PROJECT ID: PMN06011997

SAMPLE ID: ~~NO SAMPLE ID~~ PN 111

DESCRIPTOR: PESTICIDE MONITORING NETWORK

HERITAGE ENVIRONMENTAL SERVICES
COMMERCIAL LABORATORY OPERATIONS
7901 WEST MORRIS STREET
INDIANAPOLIS, IN 46231

Done

TO MITT L. DENNEY
IDEM

Invoice.
21040

Report Package # 5888
A444782-A444790
DK11771-DK11779

approved

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317/243-0811
FAX: 317/486-5095

QUALITY ASSURANCE REPORT PACKAGE # 5888
FOR
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

MITT L. DENNEY
INDIANA DEPT. OF ENV. MANAGEMENT
2525 NORTH SHADELAND AVENUE
BUILDING 30
INDIANAPOLIS, IN 46219
(317) 308-3324

SAMPLE: A444782-A444790

IDEM ID: DK11771-DK11779

HERITAGE ENVIRONMENTAL SERVICES, LLC
COMMERCIAL LABORATORY OPERATIONS
7901 WEST MORRIS STREET
INIANAPOLIS, INDIANA 46231
PHONE: (317) 243-8304
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APPROVED BY: _____
PROJECT CHEMIST

Recycled Paper

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Heritage Environmental Services, LLC
7901 West Morris Street
Indianapolis, IN 46231
Phone: (317) 243-0811
Fax: (317) 486-5095

CASE NARRATIVE
SHIPPING AND RECEIVING

The following samples were received at Heritage Environmental laboratory on 05-June-1998:

A444782-A444790
(DK11771-DK11779)

The samples were received within EPA recommended holding times and in good condition. If required, a pH screen confirmed that all samples were preserved to acceptable pH levels. Samples were analyzed within holding times as prescribed by the analytical method. Exceptions to these statements, additional information, and any analytical anomalies are noted on the accompanying Certificates of Analysis Reports.

Teresa A. Miller
Document Control Officer

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

☒ OWM ☐ OSHWM ☐ OER ☐ OAM

CHAIN OF CUSTODY

I certify that the sample(s) listed below was/were collected by me or in my presence. Date: 6 / 5 / 98

Signature: Robert S. Hamilton Jr. Section: Ground Water

LAB NUMBER ASSIGNED	IDEM CONTROL NUMBER	CONSISTING OF THE INDICATED NUMBER OF BOTTLES												DATE AND TIME COLLECTED
		2000 ml P,N.M.	1000 ml P,N.M.	1000 ml G,N.M.	500 ml G,W.M.	40 ml VIAL	120 ml G,(B.O.)	500 ml P,N.M.	250 ml P,N.M.	1000 ml DWM				
A44782	DK11771									3				6 3 98 12:14 AM/PM
783	DK11772									3				6 3 98 1:18 AM/PM
784	DK11773									3				6 3 98 3:10 AM/PM
785	DK11774									3				6 3 98 3:57 AM/PM
786	DK11775									3				6 4 98 9:27 AM/PM
787	DK11776									3				6 4 98 10:15 AM/PM
788	DK11777									3				6 4 98 10:58 AM/PM
789	DK11778									3				6 4 98 11:52 AM/PM
790	DK11779									3				6 4 98 12:56 AM/PM
791	QA/QC													/ / : AM/PM
														/ / : AM/PM
														/ / : AM/PM

P - Plastic G - Glass N.M. - Narrow Mouth W.M. - Wide Mouth B.O. - Bacti. Only

CARRIERS

Should samples be Iced? Y N

I certify that I received the above sample(s).

SIGNATURE	DATE AND TIME	SEALS INTACT		COMMENTS
RELINQUISHED BY: Robert S. Hamilton Jr.	6 5 98	Y	N	No Seals
RECEIVED BY:	2:00 AM/PM			
RELINQUISHED BY:	/ /	Y	N	
RECEIVED BY:	: AM/PM			
RELINQUISHED BY:	/ /	Y	N	
RECEIVED BY:	: AM/PM			
RELINQUISHED BY:	/ /	Y	N	
RECEIVED BY:	: AM/PM			
RELINQUISHED BY:	/ /	Y	N	
RECEIVED BY:	: AM/PM			

LAB CUSTODIAN

I certify that I received the above sample(s) and is/are recorded in the official record book. The same sample(s) will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Signature: [signature] Date: 6 / 5 / 98 Time: 13:15 AM

Lab: HERITAGE ENVIRONMENTAL Address: INDIANAPOLIS IN

June 23, 1998

M 92

U. S. EPA -CLP

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Lab Name : Heritage

Contract : IDEM - OWM

Lab Code: Metals

Case No. : _____

SAS No. : _____

SDG No.: _____

Instrument ID Number : _____

Method : _____

EPA Sample No.	Lab Sample No.
	A444782
	d water
	A444790

Were ICP interelement corrections applied? Yes/No ___ yes

Were ICP background corrections applied? Yes/No ___ yes

If yes-were raw data generated before application of background corrections? Yes/No ___ no

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature : _____

Name : _____

Date : _____

Title : _____

1

CASE NARRATIVE

METALS SECTION

SAMPLE # A444782-790

There was possible matrix interference for Fe, as indicated by the serial dilution results.

Steven J Endersen 6-23-98

Steven J Endersen, Senior Chemist

U. S. EPA -CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _____

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found	% R (1)	True	Found *90056*	% R (1)	Found *133112*	% R (1)		
Barium	1000	983	98.3	5000	4770	95.4	4860	97.2		P
Calcium	20000	20400	102	50000	48500	97	47800	95.6		P
Iron	1000	1020	102	5000	4830	96.6	4730	94.6		P
Magnesium	20000	19600	98	50000	48900	97.8	49000	98		P
Potassium	20000	19800	99	50000	49700	99.4	50500	101		P
Sodium	20000	19800	99	50000	48500	97	49000	98		P

ICP Analytical Run Time

(1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.

FORM II (Part 1) - IN

U. S. EPA -CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: HES - Commercial Laboratories Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _____

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration % R (1)	Continuing Calibration True	Continuing Calibration Found 135142	Continuing Calibration % R (1)	Continuing Calibration Found 141721	Continuing Calibration % R (1)		M
Barium				5000	4960	99.2	4960	99.2		P
Calcium				50000	48700	97.4	48600	97.2		P
Iron				5000	4820	96.4	4830	96.6		P
Magnesium				50000	49900	99.8	49900	99.8		P
Potassium				50000	51400	103	51500	103		P
Sodium				50000	49800	99.6	49900	99.8		P

ICP Analytical Run Time (1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.

FORM II (Part 1) - IN

U. S. EPA -CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: HES - Commercial Laboratories Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _____

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration % R (1)	Continuing Calibration True	Continuing Calibration Found *171843*	Continuing Calibration % R (1)	Found	% R (1)		M
Barium				5000	5040	101				P
Calcium				50000	49300	98.6				P
Iron				5000	4930	98.6				P
Magnesium				50000	50700	101				P
Potassium				50000	52600	105				P
Sodium				50000	50900	102				P

ICP Analytical Run Time

(1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.

FORM II (Part 1) - IN

5

U. S. EPA -CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

AA CRDL Calibration Source : Inorganic Ventures

ICP CRDL Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP						M
	True	Found	% R	True	Initial Found *85013*	% R	Final Found *171058*	% R		
Barium				NA						
Calcium				NA						
Iron				NA						
Magnesium				NA						
Potassium				NA						
Sodium				NA						

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U. S. EPA -CLP

3

BLANKS

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

Preparation Blank Matrix : Water

Preparation Blank Concentration Units (uG/L or mG/kG) : uG/L

Analyte	Initial Calibration Blank (uG/L) 83438	C	Continuing Calibration Blank (uG/L) 1 84451	C	2 90330	C	3 133346	C	Preparation Blank 133620	C	M
Barium	0.84	U	0.84	U	0.84	U	0.84	U	0.84	U	P
Calcium	8.2	U	8.2	U	28	B	17	B	39	B	P
Iron	2.1	U	2.1	U	11	B	2.1	U	11	B	P
Magnesium	20	U	20	U	33	B	27	B	22	B	P
Potassium	98	U	98	U	98	U	98	U	120	B	P
Sodium	37	U	37	U	40	B	37	U	210		P

ICP Analytical Run Time

FORM III -IN

7

U. S. EPA -CLP

3

BLANKS

Lab Name: HES - Commercial Laboratories Contract : _____

Lab Code: _____ Case No. : ___ SAS No. : ___ SDG No.: _____

Preparation Blank Matrix : _____

Preparation Blank Concentration Units (uG/L or mG/kG) : _____

Analyte	Initial Calibration Blank (uG/L)	C	Continuing Calibration Blank (uG/L) 4 *135415*	C	5 *141955*	C	6 *172118*	C	Preparation Blank	C	M
Barium			0.84	U	0.84	U	0.84	U			P
Calcium			18	B	8.4	B	37	B			P
Iron			2.1	U	2.1	U	13	B			P
Magnesium			20	U	20	U	80	B			P
Potassium			98	U	98	U	98	U			P
Sodium			37	U	37	U	37	U			P

ICP Analytical Run Time

FORM III -IN

8

U. S. EPA -CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

ICP ID Number : 242 ICS Source : Perkin-Elmer

Date of Analysis : 22-Jun-98

Concentration Units: uG/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found % R	Final Found Sol. A	Final Found Sol. AB	Final Found % R
Aluminum		500,000		464,000	92.8		489,000	97.8
Antimony		600		554	92.3		587	97.8
Arsenic		100						
Barium		500		462	92.4		499	99.8
Beryllium		500		442	88.4		465	93
Cadmium		1,000		897	89.7		932	93.2
Calcium		500,000		470,000	94.0		482,000	96.4
Chromium		500		443	88.6		458	91.6
Cobalt		500		445	89		456	91.2
Copper		500		470	94		491	98.2
Iron		200,000		175,000	87.5		180,000	90
Lead		1,000		960	96		1,020	102
Magnesium		500,000		490,000	98.0		513,000	103
Manganese		500		443	88.6		460	92
Mercury								
Nickel		1,000		874	87.4		911	91.1
Potassium								
Selenium		50						
Silver		200		203	102		220	110
Sodium								
Thallium		100						
Vanadium		500		459	91.8		485	97
Zinc		1,000		934	93.4		972	97.2

FORM IV - IN

U. S. EPA -CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A444782

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

Matrix (soil/water) : Water Level (low/med):

Initial Wt/Vol : 50 mL

% Solids for Sample : Final Volume : 50 mL

Dilution : 1

Concentration Units (uG/L or mG/kG dry weight) : uG/L

Analyte	Control Limit %R	Q850574 Spiked Sample (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Barium	80 - 120	1960		20.4		2,000	97		P
Calcium	80 - 120	116000		23500		100,000	92.5		P
Iron	80 - 120	1060		162		1,000	89.8		P
Magnesium	80 - 120	101000		6490		100,000	94.5		P
Potassium	80 - 120	98500		553		100,000	97.9		P
Sodium	80 - 120	107000		2410		100,000	105		P

FORM V (Part 1) - IN

1.0

U. S. EPA -CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A444782

Lab Name: HES - Commercial Laboratories Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _____

Matrix (soil/water) : Water Level (low/med): low

Initial Wt/Vol : 50 mL

% Solids for Sample : _____ Final Volume : 50 mL

Dilution : 1

Concentration Units (uG/L or mG/kG dry weight) : uG/L

Analyte	Control Limit %R	Spiked Dup Sample (SDS)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Barium	75 - 125	2010		20.4		2,000	99.5		P
Calcium	75 - 125	120000		23500		100,000	96.5		P
Iron	75 - 125	1100		162		1,000	93.8		P
Magnesium	75 - 125	104000		6490		100,000	97.5		P
Potassium	75 - 125	102000		553		100,000	101		P
Sodium	75 - 125	111000		2410		100,000	109		P

FORM V (Part 1) - IN

U. S. EPA -CLP
7

LABORATORY CONTROL SAMPLE

Q850572

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

Solid LCS Source :

Aqueous LCS Source : SPEX

Analyte	Aqueous (uG/L) True	Found	%R	True	Found	C	Limits		%R
Barium	20000	19,100	95.5						
Calcium	100000	91,800	91.8						
Iron	10000	9,110	91.1						
Magnesium	100000	94,100	94.1						
Potassium	100000	98,400	98.4						
Sodium	100000	105,000	105						

FORM VII - IN

12

U. S. EPA -CLP

9

ICP SERIAL DILUTION

EPA SAMPLE NO.

A444782

Lab Name: Heritage Contract :

Lab Code: Case No. : SAS No. : SDG No.:

Matrix (soil/water) : Water Level (low/med):

Concentration Units (uG/L) : uG/L Dilution 1: 5

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q (1)	M
Barium	20.4		36	B			P
Calcium	23500		23900		1.7		P
Iron	162		182		12	E	P
Magnesium	6490		6710		3.4		P
Potassium	553		98	U			P
Sodium	2410		2640		9.5		P

(1) - % Difference criteria 10%, if concentration > 50*IDL.

FORM IX - IN

U. S. EPA - CLP

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STANDARD SOLUTIONS SOURCES

Lab Name: Heritage Labotatories, Inc.

Contract_____

	CALIBRATION					MATRIX		
Analyte	STANDARD	ICV	TRACE CCV	CCV	CRDL	SPIKE	ICS	Method
Aluminum	INV	PE		INV		SPEX	PE	P
Antimony	INV	PE	SPEX	INV	PE	INV		P
Arsenic	INV	PE	SPEX	INV	PE	SPEX		P
Barium	INV	PE		INV		SPEX	PE	P
Beryllium	INV	PE	SPEX	INV	PE	SPEX	PE	P
Cadmium	INV	PE	SPEX	INV	PE	SPEX	PE	P
Calcium	INV	PE		INV		SPEX	PE	P
Chromium	INV	PE	SPEX	INV	PE	SPEX	PE	P
Cobalt	INV	PE	SPEX	INV	PE	SPEX	PE	P
Copper	INV	PE		INV	PE	SPEX	PE	P
Iron	INV	PE		INV		SPEX	PE	P
Lead	INV	PE	SPEX	INV	PE	SPEX	PE	P
Magnesium	INV	PE		INV		SPEX	PE	P
Manganese	INV	PE	SPEX	INV	PE	SPEX	PE	P
Mercury	INV	NIST		FISHER	FISHER	FISHER		CV
Nickel	INV	PE		INV	PE	SPEX	PE	P
Potassium	INV	PE		INV		SPEX		P
Selenium	INV	PE	SPEX	INV	PE	SPEX		P
Silver	INV	PE	PE	INV	PE	SPEX	PE	P
Sodium	INV	PE		INV		SPEX		P
Thallium	INV	PE	SPEX	INV	PE	SPEX		P
Vanadium	INV	PE	SPEX	INV	PE	SPEX	PE	P
Zinc	INV	PE		INV	PE	SPEX	PE	P
Titanium	INV	PE		INV		SPEX		P
Strontium	INV	PE		INV		SPEX		P
Molybdenum	INV	PE		INV		SPEX		P
Boron	INV	PE		INV		SPEX		P
Tin	INV	PE		INV		INV		P
Zirconium	INV	FISHER		INV		SPEX		P
Lithium	INV	PE		INV		SPEX		P
Silicon	INV	PE		INV		INV		P
Bismuth	INV	PE		INV		SPEX		P
Yttrium	INV	PE		INV		SPEX		P

PE = Perkin Elmer Pure

INV = Inorganic Ventures

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U. S. EPA -CLP

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: Heritage Laboratories, Inc. Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____

ICP ID Number : ICP#242 Date : May 19, 1998

Analyte	Integ. Time (Sec.)	Concentration (uG/L)	M
Aluminum	8	500,000	P
Antimony	8	100,000	P
Arsenic	8	200,000	P
Barium	8	200,000	P
Beryllium	8	10,000	P
Boron	8	300,000	P
Cadmium	8	100,000	P
Calcium	8	800,000	P
Chromium	8	100,000	P
Cobalt	8	800,000	P
Copper	8	100,000	P
Iron	8	300,000	P
Lead	8	300,000	P
Lithium	8	300,000	P
Magnesium	8	1,000,000	P
Manganese	8	100,000	P
Mercury	8	100,000	P
Molybdenum	8	100,000	P
Nickel	8	400,000	P
Phosphorus	8	500,000	P
Potassium	8	500,000	P
Selenium	8	200,000	P
Silicon	8	500,000	P
Silver	8	10,000	P
Sodium	8	500,000	P
Strontium	8	50,000	P
Thallium	8	200,000	P
Tin	8	500,000	P
Titanium	8	100,000	P
Uranium	8	500,000	P
Vanadium	8	100,000	P
Zinc	8	100,000	P
Zirconium	8	500,000	P

Comments: _____

FORM XII - IN

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U. S. EPA -CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Heritage Laboratories, Inc. Contract :

Lab Code: Case No. : SAS No. :

ICP ID Number : ICP#242 Date : Feb 11, 1998

Interelement Correction Factors for:

Analyte	Wave-length (nm)	Al	Cr	Cu	Fe	Mn	Ni	V
Aluminum	308.2					0.00128		-0.04832
Antimony	206.8		0.01381		-0.007786	-0.000198	0.000093	0.000441
Arsenic	193.6	0.003796	0.001743		0.000407		0.000802	0.013807
Barium	493.4							
Beryllium	313.0							0.000836
Boron	249.6							
Cadmium	226.5	0.000011			0.00009		-0.000198	
Calcium	317.9							
Chromium	267.7				-0.000038	0.000107		0.001866
Cobalt	228.6						0.000264	
Copper	324.7				-0.000029			0.000112
Iron	259.9		0.000076			0.000285		0.000426
Lead	220.3	0.000951			0.000107		0.000201	
Lithium	670.7				-0.000019			
Magnesium	279.0					-0.005355		
Manganese	257.6							-0.00019
Molybdenum	202.0		0.000982		-0.003821		-0.000076	-0.0005
Nickel	231.6	0.000013				-0.000186		-0.00018
Potassium	766.4							
Selenium	196.0				0.000154			
Silicon	288.1	0.000474	-0.008893		-0.000582	-0.002939		
Silver	328.0				-0.00054			-0.00133
Sodium	588.9							
Strontium	421.5						-0.000111	
Thallium	190.8				0.003472	-0.005651		0.006385
Tin	283.9	0.000524	0.903853		-0.038125	0.000949		-0.14987
Titanium	337.2							
Uranium	367.0				0.003547	-0.000812		-0.01458
Vanadium	292.4		-0.005278	-0.000057	0.000029	-0.000123		
Zinc	213.8	0.000031		0.001155	0.000058		0.004196	0.00013
Zirconium	343.8				0.000055	-0.003351		
Phosphorus	214.9	-0.001949		0.105579	0.000626			-0.00407

Comments:

FORM XI (Part 1) - IN

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U. S. EPA -CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Heritage Laboratories, Inc. Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____

ICP ID Number : ICP#242 Date : Feb 11, 1998

Interelement Correction Factors for:

Analyte	Wave-length (nm)	Ca	Cd	Mg	Sb	P	U	Co
Aluminum	308.2						0.011576	-0.00824
Antimony	206.8						0.000882	
Arsenic	193.6						0.001634	0.000762
Barium	493.4							
Beryllium	313.0						0.000025	
Boron	249.6						-0.000287	0.001548
Cadmium	226.5						-0.000492	0.00005
Calcium	317.9						0.000894	
Chromium	267.7		0.000249	-0.000014	0.000379		-0.003551	-6.6E-05
Cobalt	228.6		0.001778				-0.000068	
Copper	324.7						0.002049	-0.00017
Iron	259.9				0.000112		-0.000155	
Lead	220.3						0.000242	-0.00645
Lithium	670.7							
Magnesium	279.0						0.01286	-0.00088
Manganese	257.6			0.00002			0.000169	
Molybdenum	202.0						0.000027	
Nickel	231.6				0.000375		0.000142	-0.00018
Potassium	766.4							
Selenium	196.0		-0.001896					0.000542
Silicon	288.1		-0.003025				-0.000258	
Silver	328.0	-0.000021		-0.000011			0.000583	
Sodium	588.9						0.000262	
Strontium	421.5	0.000071		0.000017				
Thallium	190.8						0.000851	0.006722
Tin	283.9			-0.000329			0.004525	
Titanium	337.2						-0.000271	
Uranium	367.0							0.001834
Vanadium	292.4						-0.002521	
Zinc	213.8							-0.00005
Zirconium	343.8						-0.000033	-0.00051
Phosphorus	214.9		0.001187				0.000795	

Comments: _____

FORM XI (Part 2)-IN

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U. S. EPA -CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Heritage Laboratories, Inc. Contract :

Lab Code: Case No. : SAS No. :

ICP ID Number : ICP#242 Date : Feb 11, 1998

Interelement Correction Factors for:

Analyte	Wave-length (nm)	Ti	Zr	Mo	B	Sr	Sn	Ba
Aluminum	308.2		-0.00033	0.019169				
Antimony	206.8	0.001167		0.005408			0.001312	
Arsenic	193.6		0.005115	0.001027				
Barium	493.4		-0.000191		0.000127	0.000158		
Beryllium	313.0		-0.000062	-0.000047				
Boron	249.6		0.000194	-0.000524				
Cadmium	226.5	0.000117		0.000076				
Calcium	317.9							
Chromium	267.7	0.000102	0.000801	-0.0045				
Cobalt	228.6	0.001663					0.000025	0.000441
Copper	324.7	0.001203		0.000648				
Iron	259.9	-0.000384	0.000885					
Lead	220.3			-0.000799				
Lithium	670.7							
Magnesium	279.0	-0.004244	-0.000934	-0.03065				
Manganese	257.6		0.000032	-0.000218				
Molybdenum	202.0		-0.000101		0.00005		-0.000042	
Nickel	231.6			-0.003003			0.000019	
Potassium	766.4							
Selenium	196.0		0.00037					
Silicon	288.1	0.008533	0.001264	0.002573			0.00254	
Silver	328.0	-0.000475	0.001966					
Sodium	588.9							
Strontium	421.5		0.00003					
Thallium	190.8	-0.027949		-0.003732				
Tin	283.9	0.018563	0.016534	0.007298				
Titanium	337.2		0.000817					
Uranium	367.0							
Vanadium	292.4	0.000503		-0.003564				
Zinc	213.8							
Zirconium	343.8			-0.000486				
Phosphorus	214.9	-0.009505	0.001026	0.005753				

Comments:

FORM XI (Part 3) IN

18

WATER METHOD DETECTION LIMITS, uG/L

Hotblock / Hotplate

Element	ICAP-61	ICAP-61	ICAP-61	ICAP-61	ICAP-61	ICAP-61	ICAP-61	ICAP-61	ICAP-61	GFAA	GFAA	GFAA	GFAA	GF	GFAA
	#32 (AH)	#32 (AH)	#32 (AAS)	#32 (AAS)	#242 (AH)	#242 (AH)	#242 (AAS)	TRACE	TRACE	PE5100-A	PE5100-A	PE5100-B	PE5100-B	PE3030	PE3030
		Hotblock		Hotblock		Hotblock	Hotblock		Hotblock		Hotblock		Hotblock		Hotblock
Complete	1/27/98	3/19/98	1/22/98	3/18/98	1/27/98	3/19/98	3/20/98	2/3/98	3/17/98	2/18/98	4/9/98	2/24/98	3/24/98	2/20/98	4/6/98
Al	32	37	20	25	43	21	21								
B	21	4.6	15	4.6	18	4.5	4.2								
Sb	14	19	16	17	25	20	18	3.5	2.9			2.1	1.7		
As	46	40	27	20	31	21	20	2.3	2.8	0.75	0.96	1.7	1.9		
Ba	0.79	0.92	1.9	0.92	1.7	0.94	0.64								
Be	1.5	0.67	0.83	0.83	0.10	0.13	0.36	0.22	0.10			0.099	0.056		
Bi	29	30	24	14											
Cd	2.9	2.2	3.0	2.1	2.6	1.7	3.2	0.24	0.20	0.086	0.20	0.11	0.23	0.19	0.17
Ca	94	36	90	36	92	23	23								
Cr	3.7	3.0	6.7	2.8	6.2	3.4	3.8	1.9	0.94					1.7	1.4
Co	3.2	2.0	2.5	3.5	3.6	1.9	2.8	0.90	1.0						
Cu	4.4	4.0	3.6	1.9	9.2	5.9	3.5							2.0	0.83
Fe	25	4.3	27	6.1	25	4.8	3.5								
Pb	15	16	29	12	25	36	18	1.9	1.7	1.7	0.82	1.2	1.2	2.6	1.4
Hg					99										
Mg	98	165	130	50	58	28	27								
Mn	1.4	1.0	2.1	0.96	1.2	0.80	0.48	1.2	0.85						
Mo	3.5	3.4	3.1	2.8	2.7	4.4	3.7								
Ni	4.8	3.7	7.8	3.6	7.7	3.3	5.1					2.5			
K	90	79	110	99	140	85	56								
Li	3.0	3.2	2.5	1.6	20	13	18								
P					160	150	160								
Se	28	40	22	48	50	33	25	2.3	2.2	1.3	1.5	1.2	1.5		
Si	28	22	23	13	49	30	31								
Sr	0.92	0.70	0.46	0.97	1.1	0.40	0.50								
Sn	11	13	10	10	110	71	59								
Ag	3.4	2.4	4.0	2.0	3.6	3.8	4.4	1.6	1.3					0.18	0.37
Na	120	82	120	17	120	30	26								
Tl	2.0	1.9	1.4	1.6	4.3	2.6	2.7								
Tl	140	67	78	110	53	49	38	3.4	3.2	0.90	0.86	0.81	0.90		
U					140	93	86								
V	1.7	1.9	2.8	2.2	4.2	2.1	1.3	0.96	1.0	0.86	0.69				
Y	2.3	0.83													
Zn	17	11	20	3.2	19	2.3	2.2								
Zr	6.0	2.3	6.8	3.7	5.4	3.6	4.1								
As prep												1.3			
Se prep										1.2					
Pb (DW)										1.2		1.2		1.8	
As (2inj.)												0.84			
															4/14/98
Hg	CVAA	PE-FIMS	1/29/98	0.031											

U. S. EPA -CLP

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: Heritage Laboratories, Inc. Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No. _____

ICP ID Number : ICP#242 Date : May 18, 1998

Flame AA ID Number : PE FIMS-CVAA

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	USEPA CRDL (uG/L)	Laboratory Reporting Limits (uG/L)		IDL (uG/L)	M
Aluminum	308.2		200	50		14	P
Antimony	206.8		60	30		23	P
Arsenic	193.6		10	100		27	P
Barium	493.4		200	10		0.84	P
Beryllium	313.0		5	4		0.12	P
Boron	249.6			50		4.2	P
Cadmium	226.5		5	5		3.3	P
Calcium	317.9		5000	200		8.2	P
Chromium	267.7		10	10		3.6	P
Cobalt	228.6		50	10		3.2	P
Copper	324.7		25	20		3.1	P
Iron	259.9		100	25		2.1	P
Lead	220.3		3	50		46	P
Lithium	670.7			50		18	P
Magnesium	279.0		5000	200		20	P
Manganese	257.6		15	10		0.66	P
Mercury **	253.7		0.20	0.20		0.031	CV
Molybdenum	202.0			10		4.2	P
Nickel	231.6		40	10		5.0	P
Phosphorus	214.9			500		120	P
Potassium	766.4		5000	200		98	P
Selenium	196.0		5	100		42	P
Silicon	288.1			200		31	P
Silver	328.0		10	10		4.6	P
Sodium	588.9		5000	200		37	P
Strontium	421.5			10		0.64	P
Thallium	190.8		10	300		54	P
Tin	283.9			200		97	P
Titanium	337.2			10		2.3	P
Uranium	367.0			500		84	P
Vanadium	292.4		50	10		2.3	P
Zinc	213.8		20	20		2.6	P
Zirconium	343.8			10		3.5	P

Comments: **Mercury on 2/10/98

FORM X - IN

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MTO PREP SHEET Method: EPA 200.0

Prep Worksheet for Run: R350705 Instrument: 275 Page: 1

Analyst T / W / N # 2908 Reviewed ___/___/___ #_____ Recorded ___/___/___ #_____

Date 06/20/98 Start 1230 Stop 1700 Date ___/___/___ Date ___/___/___

SAMPLE	TEST	Initial Wt/Vol	Final Volume	DUE	SUBMITTER	CONTAINER ID	AN_REP	ELEMENT
Q850572	LCS					7453		
Q850573	BLA02							
Q850574	SPI02					A444782	7400	
Q850575	DPS02					782	7405 7456	
A444782	P129.2.0			24-JUN	IDEM - OFFICE	DL 11771	ICP.0	Ba Ca Fe K Mg Na
A444783	P129.2.0			24-JUN	IDEM - OFFICE	772	ICP.0	Ba Ca Fe K Mg Na
A444784	P129.2.0			24-JUN	IDEM - OFFICE	773	ICP.0	Ba Ca Fe K Mg Na
A444785	P129.2.0			24-JUN	IDEM - OFFICE	771	ICP.0	Ba Ca Fe K Mg Na
A444786	P129.2.0			24-JUN	IDEM - OFFICE	775	ICP.0	Ba Ca Fe K Mg Na
A444787	P129.2.0			24-JUN	IDEM - OFFICE	776	ICP.0	Ba Ca Fe K Mg Na
A444788	P129.2.0			24-JUN	IDEM - OFFICE	777	ICP.0	Ba Ca Fe K Mg Na
A444789	P129.2.0			24-JUN	IDEM - OFFICE	778	ICP.0	Ba Ca Fe K Mg Na
[illegible]4790	P129.2.0			24-JUN	IDEM - OFFICE	779	ICP.0	Ba Ca Fe K Mg Na

HNO3 Fisher 118030 H2O2 Fisher _____ HCL Fisher 417120 Balance# _____

(runprep.sql)

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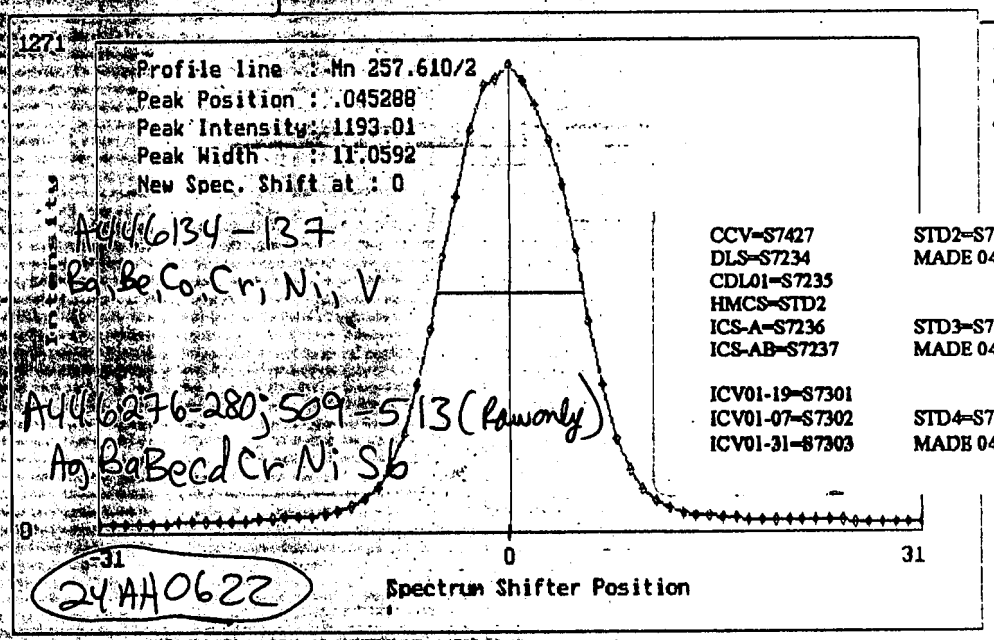
A445616-617; 862-867 BaBeCoCrNiV

ICP242
06/22/98
[illegible]



A446134-137
Ba, Be, Co, Cr, Ni, V

A446276-280; 509-513 (Raw only)
Ag BaBeCdCrNiSb

24AH0622

A445502-509; 515-523 BaBeCoCrNiV

A444770-778 Ba ~~Ca~~ ~~Fe~~ KMgNa (Ca, Fe failed)

A444782-790 BaCaFeKMgNa

A444793-804 BaCaFeKMgNa

A445018-020 BaCaFeKMgNa

A443954-958; 973-981 Fe

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Method: EMS Standard: STD2

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Cd2265
Avge	9154	1.636	1.780	8.442	3.7284	25.520	7.608
SDev	.0099	.020	.021	.090	.0623	.337	.081
%RSD	1.081	1.248	1.201	1.068	1.6713	1.3217	1.064
#1	.9224	1.651	1.796	8.506	3.7725	25.758	7.666
#2	.9084	1.622	1.765	8.378	3.6844	25.281	7.551

Elem	Co2286	Cr2677	Cu3247	Fe2599	Li6707	Mn2576	Ni2316
Avge	1.612	16.37	2.951	6.926	.1794	2.2298	3.696
SDev	.020	.21	.042	.083	.0022	.0280	.059
%RSD	1.233	1.301	1.438	1.198	1.231	1.2566	1.586
#1	1.626	16.52	2.981	6.985	.1810	2.2496	3.737
#2	1.598	16.22	2.921	6.868	.1779	2.2100	3.655

Elem	Pb2203	Se1960	Sr4215	Tl1908	V_2924	Zn2138	Zr3438
Avge	1.765	2.484	13.969	2.210	9.057	5.547	4.6016
SDev	.027	.027	.221	.022	.126	.053	.0685
%RSD	1.522	1.071	1.5806	1.004	1.389	.9480	1.4886
#1	1.784	2.503	14.125	2.225	9.146	5.584	4.6500
#2	1.746	2.465	13.813	2.194	8.968	5.510	4.5531

Method: EMS Standard: STD3

Elem	Ca3179	K_7664	Mg2790	Na5889
Avge	.3733	1.216	.9514	1.152
SDev	.0010	.009	.0004	.003
%RSD	.2604	.7267	.0464	.2226
#1	.3740	1.210	.9511	1.153
#2	.3726	1.223	.9517	1.150

Method: EMS Standard: STD4

Elem	Mo2020	Sb2068	Si2881	Sn2839	Ti3372
Avge	3.378	.9134	.6308	.2583	11.91
SDev	.007	.0065	.0048	.0017	.02
%RSD	.1962	.7064	.7567	.6501	.1811
#1	3.374	.9089	.6274	.2595	11.90
#2	3.383	.9180	.6341	.2571	11.93

Method: EMS Sample Name: CCV Operator: AH

Run Time: 06/22/98 08:20:09

Comment:

Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.9592	5.124	4.689	4.818	4.7622	4.6433	47.93
SDev	.0084	.024	.051	.032	.0488	.0184	.09
%RSD	.8743	.4775	1.095	.6564	1.0254	.39651	.1828

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0053	.00140	.0008	-.0761	-.0017	.0131	.0077
SDev	.0222	.00040	.0023	.0104	.0012	.0110	.0152
%RSD	421.8	28.335	293.6	13.62	70.67	84.02	197.6
#1	-.0105	.00112	.0024	-.0835	-.0025	.0053	.0185
#2	.0210	.00168	-.0008	-.0688	-.0008	.0209	-.0031

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0035	.0059	-.0365	-.00000	-.0006	-.0215	.0003
SDev	.0284	.0086	.0219	.00038	.0010	.0184	.0013
%RSD	808.2	145.3	59.93	1192100.	183.8	85.63	370.4
#1	-.0236	.0121	-.0211	-.00027	-.0012	-.0345	-.0006
#2	.0166	-.0002	-.0520	.00027	.0002	-.0085	.0013

Elem	Zn2138	Zr3438
Avge	.0003	-.00028
SDev	.0003	.00039
%RSD	95.01	140.45
#1	.0006	-.00000
#2	.0001	-.00055

Method: EMS Standard: STD1-Blank

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0086	.0194	-.0061	.0035	.00000	.00425	-.0001
SDev	.0013	.0003	.0002	.0003	.00018	.00018	.0001
%RSD	15.48	1.825	2.886	10.10	.00000	4.1595	141.4
#1	.0076	.0191	-.0063	.0033	-.00013	.00412	-.0001
#2	.0095	.0196	-.0060	.0037	.00013	.00438	.0000

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0003	.0001	.0039	.0021	.0001	.0219	-.0001
SDev	.0009	.0005	.0038	.0009	.0006	.0072	.0002
%RSD	353.6	424.3	96.53	41.59	989.9	32.64	141.4
#1	.0009	.0005	.0012	.0015	-.0004	.0169	-.0003
#2	.0004	.0003	.0066	.0027	.0005	.0270	.0000

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0000	.00069	.0023	.0339	.0020	.0058	-.0004
SDev	.0000	.00009	.0011	.0008	.0012	.0075	.0043
%RSD	.0000	12.856	49.69	2.344	61.87	129.3	989.9
#1	.0000	.00075	.0031	.0334	.0011	.0005	-.0035
#2	.0000	.00062	.0015	.0345	.0029	.0111	.0026

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0059	.0019	-.0056	-.00006	.0049	-.0004	.0009
SDev	.0028	.0001	.0004	.00044	.0002	.0050	.0020
%RSD	48.14	4.562	7.945	707.11	3.626	1320.	216.8

#1	-.0079	.0019	-.0059	-.00038	.0050	.0031	-.0005
#2	-.0039	.0020	-.0052	.00025	.0047	-.0039	.0024

Elem	Zn2138	Zr3438
Avge	.0024	.00050
SDev	.0002	.00071
%RSD	7.443	141.42
#1	.0025	-.00100
#2	.0022	.00000

Method: EMS Sample Name: CCV Operator: AH
Run Time: 06/22/98 08:29:35
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.9590	4.851	4.791	4.815	4.7288	4.6232	47.34
SDev	.0002	.001	.033	.005	.0114	.0082	.09
%RSD	.0204	.0145	.6818	.1044	.24061	.17690	.1800
#1	.9591	4.851	4.768	4.818	4.7369	4.6290	47.40
#2	.9588	4.852	4.814	4.811	4.7208	4.6174	47.28

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	4.685	4.696	4.721	4.762	4.714	49.25	4.890
SDev	.006	.003	.005	.011	.008	.13	.005
%RSD	.1240	.0576	.1070	.2263	.1734	.2689	.1007
#1	4.689	4.698	4.724	4.769	4.720	49.35	4.894
#2	4.681	4.694	4.717	4.754	4.709	49.16	4.887

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	47.96	4.7234	.9308	48.30	4.681	4.708	.9252
SDev	.12	.0040	.0050	.15	.015	.027	.0075
%RSD	.2536	.08387	.5375	.3144	.3268	.5725	.8061
#1	48.04	4.7262	.9273	48.40	4.691	4.689	.9199
#2	47.87	4.7206	.9343	48.19	4.670	4.727	.9304

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	4.772	4.948	L3.428	4.7222	4.694	4.644	4.738
SDev	.031	.038	.035	.0175	.015	.074	.004
%RSD	.6462	.7751	1.016	.37112	.3256	1.586	.0922
#1	4.750	4.921	L3.403	4.7345	4.705	4.696	4.741
#2	4.794	4.975	L3.453	4.7098	4.683	4.592	4.735

Elem	Zn2138	Zr3438
Avge	4.763	4.7542
SDev	.012	.0103
%RSD	.2474	.21757
#1	4.771	4.7615
#2	4.754	4.7469

Method: EMS Sample Name: BLA01 Operator: AH
Run Time: 06/22/98 08:32:08
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0003	.0047	.0334	.0061	.00050	.00056	.0067
SDev	.0014	.0037	.0046	.0010	.00024	.00010	.0024
%RSD	499.6	79.08	13.78	17.17	47.174	18.342	35.36
#1	-.0007	.0073	.0301	.0068	.00067	.00064	.0084
#2	.0012	.0021	.0366	.0053	.00033	.00049	.0050

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0016	-.0012	.0035	.0004	.0007	.0502	.0209
SDev	.0007	.0017	.0018	.0000	.0011	.0289	.0197
%RSD	42.46	141.2	50.92	.6637	159.9	57.45	94.28
#1	.0011	-.0000	.0023	.0004	.0015	.0298	.0348
#2	.0021	-.0023	.0048	.0004	-.0001	.0706	.0070

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0139	.00112	.0042	.0235	-.0012	-.0304	.0120
SDev	.0008	.00040	.0026	.0008	.0012	.0195	.0019
%RSD	6.111	35.291	60.67	3.367	102.3	64.14	15.96
#1	.0145	.00140	.0024	.0229	-.0020	-.0166	.0107
#2	.0133	.00084	.0060	.0240	-.0003	-.0442	.0134

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0178	-.0070	.0017	.00036	.0006	.0112	.0007
SDev	.0344	.0114	.0016	.00006	.0007	.0093	.0007
%RSD	193.2	161.9	97.14	17.710	118.4	82.67	91.85
#1	.0421	.0010	.0005	.00031	.0001	.0178	.0012
#2	-.0065	-.0151	.0028	.00040	.0012	.0047	.0003

Elem	Zn2138	Zr3438
Avge	-.0002	.00231
SDev	.0006	.00057
%RSD	290.4	24.938
#1	.0002	.00271
#2	-.0007	.00190

Method: EMS Sample Name: ICV01-19 Operator: AH
Run Time: 06/22/98 08:34:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0018	.0303	1.015	.0029	-.00013	.96172	1.013
SDev	.0010	.0115	.010	.0021	.00024	.00021	.005
%RSD	53.02	37.96	.9472	71.82	176.62	.02117	.4975

#1	.0025	.0222	1.008	.0044	.00003	.96157	1.009
#2	.0011	.0384	1.022	.0014	-.00030	.96187	1.016

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	1.016	1.012	1.021	.9946	1.022	-.0094	1.002
SDev	.000	.001	.002	.0024	.000	.0037	.000
%RSD	.0114	.0540	.1877	.2405	.0249	39.28	.0000
#1	1.016	1.012	1.022	.9963	1.022	-.0120	1.002
#2	1.016	1.011	1.019	.9929	1.022	-.0068	1.002

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	1.018	1.0118	1.005	.0089	1.003	1.031	.9950
SDev	.009	.0004	.004	.0024	.004	.021	.0004
%RSD	.9271	.03922	.4424	26.52	.4067	2.037	.0418
#1	1.025	1.0121	1.008	.0073	1.006	1.046	.9953
#2	1.012	1.0115	1.002	.0106	1.000	1.016	.9947

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	1.004	.0169	-.2325	.99029	1.005	.9953	1.009
SDev	.027	.0030	.0567	.00145	.002	.0570	.001
%RSD	2.685	17.56	24.39	.14696	.2435	5.730	.1322
#1	1.023	.0190	-.2725	.99132	1.007	.9550	1.008
#2	.9846	.0148	-.1924	.98926	1.004	1.036	1.010

Elem	Zn2138	Zr3438
Avge	1.011	.99603
SDev	.001	.00268
%RSD	.0932	.26930
#1	1.012	.99792
#2	1.010	.99413

Method: EMS Sample Name: ICV01-07 Operator: AH
Run Time: 06/22/98 08:37:15
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	H.5365	.9936	.0358	1.009	.98261	.00015	-.0000
SDev	.0025	.0144	.0055	.005	.00142	.00007	.0024
%RSD	.4725	1.449	15.48	.5093	.14471	46.893	4067e6
#1	H.5383	.9834	.0318	1.006	.98161	.00020	.0017
#2	H.5347	1.004	.0397	1.013	.98362	.00010	-.0017

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0012	-.0001	.0005	-.0009	-.0006	10.01	-.0000
SDev	.0013	.0016	.0029	.0006	.0010	.01	.0000
%RSD	105.4	1688.	609.7	70.68	161.4	.1108	161.2
#1	.0003	-.0013	.0025	-.0004	-.0014	10.02	-.0000
#2	.0021	.0011	-.0015	-.0013	.0001	10.01	.0000

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0021	.00056	.0024	1.009	.0003	-.0063	.0011
SDev	.0010	.00040	.0033	.008	.0029	.0040	.0241
%RSD	50.24	70.784	137.7	.7835	927.3	63.71	2225.
#1	.0013	.00028	.0001	1.004	.0023	-.0034	.0181
#2	.0028	.00084	.0047	1.015	-.0017	-.0091	-.0160

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0083	4.963	2.021	-.00000	.0007	.0132	.0000
SDev	.0082	.013	.091	.00019	.0003	.0300	.0001
%RSD	98.55	.2525	4.522	199720.	40.57	226.8	950.3
#1	-.0025	4.954	1.956	.00013	.0009	-.0080	.0001
#2	-.0140	4.972	2.086	-.00013	.0005	.0344	-.0001

Elem	Zn2138	Zr3438
Avge	.0001	.00311
SDev	.0002	.00019
%RSD	152.9	6.0241
#1	-.0000	.00325
#2	.0002	.00298

Method: EMS Sample Name: ICV01-31 Operator: AH
Run Time: 06/22/98 08:39:48
Comment:
Mode: CONC Corr. Factor: 1.

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0024	.0288	.0283	.0010	.00017	.00015	20.40
SDev	.0023	.0047	.0137	.0010	.00024	.00000	.07
%RSD	95.91	16.31	48.36	100.5	141.63	.65945	.3481
#1	.0008	.0255	.0186	.0003	-.00000	.00015	20.45
#2	.0041	.0322	.0379	.0018	.00034	.00015	20.35

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0002	-.0019	.0020	.0006	.0016	19.80	-.0070
SDev	.0001	.0016	.0023	.0015	.0011	.16	.0000
%RSD	47.26	84.52	114.9	236.2	70.75	.8109	.0003
#1	.0003	.0031	.0004	-.0004	.0008	19.92	-.0070
#2	.0002	-.0008	.0037	.0017	.0024	19.69	-.0070

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	19.64	.00018	.0005	19.75	-.0041	-.0311	.0275
SDev	.10	.00040	.0011	.16	.0048	.0045	.0019
%RSD	.5060	226.62	212.5	.7847	117.6	14.42	7.033
#1	19.71	-.00011	-.0003	19.86	-.0074	-.0279	.0262
#2	19.57	.00046	.0013	19.64	-.0007	-.0343	.0289

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0005	.0070	-.0025	.00170	.0009	.0367	.0006
SDev	.0340	.0082	.1484	.00013	.0005	.0057	.0014

%RSD	6807.	116.0	5834.	7.5289	59.01	15.47	218.3
#1	-.0246	.0013	-.1075	.00161	.0005	.0407	-.0003
#2	.0236	.0128	.1024	.00179	.0012	.0327	.0016

Elem	Zn2138	Zr3438
Avge	.0027	.00176
SDev	.0013	.00211
%RSD	46.06	119.83
#1	.0018	.00027
#2	.0036	.00325

Method: EMS Sample Name: BLA01 Operator: AH
Run Time: 06/22/98 08:42:22
Comment:
Mode: CONC Corr Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0001	.0047	.0223	.0025	-.00017	.00010	.0050
SDev	.0000	.0056	.0224	.0007	.00024	.00000	.0047
%RSD	1.442	118.3	100.6	29.96	141.51	.42237	94.28
#1	.0001	-.0087	.0381	.0019	-.00034	.00010	.0017
#2	.0001	-.0008	.0064	.0030	.00000	.00010	.0084

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	-.0007	.0008	.0011	.0008	.0008	.0366	.0139
SDev	.0016	.0011	.0004	.0000	.0000	.0007	.0098
%RSD	247.4	141.0	36.43	.0381	.0726	2.020	70.71
#1	-.0018	.0016	.0008	.0008	.0008	.0361	.0070
#2	.0005	.0000	.0014	.0008	.0008	.0372	.0209

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0185	.00084	.0032	.0252	.0003	-.0120	.0052
SDev	.0001	.00000	.0030	.0095	.0019	.0055	.0026
%RSD	.4838	.06991	96.36	37.71	557.0	45.79	49.30
#1	.0184	.00084	.0010	.0185	-.0010	-.0159	.0070
#2	.0186	.00084	.0053	.0319	.0017	-.0081	.0034

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0045	-.0162	.0354	.00013	.0009	-.0194	.0014
SDev	.0057	.0214	.0072	.00013	.0012	.0154	.0003
%RSD	125.7	132.0	20.45	94.317	126.0	79.03	19.99
#1	-.0085	-.0313	.0405	.00004	.0018	-.0303	.0016
#2	-.0005	-.0011	.0303	.00022	.0001	-.0086	.0012

Elem	Zn2138	Zr3438
Avge	-.0010	.00230
SDev	.0008	.00058
%RSD	77.58	25.003
#1	-.0016	.00190

#2	-.0005	.0271					

Method: EMS Sample Name: DLS Operator: AH
Run Time: 06/22/98 08:44:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	H.0159	.0491	.0248	-.0003	.01039	.00482	.0017
SDev	.0008	.0037	.0183	.0017	.00047	.00003	.0000
%RSD	4.906	7.485	74.07	533.8	4.5648	.73513	.0000
#1	H.0153	.0517	.0118	-.0015	.01073	.00480	.0017
#2	H.0164	.0465	.0377	.0009	.01006	.00485	.0017

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0054	.0116	.0102	.0184	.0239	-.0094	.0104
SDev	.0002	.0022	.0028	.0003	.0005	.0703	.0049
%RSD	4.288	18.86	27.02	1.620	2.135	746.4	47.14
#1	.0053	.0132	.0122	.0186	.0243	.0403	.0070
#2	.0056	.0101	.0083	.0182	.0236	-.0591	.0139

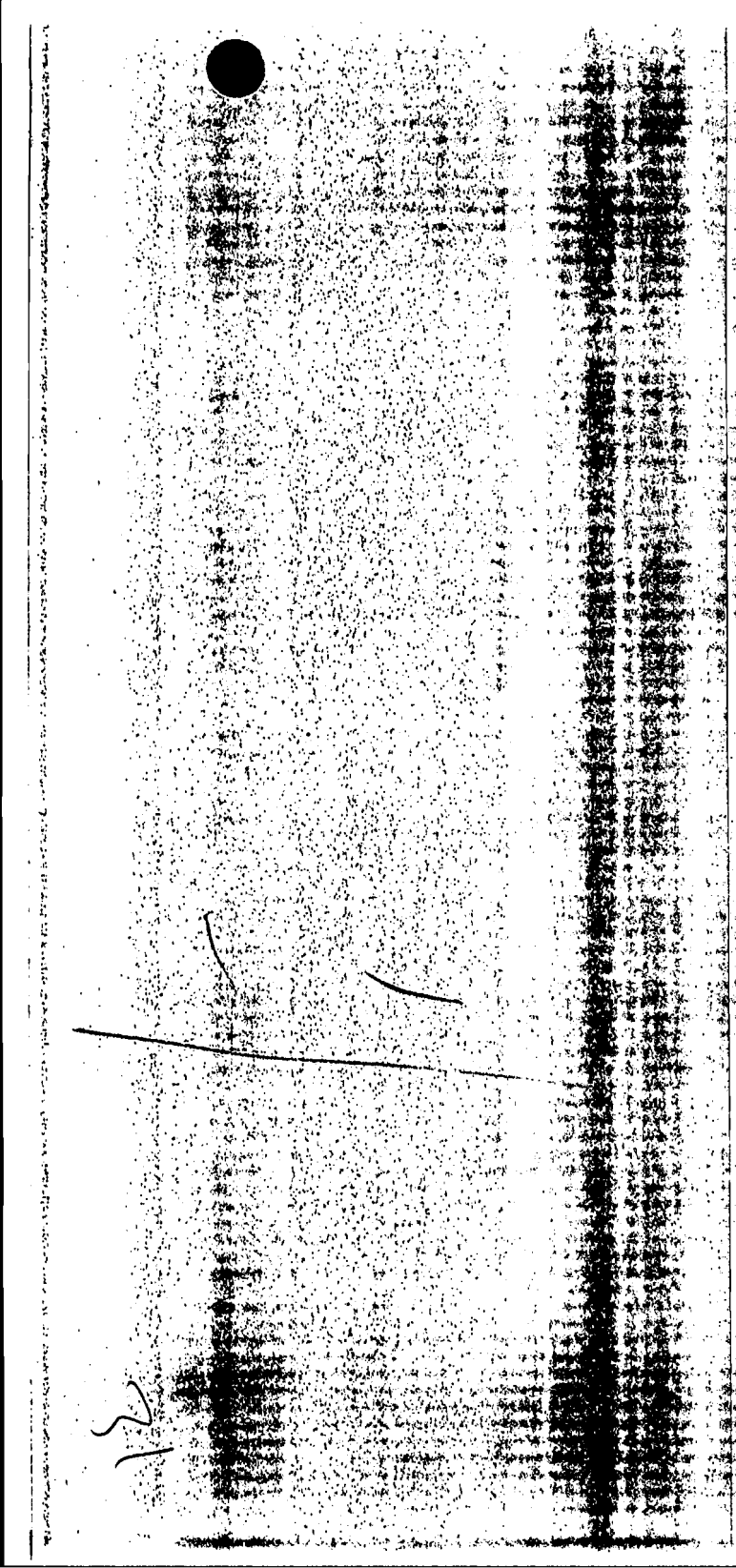
Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0053	.01150	-.0002	.0045	.0133	.0389	.0414
SDev	.0019	.00000	.0003	.0040	.0017	.0205	.0062
%RSD	35.15	.00167	117.1	88.39	12.56	52.69	14.97
#1	.0067	.01150	-.0000	.0073	.0145	.0534	.0371
#2	.0040	.01150	-.0004	.0017	.0122	L.0244	H.0458

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0146	-.0150	.0121	-.00004	.0012	-.0045	.0095
SDev	.0326	.0001	.0489	.00013	.0009	.0150	.0010
%RSD	224.1	.7388	404.1	282.31	77.09	335.3	10.42
#1	.0376	-.0151	.0467	.00004	.0018	-.0151	.0102
#2	-.0085	-.0149	-.0225	-.00013	.0005	.0061	.0088

Elem	Zn2138	Zr3438
Avge	.0202	.00126
SDev	.0005	.00057
%RSD	2.343	45.628
#1	.0205	.00167
#2	.0199	.00085

Method: EMS Sample Name: CDL01 Operator: AH
Run Time: 06/22/98 08:47:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0226	.0101	.0365	-.0005	-.00017	.00955	.0033
SDev	.0039	.0020	.0255	.0008	.00024	.00003	.0021



%RSD	17.25	19.66	69.81	183.8	141.99	.35903	70.71
#1	.0254	.0115	.0185	.0001	.00000	.00957	.0050
#2	.0199	.0087	.0545	-.0011	-.00033	.00953	.0017

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0115	.1045	.0206	.0487	-.0003	.0194	.0070
SDev	.0040	.0028	.0056	.0012	.0009	.0414	.0000
%RSD	34.32	2.641	27.19	2.450	354.2	214.0	.0002
#1	.0143	.1025	.0245	.0496	.0004	.0487	.0070
#2	.0087	.1064	.0166	.0479	-.0009	-.0099	.0070

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0153	.03058	-.0021	.0190	.0764	.0801	.1398
SDev	.0026	.00000	.0047	.0008	.0057	.0190	.0014
%RSD	17.25	.00390	219.5	4.160	7.528	23.71	.9759
#1	.0134	.03058	.0012	.0196	.0805	.0667	.1389
#2	.0172	.03057	-.0055	.0185	.0724	.0935	.1408

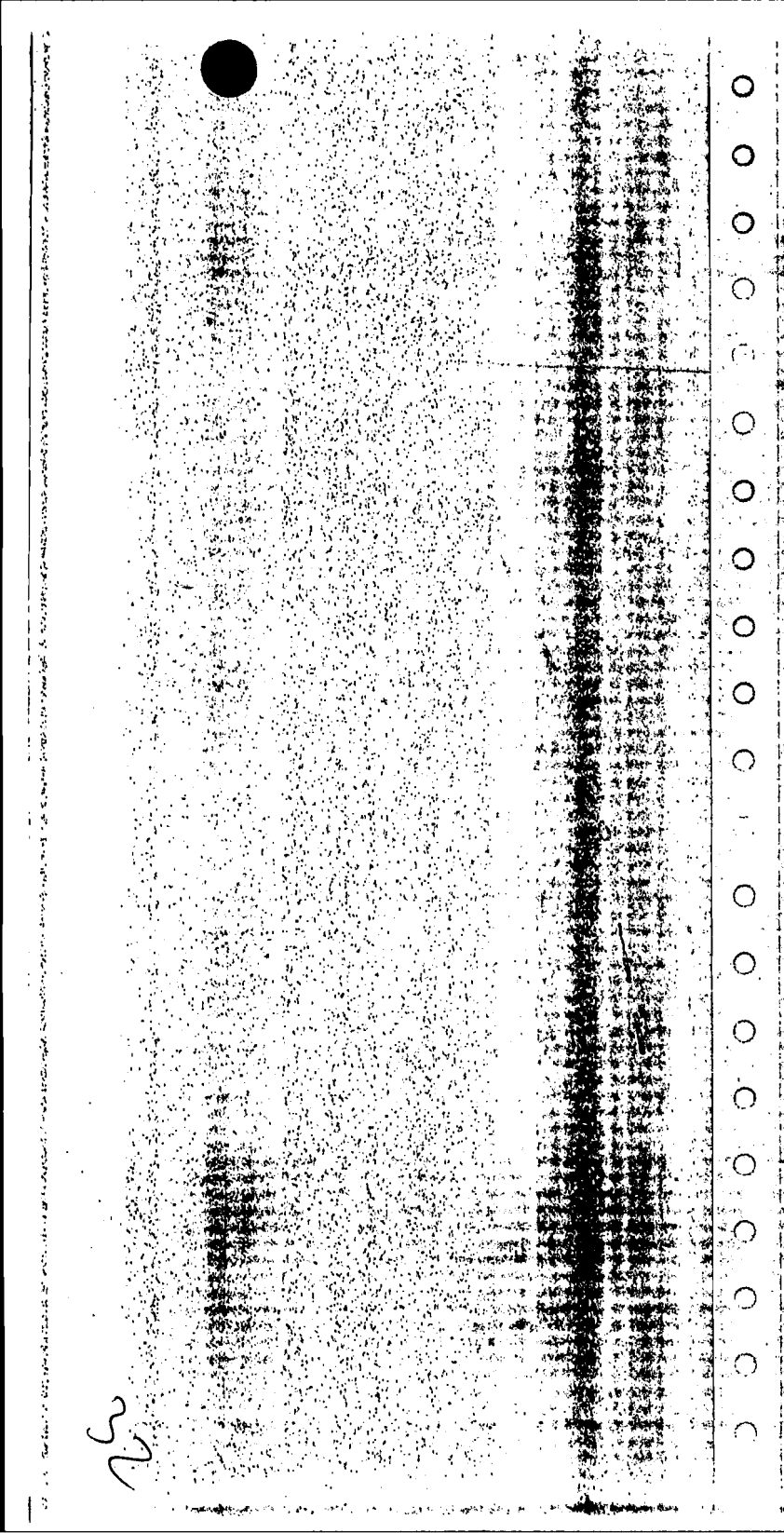
Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0343	-.0259	.0376	-.00009	.0005	.0223	.1012
SDev	.0039	.0070	.0634	.00019	.0008	.0179	.0008
%RSD	11.34	26.95	168.6	211.64	170.6	80.08	.8127
#1	.0316	-.0210	.0824	.00004	.0011	.0350	.1018
#2	.0371	-.0309	-.0072	-.00022	-.0001	.0097	.1006

Elem	Zn2138	Zr3438
Avge	.0416	.00273
SDev	.0003	.00134
%RSD	.7092	49.173
#1	.0418	.00367
#2	.0413	.00178

Method: EMS Sample Name: HMCS Operator: AH
Run Time: 06/22/98 08:50:21
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	1.987	9.941	10.11	10.03	9.7680	10.093	.0117
SDev	.014	.046	.03	.06	.0462	.057	.0000
%RSD	.7074	.4623	.2574	.5922	.47324	.56219	.0000
#1	1.997	9.973	10.12	10.07	9.8007	10.133	.0117
#2	1.977	9.908	10.09	9.985	9.7353	10.053	.0117

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	10.06	10.08	10.04	9.887	9.996	.0324	9.826
SDev	.05	.07	.06	.046	.050	.0673	.034
%RSD	.4771	.6696	.6401	.4668	.4979	207.6	.3507
#1	10.09	10.12	10.08	9.920	10.03	-.0152	9.802



#2	10.02	10.03	9.993	9.854	9.961	.0801	9.850

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0004	10.026	-.0122	.0201	10.03	10.00	-.0409
SDev	.0042	.058	.0023	.0071	.07	.14	.0074
%RSD	938.2	.57744	18.62	35.36	.6941	1.377	18.01
#1	.0034	10.066	-.0106	.0252	10.08	10.10	-.0357
#2	-.0025	9.9846	-.0138	.0151	9.983	9.904	-.0461

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	10.03	.4913	-2.629	9.8491	-.0003	9.857	9.946
SDev	.05	.0106	.029	.0423	.0024	.063	.055
%RSD	.4918	2.165	1.115	.42914	740.6	.6385	.5530
#1	10.07	.4838	-2.608	9.8790	.0014	9.901	9.985
#2	9.997	.4988	-2.650	9.8192	-.0020	9.812	9.907

Elem	Zn2138	Zr3438
Avge	10.01	9.9107
SDev	.02	.0427
%RSD	.2078	.43087
#1	10.03	9.9409
#2	9.997	9.8805

Method: EMS Sample Name: ICS Operator: AH
Run Time: 06/22/98 08:53:04
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.2026	464.0	.1622	.0116	.46237	.44209	470.0
SDev	.0019	.6	.0452	.0032	.00047	.00097	1.7
%RSD	.9438	.1252	27.87	27.08	.10264	.21928	.3707
#1	.2039	463.5	.1302	.0094	.46270	.44140	468.7
#2	.2012	464.4	.1941	.0139	.46203	.44278	471.2

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.8966	.4452	.4434	.4703	175.4	-.0492	.0207
SDev	.0049	.0005	.0012	.0015	.7	.0318	.0049
%RSD	.5470	.1205	.2712	.3221	.3989	64.69	23.67
#1	.8931	.4448	.4426	.4692	175.0	-.0267	.0242
#2	.9000	.4456	.4443	.4713	175.9	-.0717	.0173

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	490.5	.44266	.0156	.0173	.8735	.9600	.5536
SDev	1.0	.00157	.0074	.0047	.0113	.0351	.0099
%RSD	.2050	.35424	47.17	27.37	1.289	3.658	1.781
#1	489.8	.44155	.0104	.0140	.8655	.9848	.5466
#2	491.2	.44376	H.0208	.0207	.8815	.9351	.5605

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924

Avge	.0609	.0694	H.2743	-.00063	-.0076	.2312	.4593
SDev	.0283	.0027	.1043	.00023	.0006	.0221	.0019
%RSD	46.40	3.930	38.01	36.735	8.035	9.539	.4254
#1	.0409	.0675	H.2006	-.00047	-.0071	.2468	.4580
#2	.0809	.0713	H.3480	-.00079	-.0080	.2156	.4607

Elem	Zn2138	Zr3438
Avge	.9340	.00333
SDev	.0076	.00022
%RSD	.8085	6.6177
#1	.9287	.00349
#2	.9394	.00318

Method: EMS Sample Name: ICS-A Operator: AH
Run Time: 06/22/98 08:55:49
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0016	458.8	.0897	.0059	.00436	.00012	463.9
SDev	.0006	.3	.0573	.0013	.00000	.00003	1.0
%RSD	40.44	.0752	63.89	21.33	.00844	28.569	.2159
#1	.0011	459.0	H.1302	.0068	.00436	.00014	464.6
#2	.0020	458.6	.0492	.0050	.00436	.00010	463.2

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0072	-.0000	.0008	-.0022	173.4	-.0816	.0068
SDev	.0017	.0011	.0005	.0000	.2	.0229	.0049
%RSD	22.97	15530	64.06	.1954	.1302	28.10	72.72
#1	.0061	.0008	.0004	-.0022	173.5	-.0654	.0103
#2	.0084	-.0008	.0012	-.0022	173.2	-.0978	.0033

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	487.9	-.00452	.0064	.0274	-.0057	.0275	-.0234
SDev	.2	.00040	.0165	.0016	.0029	.0301	.0182
%RSD	.0446	8.7897	255.8	5.772	50.86	109.8	77.62
#1	488.1	-.00480	.0181	.0285	-.0037	.0061	-.0106
#2	487.8	-.00423	.0052	.0263	-.0078	.0488	L-.0363

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0267	.0687	H.2937	-.00107	-.0081	.1386	.0035
SDev	.0735	.0058	.0034	.00002	.0001	.0304	.0012
%RSD	275.7	8.414	1.145	2.2512	1.816	21.91	34.38
#1	.0786	.0646	H.2960	-.00108	-.0080	.1171	.0044
#2	-.0253	.0728	H.2913	-.00105	-.0082	.1600	.0027

Elem	Zn2138	Zr3438
Avge	.0060	.00469
SDev	.0009	.00134
%RSD	15.35	28.646

#1	.0066	.00374
#2	.0053	.00564

Method: EMS Sample Name: CCV Operator: AH
Run Time: 06/22/98 08:58:26
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.9795	4.960	4.947	4.921	4.7671	4.7807	48.48
SDev	.0052	.141	.038	.001	.0024	.0031	.14
%RSD	.5340	2.851	.7779	.0294	.04974	.06452	.2881
#1	.9832	4.860	4.920	4.922	4.7654	4.7785	48.38
#2	.9758	5.060	4.974	4.920	4.7687	4.7829	48.58

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	4.871	4.855	4.875	4.806	4.834	49.67	4.852
SDev	.010	.013	.000	.001	.051	.15	.020
%RSD	.2049	.2723	.0079	.0248	1.060	.3099	.4058
#1	4.864	4.864	4.875	4.806	4.798	49.78	4.866
#2	4.878	4.846	4.876	4.807	4.870	49.56	4.838

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	48.85	4.8658	.9554	48.49	4.828	4.886	.9461
SDev	.13	.0008	.0021	.05	.001	.019	.0020
%RSD	.2721	.01634	.2147	.0995	.0149	.3923	.2131
#1	48.76	4.8663	.9539	48.45	4.829	4.900	.9446
#2	48.95	4.8652	.9568	48.52	4.828	4.873	.9475

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	4.957	5.052	L3.525	4.7709	4.786	4.839	4.850
SDev	.048	.002	.145	.0000	.005	.022	.002
%RSD	.9592	.0365	4.105	.00007	.1070	.4532	.0341
#1	4.924	5.053	L3.423	4.7709	4.783	4.855	4.849
#2	4.991	5.051	L3.627	4.7709	4.790	4.824	4.851

Elem	Zn2138	Zr3438
Avge	4.907	4.8396
SDev	.018	.0009
%RSD	.3594	.01954
#1	4.919	4.8389
#2	4.894	4.8402

Method: EMS Sample Name: BLA01 Operator: AH
Run Time: 06/22/98 09:01:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179

Avge	.0017	.0218	.0326	.0085	.00084	.00088	.0285
SDev	.0010	.0218	.0006	.0006	.00024	.00028	.0189
%RSD	58.48	99.71	1.892	7.376	28.311	31.375	66.55
#1	.0023	.0064	.0330	.0080	.00101	.00069	.0151
#2	.0010	.0373	.0321	.0089	.00067	.00108	.0418

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0005	-.0031	.0041	.0015	.0107	.0382	.0070
SDev	.0032	.0022	.0005	.0003	.0114	.0311	.0098
%RSD	663.6	70.45	11.53	19.99	106.7	81.37	141.4
#1	-.0018	-.0047	.0038	.0017	.0026	.0602	.0000
#2	.0028	.0016	.0045	.0013	.0187	.0162	.0139

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0329	.00112	.0024	.0403	-.0041	-.0180	.0128
SDev	.0352	.00040	.0035	.0103	.0019	.0200	.0167
%RSD	106.9	35.236	149.2	25.53	47.07	110.7	130.5
#1	.0081	.00084	.0049	.0475	-.0054	-.0322	.0245
#2	.0578	.00140	-.0001	.0330	-.0027	-.0039	.0010

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0155	-.0101	.0279	.00103	.0029	-.0083	.0004
SDev	.0347	.0014	.0137	.00025	.0011	.0132	.0004
%RSD	223.4	13.41	49.05	24.568	38.64	160.5	101.8
#1	.0401	-.0092	.0376	.00085	.0037	-.0176	.0001
#2	-.0090	-.0111	.0182	.00121	.0021	.0011	.0006

Elem	Zn2138	Zr3438
Avge	.0007	.00325
SDev	.0003	.00038
%RSD	44.89	11.779
#1	.0005	.00298
#2	.0009	.00352

Method: IDLE Sample Name: Q850609 BLA02 Operator: AH
Run Time: 06/22/98 09:04:13
Comment:
Mode: CONC Corr. Factor: 1

WRONG PUMP SPEED 06/22/98 CH

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0100	.0230	.0149	-.0067	.00035	.00015	.0422
SDev	.0018	.0034	.0020	.0017	.00024	.00003	.0024
%RSD	18.45	14.64	13.31	25.40	70.650	23.311	5.657
#1	.0087	.0206	.0164	-.0055	.00017	.00013	.0405
#2	.0113	.0254	.0135	-.0079	.00052	.00018	.0439

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0022	.0032	-.0028	-.0019	.0122	-.0348	-.0036
SDev	.0019	.0017	.0013	.0003	.0001	.0077	.0253
%RSD	87.11	53.21	45.58	15.61	1.082	22.10	707.3

Elem	Zn2138	Zr3438
Avge	.0187	.00406
SDev	.0002	.00115
%RSD	1.8716	28.379
#1	.0188	.00488
#2	.0185	.00325

Method: EMS Sample Name: CCV Operator: AH

Run Time: 06/22/98 13:28:43

Comment:

Mode: CONC Conc Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	[illegible]
Avge	4.913	4.905	4.990	4.952	4.8588	4.8298	17.81
SDev	.001	.004	.025	.023	.0197	.0119	.07
%RSD	.1159	.0803	.5038	.4599	.40494	.21606	.1[illegible]
#1	4.914	4.902	5.008	4.936	4.8448	4.8211	17.77
#2	4.912	4.908	4.972	4.968	4.8727	4.8382	17.85

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	[illegible]
Avge	4.834	4.856	4.833	4.853	4.731	50.49	1.071
SDev	.010	.004	.006	.017	.014	.11	.004
%RSD	.2114	.0798	.1207	.3518	.2995	.2110	1.089
#1	4.826	4.859	4.829	4.841	4.721	50.42	1.068
#2	4.841	4.853	4.837	4.865	4.741	50.57	1.073

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb[illegible]	[illegible]
Avge	49.05	4.8464	.9551	48.96	4.847	4.852	.9167
SDev	.11	.0107	.0052	.18	.005	.025	.[illegible]
%RSD	.2259	.22087	.5415	.3666	.1034	.5119	.[illegible]
#1	48.97	4.8389	.9514	48.84	4.851	4.870	.[illegible]
#2	49.12	4.8540	.9588	49.09	4.844	4.835	.[illegible]

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl[illegible]	V_[illegible]
Avge	4.962	5.215	L3.494	4.8175	4.786	4.801	1.[illegible]
SDev	.011	.003	.031	.0189	.003	.019	.[illegible]
%RSD	.2282	.0512	.8917	.39138	.0680	.4037	.1867
#1	4.970	5.213	L3.516	4.8042	4.784	1.815	1.[illegible]
#2	4.954	5.217	L3.472	4.8308	4.789	1.788	1.[illegible]

Elem	Zn2138	Zr3438
Avge	4.915	4.8561
SDev	.003	.0142
%RSD	.0522	.29228
#1	4.916	4.8461
#2	4.913	4.8662

Method: EMS Sample Name: BLA01 Operator: AH

Run Time: 06/22/98 13:31:17
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag1280	Al3082	As1936	B_2496	Ba4934	Be3130	
Avge	0032	.0055	.0442	.0071	.00084	.00078	
SDev	0003	.0067	.0127	.0013	.00024	.00007	
%RSD	12.48	122.0	28.69	17.67	28.318	8.8329	
#1	0034	.0103	.0352	.0080	.00067	.00074	
#2	0029	.0008	.0532	.0062	.00101	.00083	

Elem	Cd2265	Cr2286	Cr2677	Cu3247	Fe2599	K_7664	
Avge	0003	.0008	.0033	.0004	.0006	.0031	
SDev	0000	.0000	.0007	.0006	.0005	.0215	
%RSD	07.11	3620	21.39	142.6	80.97	683.5	
#1	0003	.0008	.0038	.0008	.0003	.0183	
#2	0003	.0008	.0028	-.0000	.0010	-.0120	

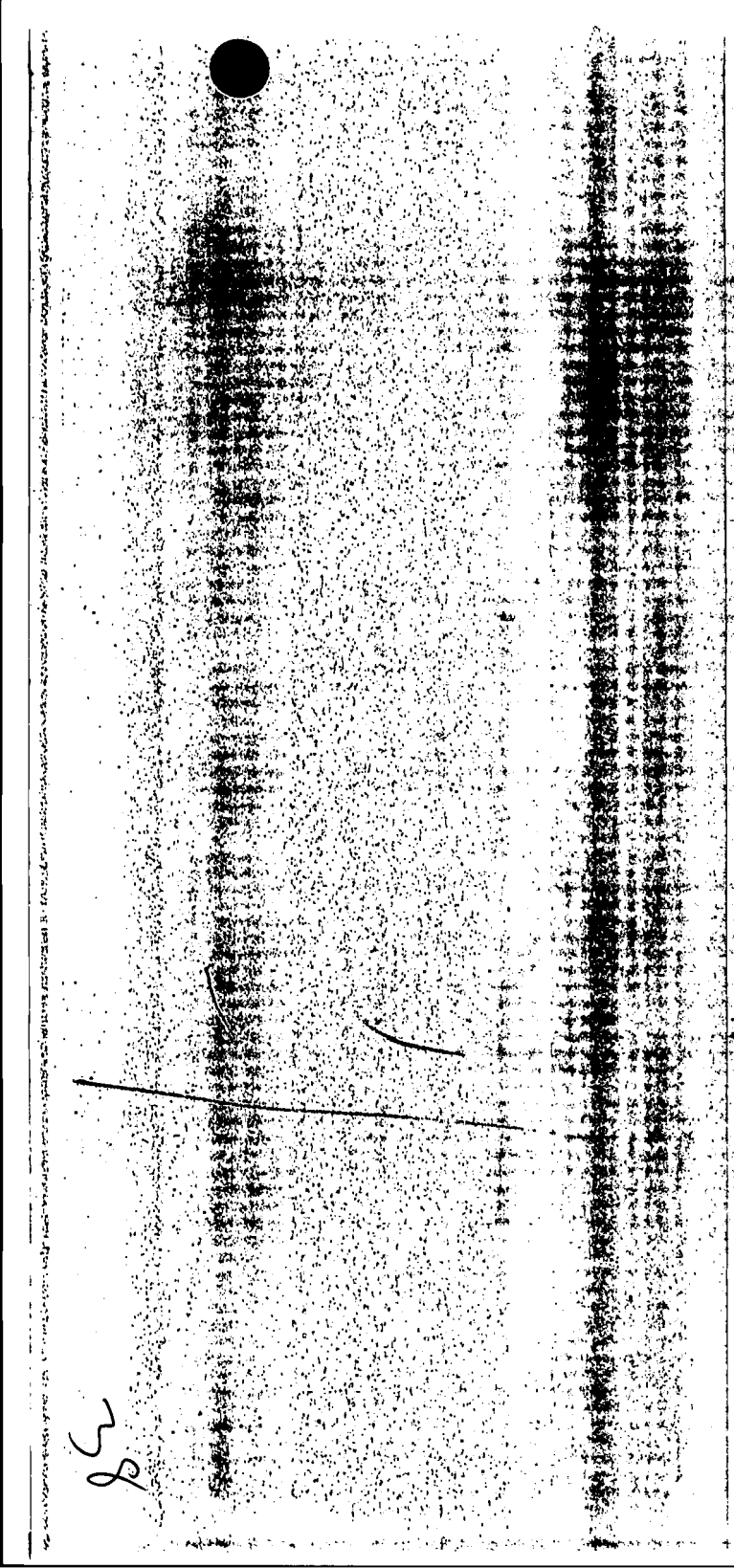
Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	
Avge	0271	.00112	.0044	.0207	-.0057	-.0233	
SDev	0046	.00040	.0002	.0032	.0014	.0005	
%RSD	17.12	35.327	4.750	15.29	24.97	2.172	
#1	0238	.00084	.0046	.0229	-.0067	-.0239	
#2	0304	.00140	.0043	.0185	-.0047	-.0227	

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	
Avge	0115	.0181	.0092	.00103	.0012	.0339	
SDev	0028	.0212	.0540	.00000	.0012	.0170	
%RSD	24.60	117.1	585.2	.00665	103.1	50.16	
#1	0095	.0331	.0474	.00103	.0020	.0218	
#2	0135	.0031	-.0289	.00103	.0003	.0159	

Elem	Zn2138	Zr3438
Avge	0001	.00190
SDev	0001	.00038
%RSD	113.4	20.082
#1	0000	.00217
#2	0002	.00163

Method: EMS Sample Name: Q850573 BLA02 Operator: AH
Run Time: 06/22/98 13:33:50
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba1931	Be3130	
Avge	0044	.0179	.0229	H.0540	.00066	.00012	
SDev	0006	.0181	.0111	.0021	.00000	.00003	
%RSD	13.21	101.5	48.35	3.877	.03706	27.511	
#1	.0048	.0307	.0307	H.0555	.00066	.00015	
#2	.0040	.0050	.0151	H.0525	.00066	.00010	



Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0012	.0012	.0027	.0008	.0109	.1245	.0035
SDev	.0013	.0027	.0034	.0024	.0023	.0437	.0019
%RSD	103.8	237.2	123.5	283.9	21.02	35.06	111.4
#1	.0021	.0031	.0051	.0025	.0126	.1554	.0070
#2	.0003	-.0008	.0003	-.0009	.0093	.0937	.0000

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0217	.00056	.0012	H.2114	.0017	-.0014	.0128
SDev	.0009	.00040	.0001	.0103	.0000	.0325	.0065
%RSD	4.222	70.778	5.009	4.864	.0945	2293.	50.41
#1	.0211	.00084	.0013	H.2187	.0017	-.0244	.0082
#2	.0224	.00028	.0012	H.2041	.0017	.0215	.0174

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0236	.0792	.1089	.00031	.0025	-.0198	-.0001
SDev	.0113	.0031	.0962	.00000	.0006	.0442	.0012
%RSD	48.13	3.878	88.40	.06260	23.51	223.6	2300.
#1	.0155	.0770	.1769	.00031	.0029	-.0510	.0008
#2	.0316	.0813	.0408	.00031	.0021	.0115	-.0009

Elem	Zn2138	Zr3438
Avge	H.0766	.00379
SDev	.0003	.00268
%RSD	.4144	70.734
#1	H.0768	.00569
#2	H.0764	.00189

Method: EMS Sample Name: Q850572 LCS Operator: All
Run Time: 06/22/98 13:36:24
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.4995	18.74	18.85	.9590	19.060	.46020	91.82
SDev	.0009	.01	.01	.0098	.016	.00031	.32
%RSD	.1911	.0348	.0342	1.027	.08584	.06692	.3155
#1	.5002	18.73	18.84	.9520	19.072	.46004	91.60
#2	.4989	18.74	18.85	.9660	19.049	.46048	92.05

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.4575	4.636	1.855	2.389	9.109	98.43	1.006
SDev	.0024	.012	.010	.004	.016	.06	.005
%RSD	.5328	.2488	.5353	.1504	.1795	.0579	.4893
#1	.4558	4.628	1.848	2.387	9.098	98.39	1.003
#2	.4592	4.644	1.862	2.392	9.121	98.47	1.010

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	94.14	4.6575	.9326	105.3	4.583	4.700	1.791
SDev	.10	.0079	.0003	.1	.007	.048	.051

%RSD	.1076	.17022	.0289	.0826	.1510	1.011	1.142
#1	94.07	4.6519	.9328	105.3	4.578	4.667	1.663
#2	94.21	4.6631	.9324	105.2	4.588	4.734	1.739

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	19.20	9.957	L-.3201	.93666	.9319	19.56	4.680
SDev	.06	.036	.0126	.00032	.0050	.04	.005
%RSD	.2991	.3575	3.942	.03460	.5414	.2279	.1069
#1	19.16	9.932	L-.3290	.93689	.9283	19.59	4.676
#2	19.24	9.982	L-.3112	.93643	.9355	19.53	4.683

Elem	Zn2138	Zr3438
Avge	4.680	.94184
SDev	.005	.00252
%RSD	.1088	.26743
#1	4.677	.94006
#2	4.684	.94362

Method: EMS Sample Name: A444782 1:5 Operator: AH
Run Time: 06/22/98 13:38:58
Comment:
Mode: CONC Corr. Factor: 1

SD

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	-.0001	.0072	.0528	.0194	.00721	.00015	1.786
SDev	.0037	.0083	.0086	.0002	.00213	.00014	.033
%RSD	2486.	115.2	16.29	1.073	29.611	93.311	.6925
#1	.0025	.0013	.0467	.0196	.00570	.00005	1.762
#2	-.0028	.0131	.0588	.0193	.00871	.00025	1.809

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0007	-.0012	.0014	-.0017	.0364	.0822	.0000
SDev	.0005	.0006	.0005	.0000	.0010	.0148	.0197
%RSD	71.27	47.03	37.42	.0500	2.806	18.02	2813000.
#1	.0003	-.0008	.0018	-.0017	.0357	.0717	-.0139
#2	.0010	-.0016	.0011	-.0017	.0371	.0926	.0139

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	1.342	.01343	.0031	.5273	-.0049	-.0018	.0119
SDev	.008	.00119	.0005	.0032	.0002	.0070	.0010
%RSD	.6242	8.8570	16.99	.5999	4.821	397.6	33.13
#1	1.336	.01259	.0027	.5251	-.0047	-.0067	.0117
#2	1.348	.01427	.0035	.5296	-.0051	.0032	.0091

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2921
Avge	.0359	.9521	.0435	.00731	-.0005	.0199	-.0003
SDev	.0167	.0028	.0178	.00032	.0011	.0300	.0011
%RSD	46.46	.2946	40.84	4.3158	223.5	150.5	418.4
#1	.0476	.9501	.0309	.00709	.0003	.0112	-.0010

#2	.0241	.9541	.0561	.00754	-.0013	-.0013	.0005

Elem	Zn2138	Zr3438
Avge	.0052	.00383
SDev	.0013	.00000
%RSD	24.53	.10193
#1	.0043	.00383
#2	.0061	.00383

Method: EMS Sample Name: A444782 Operator: AH
Run Time: 06/22/98 13:41:31
Comment:
Mode: CONC Corr. Factor: 1

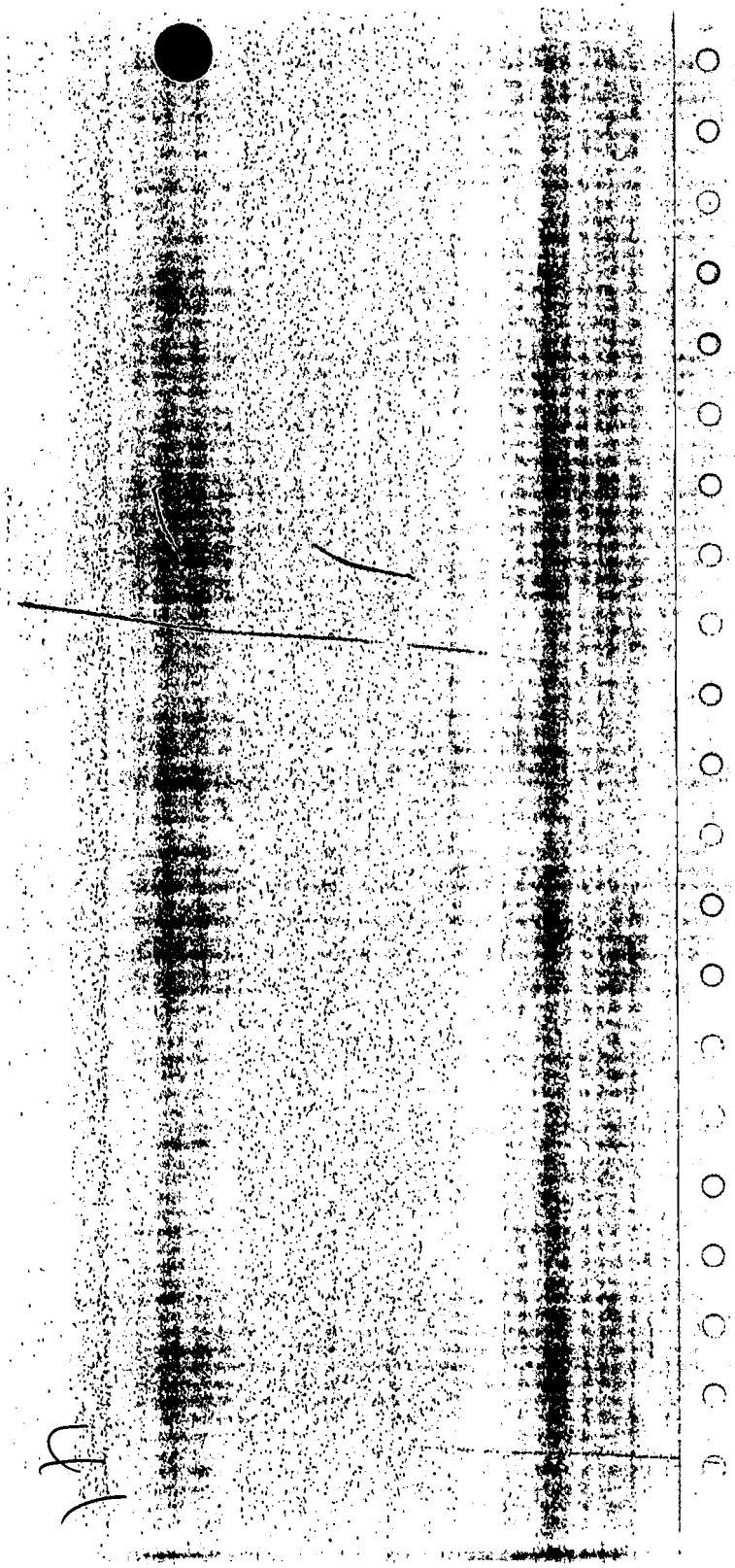
Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0029	.0335	.0291	.0766	.02044	-.00000	23.53
SDev	.0002	.0052	.0457	.0008	.00000	.00014	.02
%RSD	6.832	15.36	157.1	1.097	.00142	13276.	.1006
#1	.0030	.0372	.0614	.0760	.02044	.00010	23.51
#2	.0027	.0299	-.0032	.0772	.02044	-.00010	23.51

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0016	.0004	.0164	.0028	.1620	.5531	.0174
SDev	.0016	.0005	.0012	.0003	.0015	.0104	.0118
%RSD	100.2	146.6	7.259	10.83	.9460	1.873	81.84
#1	.0028	.0008	.0155	.0030	.1631	.5458	.0278
#2	.0005	-.0000	.0172	.0025	.1610	.5604	.0070

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	6.489	.06099	.0034	2.414	.0054	.0078	-.0061
SDev	.015	.00040	.0010	.005	.0038	.0065	.0025
%RSD	.2296	.64995	30.90	.1966	70.44	82.89	41.18
#1	6.500	.06127	.0042	2.418	.0081	.0032	-.0044
#2	6.479	.06071	.0027	2.411	.0027	.0124	-.0079

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0177	4.755	.0378	.03527	.0020	.0241	.0017
SDev	.0209	.034	.0353	.00000	.0006	.0592	.0001
%RSD	117.9	.7155	93.19	.00169	29.82	245.0	5.391
#1	-.0029	4.779	.0628	.03527	.0024	.0660	.0018
#2	-.0325	4.731	.0129	.03527	.0016	-.0177	.0017

Elem	Zn2138	Zr3438
Avge	.0191	.00412
SDev	.0005	.00096
%RSD	2.430	23.265
#1	.0194	.00480
#2	.0188	.00344



Method: EMS Sample Name: Q850574 SPI02 Operator: AH
Run Time: 06/22/98 13:44:05
Comment:
Mode: CONC Corr. Factor: 1

A444782

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0491	2.715	1.996	1.044	1.9558	.04726	116.0
SDev	.0002	.025	.006	.004	.0121	.00041	.6
%RSD	.3554	.9153	.2890	.4110	.61820	.87688	.5161
#1	.0492	2.698	2.000	1.041	1.9473	.04697	115.6
#2	.0490	2.733	1.992	1.047	1.9644	.04755	116.5

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0473	.4788	.1976	.2460	1.059	98.51	1.020
SDev	.0000	.0104	.0052	.0009	.006	.66	.015
%RSD	.0063	2.177	2.616	.3700	.5546	.6656	1.448
#1	.0474	.4714	.2013	.2466	1.055	98.04	1.009
#2	.0473	.4861	.1939	.2454	1.063	98.97	1.030

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sr2070
Avge	100.9	.53401	.9697	106.8	.4807	.4816	.5178
SDev	.8	.00395	.0073	.8	.0003	.0099	.0105
%RSD	.7453	.74001	.7531	.7397	.0540	2.063	1.909
#1	100.3	.53122	.9646	106.3	.4805	.4886	.5104
#2	101.4	.53681	.9749	107.4	.4809	.4746	.5252

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	1.964	15.01	-.0572	.98874	.9594	2.871	.1831
SDev	.027	.05	.0223	.00669	.0067	.022	.0027
%RSD	1.390	.3492	38.95	.67689	.6946	.7794	.5617
#1	1.945	14.98	-.0730	.98400	.9547	2.858	.1812
#2	1.983	15.05	-.0415	.99347	.9641	2.890	.1850

Elem	Zn2138	Zr3438
Avge	.5146	.97587
SDev	.0016	.00519
%RSD	.3114	.53160
#1	.5135	.97220
#2	.5157	.97954

Method: EMS Sample Name: Q850575 DPS02 Operator: AH
Run Time: 06/22/98 13:46:38
Comment:
Mode: CONC Corr. Factor: 1

A444782

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0510	2.041	2.052	1.033	2.0147	.04778	119.7
SDev	.0010	.007	.002	.002	.0057	.00007	.1
%RSD	1.899	.3567	.0766	.1829	.28245	.14594	.1117
#1	.0503	2.036	2.053	1.031	2.0106	.04783	119.7
#2	.0516	2.047	2.050	1.034	2.0187	.04771	119.7

#2	.0516	2.042	2.050	1.031	2.0187	.01773	[illegible]

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0498	.4893	.2031	.2501	1.097	102.1	.9885
SDev	.0005	.0011	.0008	.0024	.002	.2	.0197
%RSD	.9313	.2236	.4050	.9564	.1628	.1842	1.992
#1	.0495	.4901	.2037	.2518	1.096	101.9	1.002
#2	.0502	.4885	.2025	.2484	1.098	102.2	.9746

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	104.2	.54824	.9394	110.5	.4847	.4823	.5288
SDev	.1	.00040	.0018	.2	.0046	.0280	.0003
%RSD	.0632	.07261	.1889	.1968	.9385	5.801	.0504
#1	104.1	.54853	.9406	110.3	.4879	.5021	.5286
#2	104.2	.54796	.9381	110.7	.4815	.4626	.5290

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	1.978	14.13	-.0197	.96570	.9247	2.959	.1971
SDev	.010	.01	.0264	.00209	.0040	.123	.0006
%RSD	.4839	.0510	133.8	.21656	.4339	4.153	.1153
#1	1.985	14.12	-.0011	.96422	.9275	3.046	.1970
#2	1.971	14.13	-.0384	.96717	.9218	2.872	.1979

Elem	Zn2138	Zr3438
Avge	.5218	.93275
SDev	.0010	.00268
%RSD	.1884	.28687
#1	.5211	.93086
#2	.5225	.93464

Method: EMS Sample Name: CCV Operator: All
Run Time: 06/22/98 13:49:12
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba1934	Be3130	Ca3179
Avge	1.039	5.000	5.099	5.051	4.9558	4.9332	18.68
SDev	.002	.015	.018	.001	.0156	.0057	.05
%RSD	.2250	.2974	.3527	.0101	.31572	.11611	.0973
#1	1.040	4.989	5.112	5.051	4.9448	4.9372	18.71
#2	1.037	5.010	5.087	5.051	4.9669	4.9291	18.64

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	4.914	4.942	4.908	4.933	4.821	51.36	5.117
SDev	.005	.012	.005	.013	.003	.33	.010
%RSD	.1086	.2451	.1099	.2609	.0635	.6368	.1921
#1	4.910	4.950	4.912	4.924	4.819	51.13	5.121
#2	4.918	4.933	4.905	4.942	4.823	51.59	5.110

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	49.88	4.9277	.9767	49.78	4.923	4.938	.9951

SDev	.08	.0044	.0021	.15	.030	.019	.0091
%RSD	.1639	.08850	.2182	.3098	.6121	.3860	.9102
#1	49.83	4.9247	.9782	49.68	4.945	4.952	1.002
#2	49.94	4.9308	.9752	49.89	4.902	4.925	.9890

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	T11908	V_2924
Avge	5.059	5.257	L3.600	4.9139	4.871	4.914	4.919
SDev	.021	.034	.079	.0189	.010	.058	.010
%RSD	.4138	.6475	2.202	.38504	.2146	1.181	.1993
#1	5.044	5.281	L3.656	4.9005	4.864	4.955	4.912
#2	5.074	5.233	L3.544	4.9273	4.878	4.873	4.956

Elem	Zn2138	Zr3438
Avge	4.975	4.9472
SDev	.008	.0082
%RSD	.1557	.16645
#1	4.981	4.9414
#2	4.970	4.9531

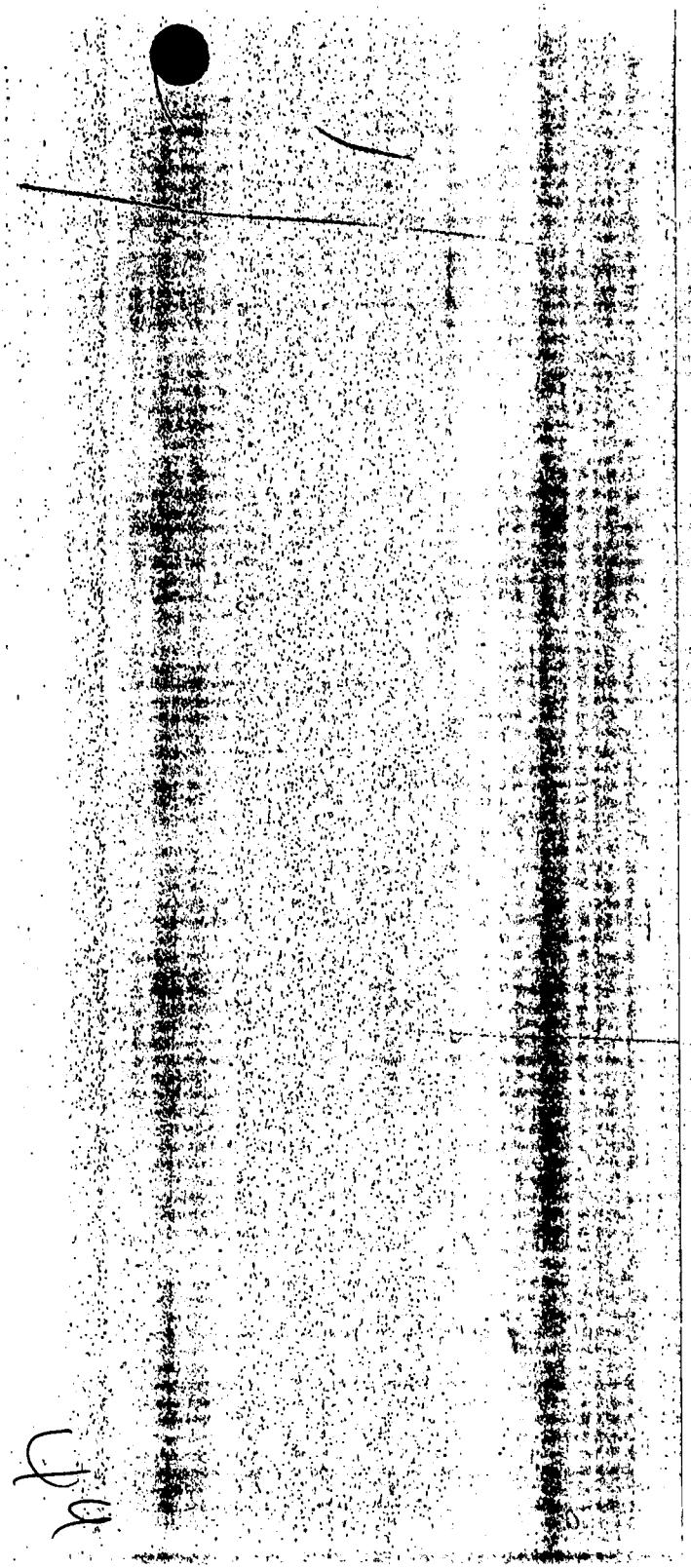
Method: EMS Sample Name: BLA01 Operator: AH
Run Time: 06/22/98 13:51:46
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0006	-.0060	.0198	.0074	.00067	.00103	.0181
SDev	.0010	.0032	.0107	.0013	.00000	.00028	.0095
%RSD	176.6	52.93	54.05	17.00	.00839	26.970	51.13
#1	-.0001	-.0037	.0122	.0065	.00067	.00083	.0117
#2	.0012	-.0082	.0273	.0083	.00067	.00123	.0251

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0022	.0008	.0012	-.0015	.0012	-.0502	.0191
SDev	.0027	.0011	.0025	.0003	.0003	.0022	.0118
%RSD	120.5	143.0	215.8	20.09	21.70	4.419	111.1
#1	.0003	.0016	.0030	-.0013	.0010	-.0518	.0000
#2	.0041	-.0000	-.0006	-.0017	.0014	-.0487	.0209

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0160	.00140	.0057	.0319	-.0003	-.0286	-.0077
SDev	.0075	.00079	.0013	.0206	.0014	.0350	.0067
%RSD	46.83	56.536	23.03	64.51	449.4	122.3	87.14
#1	.0107	.00084	.0048	.0173	.0007	-.0039	-.0030
#2	.0212	.00196	.0066	.0464	-.0013	L-.0533	-.0125

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	T11908	V_2924
Avge	.0196	.0090	.0134	.00094	.0012	.0023	-.0002
SDev	.0284	.0115	.0467	.00025	.0013	.0592	.0001
%RSD	145.0	127.6	349.3	26.923	116.0	2526.	220.2



#1	.0396	.0171	-.0196	.00076	.0021	.0442	.0001
#2	-.0005	.0009	.0463	.00112	.0002	-.0395	-.0005

Elem	Zn2138	Zr3438
Avge	.0014	.00150
SDev	.0003	.00134
%RSD	23.06	89.708
#1	.0016	.00055
#2	.0011	.00244

Method: EMS Sample Name: A444783 Operator: AH

Run Time: 06/22/98 13:54:20

Comment:

Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	-.0012	.0308	.0164	.1420	.02814	.00042	31.57
SDev	.0060	.0028	.0218	.0011	.00000	.00017	.17
%RSD	507.0	8.959	132.7	.7443	.00066	40.951	.4793
#1	-.0055	.0289	.0010	.1428	.02814	.00030	31.69
#2	.0031	.0328	.0318	.1413	.02814	.00054	31.45

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0004	.0008	-.0002	-.0006	.3800	4.442	.0035
SDev	.0001	.0044	.0053	.0027	.0010	.027	.0118
%RSD	31.80	573.4	2447.	431.2	.2694	.5997	123.1
#1	.0004	-.0023	-.0040	-.0025	.3808	4.461	-.0070
#2	.0003	.0039	.0035	.0013	.3793	4.423	.0139

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	8.216	.08029	.0018	2.251	-.0056	-.0212	.0038
SDev	.045	.00000	.0016	.004	.0012	.0010	.0011
%RSD	.5432	.00122	87.18	.1756	21.42	4.230	27.97
#1	8.247	.08029	.0029	2.254	-.0064	-.0249	.0030
#2	8.184	.08030	.0007	2.249	-.0047	-.0234	.0045

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0011	4.671	-.0206	.07058	-.0001	-.0125	-.0016
SDev	.0018	.000	.0399	.00031	.0011	.0592	.0021
%RSD	157.6	.0013	193.5	.44262	1298.	473.2	119.3
#1	-.0024	4.671	-.0489	.07080	-.0009	.0293	.0032
#2	.0001	4.671	.0076	.07036	.0007	-.0543	.0001

Elem	Zn2138	Zr3438
Avge	.0218	.00268
SDev	.0018	.00000
%RSD	8.107	.05730
#1	.0231	.00268
#2	.0206	.00269

Method: EMS Sample Name: A444784 Operator: All
Run Time: 06/22/98 13:56:54
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0004	.0384	.0213	.0803	.07156	.00010	51.00
SDev	.0002	.0032	.0137	.0023	.00024	.00007	.21
%RSD	47.39	8.296	64.34	2.877	.33160	69.870	.3811
#1	.0003	.0362	.0116	.0819	.07139	.00005	51.11
#2	.0005	.0407	.0310	.0786	.07173	.00015	50.85

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0000	-.0000	.0017	.0002	.5020	.6855	.0105
SDev	.0003	.0000	.0049	.0015	.0020	.0747	.0049
%RSD	1474.	6.100	292.7	671.8	.4073	10.90	47.10
#1	.0003	-.0000	-.0018	-.0008	.5035	.6326	.0070
#2	-.0002	-.0000	.0052	.0013	.5006	.7383	.0139

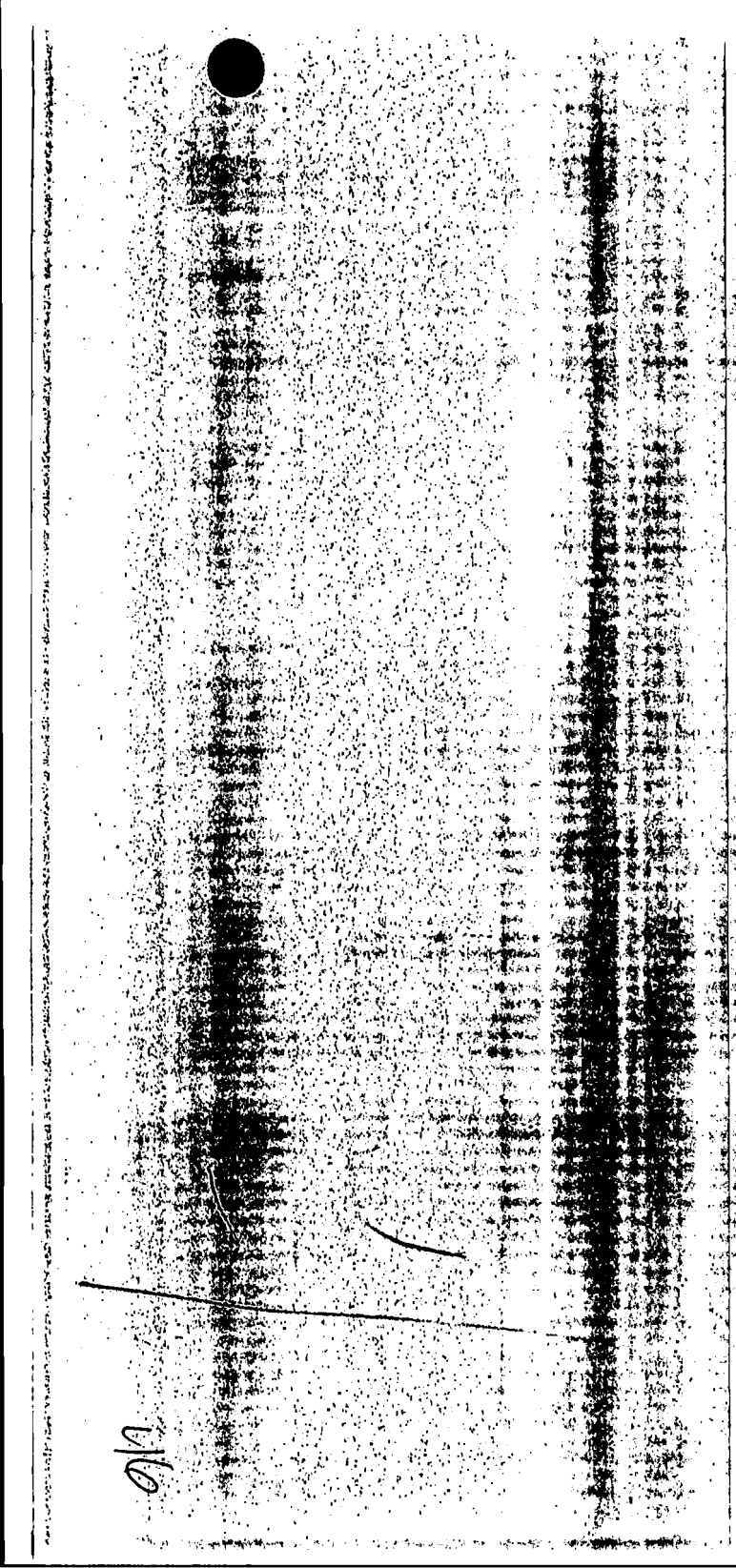
Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	9.713	.18175	.0044	4.185	.0017	-.0199	.0092
SDev	.034	.00159	.0021	.025	.0043	.0050	.0023
%RSD	.3546	.87228	46.86	.6048	247.9	25.09	21.51
#1	9.738	.18287	.0058	4.203	-.0013	-.0234	.0108
#2	9.689	.18063	.0029	4.167	.0048	-.0163	.0076

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2024
Avge	.0057	7.489	.0132	.10211	.0004	-.0321	.0006
SDev	.0199	.053	.0162	.00012	.0006	.0356	.0010
%RSD	349.1	.7025	122.5	.11908	164.1	111.2	152.2
#1	.0197	7.527	.0018	.10219	-.0001	-.0069	-.0000
#2	-.0084	7.452	.0246	.10202	.0008	-.0573	.0013

Elem	Zn2138	Zr3438
Avge	.0385	.00234
SDev	.0016	.00058
%RSD	4.116	24.769
#1	.0373	.00275
#2	.0396	.00193

Method: EMS Sample Name: A444785 Operator: All
Run Time: 06/22/98 13:59:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0014	.0363	.0329	.2506	.11689	.00012	72.93
SDev	.0004	.0052	.0116	.0030	.00024	.00003	.01
%RSD	27.12	14.24	35.35	1.212	.16127	28.367	.0519



#1	.0017	.0400	.0412	.2527	.14672	.00015	72.95
#2	.0012	.0327	.0247	.2484	.14705	.00010	72.90

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0001	-.0005	.0027	.0013	1.130	1.269	.0209
SDev	.0006	.0038	.0054	.0018	.000	.021	.0098
%RSD	504.5	836.0	204.3	138.3	.0340	1.633	17.09
#1	.0005	.0023	.0065	.0026	1.130	1.284	.0139
#2	-.0003	-.0032	-.0012	.0000	1.130	1.254	.0279

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Pb2068
Avge	23.77	.03962	.0056	9.991	.0004	-.0019	.0052
SDev	.01	.00079	.0011	.012	.0038	.0070	.0081
%RSD	.0271	2.0019	20.20	.1187	1060.	377.2	155.3
#1	23.76	.04018	.0064	9.983	.0031	.0031	-.0109
#2	23.77	.03906	.0048	9.999	-.0024	-.0068	.0005

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0096	7.985	.1335	.69056	.0019	.0087	-.0001
SDev	.0170	.072	.1929	.00101	.0021	.0191	.0000
%RSD	176.6	.8959	144.5	.14675	108.6	218.6	19.99
#1	.0217	8.035	-.0029	.68984	.0034	.0222	-.0000
#2	.0024	7.934	.2700	.69128	.0004	-.0048	-.0001

Elem	Zn2138	Zr3438
Avge	.0182	.00576
SDev	.0003	.00230
%RSD	1.859	39.981
#1	.0180	.00738
#2	.0184	.00413

Method: EMS Sample Name: A444786 Operator: All
Run Time: 06/22/98 14:02:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0030	.0926	.0241	.4714	.03409	.00007	60.81
SDev	.0027	.0124	.0040	.0027	.00047	.00003	.21
%RSD	89.95	13.42	16.54	.5779	1.3903	45.945	.3465
#1	.0050	.1014	.0269	.4734	.03442	.00010	60.96
#2	.0011	.0838	.0213	.4695	.03375	.00005	60.66

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0007	-.0035	.0050	.0034	.6571	3.310	.0070
SDev	.0007	.0027	.0009	.0018	.0006	.061	.0000
%RSD	93.63	78.00	17.17	52.79	.0977	1.817	.0002
#1	.0003	-.0016	.0057	.0047	.6566	3.383	.0070
#2	.0012	-.0055	.0044	.0021	.6575	3.297	.0070

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	16.47	.03892	.0025	9.337	.0049	-.0079	.0071
SDev	.06	.00040	.0015	.014	.0022	.0360	.0171
%RSD	.3557	1.0168	58.36	.1525	43.76	457.7	241.5
#1	16.51	.03920	.0035	9.347	.0064	.0176	.0192
#2	16.43	.03864	.0015	9.327	.0034	-.0333	-.0050

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0178	4.051	.0625	.35040	.0032	-.0027	.0000
SDev	.0092	.028	.0164	.00069	.0006	.0340	.0009
%RSD	51.70	.7007	26.22	.19718	18.59	1270.	1191.
#1	-.0113	4.071	.0741	.35089	.0036	.0214	.0006
#2	-.0243	4.031	.0509	.34991	.0028	-.0267	-.0006

Elem	Zn2138	Zr3438
Avge	.0908	.00781
SDev	.0003	.00096
%RSD	.3652	12.301
#1	.0906	.00848
#2	.0910	.00713

Method: EMS Sample Name: A444787 Operator: All
Run Time: 06/22/98 14:04:35
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0018	.0354	.0239	1.972	.23417	.00002	51.19
SDev	.0008	.0016	.0026	.001	.00119	.00004	.09
%RSD	43.40	4.558	10.74	.0636	.50626	148.35	.1717
#1	.0024	.0366	.0221	1.971	.23501	-.00000	51.56
#2	.0013	.0343	.0257	1.973	.23334	.00005	51.13

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0023	-.0005	.0042	.0034	.0152	8.366	.0318
SDev	.0021	.0039	.0003	.0018	.0014	.057	.0000
%RSD	90.98	767.4	6.122	52.99	9.261	.6811	.0001
#1	.0038	-.0032	.0044	.0047	.0162	8.406	.0318
#2	.0008	.0022	.0040	.0021	.0142	8.326	.0318

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	28.76	.00869	.0002	20.10	-.0019	-.0127	.0111
SDev	.00	.00000	.0012	.04	.0065	.0195	.0073
%RSD	.0064	.00014	494.4	.2125	347.0	153.1	65.96
#1	28.76	.00869	-.0006	20.13	-.0064	-.0265	.0165
#2	28.76	.00869	.0011	20.07	.0027	.0010	.0062

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	-.0158	3.694	.0398	.71962	.0036	-.0231	.0008
SDev	.0117	.033	.0102	.00088	.0031	.0071	.0015

%RSD	74.07	.8842	25.70	.12279	86.23	31.52	199.3
#1	-.0241	3.717	.0470	.72024	.0058	-.0182	.0019
#2	-.0075	3.671	.0326	.71900	.0014	-.0286	-.0003

Elem	Zn2138	Zr3438
Avge	.0203	.00625
SDev	.0005	.00038
%RSD	2.491	6.0790
#1	.0206	.00652
#2	.0199	.00598

Method: EMS Sample Name: A444788 Operator: All
Run Time: 06/22/98 14:07:10
Comment:
Mode: CONC Corr. Factor: 1

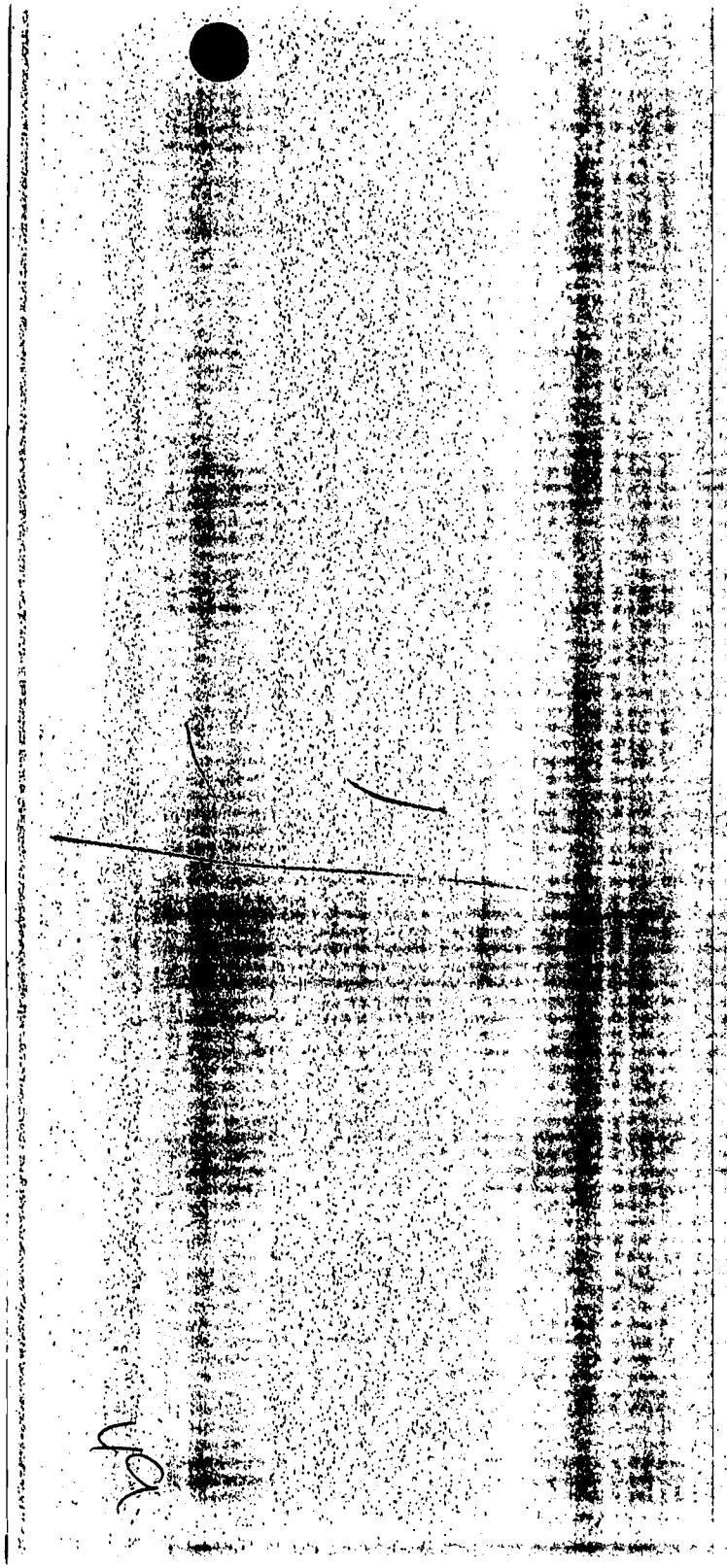
Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	[illegible]
Avge	.0002	.0361	.0410	.1695	.11926	.00005	29.62
SDev	.0006	.0053	.0071	.0022	.00000	.00007	.00
%RSD	340.1	14.54	17.43	1.300	.00033	135.37	.0120
#1	.0006	.0324	.0460	.1680	.11926	.00000	29.62
#2	-.0002	.0398	.0359	.1711	.11926	.00010	29.63

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0007	-.0001	.0010	.0006	.5552	1.036	.0209
SDev	.0008	.0011	.0023	.0003	.0003	.024	.0098
%RSD	120.8	1894.	237.7	47.12	.0461	2.287	47.12
#1	.0001	.0007	-.0006	.0004	.5554	1.019	.0279
#2	.0012	-.0008	.0025	.0009	.5550	1.052	.0139

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	[illegible]
Avge	13.91	.02272	.0195	12.08	-.0006	-.0036	-.0012
SDev	.00	.00040	.0029	.00	.0024	.0380	.0017
%RSD	.0207	1.7432	15.04	.0131	390.8	1059.	39.35
#1	13.91	.02244	.0216	12.08	.0011	.0233	-.0051
#2	13.91	.02300	.0175	12.07	-.0023	-.0304	-.0031

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0070	7.228	.1011	.55507	.0012	.0170	-.0001
SDev	.0011	.051	.0873	.00025	.0007	.0045	.0008
%RSD	15.25	.7115	86.39	.04558	56.46	26.35	185.2
#1	.0077	7.192	.1629	.55489	.0007	.0138	-.0010
#2	.0062	7.265	.0393	.55525	.0017	.0201	.0001

Elem	Zn2138	Zr3438
Avge	.0280	.00520
SDev	.0013	.00038
%RSD	4.539	7.3767
#1	.0289	.00547



#2	.0271	.00493

Method: EMS Sample Name: A444789 Operator: AH
Run Time: 06/22/98 14:09:44
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	-.0004	.0306	.0207	3.511	.25747	.00003	16.38
SDev	.0002	.0031	.0040	.014	.00071	.00004	.00
%RSD	53.10	10.22	19.57	.4065	.27538	141.12	.0289
#1	-.0005	.0329	.0235	3.521	.25797	.00000	16.38
#2	-.0002	.0284	.0178	3.501	.25697	.00005	16.37

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	-.0000	-.0005	.0046	.0015	.0285	8.337	.2193
SDev	.0005	.0006	.0029	.0009	.0000	.067	.0148
%RSD	11040.	109.9	63.43	60.56	.0058	.8078	6.734
#1	.0003	-.0009	.0025	.0008	.0285	8.384	.2297
#2	-.0003	-.0001	.0067	.0021	.0285	8.289	.2088

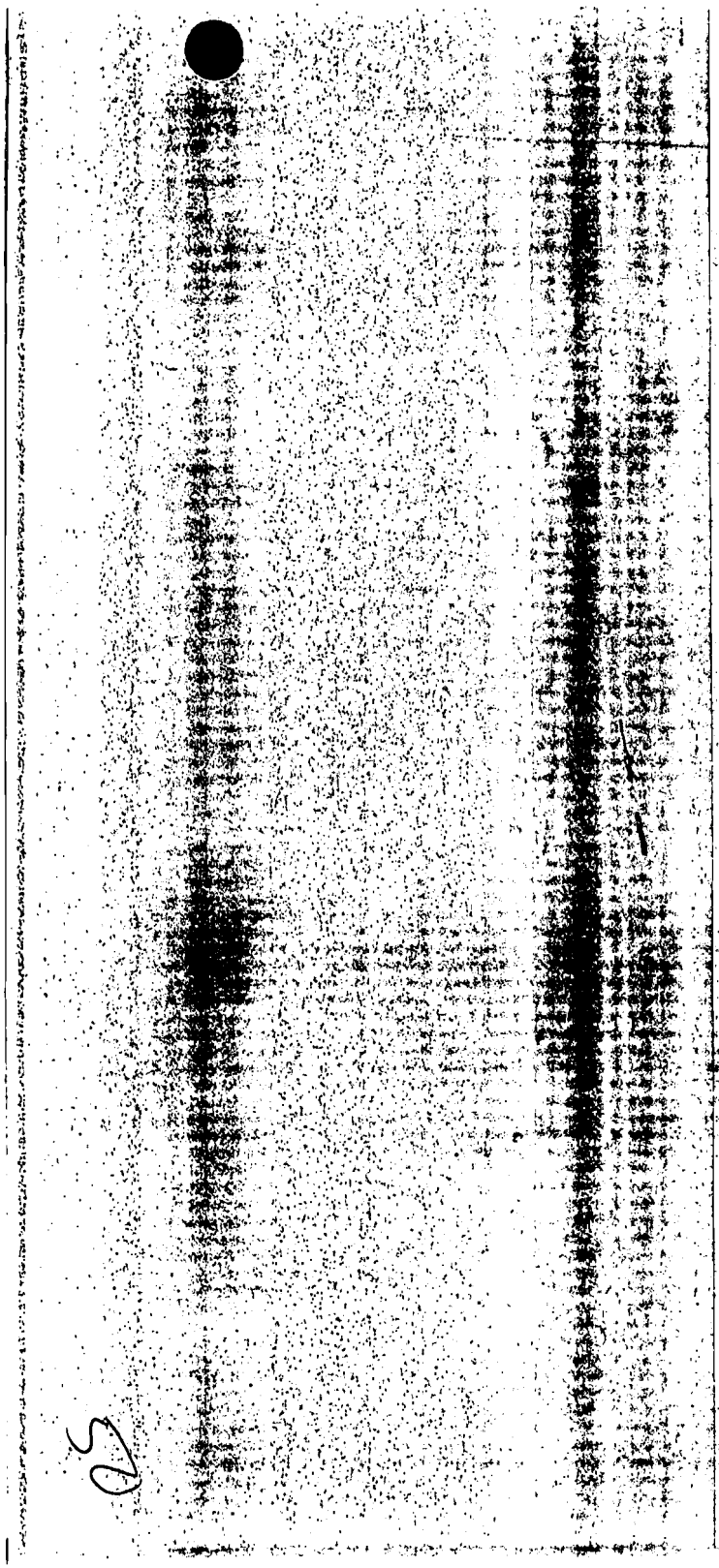
Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	10.21	.00344	-.0009	253.7	-.0022	-.0156	.0135
SDev	.05	.00000	.0009	1.2	.0045	.0115	.0113
%RSD	.5372	.01842	100.8	.4732	206.1	73.87	113.8
#1	10.25	.00344	-.0003	254.5	-.0054	-.0237	.0226
#2	10.17	.00344	-.0016	252.8	.0010	-.0074	.0021

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0080	3.470	.0578	.57335	-.0005	.0084	-.0007
SDev	.0142	.009	.1019	.00215	.0003	.0211	.0012
%RSD	177.0	.2539	176.3	.37522	61.37	249.2	157.0
#1	.0020	3.464	.1299	.57487	-.0007	.0233	.0001
#2	-.0180	3.476	-.0143	.57183	-.0003	-.0064	-.0015

Elem	Zn2138	Zr3438
Avge	.0198	.00244
SDev	.0001	.00038
%RSD	.7074	15.647
#1	.0197	.00217
#2	.0199	.00271

Method: EMS Sample Name: A444790 Operator: AH
Run Time: 06/22/98 14:12:17
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0016	.0398	.0265	.1666	.18116	.00005	106.3
SDev	.0031	.0030	.0066	.0020	.00024	.00000	.1



%RSD	188.6	7.627	24.88	1.200	.13097	.89061	.3364
#1	.0038	.0419	.0312	.1680	.18099	.00005	106.0
#2	-.0005	.0376	.0219	.1652	.18133	.00005	106.5

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0018	.0011	.0032	.0016	12.10	1.169	.0113
SDev	.0001	.0016	.0036	.0018	.04	.050	.0000
%RSD	6.203	153.1	113.6	110.8	.2906	3.426	.0017
#1	.0017	-.0001	.0058	.0029	12.07	1.501	.0112
#2	.0019	.0022	.0006	.0003	12.12	1.433	.0112

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	17.43	.31475	.0036	68.58	-.0003	.0090	.0013
SDev	.03	.00119	.0048	.03	.0010	.0175	.0125
%RSD	.1698	.37731	132.8	.0496	355.6	193.4	292.7
#1	17.41	.31392	.0070	68.55	.0004	.0214	.0131
#2	17.45	.31559	.0002	68.60	-.0010	-.0033	-.0016

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0044	8.824	.0789	.27566	.0018	.0279	.0014
SDev	.0344	.056	.0436	.00006	.0003	.0002	.0008
%RSD	775.2	.6298	55.25	.01985	16.44	.7817	56.91
#1	-.0199	8.784	.1098	.27562	.0020	.0280	.0020
#2	.0288	8.863	.0481	.27570	.0016	.0277	.0009

Elem	Zn2138	Zr3438
Avge	.0301	.00499
SDev	.0013	.00038
%RSD	4.262	7.6514
#1	.0292	.00526
#2	.0310	.00472

Method: EMS Sample Name: CCV Operator: AH
Run Time: 06/22/98 14:14:51
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	1.029	5.010	5.052	5.050	4.9632	4.9290	18.62
SDev	.007	.009	.011	.030	.0066	.0199	.11
%RSD	.7025	.1860	.2176	.5873	.13383	.40291	.2191
#1	1.034	5.016	5.060	5.071	4.9585	4.9431	18.69
#2	1.024	5.003	5.044	5.029	4.9679	4.9150	18.54

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	4.890	4.935	4.900	4.945	4.826	51.49	5.121
SDev	.021	.019	.017	.010	.009	.15	.019
%RSD	.4253	.3778	.3504	.1941	.1773	.2903	.9607
#1	4.905	4.949	4.912	4.952	4.832	51.59	5.108

#2	4.875	4.922	4.888	4.939	4.820	51.38	5.089

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	49.91	4.9247	.9744	49.91	4.923	4.919	.9555
SDev	.13	.0071	.0066	.12	.027	.100	.0186
%RSD	.2696	.14485	.6757	.2314	.5436	2.013	1.911
#1	50.00	4.9297	.9698	49.99	4.942	4.990	.9687
#2	49.81	4.9196	.9791	49.83	4.904	4.848	.9424

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	5.049	5.176	L3.555	4.9236	4.881	4.828	1.951
SDev	.038	.005	.025	.0037	.001	.023	.006
%RSD	.7591	.0887	.6921	.07449	.0243	.4662	.1132
#1	5.076	5.179	L3.537	4.9262	4.880	4.812	1.955
#2	5.021	5.173	L3.572	4.9210	4.882	4.844	1.947

Elem	Zn2138	Zr3438
Avge	4.988	4.9482
SDev	.022	.0008
%RSD	.4345	.01607
#1	5.004	4.9487
#2	4.973	4.9476

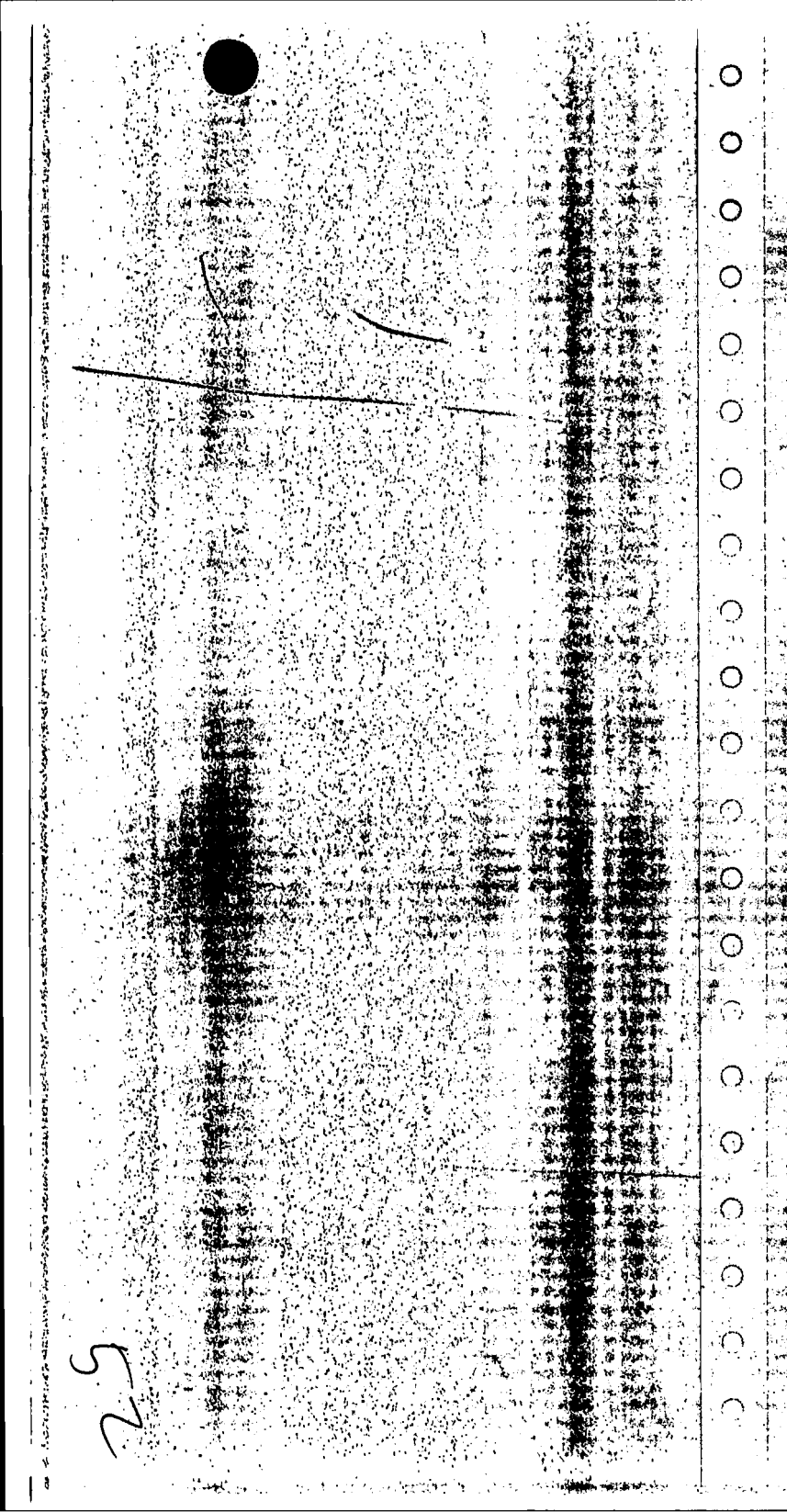
Method: EMS Sample Name: BLA01 Operator: AH
Run Time: 06/22/98 14:17:25
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0026	.0007	.0460	.0068	.00017	.00081	.0081
SDev	.0004	.0021	.0091	.0000	.00024	.00010	.0000
%RSD	14.94	296.1	19.88	.0080	141.87	12.904	.0000
#1	.0023	-.0008	.0524	.0068	.00033	.00073	.0081
#2	.0029	.0022	.0395	.0068	-.00000	.00088	.0081

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0011	.0004	.0038	.0002	.0007	.0105	-.0174
SDev	.0006	.0016	.0007	.0009	.0009	.0111	.0019
%RSD	54.45	431.0	19.58	429.5	124.8	106.1	28.28
#1	.0007	.0016	.0033	.0008	.0001	.0183	-.0209
#2	.0015	-.0008	.0043	-.0004	.0014	.0026	-.0139

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0119	.00140	.0023	.0240	-.0015	-.0395	-.0004
SDev	.0076	.00000	.0061	.0016	.0007	.0095	.0301
%RSD	63.95	.09414	266.6	6.578	47.83	24.04	7021.
#1	.0173	.00140	.0066	.0229	-.0010	-.0328	.0209
#2	.0065	.00140	-.0020	.0252	-.0020	-.0463	-.0217

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924



Avge	.0306	.0039	.0667	.00049	.0014	.0052	.0006
SDev	.0213	.0185	.0007	.00000	.0010	.0170	.0008
%RSD	69.54	476.9	1.100	.00358	68.25	326.8	123.2
#1	.0456	.0169	.0672	.00049	.0007	.0172	.0012
#2	.0155	-.0092	.0661	.00049	.0021	-.0068	.0001

Elem	Zn2138	Zr3438
Avge	.0013	.00258
SDev	.0008	.00058
%RSD	64.29	22.428
#1	.0007	.00299
#2	.0018	.00217

Method: EMS Sample Name: Q850577 BLA02 Operator: All
Run Time: 06/22/98 14:20:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0028	H.0521	.0339	H.1002	.00049	.00012	.1791
SDev	.0041	.0037	.0066	.0010	.00071	.00003	.0000
%RSD	148.7	7.153	19.32	1.043	144.83	27.336	.0000
#1	.0057	H.0548	.0385	H.1009	.00099	.00015	.1791
#2	-.0001	.0495	.0293	H.0994	-.00001	.00010	.1791

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0020	-.0008	.0025	.0008	.0086	.0460	.0139
SDev	.0014	.0022	.0071	.0018	.0023	.0215	.0000
%RSD	70.82	279.1	286.1	212.3	26.80	46.60	.0003
#1	.0030	.0008	.0075	.0021	.0102	.0612	.0139
#2	.0010	-.0023	-.0026	-.0004	.0070	.0309	.0139

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0513	.00084	.0012	H.2075	.0014	-.0361	-.0097
SDev	.0037	.00079	.0024	.0032	.0072	.0015	.0107
%RSD	7.144	94.347	195.0	1.525	527.8	4.177	110.7
#1	.0539	.00140	-.0005	H.2097	.0064	-.0350	-.0173
#2	.0487	.00028	.0029	H.2052	-.0037	-.0371	-.0021

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0133	.1697	.0654	.00035	.0008	.0049	-.0007
SDev	.0117	.0114	.0108	.00006	.0028	.0823	.0011
%RSD	88.03	6.714	16.50	17.883	338.0	1691.	163.7
#1	.0216	.1778	.0730	.00040	.0028	.0630	.0001
#2	.0050	.1617	.0578	.00031	-.0012	-.0533	-.0014

Elem	Zn2138	Zr3438
Avge	.0130	.00582
SDev	.0008	.00211
%RSD	5.903	36.205

25

SDev	.0013	.0039	.0009	.0006	.0004	.0030	.0000
%RSD	1536.	1002.	24.37	23410.	15.14	565.7	.0001
#1	-.0010	.0031	.0031	-.0004	.0028	-.0016	.0070
#2	.0008	-.0023	.0044	.0004	.0023	.0026	.0070

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0132	.00168	.0021	.0302	-.0020	-.0388	-.0080
SDev	.0037	.00040	.0017	.0055	.0024	.0224	.0128
%RSD	27.75	23.540	79.17	18.33	118.3	57.76	159.4
#1	.0106	.00140	.0033	.0263	-.0037	L-.0547	.0010
#2	.0158	.00196	.0009	.0341	-.0003	-.0230	-.0170

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0213	-.0043	.1224	.00098	.0010	-.0263	.0011
SDev	.0259	.0212	.0316	.00044	.0010	.0211	.0001
%RSD	121.4	492.5	25.82	45.014	97.09	80.19	8.490
#1	.0396	.0107	.1447	.00067	.0003	-.0413	.0011
#2	.0030	-.0193	.1000	.00130	.0017	-.0114	.0012

Elem	Zn2138	Zr3438
Avge	.0006	.00407
SDev	.0008	.00076
%RSD	137.6	18.790
#1	.0000	.00353
#2	.0011	.00461

Method: EMS Sample Name: DLS Operator: All
Run Time: 06/22/98 17:05:52
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0148	.0569	.0286	.0027	.01140	.00502	.0050
SDev	.0008	.0010	.0270	.0017	.00047	.00003	.0047
%RSD	5.266	1.842	94.16	63.48	4.1591	.68661	94.28
#1	.0142	.0562	.0477	.0015	.01174	.00499	.0017
#2	H.0153	.0576	.0096	.0038	.01107	.00504	.0084

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0068	.0128	.0116	.0210	.0261	.0440	.0035
SDev	.0006	.0027	.0005	.0009	.0005	.0126	.0049
%RSD	8.539	21.48	4.623	4.281	1.954	28.62	141.4
#1	.0064	.0147	.0112	.0216	.0257	.0528	.0070
#2	.0072	.0109	.0119	.0203	.0265	.0351	.0000

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0250	.01206	-.0006	.0112	.0081	.0477	.0372
SDev	.0223	.00000	.0013	.0040	.0043	.0130	.0014
%RSD	89.25	.00152	201.5	35.36	53.05	27.26	3.749

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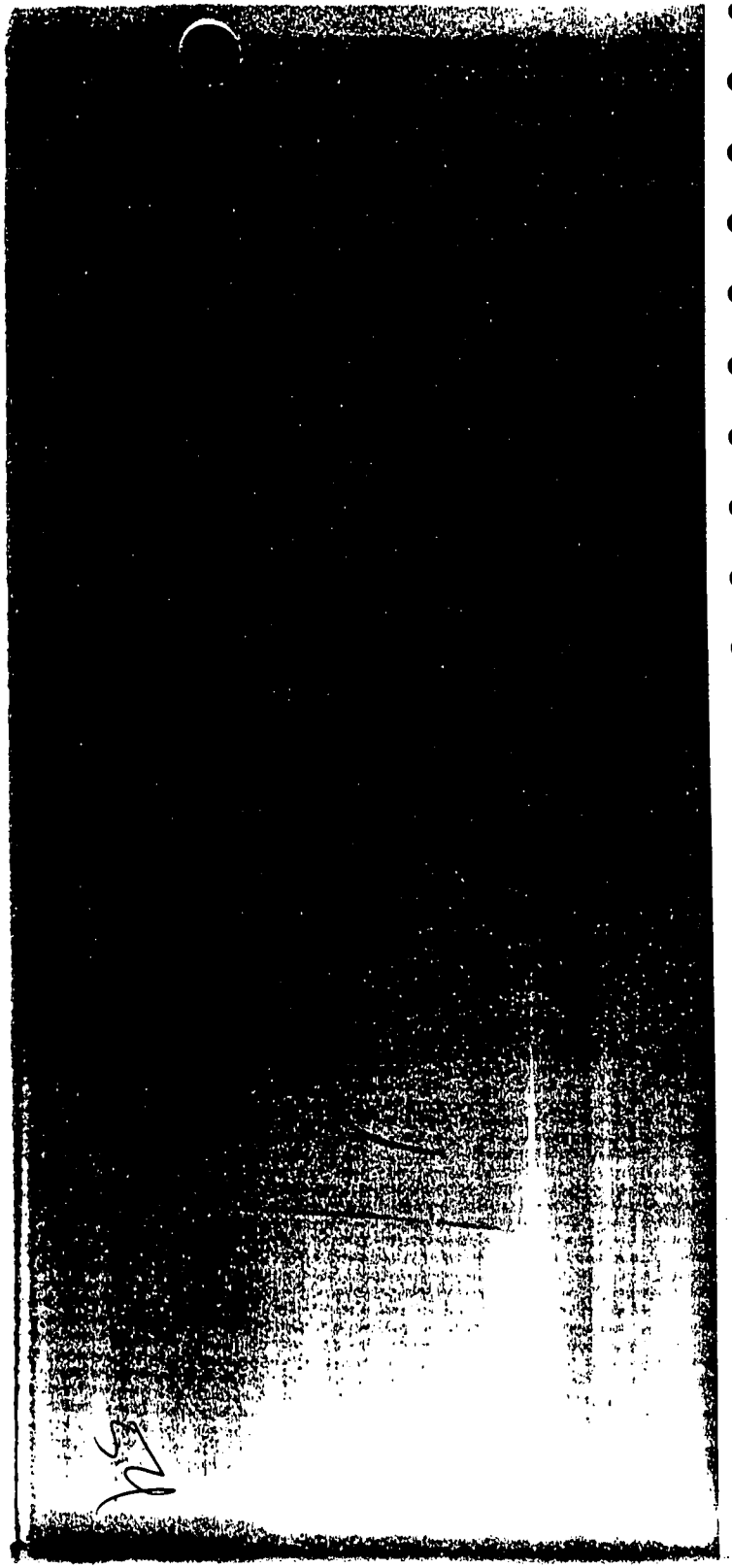

#1	.0408	.01206	.0003	.0084	.0051	.0569	.0382
#2	.0092	.01206	-.0015	.0140	.0111	.0385	.0362

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0125	.0009	.0862	.00009	.0012	.0230	.0120
SDev	.0007	.0000	.0132	.00006	.0005	.0045	.0003
%RSD	5.632	2.295	15.36	71.085	43.17	19.40	2.414
#1	.0130	.0009	.0768	.00013	.0016	.0262	.0118
#2	.0120	.0009	.0955	.00004	.0008	.0198	.0122

Elem	Zn2138	Zr3438
Avge	.0209	.00465
SDev	.0002	.00115
%RSD	.8493	24.670
#1	.0210	.00383
#2	.0208	.00546

Method: EMS Sample Name: CDL01 Operator: AH
Run Time: 06/22/98 17:08:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0262	.0052	.0450	.0033	.00000	.01011	.0050
SDev	.0019	.0031	.0041	.0006	.00000	.00007	.0000
%RSD	7.447	58.66	9.026	19.36	75.426	.68109	.0000
#1	.0276	.0031	.0421	.0028	.00000	.01016	.0050
#2	.0248	.0074	.0479	.0037	.00000	.01006	.0050

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0084	.1053	.0244	.0511	-.0009	-.0058	.0174
SDev	.0040	.0006	.0004	.0003	.0015	.0252	.0246
%RSD	47.07	.5301	1.817	.5877	172.7	437.1	141.4
#1	.0112	.1049	.0241	.0509	.0002	.0120	.0348
#2	.0056	.1057	.0247	.0513	-.0020	-.0235	-.0000

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0049	.03226	.0021	.0095	.0883	.0752	.1277
SDev	.0009	.00000	.0008	.0047	.0010	.0420	.0091
%RSD	19.28	.00022	38.72	49.91	1.091	55.81	7.084
#1	.0043	.03226	.0016	.0129	.0876	L.0455	.1341
#2	.0056	.03226	.0027	.0062	.0890	.1048	.1213

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0145	-.0079	.0832	-.00000	.0003	.0260	.1067
SDev	.0128	.0355	.0210	.00006	.0007	.0255	.0006
%RSD	88.09	447.5	25.25	27680.	230.5	98.02	.5403
#1	.0235	.0172	.0981	-.00004	.0008	.0080	.1071
#2	.0055	-.0330	.0684	.00004	-.0002	.0441	.1063

Elem	Zn2138	Zr3438
Avge	.0425	.00355
SDev	.0008	.00057
%RSD	1.875	16.169
#1	.0420	.00395
#2	.0431	.00314

Method: EMS Sample Name: ICS-A Operator: AH
Run Time: 06/22/98 17:11:03
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0006	485.6	H.1003	.0019	.00436	.00010	479.5
SDev	.0015	.4	.0158	.0002	.00000	.00007	.9
%RSD	264.1	.0897	15.79	10.98	.00253	72.647	.1950
#1	-.0005	485.9	.0891	.0018	.00436	.00005	480.2
#2	.0017	485.3	H.1115	.0021	.00436	.00015	478.8

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0096	.0027	-.0046	-.0029	179.0	-.0544	.0138
SDev	.0028	.0006	.0002	.0012	.3	.0037	.0049
%RSD	29.41	20.57	4.002	41.62	.1799	6.799	35.61
#1	.0076	.0031	-.0047	-.0037	179.2	-.0518	.0173
#2	H.0116	.0023	-.0044	-.0020	178.7	-.0570	.0104

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	508.7	-.00492	.0050	.0034	-.0044	-.0147	.0121
SDev	.7	.00041	.0015	.0040	.0005	.0147	.0519
%RSD	.1370	8.3351	29.38	117.8	11.28	100.3	428.3
#1	509.2	-.00521	.0039	.0062	-.0040	-.0043	-.0246
#2	508.2	-.00463	.0060	.0006	-.0047	-.0251	H.0489

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V 2924
Avge	.0226	.0538	H.4241	-.00081	-.0067	.0942	.0025
SDev	.0409	.0102	.1240	.00015	.0009	.0658	.0008
%RSD	181.1	19.01	29.23	18.300	13.09	69.80	30.31
#1	.0515	.0611	H.3364	-.00092	-.0061	.0477	.0030
#2	-.0063	.0466	H.5117	-.00071	-.0073	.1407	.0020

Elem	Zn2138	Zr3438
Avge	.0027	.00276
SDev	.0006	.00056
%RSD	21.75	20.073
#1	.0032	.00315
#2	.0023	.00237

Method: EMS Sample Name: ICS Operator: AH

Run Time: 06/22/98 17:13:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.2201	488.9	.1851	.0006	.49925	.46521	481.9
SDev	.0011	1.1	.0119	.0032	.00047	.00138	1.4
%RSD	.4839	.2208	6.411	497.8	.09507	.29767	.2957
#1	.2194	488.1	.1768	.0029	.49892	.46423	480.9
#2	.2209	489.7	.1935	-.0016	.49959	.46619	482.9

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.9322	.4560	.4584	.4905	179.9	-.0649	.0139
SDev	.0021	.0006	.0018	.0000	.4	.0126	.0148
%RSD	.2287	.1199	.3823	.0027	.2472	19.39	106.5
#1	.9307	.4556	.4597	.4905	179.6	-.0738	.0243
#2	.9337	.4564	.4572	.4905	180.2	-.0560	.0034

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	513.4	.45987	.0061	-.0022	.9107	1.022	.5866
SDev	1.1	.00117	.0001	.0055	.0069	.032	.0175
%RSD	.2173	.25398	1.397	247.5	.7609	3.146	2.980
#1	512.6	.45905	.0061	.0017	.9156	.9994	.5990
#2	514.2	.46070	.0062	-.0062	.9058	1.045	.5743

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0961	.0664	H.3163	-.00038	-.0089	.2139	.4852
SDev	.0427	.0167	.0586	.00048	.0005	.0689	.0023
%RSD	44.48	25.08	18.54	125.67	6.020	32.22	.4757
#1	.1263	.0546	H.2748	-.00004	-.0086	.2626	.4836
#2	.0659	.0782	H.3577	-.00072	-.0093	.1651	.4868

Elem	Zn2138	Zr3438
Avge	.9721	.00247
SDev	.0011	.00002
%RSD	.1185	.81461
#1	.9729	.00249
#2	.9713	.00246

Method: EMS Sample Name: CCV Operator: AH
Run Time: 06/22/98 17:16:13
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	1.041	5.194	5.024	5.056	5.0433	4.9573	49.32
SDev	.015	.154	.036	.025	.0640	.0315	.57
%RSD	1.428	2.969	.7266	.4947	1.2693	.63477	1.147
#1	1.030	5.085	4.998	5.038	4.9981	4.9350	48.92
#2	1.051	5.303	5.049	5.073	5.0886	4.9795	49.72

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	4.963	4.987	4.924	4.963	4.929	52.65	5.179
SDev	.042	.039	.053	.055	.105	.50	.010
%RSD	.8447	.7783	1.084	1.104	2.135	.9586	.1901
#1	4.934	4.959	4.886	4.924	4.854	52.29	5.172
#2	4.993	5.014	4.961	5.001	5.003	53.01	5.186

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	50.65	4.9956	.9911	50.92	4.971	5.013	.9851
SDev	.51	.0519	.0141	.45	.063	.100	.0085
%RSD	.9979	1.0397	1.421	.8821	1.271	1.986	.8622
#1	50.30	4.9589	.9811	50.60	4.926	4.943	.9791
#2	51.01	5.0323	1.001	51.24	5.016	5.083	.9911

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	5.090	5.194	L3.644	5.0126	5.049	5.002	5.038
SDev	.018	.094	.003	.0657	.052	.025	.061
%RSD	.3469	1.810	.0703	1.3113	1.035	.4986	1.203
#1	5.102	5.127	L3.643	4.9661	5.012	5.019	4.995
#2	5.077	5.260	L3.646	5.0591	5.086	4.984	5.081

Elem	Zn2138	Zr3438
Avge	5.017	5.0242
SDev	.030	.0714
%RSD	.5969	1.4205
#1	4.996	4.9737
#2	5.039	5.0747

Method: EMS Sample Name: BLA01 Operator: AH
Run Time: 06/22/98 17:18:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0030	.0289	.0268	.0073	.00067	.00103	.0368
SDev	.0033	.0232	.0126	.0010	.00047	.00035	.0260
%RSD	109.3	80.22	47.07	14.39	70.762	33.747	70.71
#1	.0007	.0125	.0179	.0080	.00033	.00078	.0184
#2	.0054	.0454	.0357	.0065	.00101	.00127	.0552

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0013	-.0016	.0037	.0004	.0127	.0225	.0070
SDev	.0014	.0022	.0012	.0000	.0092	.0296	.0000
%RSD	106.3	141.1	33.91	.0486	72.24	131.6	.0025
#1	.0023	-.0000	.0028	.0004	.0062	.0434	.0070
#2	.0003	-.0031	.0045	.0004	.0192	.0016	.0070

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0801	.00140	-.0007	.0324	-.0025	-.0142	.0007
SDev	.0241	.00000	.0010	.0024	.0060	.0105	.0020

%RSD	30.10	.05489	137.3	7.315	235.4	74.32	276.8
#1	.0631	.00140	-.0000	.0308	-.0068	-.0067	.0021
#2	.0972	.00140	-.0015	.0341	.0017	-.0216	-.0007

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0025	.0010	-.0100	.00054	.0021	-.0367	.0020
SDev	.0071	.0226	.0537	.00006	.0007	.0033	.0004
%RSD	282.1	2166.	537.8	11.924	31.12	8.887	19.24
#1	.0075	-.0149	-.0480	.00058	.0017	-.0344	.0023
#2	-.0025	.0170	.0280	.00049	.0026	-.0390	.0017

Elem	Zn2138	Zr3438
Avge	.0005	.00379
SDev	.0013	.00000
%RSD	272.1	.05606
#1	-.0004	.00379
#2	.0013	.00379

Method: EMS Sample Name: Q850537 BLA02 Operator: AH
Run Time: 06/22/98 17:21:23
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2496	Ba4934	Be3130	Ca3179
Avge	.0011	.0379	.0372	H.0988	.00066	.00049	.0653
SDev	.0014	.0073	.0081	.0004	.00047	.00021	.0142
%RSD	123.2	19.26	21.72	.4297	72.067	42.357	21.76
#1	.0021	.0328	.0315	H.0991	.00032	.00034	.0552
#2	.0001	.0431	.0429	H.0985	.00099	.00064	.0753

Elem	Cd2265	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0005	.0000	.0001	.0006	.0145	.0502	.0000
SDev	.0002	.0022	.0031	.0015	.0040	.0570	.0098
%RSD	47.49	408300.	4116.	235.5	27.38	113.4	3583000.
#1	.0007	-.0015	-.0021	-.0004	.0117	.0099	-.0070
#2	.0003	.0015	.0022	.0017	.0173	.0905	.0070

Elem	Mg2790	Mn2576	Mo2020	Na5889	Ni2316	Pb2203	Sb2068
Avge	.0434	.00140	.0013	H.2108	-.0017	-.0297	.0166
SDev	.0222	.00079	.0022	.0032	.0019	.0145	.0211
%RSD	51.25	56.529	172.1	1.500	112.0	48.75	126.7
#1	.0277	.00084	.0029	H.2086	-.0030	-.0195	.0017
#2	.0591	.00196	-.0003	H.2131	-.0004	-.0399	H.0315

Elem	Se1960	Si2881	Sn2839	Sr4215	Ti3372	Tl1908	V_2924
Avge	.0226	.0573	-.0045	.00009	-.0007	-.0259	.0002
SDev	.0213	.0111	.1306	.00006	.0020	.0122	.0004
%RSD	94.26	19.29	2896.	71.584	292.1	47.04	187.4
#1	.0075	.0495	-.0969	.00004	-.0021	-.0345	-.0001

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317/243-0811
FAX: 317/486-5095

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION

SAMPLE# A444782-A444790

These samples were analyzed for the following analytes (see table below) using normal procedures with no modifications. The required hold times were met for the analyses. The method blanks were below the reporting limit. The Laboratory Fortified Blanks, and Initial and Continuing Calibration standards were within the control limits. In addition, the matrix spike and matrix spike duplicate recoveries were within the control limits.

Hardness	EPA 130.2
Nitrogen, Nitrate-Nitrite	EPA 353.2
Total Kjeldahl Nitrogen	EPA 351.4

Karen L. Fullmer

KAREN L. FULLMER
LABORATORY GROUP LEADER
June 24, 1998

Recycled Paper

Analysis Run Number
Run Number 294 - 297
Test E621.0
Analyst JMA 6378
Date Analyzed 6.8.98
Instrument / Test 1 Hardness

Reagent Lot #
Expiration Date

BLA 01 RESP 0, 0, 0, 0, 0, 0, 0

CAL01	KNOWN CONC.					
	RESPONSE					
	OBS. CONC.					
	% RECOVERY					
CAL01	KNOWN CONC.					
	RESPONSE					
	OBS. CONC.					
	% RECOVERY					

CORR. = SLOPE = INT. =

DUP	DUP SAMPLE					
	REP. 1 CONC.					
	REP. 2 CONC.					
	REL. % DIFF.					
SPI 01	SPIKE SAMPLE	A444776	A444776	A444787	A444787	
	SPIKE CONC.	500	500	500	500	
	SAMPLE CONC.	360	360	120	120	
	TOTAL CONC.	841	827	610	602	
	% RECOVERY	96.2	93.4	98.0	96.4	
		R = 3.0%		R = 1.6%		
CCV	OBS. RESP.					
	TRUE VALUE	1000	1000	1000	1000	1000
	OBS. CONC.	976	996	982	972	970
	% RECOVERY	97.6	99.6	98.2	97.2	97.0
LFB01	STD I.D.	X536				
	TRUE VALUE	72.8				
	OBS. CONC.	70.6				
	% RECOVERY	97.0				
	MATRIX					

Analysis Run Number _____
Run Number 294-297
Test G621.0
Analyst JMA 6378
Date Analyzed 6.8.98
Instrument / Test 1 Hardness

Reagent Lot # _____
Expiration Date _____

BLA___ RESP _____

CAL01	KNOWN CONC.					
	RESPONSE					
	OBS. CONC.					
	% RECOVERY					
CAL01	KNOWN CONC.					
	RESPONSE					
	OBS. CONC.					
	% RECOVERY					

CORR. = _____ SLOPE = _____ INT. = _____

DUP___	DUP SAMPLE					
	REP. 1 CONC.					
	REP. 2 CONC.					
	REL. % DIFF.					
SPI 01	SPIKE SAMPLE	A444797	A444797	A445018	A445018	
	SPIKE CONC.	500	500	500	500	
	SAMPLE CONC.	310	310	140	140	
	TOTAL CONC.	792	811	633	627	
	% RECOVERY	96.4	100.2	98.6	97.4	
		R = 3.9%		R = 1.2%		
CCV	OBS. RESP.					
	TRUE VALUE	1000				
	OBS. CONC.	988				
	% RECOVERY	98.8				
____	STD I.D.					
	TRUE VALUE					
	OBS. CONC.					
	% RECOVERY					
	MATRIX					

Analysis Run Number _____
Run Number 294-297
Test G621.0
Analyst JMA 16378
Date Analyzed 6.8.98
Instrument / Test 1 Hardness

Reagent Lot # _____
Expiration Date _____

BLA___ RESP _____

CAL01	KNOWN CONC.					
	RESPONSE					
	OBS. CONC.					
	% RECOVERY					
CAL01	KNOWN CONC.					
	RESPONSE					
	OBS. CONC.					
	% RECOVERY					

CORR. = _____ SLOPE = _____ INT. = _____

DUP___	DUP SAMPLE					
	REP. 1 CONC.					
	REP. 2 CONC.					
	REL. % DIFF.					
SPI 01	SPIKE SAMPLE	A445019	A445019			
	SPIKE CONC.	500	500			
	SAMPLE CONC.	140	140			
	TOTAL CONC.	643	600			
	% RECOVERY	100.6	92.0			
			R = 8.9%			
CCV	OBS. RESP.					
	TRUE VALUE					
	OBS. CONC.					
	% RECOVERY					
____	STD I.D.					
	TRUE VALUE					
	OBS. CONC.					
	% RECOVERY					
	MATRIX					

Page 1 of 4

Reference No. G621.0 294

TOTAL HARDNESS (mg/l as $CaCO_3$)

Analyst JHA 6378

Reviewer BAS #1108

Date 6/9/98

Recorder _____

Date _____

Start Date 6.8.98 Start Time 1120 End Date 6.9.98 End Time 1515

QAQC TYPE	SAMPLE	TV	RESULT	%REC, RPD	UNITS	DL	COMMENTS
BLAΦ1	Blank		0		mg/L	1.0	
LFBΦ1	X536	72.8	70.6	97.0	mg/L	1.0	
	A4444648		250		mg/L	1.0	009 Outfall 98174
	A4444770		360		mg/L	1.0	DK 11907
	A4444771		400		mg/L	1.0	DK 11908
	A4444772		230		mg/L	1.0	DK 11909
	A4444773		270		mg/L	1.0	DK 11910
	A4444774		380		mg/L	1.0	DK 11799
	A4444775		530		mg/L	1.0	DK 11800
	A4444776		710		mg/L	1.0	DK 11801
SPIΦ1	A4444776	sam = 360 spike = 500	841	96.2	mg/L	1.0	DK 11801
DPSΦ1	A4444776	sam = 360 spike = 500	827	93.4, 3.0	mg/L	1.0	DK 11801
CCV	X537	1000	976	97.6	mg/L	1.0	
BLAΦ1	Blank		0		mg/L	1.0	
	A4444777		400		mg/L	1.0	DK 11802

Reference No. G621.0 295

TOTAL HARDNESS (mg/l as $CaCO_3$)

Analyst JMA 6378

Reviewer BAS#1108

Date 6/9/98

Recorder

Date

Start Date 6.8.98 Start Time 1120 End Date 6.9.98 End Time 1515

QAQC TYPE	SAMPLE	TV	RESULT	%REC, RPD	UNITS	DL	COMMENTS
	A444778		410		mg/L	1.0	DK11803
	A444782		120		mg/L	1.0	DK 11771
	A444783		84		mg/L	1.0	DK 11772
	A444784		180		mg/L	1.0	DK 11773
	A444785		270		mg/L	1.0	DK 11774
	A444786		230		mg/L	1.0	DK 11775
	A444787		240		mg/L	1.0	DK 11776
SPIØ1	A444787	Sample = 120 Spike = 500	610	98.0	mg/L	1.0	DK 11776
DPSØ1	A444787	Sample = 120 Spike = 500	602	96.4, 1.6	mg/L	1.0	DK 11776
CCV	X537	1000	996	99.6	mg/L	1.0	
BLAØ1	Blank		0		mg/L	1.0	
BLAØ1	Blank		0		mg/L	1.0	
CCV	X537	1000	982	98.2	mg/L	1.0	
	A444788		150		mg/L	1.0	DK11777
	A444789		84		mg/L	1.0	DK11778

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Page 3 of 4

Reference No. G621.0 296

TOTAL HARDNESS (mg/l as $CaCO_3$)

Analyst JMA 6378

Reviewer BAS#1108

Date 6/9/98

Recorder _____

Date _____

Start Date 6.8.98 Start Time 1120 End Date 6.9.98 End Time 1515

QAQC TYPE	SAMPLE	TV	RESULT	%REC, RPD	UNITS	DL	COMMENTS
alysis ate: 9/98							
	A444790		340		mg/L	1.0	DK 11779
	A444793		160		mg/L	1.0	DK 11759
	A444794		8.0		mg/L	1.0	DK 11760
	A444795		98		mg/L	1.0	DK 11761
	A444796		330		mg/L	1.0	DK 11762
	A444797		620		mg/L	1.0	DK 11763
SP1D1	A444797	sample = 310 Spike = 500	792	96.4	mg/L	1.0	DK 11763
DPSD1	A444797	sample = 310 Spike = 500	811	100.2, 3.7	mg/L	1.0	DK 11763
CCV	X537	1000	972	97.2	mg/L	1.0	
BLAD1	Blank		0		mg/L	1.0	
	A444798		BDL		mg/L	1.0	DK 11764
	A444799		180		mg/L	1.0	DK 11765
	A444800		150		mg/L	1.0	DK 11766
	A444801		350		mg/L	1.0	DK 11767
	A444802		BDL		mg/L	1.0	DK 11768

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Reference No. G621.0 297

TOTAL HARDNESS (mg/l as $CaCO_3$)

Analyst JMA 6378

Reviewer BAS#1108

Date 6/9/98

Recorder _____

Date _____

Start Date 6.8.98 Start Time 1120 End Date 6.9.98 End Time 1515

QAQC TYPE	SAMPLE	TV	RESULT	%REC, RPD	UNITS	DL	COMMENTS
	A444803		250		mg/L	1.0	DK 11769
	A444804		78		mg/L	1.0	DK 11770
	A445018		270		mg/L	1.0	DK 10798
SP1Φ1	A445018	Sample = 140 Spike = 500	633	98.6	mg/L	1.0	DK 10798
DPSΦ1	A445018	Sample = 140 Spike = 500	627	97.4, 1.2	mg/L	1.0	DK 10798
CCV	X537	1000	970	97.0	mg/L	1.0	
BLAΦ1	Blank		0		mg/L	1.0	
	A445019		270		mg/L	1.0	DK 10799
SP1Φ1	A445019	Sample = 140 Spike = 500	643	100.6	mg/L	1.0	DK 10799
DPSΦ1	A445019	Sample = 140 Spike = 500	600	92.0, 8.9	mg/L	1.0	DK 10799
	A445020		210		mg/L	1.0	DK 11967
CCV	X537	1000	988	98.8	mg/L	1.0	
BLAΦ1	Blank		0		mg/L	1.0	

Analysis date: 6/9/98 ↓

2

start time: 1120

Page 1 of 4	Analyst JMA 6378	Date 6.8.98					HARDNESS	
	TV = 72.8							
Sample	Blank	X536	A4444648 009 Outfall 98174	A444770	A444771	A444772	A444773	A444774	A444775
QAQC	BLAΦ1	LFBΦ1		DK11907	DK11908	DK11909	DK11910	DK11799	DK11800
Buret Fin	31.50	3.80	10.30	9.25	19.60	25.50	32.40	42.10	50.0 / 5.60
Buret Init	31.50	2.00	3.80	0.00	9.25 30 JMA	19.60	25.50	32.40	42.10 / 0.00
Vol Titr	0	1.8	6.50	9.25	10.30	5.90	6.90	9.70	13.5
Vol Samp	25	25	25	25	25	25	25	25	25
N EDTA	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196
Result	0	70.6 97.0% Sam=360 Spike=500	250 Sam=360 Spike=500	360	400	230	270	380	530
				TV=1000					
Sample	A444776	A444776	A444776	X537	Blank	A444777	A444778	A444782	A444783
QAQC	DK11801	SPIΦ1	DPSΦ1	CCV	BLAΦ1	DK11802	DK11803	DK11771	DK11772
Buret Fin	23.80	45.25	21.10	46.00	46.00	12.50	23.00	25.95	28.10
Buret Init	5.60	23.80	0.00	21.10	46.00	2.20	12.50	23.00	25.95
Vol Titr	18.20	21.45	21.10	24.90	0	10.30	10.50	2.95	2.15
Vol Samp	25	25	25	25	25	25	25	25	25
N EDTA	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196
Result	710	841	827	976	0	400	410	120	84

96.2% R=3.0% 93.4% 97.6%

$$\textit{HARDNESS, mg/l} = \frac{\textit{ml EDTA x N EDTA x 50,000}}{\textit{ml Sample}}$$

Page 2 of 4	Analyst JMA 6378	Date 6.8.98					HARDNESS	
				Sam = 120 Spike = 500	Sam = 120 Spike = 500	TV = 1000		
Sample	A444784	A444785	A444786	A444787	A444787	A444787	X537	Blank	Blank
QAQC	DK11773	DK11774	DK11775	DK11776	SPIKE1	DPSD1	CCV	BLAK1	BLAK1
Buret Fin	32.60	39.50	6.85	12.95	28.50	43.85	25.40	25.40	0.00
Buret Init	28.10	32.60	0.90	6.85	12.95	28.50	0.00	25.40	0.00
Vol Titr	4.50	6.90	5.95	6.10	15.55	15.35	25.40	0.00	0.00
Vol Samp	25	25	25	25	25	25	25	25	25
N EDTA	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196
Result	180	270	230	240	610	602	996	0	0
					98.0% R=1.6%	96.4%	99.6%		
	TV=1000								
Sample	X537	A444788	A444789	A444790	A444793	A444794	A444795	A444796	A444797
QAQC	CCV	DK11777	DK11778	DK11779	DK11759	DK11760	DK11761	DK11762	DK11763
Buret Fin	25.05	28.90	31.05	39.60	43.60	0.50	3.00	11.50	27.20
Buret Init	0.00	25.05	28.90	31.05	39.60	0.30	0.50	3.00	11.50
Vol Titr	25.05	3.85	2.15	8.55	4.00	0.20	2.50	8.50	15.70
Vol Samp	25	25	25	25	25	25	25	25	25
N EDTA	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196
Result	982	150	84	340	160	8	98	330	620
	98.2%								

$$\textit{HARDNESS, mg/l} = \frac{\textit{ml EDTA x N EDTA x 50,000}}{\textit{ml Sample}}$$

Page 3 of 4	Analyst JMA 6378	Date 6.9.98					HARDNESS	
	Sam=310 Spike=500	Sam=310 Spike=500	TV=1000					
Sample	A444797	A444797	X537	Blank	A444798	A444799	A444800	A444801	A444802
QAQC	SPIΦ1	DPSΦ1	CCV	BLAΦ1	DK11764	DK11765	DK11766	DK11767	DK11768
Buret Fin	47.40	20.70	45.50	45.50	0.00	4.50	8.30	17.20	17.20
Buret Init	27.20	0.00	20.70	45.50	0.00	0.00	4.50	8.30	17.20
Vol Titr	20.20	20.70	24.80	0.00	0.00	4.50	3.80	8.90	0.00
Vol Samp	25	25	25	25	25	25	25	25	25
N EDTA	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196
Result	792	811	972	0.	~~0~~ BDL JMA	180	150	350	BDL
	96.4%	RPD=3.7% 100.2%	97.2%	Sam=140 Spike=500	Sam=140 Spike=500	TV=1000			Sam=140 Spike=500
Sample	A444803	A444804	A445018	A445018	A445018	X537	Blank	A445019	A445019
QAQC	DK11769	DK11770	DK10798	SPIΦ1	DPSΦ1	CCV	BLAΦ1	DK10799	SPIΦ1
Buret Fin	23.70	25.70	32.70	48.85	16.00	40.85	40.85	7.00	23.40
Buret Init	17.20	23.70	25.70	32.70	0.00	16.10	40.85	0.00	7.00
Vol Titr	6.50	2.00	7.00	16.15	16.00	24.75	0.00	7.00	16.40
Vol Samp	25	25	25	25	25	25	25	25	25
N EDTA	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196
Result	250	78	270	633	627	970	0	270	643
				98.6%	RPD=1.2% 97.4%	97.0%			100.6%

$$\textit{HARDNESS, mg/l} = \frac{\textit{ml EDTA x N EDTA x 50,000}}{\textit{ml Sample}}$$

Page 4 of 4	Analyst JMA 6378	Date 6.9.98					HARDNESS	
	Sam = 140 Spike = 500		TV = 1000					
Sample	A445019	A445020	X537	Blank				
QAQC	DPS01	DK11967	CCV	BLA01				
Buret Fin	39.00	5.30	30.50	30.50				
Buret Init	23.70	0.00	5.30	30.50				
Vol Titr	15.30	5.30	25.2	0.00				
Vol Samp	25	25	25	25				
N EDTA	0.0196	0.0196	0.0196	0.0196				
Result	600	210	988	0				
	RPD = 8.9% 92.0%		98.8%					
Sample								
QAQC								
Buret Fin								
Buret Init								
Vol Titr								
Vol Samp								
N EDTA								
Result								

$$HARDNESS, mg/l = \frac{ml\ EDTA \times N\ EDTA \times 50{,}000}{ml\ Sample}$$

HARDNESS TITRANT STANDARDIZATION

Analyst JMA 6378

Date 6.8.98

Standard ID 537

True Value 1000 mg/L as $CaCO_3$

Titrant Solution EDTA

Titrant Source Lab Chem

Titrant Lot # 7345-8

Titrant Nominal Value 0.02 N

Vol Std, mL	10	10	10
$Buret_{FINAL}$	11.20	21.40	31.50
$Buret_{INITIAL}$	1.0	11.20	21.40
Vol Titrant, mL	10.20	10.20	10.10
Normality	0.0196	0.0196	0.0198

Avg Normality JMA 10 0.0196

$$\text{Normality Titrant} = \frac{(\text{True Value STD, mg/L}) \times (\text{ml STD})}{(\text{mL Titrant}) \times (50{,}000)}$$

Analysis Run No. _____ Run No. 9806/001 13

Analysis G1I3.3 Instrument # 98

Analyst KTP 4657 Reviewer BAS#1108 Recorder _____

Date 6/11/98 Date _____

Start Date 6.10.98 Start Time 13:51 End Date 6.10.98 End Time 15:36

CAL01 See Attached Calibration Report

BLA01	OBS CONC	-0.0045	-0.0032	-0.0029	0.0012	-0.0016		
BLA01	OBS CONC							
ICV01	STD ID	X540						
	TRUE VALUE	1.53						
	OBS CONC	1.56						
	%	102.0						
DUP01	SAMPLE #	A444770	A444787					
	REP 1 CONC	BDL	BDL					
	REP 2 CONC	BDL	BDL					
	RPD	CNA	CNA					
SPI01	SAMPLE #	A444786	DPS01 A444786	A444795	DPS01 A444795			
	SPIKE TV	1.00	1.00	1.00	1.00			
	SAMPLE TV	BDL	BDL	1.35	1.35			
	TOTAL CONC	1.00	1.01	2.32	2.33			
	% RECOVERY	100.0	101.0 R=1.0%	97.0	98.0 R=1.0%			
CCV	TRUE VALUE	1.00	1.00	1.00	1.00			
	OBS CONC	1.01	1.02	1.02	1.01			
	%RECOVERY	101.0	102.0	102.0	101.0			
CCV	TRUE VALUE							
	OBS CONC							
	%RECOVERY							

QuikChem AE Calibration Report for Calibration 98061001
Method: NITRATE/ITE
This calibration was done on 06/10/98 at 02:06 pm
This report prepared on 06/10/98 at 02:07 pm

CAL01 FOR TEST CODES: G113.3

CALIBRATION STATISTICS

Segment NO3/NO2#1

Standards A-F for NO3/NO2
(1mm flow cell)

Corr	Slope	Intercept
0.99996	0.02462	-0.00111

Segment NO3/NO2#2

Standards E-K for NO3/NO2
(10mm flow cell)

Corr	Slope	Intercept
0.99955	0.22334	0.00057

Standards E-K for NO2
(1mm flow cell)

Corr	Slope	Intercept
0.99996	0.24918	-0.00029

Column Efficiency Factor = 0.8963

(Total Slope / Nitrite Slope)

STDS A-F NO_3^--049

STDS E-I NO_2^--181

	Analyte	Units	Known	Observed	% Recovery	Baseline Corrected Average Absorbance
Standard A,	NO2	mg/l	**.*****	0.00171	0.0	0.0001
Standard A,	NO3/NO2	mg/l	10.00000	10.03005	100.3	0.2458
Standard B,	NO2	mg/l	**.*****	0.00085	0.0	-0.0001
Standard B,	NO3/NO2	mg/l	5.00000	4.95044	99.0	0.1208
Standard C,	NO2	mg/l	**.*****	0.00143	0.0	0.0001
Standard C,	NO3/NO2	mg/l	2.50000	2.47454	99.0	0.0598
Standard D,	NO2	mg/l	**.*****	0.00169	0.0	0.0001
Standard D,	NO3/NO2	mg/l	1.00000	0.99328	99.3	0.0233
Standard E,	NO2	mg/l	0.25000	0.25068	100.3	0.0622
Standard E,	NO3/NO2	mg/l	0.50000	0.52436	104.9	0.0118
Standard F,	NO2	mg/l	0.10000	0.09855	98.6	0.0243
Standard F,	NO3/NO2	mg/l	0.20000	0.19038	95.2	0.0431
Standard G,	NO2	mg/l	0.05000	0.04938	98.8	0.0120
Standard G,	NO3/NO2	mg/l	0.10000	0.09839	98.4	0.0225
Standard H,	NO2	mg/l	0.02500	0.02530	101.2	0.0060
Standard H,	NO3/NO2	mg/l	0.05000	0.04776	95.5	0.0112
Standard I,	NO2	mg/l	0.01000	0.00982	98.2	0.0022
Standard I,	NO3/NO2	mg/l	0.02000	0.01891	94.6	0.0048
Standard J,	NO2	mg/l	0.00500	0.00525	104.9	0.0010
Standard J,	NO3/NO2	mg/l	0.01000	0.01401	140.1	0.0037
Standard K,	NO2	mg/l	0.00000	0.00103	***.*	-0.0000
Standard K,	NO3/NO2	mg/l	0.00000	0.00618	***.*	0.0019

---------- End of Calibration Report For Calibration 98061001 ----------

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QuikChem AE Runtime Report for Tray 98061002.RS
Method: NITRATE/ITE

This report and tray were started on 06/10/98 at 03:36 pm.
Operator: KJP 4657 Template: #1

* The calculated value reported for NO3 may differ slightly from the difference of the reported values for NO2 and NO3/NO2. The NO3 value is calculated from the determined concentrations before they are rounded. The reported results for NO2 and NO3/NO2 are rounded values. This difference, if any, will not affect sample results.

** The calculated value reported for NO3 is the NO3/NO2 value. The NO2 value in this case is negative and was not subtracted from the NO3/NO2 value.

==========

-- Page 1 of report for tray 98061002.RS ----------

BLA01

Test	Result	Units	D.L.				
G113.3	-0.0045	mg/L	0.01	Cup 101 DL =	0.01	Segment NO3/NO2#2	
				: NO3	-0.0045	mg/l	(Calculation)*
				Ch.2: NO2	0.0018	mg/l	PIF=0.36 Abs= 0.0001
				Ch.3: NO3/NO2	-0.0027	mg/l	PIF=0.00 Abs=-0.0000

CDL01 TV=0.0250/0.0500 98.4%

Test	Result	Units	D.L.				
G113.3	0.0492	mg/L	0.01	Cup 102 DL =	0.01	Segment NO3/NO2#2	
				: NO3	0.0230	mg/l	(Calculation)*
				Ch.2: NO2	0.0262	mg/l	PIF=0.99 Abs= 0.0062
				Ch.3: NO3/NO2	0.0492	mg/l	PIF=0.97 Abs= 0.0116

ICV01 TV=0.150 X454

DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 103 DL =	0.01	Segment NO3/NO2#2	
				: NO3	0.0086	mg/l	(Calculation)*
				Ch.2: NO2	0.1484	mg/l	PIF=0.99 Abs= 0.0367
				Ch.3: NO3/NO2	0.1570	mg/l	PIF=0.98 Abs= 0.0356

-- Report for tray 98061002.RS continued on next page . . .

CV01 TV=~~0.514~~ 1.53 ~~X5E7~~ X540 102.0%

Test	Result	Units	D.L.				
G113.3	1.56	mg/L	0.01	Cup 104	DL =	0.01	Segment NO3/NO2#1
				: NO3		1.5568	mg/l (Calculation)*
				Ch.2: NO2		0.0025	mg/l PIF=0.30 Abs= 0.0003
				Ch.3: NO3/NO2		1.5593	mg/l PIF=0.99 Abs= 0.0373

rinse DO NOT RECORD DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 105	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0128	mg/l (Calculation)*
				Ch.2: NO2		0.0016	mg/l PIF=0.38 Abs= 0.0001
				Ch.3: NO3/NO2		-0.0112	mg/l PIF=0.10 Abs=-0.0019
				: (NEGATIVE PEAK)			
				:			

A444770 DK11907

Test	Result	Units	D.L.				
G113.3	BDL	mg/L	0.01	Cup 106	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0118	mg/l (Calculation)*
				Ch.2: NO2		0.0032	mg/l PIF=0.77 Abs= 0.0005
				Ch.3: NO3/NO2		-0.0086	mg/l PIF=0.77 Abs=-0.0013

A444770 DUP01 RPD= CNA

Test	Result	Units	D.L.				
G113.3	BDL	mg/L	0.01	Cup 107	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0115	mg/l (Calculation)*
				Ch.2: NO2		0.0032	mg/l PIF=0.73 Abs= 0.0005
				Ch.3: NO3/NO2		-0.0083	mg/l PIF=0.75 Abs=-0.0013

A444771 DK11908

Test	Result	Units	D.L.				
G113.3	BDL	mg/L	0.01	Cup 108	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0117	mg/l (Calculation)*
				Ch.2: NO2		0.0032	mg/l PIF=0.84 Abs= 0.0005
				Ch.3: NO3/NO2		-0.0085	mg/l PIF=0.77 Abs=-0.0013

Report for tray 98061002.RS continued on next page. . .

-- Page 3 of report for tray 98061002.RS ----------

A444772 DK11909

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 109 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0086 mg/l (Calculation)*
Ch.2: NO2 0.0028 mg/l PIF=0.70 Abs= 0.0004
Ch.3: NO3/NO2 -0.0058 mg/l PIF=0.74 Abs=-0.0007

A444773 DK11910

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 110 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0090 mg/l (Calculation)*
Ch.2: NO2 0.0023 mg/l PIF=0.73 Abs= 0.0003
Ch.3: NO3/NO2 -0.0066 mg/l PIF=0.72 Abs=-0.0009

A444774 DK11799

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 111 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0028 mg/l (Calculation)*
Ch.2: NO2 0.0027 mg/l PIF=0.75 Abs= 0.0004
Ch.3: NO3/NO2 -0.0001 mg/l PIF=0.57 Abs= 0.0005

A444775 DK11800

Test	Result	Units	D.L.
0113.3	BDL	mg/L	0.01

Cup 112 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0138 mg/l (Calculation)*
Ch.2: NO2 0.0039 mg/l PIF=0.85 Abs= 0.0007
Ch.3: NO3/NO2 -0.0100 mg/l PIF=0.76 Abs=-0.0017

A444776 DK11801 DO NOT RECORD

Test	Result	Units	D.L.

Cup 113 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0222 mg/l (Calculation)*
Ch.2: NO2 0.0072 mg/l PIF=0.89 Abs= 0.0015
Ch.3: NO3/NO2 -0.0150 mg/l PIF=0.79 Abs=-0.0028
: (NEGATIVE PEAK)
:

-- Report for tray 98061002.RS continued on next page . . .

A444776 SPI01 TV=1.00

DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 114	DL =	0.01	Segment NO3/NO2#1
				: NO3	0.6554	mg/l	(Calculation)*
				Ch.2: NO2	0.0074	mg/l	PIF=0.86 Abs= 0.0015
				Ch.3: NO3/NO2	0.6628	mg/l	PIF=0.93 Abs= 0.0152

---

rinse DO NOT RECORD

DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 115	DL =	0.01	Segment NO3/NO2#2
				: NO3	-0.0085	mg/l	(Calculation)*
				Ch.2: NO2	0.0016	mg/l	PIF=0.52 Abs= 0.0001
				Ch.3: NO3/NO2	-0.0069	mg/l	PIF=0.11 Abs=-0.0010

A444776 DPS01 RPD=

DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 116	DL =	0.01	Segment NO3/NO2#1
				: NO3	0.6548	mg/l	(Calculation)*
				Ch.2: NO2	0.0078	mg/l	PIF=0.89 Abs= 0.0015
				Ch.3: NO3/NO2	0.6620	mg/l	PIF=0.93 Abs= 0.0152

---

rinse DO NOT RECORD

DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 117	DL =	0.01	Segment NO3/NO2#2
				: NO3	-0.0077	mg/l	(Calculation)*
				Ch.2: NO2	0.0006	mg/l	PIF=0.00 Abs=-0.0001
				Ch.3: NO3/NO2	-0.0071	mg/l	PIF=0.13 Abs=-0.0010

CCV TV=0.100

DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 118	DL =	0.01	Segment NO3/NO2#2
				: NO3	0.0930	mg/l	(Calculation)*
				Ch.2: NO2	0.1010	mg/l	PIF=0.99 Abs= 0.0249
				Ch.3: NO3/NO2	0.1940	mg/l	PIF=0.98 Abs= 0.0439

-- Report for tray 98061002.RS continued on next page . . .

-- Page 5 of report for tray 98061002.RS ----------

CV TV=1.00 101.0%

Test	Result	Units	D.L.
6113.3	1.01	mg/L	0.01

Cup 119 DL = 0.01 Segment NO3/NO2#1
: NO3 1.0114 mg/l (Calculation)*
Ch.2: NO2 0.0016 mg/l PIF=0.00 Abs= 0.0001
Ch.3: NO3/NO2 1.0130 mg/l PIF=0.98 Abs= 0.0238

---

rinse DO NOT RECORD

DO NOT RECORD

Test	Result	Units	D.L.

Cup 120 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0096 mg/l (Calculation)*
Ch.2: NO2 0.0016 mg/l PIF=0.75 Abs= 0.0001
Ch.3: NO3/NO2 -0.0080 mg/l PIF=0.14 Abs=-0.0012

BLA01

Test	Result	Units	D.L.
113.3	-0.0032	mg/L	0.01

Cup 121 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0047 mg/l (Calculation)*
Ch.2: NO2 0.0015 mg/l PIF=0.07 Abs= 0.0001
Ch.3: NO3/NO2 -0.0032 mg/l PIF=0.13 Abs=-0.0002

A444777 DK11802

DO NOT RECORD

Test	Result	Units	D.L.

Cup 122 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0200 mg/l (Calculation)*
Ch.2: NO2 0.0071 mg/l PIF=0.89 Abs= 0.0015
Ch.3: NO3/NO2 -0.0130 mg/l PIF=0.76 Abs=-0.0023
: (NEGATIVE PEAK)
:

A444777 DUP01 RPD=

DO NOT RECORD

Test	Result	Units	D.L.

Cup 123 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0189 mg/l (Calculation)*
Ch.2: NO2 0.0069 mg/l PIF=0.93 Abs= 0.0014
Ch.3: NO3/NO2 -0.0120 mg/l PIF=0.80 Abs=-0.0021
: (NEGATIVE PEAK)
:

-- Report for tray 98061002.RS continued on next page . . .

A444778 DK11803 DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 124	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0190	mg/l (Calculation)*
				Ch.2: NO2		0.0071	mg/l PIF=0.91 Abs= 0.0015
				Ch.3: NO3/NO2		-0.0120	mg/l PIF=0.78 Abs=-0.0021
				: (NEGATIVE PEAK)			
				:			

A444782 DK11771

Test	Result	Units	D.L.				
				Cup 125	DL =	0.01	Segment NO3/NO2#2
G113.3	BDL	mg/L	0.01	: NO3		-0.0049	mg/l (Calculation)*
				Ch.2: NO2		0.0011	mg/l PIF=0.00 Abs=-0.0000
				Ch.3: NO3/NO2		-0.0038	mg/l PIF=0.26 Abs=-0.0003

A444783 DK11772

Test	Result	Units	D.L.				
				Cup 126	DL =	0.01	Segment NO3/NO2#2
G113.3	BDL	mg/L	0.01	: NO3		-0.0039	mg/l (Calculation)*
				Ch.2: NO2		0.0019	mg/l PIF=0.33 Abs= 0.0002
				Ch.3: NO3/NO2		-0.0020	mg/l PIF=0.00 Abs= 0.0001

A444784 DK11773

Test	Result	Units	D.L.				
				Cup 127	DL =	0.01	Segment NO3/NO2#2
G113.3	BDL	mg/L	0.01	: NO3		0.0043	mg/l (Calculation)*
				Ch.2: NO2		0.0022	mg/l PIF=0.57 Abs= 0.0002
				Ch.3: NO3/NO2		0.0065	mg/l PIF=0.90 Abs= 0.0020

A444785 DK11774

Test	Result	Units	D.L.				
				Cup 128	DL =	0.01	Segment NO3/NO2#2
G113.3	BDL	mg/L	0.01	: NO3		-0.0047	mg/l (Calculation)*
				Ch.2: NO2		0.0014	mg/l PIF=0.00 Abs= 0.0000
				Ch.3: NO3/NO2		-0.0034	mg/l PIF=0.00 Abs=-0.0002

-- Report for tray 98061002.RS continued on next page . . .

A444786 DK11775

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 129 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0026 mg/l (Calculation)*
Ch.2: NO2 0.0015 mg/l PIF=0.00 Abs= 0.0001
Ch.3: NO3/NO2 -0.0011 mg/l PIF=0.58 Abs= 0.0003

A444786 SPI01 TV=1.00 100.0% SAM=BDL SPI=1.00

Test	Result	Units	D.L.
G113.3	1.00	mg/L	0.01

Cup 130 DL = 0.01 Segment NO3/NO2#1
: NO3 1.0035 mg/l (Calculation)*
Ch.2: NO2 0.0014 mg/l PIF=0.00 Abs= 0.0001
Ch.3: NO3/NO2 1.0049 mg/l PIF=0.98 Abs= 0.0236

---

rinse DO NOT RECORD DO NOT RECORD

Test	Result	Units	D.L.

Cup 131 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0094 mg/l (Calculation)*
Ch.2: NO2 0.0009 mg/l PIF=0.00 Abs=-0.0001
Ch.3: NO3/NO2 -0.0085 mg/l PIF=0.16 Abs=-0.0013

A444786 DPS01 101.0% RPD=1.0% SAM=BDL SPI=1.00

Test	Result	Units	D.L.
G113.3	1.01	mg/L	0.01

Cup 132 DL = 0.01 Segment NO3/NO2#1
: NO3 1.0058 mg/l (Calculation)*
Ch.2: NO2 0.0019 mg/l PIF=0.46 Abs= 0.0002
Ch.3: NO3/NO2 1.0077 mg/l PIF=0.98 Abs= 0.0237

---

rinse DO NOT RECORD DO NOT RECORD

Test	Result	Units	D.L.

Cup 133 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0098 mg/l (Calculation)*
Ch.2: NO2 0.0011 mg/l PIF=0.00 Abs=-0.0000
Ch.3: NO3/NO2 -0.0087 mg/l PIF=0.17 Abs=-0.0014

-- Report for tray 98061002.RS continued on next page . . .

-- Page 8 of report for tray 98061002.RS ----------

CV TV=0.100 DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 134	DL =	0.01	Segment NO3/NO2#2
				: NO3		0.0931	mg/l (Calculation)*
				Ch.2: NO2		0.1016	mg/l PIF=0.99 Abs= 0.0250
				Ch.3: NO3/NO2		0.1946	mg/l PIF=0.98 Abs= 0.0440

CCV TV=1.00 102.0%

Test	Result	Units	D.L.				
				Cup 135	DL =	0.01	Segment NO3/NO2#1
G113.3	1.02	mg/L	0.01	: NO3		1.0189	mg/l (Calculation)*
				Ch.2: NO2		0.0012	mg/l PIF=0.00 Abs= 0.0000
				Ch.3: NO3/NO2		1.0201	mg/l PIF=0.98 Abs= 0.0240

---

rinse DO NOT RECORD DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 136	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0105	mg/l (Calculation)*
				Ch.2: NO2		0.0021	mg/l PIF=0.42 Abs= 0.0002
				Ch.3: NO3/NO2		-0.0084	mg/l PIF=0.15 Abs=-0.0013

BLA01

Test	Result	Units	D.L.				
				Cup 137	DL =	0.01	Segment NO3/NO2#2
G113.3	-0.0029	mg/L	0.01	: NO3		-0.0048	mg/l (Calculation)*
				Ch.2: NO2		0.0020	mg/l PIF=0.66 Abs= 0.0002
				Ch.3: NO3/NO2		-0.0029	mg/l PIF=0.00 Abs=-0.0001

A444787 DK11776

Test	Result	Units	D.L.				
				Cup 138	DL =	0.01	Segment NO3/NO2#2
G113.3	BDL	mg/L	0.01	: NO3		-0.0033	mg/l (Calculation)*
				Ch.2: NO2		0.0020	mg/l PIF=0.32 Abs= 0.0002
				Ch.3: NO3/NO2		-0.0013	mg/l PIF=0.00 Abs= 0.0003

-- Report for tray 98061002.RS continued on next page . . .

444787 DUP01 RPD= CNA

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 139 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0011 mg/l (Calculation)*
:
: Low level difference between NO3/NO2 and
: NO2. Report NO3/NO2 value for NO3/NO2 and
: NO2. Report BDL for NO3.
:
Ch.2: NO2 0.0015 mg/l PIF=0.00 Abs= 0.0001
Ch.3: NO3/NO2 0.0004 mg/l PIF=0.55 Abs= 0.0007

A444788 DK11777

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 140 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0029 mg/l (Calculation)*
Ch.2: NO2 0.0018 mg/l PIF=0.57 Abs= 0.0002
Ch.3: NO3/NO2 -0.0011 mg/l PIF=0.58 Abs= 0.0003

444789 DK11778

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 141 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0008 mg/l (Calculation)*
:
: Low level difference between NO3/NO2 and
: NO2. Report NO3/NO2 value for NO3/NO2 and
: NO2. Report BDL for NO3.
:
Ch.2: NO2 0.0015 mg/l PIF=0.00 Abs= 0.0001
Ch.3: NO3/NO2 0.0007 mg/l PIF=0.52 Abs= 0.0007

A444790 DK11779

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 142 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0168 mg/l (Calculation)*
Ch.2: NO2 0.0151 mg/l PIF=0.94 Abs= 0.0035
Ch.3: NO3/NO2 -0.0017 mg/l PIF=0.00 Abs= 0.0002

-- Report for tray 98061002.RS continued on next page . . .

A444793 DK11759

Test	Result	Units	D.L.
G113.3	0.04	mg/L	0.01

Cup 143 DL = 0.01 Segment NO3/NO2#2
: NO3 0.0399 mg/l (Calculation)*
Ch.2: NO2 0.0043 mg/l PIF=0.89 Abs= 0.0008
Ch.3: NO3/NO2 0.0441 mg/l PIF=0.97 Abs= 0.0104

A444794 DK11760

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 144 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0043 mg/l (Calculation)*
Ch.2: NO2 0.0019 mg/l PIF=0.36 Abs= 0.0002
Ch.3: NO3/NO2 -0.0024 mg/l PIF=0.00 Abs= 0.0000

A444795 DK11761

Test	Result	Units	D.L.
G113.3	1.5	mg/L	0.01

Cup 145 DL = 0.01 Segment NO3/NO2#1
: NO3 1.4560 mg/l (Calculation)*
Ch.2: NO2 0.0049 mg/l PIF=0.87 Abs= 0.0009
Ch.3: NO3/NO2 1.4610 mg/l PIF=0.99 Abs= 0.0349

SAM = 1.35

A444795 SPI01 TV=1.00 97.0% SPI = 1.00

Test	Result	Units	D.L.
G113.3	2.32	mg/L	0.01

Cup 146 DL = 0.01 Segment NO3/NO2#1
: NO3 2.3118 mg/l (Calculation)*
Ch.2: NO2 0.0042 mg/l PIF=0.87 Abs= 0.0007
Ch.3: NO3/NO2 2.3160 mg/l PIF=0.99 Abs= 0.0559

---

rinse DO NOT RECORD DO NOT RECORD

Test	Result	Units	D.L.

Cup 147 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0157 mg/l (Calculation)*
Ch.2: NO2 0.0014 mg/l PIF=0.02 Abs= 0.0001
Ch.3: NO3/NO2 -0.0143 mg/l PIF=0.00 Abs=-0.0026
: (NEGATIVE PEAK)
:

- Report for tray 98061002.RS continued on next page . . .

444795 DPS01 98.0% RPD= 1.0% SAM = 1.35 SPE = 1.00

Test	Result	Units	D.L.				
G113.3	1.33	mg/L	0.01	Cup 148	DL =	0.01	Segment NO3/NO2#1
				: NO3		2.3221	mg/l (Calculation)*
				Ch.2: NO2		0.0041	mg/l PIF=0.86 Abs= 0.0007
				Ch.3: NO3/NO2		2.3262	mg/l PIF=0.99 Abs= 0.0562

rinse DO NOT RECORD DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 149	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0180	mg/l (Calculation)*
				Ch.2: NO2		0.0016	mg/l PIF=0.60 Abs= 0.0001
				Ch.3: NO3/NO2		-0.0163	mg/l PIF=0.11 Abs=-0.0031
				: (NEGATIVE PEAK)			
				:			

CCV TV=0.100 DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 150	DL =	0.01	Segment NO3/NO2#2
				: NO3		0.0955	mg/l (Calculation)*
				Ch.2: NO2		0.1018	mg/l PIF=0.99 Abs= 0.0251
				Ch.3: NO3/NO2		0.1972	mg/l PIF=0.98 Abs= 0.0446

CCV TV=1.00 102.0%

Test	Result	Units	D.L.				
G113.3	1.02	mg/L	0.01	Cup 151	DL =	0.01	Segment NO3/NO2#1
				: NO3		1.0178	mg/l (Calculation)*
				Ch.2: NO2		0.0015	mg/l PIF=0.00 Abs= 0.0001
				Ch.3: NO3/NO2		1.0193	mg/l PIF=0.98 Abs= 0.0240

rinse DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 152	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0073	mg/l (Calculation)*
				:			
				: Low level difference between NO3/NO2 and			
				: NO2. Report NO3/NO2 value for NO3/NO2 and			
				: NO2. Report BDL for NO3.			
				:			
				Ch.2: NO2		0.0164	mg/l PIF=0.28 Abs= 0.0038
				Ch.3: NO3/NO2		0.0091	mg/l PIF=0.54 Abs= 0.0026

-- Report for tray 98061002.RS continued on next page . . .

LA01

Test	Result	Units	D.L.
G113.3	0.0012	mg/L	0.01

Cup 153 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0022 mg/l (Calculation)*
:
: Low level difference between NO3/NO2 and
: NO2. Report NO3/NO2 value for NO3/NO2 and
: NO2. Report BDL for NO3.
:
Ch.2: NO2 0.0034 mg/l PIF=0.00 Abs= 0.0005
Ch.3: NO3/NO2 0.0012 mg/l PIF=0.31 Abs= 0.0008

A444796 DK11762

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 154 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0006 mg/l (Calculation)*
:
: Low level difference between NO3/NO2 and
: NO2. Report NO3/NO2 value for NO3/NO2 and
: NO2. Report BDL for NO3.
:
Ch.2: NO2 0.0028 mg/l PIF=0.33 Abs= 0.0004
Ch.3: NO3/NO2 0.0022 mg/l PIF=0.84 Abs= 0.0011

A444797 DK11763

Test	Result	Units	D.L.
G113.3	BDL	mg/L	0.01

Cup 155 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0018 mg/l (Calculation)*
:
: Low level difference between NO3/NO2 and
: NO2. Report NO3/NO2 value for NO3/NO2 and
: NO2. Report BDL for NO3.
:
Ch.2: NO2 0.0026 mg/l PIF=0.74 Abs= 0.0004
Ch.3: NO3/NO2 0.0008 mg/l PIF=0.76 Abs= 0.0007

---

rinse DO NOT RECORD DO NOT RECORD

Test	Result	Units	D.L.

Cup 156 DL = 0.01 Segment NO3/NO2#2
: NO3 -0.0043 mg/l (Calculation)*
Ch.2: NO2 0.0032 mg/l PIF=0.43 Abs= 0.0005
Ch.3: NO3/NO2 -0.0011 mg/l PIF=0.43 Abs= 0.0003

-- Report for tray 98061002.RS continued on next page . . .

-- Page 13 of report for tray 98061002.RS ----------

CV TV=0.100 DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 157	DL =	0.01	Segment NO3/NO2#2
				: NO3		0.0946	mg/l (Calculation)*
				Ch.2: NO2		0.1019	mg/l PIF=0.98 Abs= 0.0251
				Ch.3: NO3/NO2		0.1964	mg/l PIF=0.98 Abs= 0.0444

CCV TV=1.00 101.0%

Test	Result	Units	D.L.				
				Cup 158	DL =	0.01	Segment NO3/NO2#1
G113.3	1.01	mg/L	0.01	: NO3		1.0137	mg/l (Calculation)*
				Ch.2: NO2		0.0003	mg/l PIF=0.33 Abs=-0.0002
				Ch.3: NO3/NO2		1.0140	mg/l PIF=0.98 Abs= 0.0238

---

rinse DO NOT RECORD DO NOT RECORD

Test	Result	Units	D.L.				
				Cup 159	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0088	mg/l (Calculation)**
				Ch.2: NO2		-0.0028	mg/l PIF=0.39 Abs=-0.0010
				Ch.3: NO3/NO2		-0.0088	mg/l PIF=0.15 Abs=-0.0014

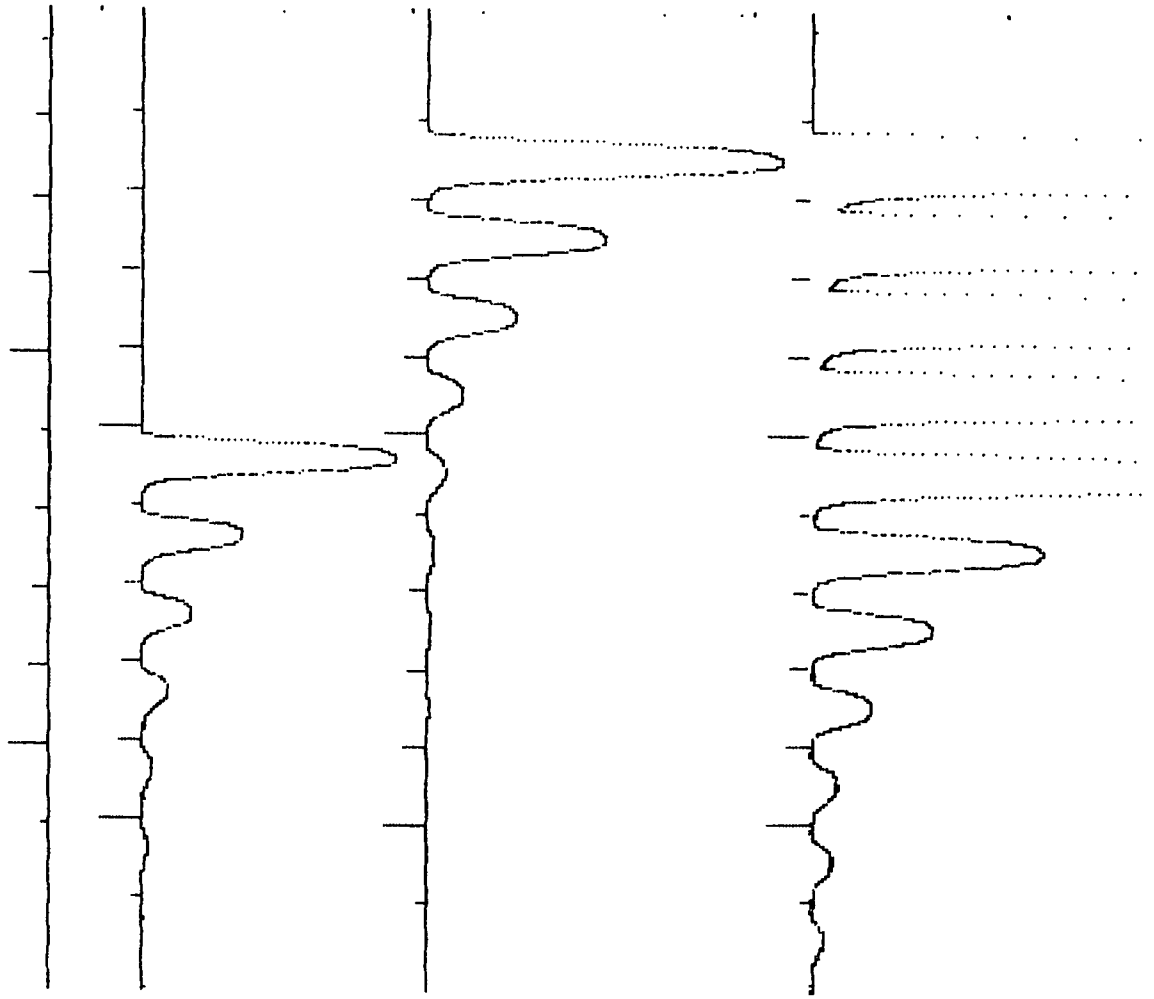
BLA01

Test	Result	Units	D.L.				
				Cup 160	DL =	0.01	Segment NO3/NO2#2
				: NO3		-0.0028	mg/l (Calculation)*
G113.3	-0.0016	mg/L	0.01	Ch.2: NO2		0.0012	mg/l PIF=0.00 Abs= 0.0000
				Ch.3: NO3/NO2		-0.0016	mg/l PIF=0.05 Abs= 0.0002

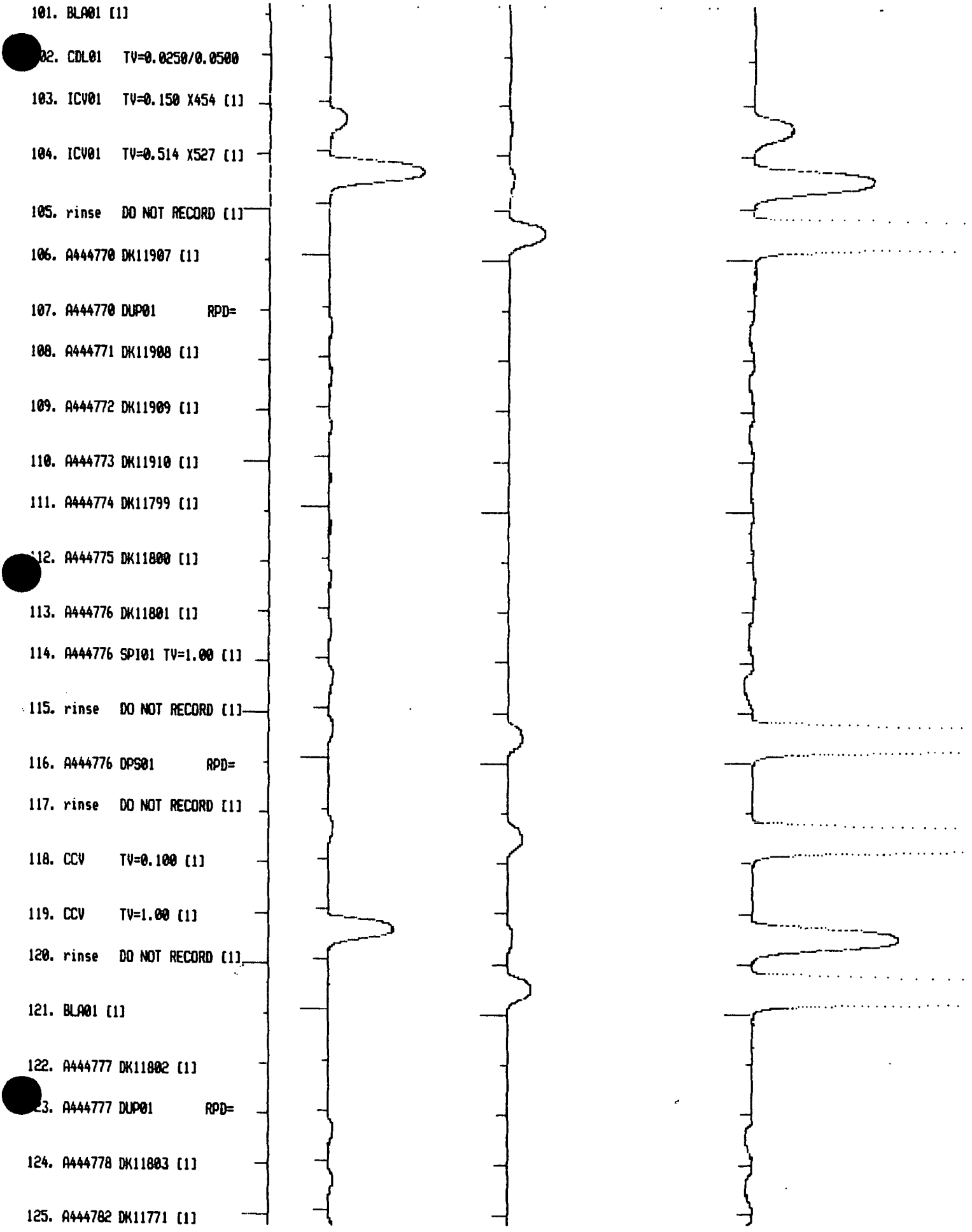
--------- End of Report for Tray 98061002.RS ----------

Calibration 06/10/1998, 01:51 pm

1. Standard A [1]
2. Standard B [1]
3. Standard C [1]
4. Standard D [1]
5. Standard E [1]
6. Standard F [1]
7. Standard G [1]
8. Standard H [1]
9. Standard I [1]
10. Standard J [1]
11. Standard K [1]



Rack 1 (Ref: 98061002) 06/10/1998, 02:21 pm



126. A444783 DK11772 [1]

127. A444784 DK11773 [1]

128. A444785 DK11774 [1]

129. A444786 DK11775 [1]

130. A444786 SPI01 TV=1.00 [1]

131. rinse DO NOT RECORD [1]

132. A444786 DPS01 RPD

133. rinse DO NOT RECORD [1]

134. CCV TV=0.100 [1]

135. CCV TV=1.00 [1]

136. rinse DO NOT RECORD [1]

137. BLA01 [1]

138. A444787 DK11776 [1]

139. A444787 DUP01 RPD=

140. A444788 DK11777 [1]

141. A444789 DK11778 [1]

142. A444790 DK11779 [1]

143. A444793 DK11759 [1]

144. A444794 DK11760 [1]

145. A444795 DK11761 [1]

146. A444795 SPI01 TV=1.00 [1]

147. rinse DO NOT RECORD [1]

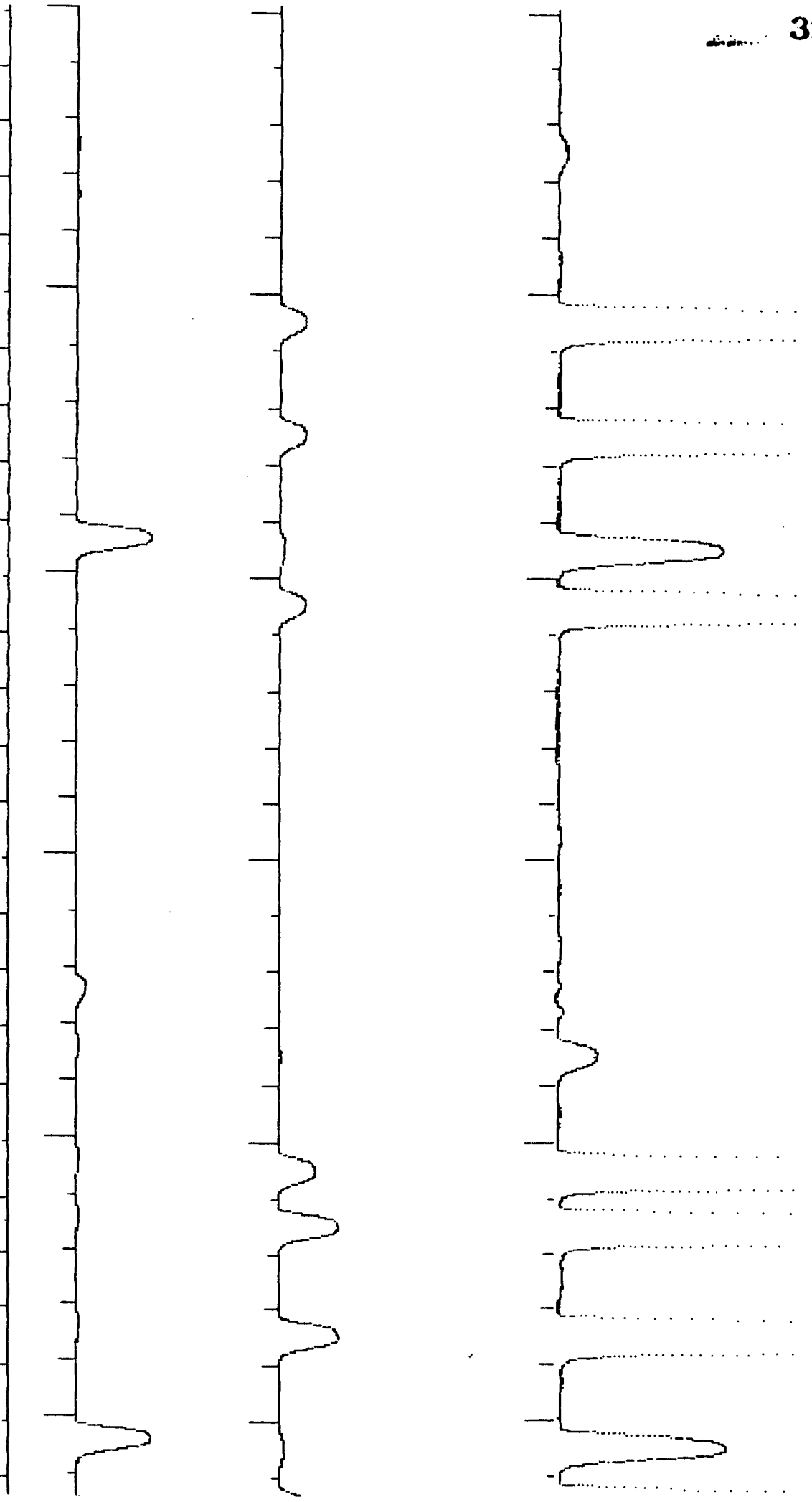
148. A444795 DPS01 RPD=

149. rinse DO NOT RECORD [1]

150. CCV TV=0.100 [1]

151. CCV TV=1.00 [1]

152. rinse [1]



153. BLA01 [1]

154. A444796 DK11762 [1]

155. A444797 DK11763 [1]

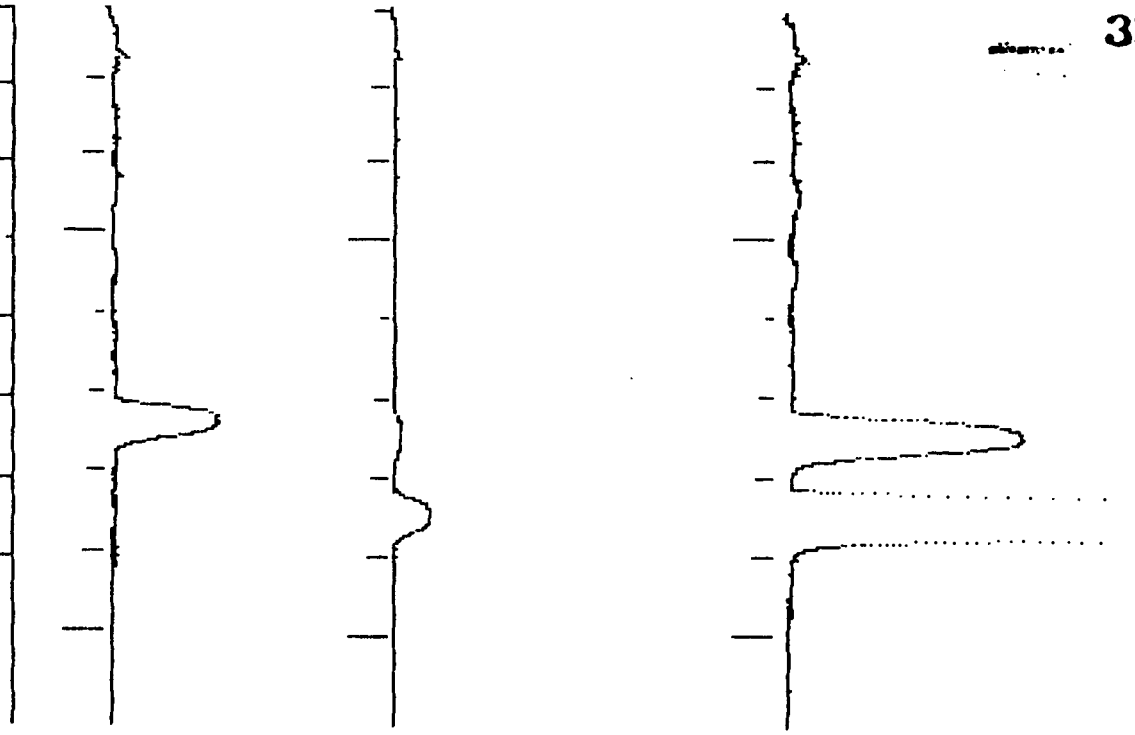
156. rinse DO NOT RECORD [1]

157. CCV TV=0.100 [1]

158. CCV TV=1.00 [1]

159. rinse DO NOT RECORD [1]

160. BLA01 [1]



Analysis Run Number
Run Number 2207-2209 2211, 2213
Test G202.6
Analyst KDB6017
Date Analyzed 6.23.98
Instrument / Test 311 / TKN

Reagent Lot #
Expiration Date

BLA___ RESP

CAL01	KNOWN CONC.	0.10	0.50	1.0	5.0	10
	RESPONSE	108	75	56	17	0
	OBS. CONC.	0.109	0.440	0.981	5.08	10.4
	% RECOVERY	109.0	88.0	98.1	101.6	104.0
CAL01	KNOWN CONC.					
	RESPONSE					
	OBS. CONC.					
	% RECOVERY					

CORR. = -0.9990 SLOPE = -54.59 INT. = 55.54

DUP___	DUP SAMPLE					
	REP. 1 CONC.					
	REP. 2 CONC.					
	REL. % DIFF.					
SPI ___	SPIKE SAMPLE					
	SPIKE CONC.					
	SAMPLE CONC.					
	TOTAL CONC.					
	% RECOVERY					
CCV	OBS. RESP.					
	TRUE VALUE					
	OBS. CONC.					
	% RECOVERY					
____	STD I.D.					
	TRUE VALUE					
	OBS. CONC.					
	% RECOVERY					
	MATRIX					

Page 1 of 5

Reference No. G202.6 2207

KJELDAHL NITROGEN, TOTAL (TKN)

Analyst KDB0017 Reviewer KLF1606 Recorder _____

Date 6-23-98 Date _____

Start Date 6.23.98 Start Time 945 End Date 6.23.98 End Time 1415

Calibration 0.1 STD 108 mV 0.5 STD 75 mV 1.0 STD 56 mV 5.0 STD 17 mV 10.0 STD 0 mV

Sample	BLANK	X540	CDL	BLANK	X541	A44477Ø	A44477I	A44477Z	CCV	BLANK
TKN	0.0322	1.93	0.101	0.244	18.8	1.6	0.98	2.4	0.940	0.0322
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Amt Sample				25ml	25ml	25ml	25ml	25ml		
Final Volume				75ml	75ml	75ml	75ml	75ml		
Dilution										
Relative mV	137	40	110	115	12	70	82	61	57	137
QAQC Type	BLAØI	ICVØI	CDLØI	BLAØI	LFBØI				CCV	BLAØI
True Value		1.95	0.100		17.3				1.00	
Detection	0.10	0.10	0.10	0.30	0.30	0.30	0.30	0.30	0.10	0.10
Comments		99.0%	101.0%		108.7%	DK11907	11908	11909	94.0%	

Page 2 of 5

Reference No. G202.6 2208

KJELDAHL NITROGEN, TOTAL (TKN)

Analyst KDB60017 Reviewer KLF2661 Recorder _____

Date 6-23-98 Date _____

Start Date 6.23.98 Start Time 945 End Date 6.23.98 End Time 1415

Calibration 0.1 STD _____ mV 0.5 STD _____ mV 1.0 STD _____ mV 5.0 STD _____ mV 10.0 STD _____ mV

Sample	A444773	A444774	A444775	A444776	A444777	A444778	A444782 ~~A444779~~	A444783 ~~A444780~~	CCV	BLANK
TKN	2.3	1.1	0.98	0.94	1.1	0.98	0.57	0.40	0.902	0.0309
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Amt Sample	25ml	25ml	25ml	25ml	25ml	25ml	25ml	25ml		
Final Volume	75ml	75ml	75ml	75ml	75ml	75ml	75ml	75ml		
Dilution										
Relative mV	62	79	82	83	79	82	95	103	58	138
QAQC Type									CCV	BLA01
True Value									1.00	
Detection	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.10
Comments	11910	11799	11800	11801	11802	11803	11771	11772	90.2%	

Page 3 of 5

Reference No. G202.6 2209

KJELDAHL NITROGEN, TOTAL (TKN)

Analyst KDB6017 Reviewer KLF2661 Recorder _____

Date 6-23-98 Date _____

Start Date 6·23·98 Start Time 945 End Date 6·23·98 End Time 1415

Calibration 0.1 STD _____ mV 0.5 STD _____ mV 1.0 STD _____ mV 5.0 STD _____ mV 10.0 STD _____ mV

Sample	A444784	A444785	A444786	A444787	A444788	A444789	A444790	A444793	CCV	BLANK
TKN	0.48	1.0	0.52	1.1	0.62	1.0	1.6	0.48	0.981	0.029L
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Amt Sample	25ml	25ml	25ml	25ml	25ml	25ml	25ml	25ml		
Final Volume	75ml	75ml	75ml	75ml	75ml	75ml	75ml	75ml		
Dilution										
Relative mV	99	81	97	79	93	81	71	99	56	139
QAQC Type									CCV	BLA01
True Value									1.00	
Detection	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.10
Comments	11773	11774	11775	11776	11777	11778	11779	11759	98.1%	

Page 4 of 5 Reference No. G202.6 2213

KJELDAHL NITROGEN, TOTAL (TKN)

Analyst KDB6017 Reviewer KLF21dd Recorder _____

Date 6-23-98 Date _____

Start Date 6·23·98 Start Time 945 End Date 6·23·98 End Time 1415

Calibration 0.1 STD _____ mV 0.5 STD _____ mV 1.0 STD _____ mV 5.0 STD _____ mV 10.0 STD _____ mV

Sample	A444794	A444794	A444794	A444795	A444796	A444797	A445020	A445020	CCV	BLANK
TKN	0.40	3.95	3.79	0.54	0.39	0.52	0.50	0.46	0.940	0.0309
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Amt Sample	25ml	25ml	25ml	25ml	25ml	25ml	25ml	25ml		
Final Volume	75ml	75ml	75ml	75ml	75ml	75ml	75ml	75ml		
Dilution										
Relative mV	103	49	50	96	104	97	98	100	57	138
QAQC Type		SPIØ1	DPSØ1					DupØ1	CCV	BIAØ1
True Value		SAM = 0.320 Spi = 3.46	SAM = 0.320 Spi = 3.46						1.00	
Detection	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.10
Comments	DK11760	104.9%	100.3%	11761	11762	11763	11967	R=8.3%	94.0%	
		R= 4.5%								

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Reference No. G202.6 2211

KJELDAHL NITROGEN, TOTAL (TKN)

Analyst KDB6017 Reviewer KLF2161 Recorder _____

Date 6-23-98 Date _____

Start Date 6.23.98 Start Time 945 End Date 6.23.98 End Time 1415

Calibration 0.1 STD _____ mV 0.5 STD _____ mV 1.0 STD _____ mV 5.0 STD _____ mV 10.0 STD _____ mV

Sample	A444798	A444799	A444800	A444801	A444802	A444803	A444804	A445018	A445019	CCV	BLANK
TKN	0.31	0.70	0.50	1.1	0.70	0.73	0.59	0.64	0.73	0.940	0.028 ~~0.02~~ KDB 6/23
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Amt Sample	25ml	25ml	25ml	25ml	25ml	25ml	25ml	25ml	25ml		
Final Volume	75ml	75ml	75ml	75ml	75ml	75ml	75ml	75ml	75ml		
Dilution											
Relative mV	109	90	98	80	90	89	94	92	89	57	140
QAQC Type										CCV	BLANK
True Value										1.00	
Detection	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.10
Comments	~~11764~~	~~11765~~	~~11766~~	~~11767~~ 11769 KDB 6/23	~~11768~~ 11770	11769	11770	10798	10799	94.0%	

3 of 3

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317/243-0811
FAX: 317/486-5095

CASE NARRATIVE

IDEM
General Organics Packet #1304

7-1-98

SAMPLE # A444782-A444790

These samples were analyzed for chloride and sulfate by Ion Chromatography (EPA 300.0) using normal procedures with no modifications. The required holding time was met for the analysis. The method blanks were below the reporting limit. The Initial Calibration Verification and Continuing Calibration Verification standards were within the control limits. In addition, the matrix spike and matrix spike duplicate were within the control limits.

Heritage Environmental Services

Melody Adkins

Melody Adkins
IC Analyst

Recycled Paper

Run Number R350051

File Number 98-0609

ION CHROMATOGRAPHY

Instrument # 268

Analyst MA-4317

Start Date 9-Jun-98
Start Time 17:52

End Date 10-Jun-98
End Time 12:58

Reviewed By EW/1023
Date 6-11-98

Recorded By MEQ
Date 6/12/98

2

Candy 6-12-98

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	BLA01 09-Jun-98 17:52													
	367	F	0	1	0.002	< 0.04		0.1	mg/L					
	223	Cl	0	1	-0.008	< 0.1		0.25	mg/L					
	507	NO_2	0	1	0.005	< 0.02		0.05	mg/L					
	192	Br	0	1	0.005	< 0.02		0.05	mg/L					
	508	NO_3	0	1	0.004	< 0.02		0.05	mg/L					
	539	HPO_4	4642	1	0.030	0.03		0.05	mg/L					
	681	SO_4	0	1	-0.049	< 0.1		0.25	mg/L					
	CCV L 09-Jun-98 18:10													
	367	F	186201	1	0.468	0.468		0.1	mg/L		0.5	93.6		
	223	Cl	341318	1	1.264	1.26		0.25	mg/L		1.25	100.8		
	507	NO_2	280450	1	0.482	0.482		0.05	mg/L		0.5	96.4		
	192	Br	52788	1	0.485	0.485		0.05	mg/L		0.5	97.0		
	508	NO_3	307615	1	0.478	0.478		0.05	mg/L		0.5	95.6		
	539	HPO_4	108288	1	0.480	0.48		0.05	mg/L		0.5	96.0		
	681	SO_4	458999	1	2.425	2.43		0.25	mg/L		2.5	97.2		
	CCV H 09-Jun-98 18:27													
	367	F	2258325	1	4.983	4.98		0.1	mg/L		5	99.6		
	223	Cl	4215002	1	12.047	12		0.25	mg/L		12.5	96.0		
	507	NO_2	3316454	1	5.002	5		0.05	mg/L		5	100.0		
	192	Br	597427	1	4.966	4.97		0.05	mg/L		5	99.4		
	508	NO_3	3793157	1	4.767	4.77		0.05	mg/L		5	95.4		
	539	HPO_4	1230285	1	4.740	4.74		0.05	mg/L		5	94.8		
	681	SO_4	5499655	1	23.674	23.7		0.25	mg/L		25	94.8		
	LFB01 SPI 09-Jun-98 19:03													
	367	F	438643	10	10.240			1	mg/L		10			
	223	Cl	748182	10	24.397	24.4		2.5	mg/L		25	97.6		
	507	NO_2	624550	10	9.945			0.5	mg/L		10			
	192	Br	120089	10	10.522			0.5	mg/L		10			
	508	NO_3	678506	10	9.697			0.5	mg/L		10			
	539	HPO_4	238907	10	10.107			0.5	mg/L		10			
G	681	SO_4	1017793	10	49.208	49.2		2.5	mg/L		50	98.4		
	A444254 1:10 09-Jun-98 19:20													
	367	F	18524	10	0.484			1	mg/L					
	223	Cl	1926267	10	57.043			2.5	mg/L					
	507	NO_2	0	10	0.047			0.5	mg/L					
	192	Br	3395	10	0.362			0.5	mg/L					
	508	NO_3	1841	10	0.067			0.5	mg/L					
	539	HPO_4	0	10	0.101			0.5	mg/L					
G310.7	681	SO_4	9256737	10	393.946	390		2.5	mg/L					
	A444719 1:5 09-Jun-98 19:38													
	367	F	11188	5	0.150			0.5	mg/L					
G310.2	223	Cl	2386713	5	34.902	35		1.3	mg/L					
	507	NO_2	0	5	0.024			0.25	mg/L					
	192	Br	5523	5	0.278			0.25	mg/L					
	508	NO_3	97519	5	0.770			0.25	mg/L					
	539	HPO_4	22860	5	0.547			0.25	mg/L					
G310.7	681	SO_4	2138072	5	48.042	48		1.3	mg/L					
	A444810 1:5 09-Jun-98 19:56													
	367	F	9126	5	0.124			0.5	mg/L					
	223	Cl	508759	5	9.444			1.3	mg/L					
	507	NO_2	0	5	0.024			0.25	mg/L					
	192	Br	0	5	0.026			0.25	mg/L					
	508	NO_3	0	5	0.019			0.25	mg/L					
	539	HPO_4	1881	5	0.091			0.25	mg/L					
G310.7	681	SO_4	1960437	5	44.325	44		1.3	mg/L					

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	A444770 09-Jun-98 20:13													
	367	F	604407	1	1.385			0.1	mg/L					
G300.2	223	Cl	3534384	1	10.161	10		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	2878	1	0.031			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	0	1	0.010			0.05	mg/L					
G300.7	681	SO_4	1002599	1	4.857	4.9		0.25	mg/L					
	SPI01 A444770 09-Jun-98 20:31													
	367	F	1025418	1	2.301			0.1	mg/L		1			
G	223	Cl	4102368	1	11.735	11.7		0.25	mg/L	9.14	2.5	102.4		
	507	NO_2	626573	1	0.998			0.05	mg/L		1			
	192	Br	127328	1	1.112			0.05	mg/L		1			
	508	NO_3	701606	1	0.998			0.05	mg/L		1			
	539	HPO_4	151761	1	0.669			0.05	mg/L		1			
G	681	SO_4	2040206	1	9.199	9.2		0.25	mg/L	4.37	5	96.6		
	DSP01 A444770 09-Jun-98 20:48													
	367	F	1031006	1	2.313			0.1	mg/L		1			
G	223	Cl	4110372	1	11.757	11.8		0.25	mg/L	9.14	2.5	106.4	3.8	
	507	NO_2	624553	1	0.995			0.05	mg/L		1			
	192	Br	126968	1	1.109			0.05	mg/L		1			
	508	NO_3	700215	1	0.996			0.05	mg/L		1			
	539	HPO_4	204968	1	0.900			0.05	mg/L		1			
G	681	SO_4	2036998	1	9.185	9.19		0.25	mg/L	4.37	5	96.4	0.2	
	A444771 09-Jun-98 21:06													
	367	F	250576	1	0.629			0.1	mg/L					
	223	Cl	12325735	1	34.523	HIGH		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	6408	1	0.064			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	24212	1	0.115			0.05	mg/L					
G300.7	681	SO_4	11393984	1	48.337	48		0.25	mg/L					
	A444772 09-Jun-98 21:24													
	367	F	587644	1	1.348			0.1	mg/L					
G300.2	223	Cl	335034	1	1.241	1.2		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	4437	1	0.046			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	11825	1	0.061			0.05	mg/L					
G300.7	681	SO_4	2064	1	0.038		BDL	0.25	mg/L					
	A444773 09-Jun-98 21:41													
	367	F	395594	1	0.992			0.1	mg/L					
G300.2	223	Cl	416084	1	1.543	1.5		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	2607	1	0.029			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	8594	1	0.047			0.05	mg/L					
G300.7	681	SO_4	0	1	0.049		BDL	0.25	mg/L					
	CCV L 09-Jun-98 21:59													
	367	F	192885	1	0.485	0.485		0.1	mg/L		0.5	97.0		
	223	Cl	346648	1	1.284	1.28		0.25	mg/L		1.25	102.4		
	507	NO_2	285720	1	0.491	0.491		0.05	mg/L		0.5	98.2		
	192	Br	53328	1	0.490	0.49		0.05	mg/L		0.5	98.0		
	508	NO_3	308372	1	0.479	0.479		0.05	mg/L		0.5	95.8		
	539	HPO_4	121397	1	0.537	0.537		0.05	mg/L		0.5	107.4		
	681	SO_4	457492	1	2.417	2.42		0.25	mg/L		2.5	96.8		

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD #
	CCV H 09-Jun-98 22:16												
	367	F	2271941	1	5.013	5.01		0.1	mg/L		5	100.2	
	223	Cl	4242355	1	12.123	12.1		0.25	mg/L		12.5	96.8	
	507	NO_2	3333835	1	5.028	5.03		0.05	mg/L		5	100.6	
	192	Br	597997	1	4.970	4.97		0.05	mg/L		5	99.4	
	508	NO_3	3781181	1	4.752	4.75		0.05	mg/L		5	95.0	
	539	HPO_4	1235988	1	4.762	4.76		0.05	mg/L		5	95.2	
	681	SO_4	5448031	1	23.458	23.5		0.25	mg/L		25	94.0	
	BLA01 09-Jun-98 22:34												
	367	F	0	1	0.002	< 0.04		0.1	mg/L				
	223	Cl	0	1	-0.008	< 0.1		0.25	mg/L				
	507	NO_2	0	1	0.005	< 0.02		0.05	mg/L				
	192	Br	0	1	0.005	< 0.02		0.05	mg/L				
	508	NO_3	0	1	0.004	< 0.02		0.05	mg/L				
	539	HPO_4	24258	1	0.115	0.12		0.05	mg/L				
	681	SO_4	0	1	-0.049	< 0.1		0.25	mg/L				
	A444774 09-Jun-98 22:52												
	367	F	355502	1	0.891			0.1	mg/L				
G300.2	223	Cl	350381	1	1.298	1.3		0.25	mg/L				
	507	NO_2	0	1	0.005			0.05	mg/L				
	192	Br	1690	1	0.021			0.05	mg/L				
	508	NO_3	9395	1	0.018			0.05	mg/L				
	539	HPO_4	0	1	0.010			0.05	mg/L				
G300.7	681	SO_4	5640893	1	24.265	24		0.25	mg/L				
	SPI01 A444774 09-Jun-98 23:09												
	367	F	766615	1	1.738			0.1	mg/L		1		
	223	Cl	1127176	1	3.490	3.49		0.25	mg/L	1.17	2.5	92.8	
	507	NO_2	595832	1	0.952			0.05	mg/L		1		
	192	Br	116621	1	1.024			0.05	mg/L		1		
	508	NO_3	672388	1	0.962			0.05	mg/L		1		
	539	HPO_4	152206	1	0.671			0.05	mg/L		1		
G	681	SO_4	6254223	1	26.831	26.8		0.25	mg/L	21.8	5	100.0	
	DSP01 A444774 09-Jun-98 23:27												
	367	F	762022	1	1.728			0.1	mg/L		1		
G	223	Cl	1121654	1	3.475	3.48		0.25	mg/L	1.17	2.5	92.4	0.4
	507	NO_2	591620	1	0.945			0.05	mg/L		1		
	192	Br	113590	1	0.999			0.05	mg/L		1		
	508	NO_3	668624	1	0.958			0.05	mg/L		1		
	539	HPO_4	192267	1	0.845			0.05	mg/L		1		
G	681	SO_4	6272664	1	26.909	26.9		0.25	mg/L	21.8	5	102.0	0.2
	A444775 09-Jun-98 23:45												
	367	F	318251	1	0.798			0.1	mg/L				
G300.2	223	Cl	5870715	1	16.635	17		0.25	mg/L				
	507	NO_2	0	1	0.005			0.05	mg/L				
	192	Br	2622	1	0.029			0.05	mg/L				
	508	NO_3	0	1	0.004			0.05	mg/L				
	539	HPO_4	23510	1	0.112			0.05	mg/L				
	681	SO_4	59250098	1	248.580	HIGH		0.25	mg/L				
	A444776 10-Jun-98 00:02												
	367	F	237364	1	0.596			0.1	mg/L				
00.2	223	Cl	4210261	1	12.034	12		0.25	mg/L				
	507	NO_2	0	1	0.005			0.05	mg/L				
	192	Br	4518	1	0.046			0.05	mg/L				
	508	NO_3	0	1	0.004			0.05	mg/L				
	539	HPO_4	10477	1	0.056			0.05	mg/L				
	681	SO_4	108702658	1	455.502	HIGH		0.25	mg/L				

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	A444777 10-Jun-98 00:20													
	367	F	254318	1	0.638			0.1	mg/L					
G300.2	223	Cl	1228391	1	3.770	3.8		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	1663	1	0.017			0.05	mg/L					
	681	SO_4	22267800	1	93.836	HIGH		0.25	mg/L					
	A444778 10-Jun-98 00:37													
	367	F	251192	1	0.630			0.1	mg/L					
G300.2	223	Cl	1223744	1	3.758	3.8		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	0	1	0.010			0.05	mg/L					
	681	SO_4	22025064	1	92.821	HIGH		0.25	mg/L					
	A444782 10-Jun-98 00:55													
	367	F	23315	1	0.060			0.1	mg/L					
G300.2	223	Cl	1003865	1	3.148	3.1		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	4254	1	0.029			0.05	mg/L					
G300.7	681	SO_4	8199461	1	34.971	35		0.25	mg/L					
	A444783 10-Jun-98 01:13													
	367	F	13713	1	0.036			0.1	mg/L					
00.2	223	Cl	347918	1	1.289	1.3		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	0	1	0.010			0.05	mg/L					
G300.7	681	SO_4	4751488	1	20.544	21		0.25	mg/L					
	A444784 10-Jun-98 01:30													
	367	F	22823	1	0.059			0.1	mg/L					
G300.2	223	Cl	4710166	1	13.419	13		0.25	mg/L					
	507	NO_2	2268	1	0.009			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	7105	1	0.015			0.05	mg/L					
	539	HPO_4	0	1	0.010			0.05	mg/L					
	681	SO_4	22302535	1	93.982	HIGH		0.25	mg/L					
	CCV L 10-Jun-98 01:48													
	367	F	199805	1	0.502	0.502		0.1	mg/L		0.5	100.4		
	223	Cl	367420	1	1.362	1.36		0.25	mg/L		1.25	108.8		
	507	NO_2	287383	1	0.494	0.494		0.05	mg/L		0.5	98.8		
	192	Br	53544	1	0.492	0.492		0.05	mg/L		0.5	98.4		
	508	NO_3	319286	1	0.496	0.496		0.05	mg/L		0.5	99.2		
	539	HPO_4	115624	1	0.512	0.512		0.05	mg/L		0.5	102.4		
	681	SO_4	473035	1	2.501	2.5		0.25	mg/L		2.5	100.0		
	CCV H 10-Jun-98 02:06													
	367	F	2250614	1	4.967	4.97		0.1	mg/L		5	99.4		
	223	Cl	4229334	1	12.086	12.1		0.25	mg/L		12.5	96.8		
	507	NO_2	3305186	1	4.985	4.99		0.05	mg/L		5	99.8		
	192	Br	592878	1	4.928	4.93		0.05	mg/L		5	98.6		
	508	NO_3	3757572	1	4.723	4.72		0.05	mg/L		5	94.4		
	539	HPO_4	1219887	1	4.701	4.7		0.05	mg/L		5	94.0		
	681	SO_4	5434065	1	23.400	23.4		0.25	mg/L		25	93.6		

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	BLA01 10-Jun-98 02:23													
	367	F	0	1	0.002	< 0.04		0.1	mg/L					
	223	Cl	0	1	-0.008	< 0.1		0.25	mg/L					
	507	NO_2	0	1	0.005	< 0.02		0.05	mg/L					
	192	Br	0	1	0.005	< 0.02		0.05	mg/L					
	508	NO_3	0	1	0.004	< 0.02		0.05	mg/L					
	539	HPO_4	25555	1	0.121	0.12		0.05	mg/L					
	681	SO_4	0	1	-0.049	< 0.1		0.25	mg/L					
	A444785 10-Jun-98 02:41													
	367	F	116486	1	0.293			0.1	mg/L					
G300.2	223	Cl	3204332	1	9.246	9.2		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	1517	1	0.019			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	0	1	0.010			0.05	mg/L					
	681	SO_4	13959771	1	59.073	HIGH		0.25	mg/L					
	SPI01 A444785 10-Jun-98 02:58													
	367	F	549407	1	1.265			0.1	mg/L		1			
G	223	Cl	3813906	1	10.935	10.9		0.25	mg/L	8.32	2.5	103.2		
	507	NO_2	602266	1	0.961			0.05	mg/L		1			
	192	Br	118534	1	1.039			0.05	mg/L		1			
	508	NO_3	671043	1	0.961			0.05	mg/L		1			
	539	HPO_4	157505	1	0.694			0.05	mg/L		1			
	681	SO_4	13729608	1	58.110	HIGH		0.25	mg/L		5			
	DSP01 A444785 10-Jun-98 03:16													
	367	F	549434	1	1.265			0.1	mg/L		1			
	223	Cl	3814501	1	10.937	10.9		0.25	mg/L	8.32	2.5	103.2	0	
	507	NO_2	607420	1	0.969			0.05	mg/L		1			
	192	Br	119092	1	1.044			0.05	mg/L		1			
	508	NO_3	677939	1	0.969			0.05	mg/L		1			
	539	HPO_4	199194	1	0.875			0.05	mg/L		1			
	681	SO_4	13755185	1	58.217	HIGH		0.25	mg/L		5			
	A444786 10-Jun-98 03:34													
	367	F	88897	1	0.224			0.1	mg/L					
G300.2	223	Cl	7133448	1	20.134	20		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	3346	1	0.036			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	24118	1	0.115			0.05	mg/L					
	681	SO_4	22205203	1	93.574	HIGH		0.25	mg/L					
	A444787 10-Jun-98 03:51													
	367	F	319889	1	0.802			0.1	mg/L					
G300.2	223	Cl	124749	1	0.457	0.46		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	17058	1	0.084			0.05	mg/L					
G300.7	681	SO_4	942335	1	4.605	4.6		0.25	mg/L					
	A444788 10-Jun-98 04:09													
	367	F	179428	1	0.451			0.1	mg/L					
0.2	223	Cl	1172819	1	3.618	3.6		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	86208	1	0.789			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	10655	1	0.056			0.05	mg/L					
G300.7	681	SO_4	1904836	1	8.632	8.6		0.25	mg/L					

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	A444789 10-Jun-98 04:27													
	367	F	1311830	1	2.924			0.1	mg/L					
	223	Cl	32849213	1	91.396	HIGH		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	50725	1	0.467			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	11173	1	0.059			0.05	mg/L					
G300.7	681	SO_4	1153295	1	5.488	5.5		0.25	mg/L					
	A444790 10-Jun-98 04:44													
	367	F	114815	1	0.289			0.1	mg/L					
	223	Cl	72055189	1	200.041	HIGH		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	3093	1	0.024			0.05	mg/L					
G300.7	681	SO_4	9787396	1	41.615	42		0.25	mg/L					
	A444793 10-Jun-98 05:02													
	367	F	13550	1	0.036			0.1	mg/L					
G300.2	223	Cl	3010153	1	8.708	8.7		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	22151	1	0.038			0.05	mg/L					
	539	HPO_4	2664	1	0.022			0.05	mg/L					
G300.7	681	SO_4	9264880	1	39.429	39		0.25	mg/L					
	A444794 10-Jun-98 05:19													
	367	F	32192	1	0.083			0.1	mg/L					
0.2	223	Cl	5200049	1	14.776	15		0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	26024	1	0.123			0.05	mg/L					
	681	SO_4	20622633	1	86.952	HIGH		0.25	mg/L					
	CCV L 10-Jun-98 05:37													
	367	F	184454	1	0.463	0.463		0.1	mg/L		0.5	92.6		
	223	Cl	346436	1	1.283	1.28		0.25	mg/L		1.25	102.4		
	507	NO_2	279735	1	0.481	0.481		0.05	mg/L		0.5	96.2		
	192	Br	53793	1	0.494	0.494		0.05	mg/L		0.5	98.8		
	508	NO_3	309850	1	0.481	0.481		0.05	mg/L		0.5	96.2		
	539	HPO_4	111480	1	0.494	0.494		0.05	mg/L		0.5	98.8		
	681	SO_4	465791	1	2.462	2.46		0.25	mg/L		2.5	98.4		
	CCV H 10-Jun-98 05:55													
	367	F	2235828	1	4.934	4.93		0.1	mg/L		5	98.6		
	223	Cl	4153834	1	11.877	11.9		0.25	mg/L		12.5	95.2		
	507	NO_2	3280513	1	4.948	4.95		0.05	mg/L		5	99.0		
	192	Br	584152	1	4.857	4.86		0.05	mg/L		5	97.2		
	508	NO_3	3721049	1	4.679	4.68		0.05	mg/L		5	93.6		
	539	HPO_4	1197001	1	4.615	4.62		0.05	mg/L		5	92.4		
	681	SO_4	5346767	1	23.034	23		0.25	mg/L		25	92.0		
	BLA01 10-Jun-98 06:12													
	367	F	0	1	0.002	< 0.04		0.1	mg/L					
	223	Cl	0	1	0.008	< 0.1		0.25	mg/L					
	507	NO_2	0	1	0.005	< 0.02		0.05	mg/L					
	192	Br	0	1	0.005	< 0.02		0.05	mg/L					
	508	NO_3	0	1	0.004	< 0.02		0.05	mg/L					
	539	HPO_4	18882	1	0.092	0.092		0.05	mg/L					
	681	SO_4	0	1	0.049	< 0.1		0.25	mg/L					

Run Number R350257

File Number 98-0610

ION CHROMATOGRAPHY

Instrument # 268

Analyst MA-4317

Start Date 10-Jun-98
Start Time 18:34

End Date 11-Jun-98
End Time 15:09

Reviewed By EW/1023
Date 6-12-98

Recorded By [illegible]
Date 6/15/98

9

6-15-98

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	BLA01 10-Jun-98 18:34													
	367	F	0	1	0.002	< 0.04		0.1	mg/L					
	223	Cl	4479	1	0.008	< 0.1		0.25	mg/L					
	507	NO_2	0	1	0.005	< 0.02		0.05	mg/L					
	192	Br	0	1	0.005	< 0.02		0.05	mg/L					
	508	NO_3	0	1	0.004	< 0.02		0.05	mg/L					
	539	HPO_4	1525	1	0.017	< 0.02		0.05	mg/L					
	681	SO_4	0	1	-0.049	< 0.1		0.25	mg/L					
	CCV L 10-Jun-98 19:28													
	367	F	192043	1	0.482	0.482		0.1	mg/L		0.5	96.4		
	223	Cl	339210	1	1.257	1.26		0.25	mg/L		1.25	100.8		
	507	NO_2	283610	1	0.488	0.488		0.05	mg/L		0.5	97.6		
	192	Br	54121	1	0.497	0.497		0.05	mg/L		0.5	99.4		
	508	NO_3	312406	1	0.485	0.485		0.05	mg/L		0.5	97.0		
	539	HPO_4	106937	1	0.474	0.474		0.05	mg/L		0.5	94.8		
	681	SO_4	459666	1	2.429	2.43		0.25	mg/L		2.5	97.2		
	CCV H 10-Jun-98 19:45													
	367	F	2232470	1	4.927	4.93		0.1	mg/L		5	98.6		
	223	Cl	4116140	1	11.773	11.8		0.25	mg/L		12.5	94.4		
	507	NO_2	3251568	1	4.905	4.91		0.05	mg/L		5	98.2		
	192	Br	584713	1	4.861	4.86		0.05	mg/L		5	97.2		
	508	NO_3	3728808	1	4.688	4.69		0.05	mg/L		5	93.8		
	539	HPO_4	1189865	1	4.588	4.59		0.05	mg/L		5	91.8		
	681	SO_4	5354519	1	23.067	23.1		0.25	mg/L		25	92.4		
	LFB01 SPI 10-Jun-98 20:21													
G	367	F	402956	1	0.946	0.946		0.1	mg/L		1	94.6		
	223	Cl	680575	1	2.252	2.25		0.25	mg/L		2.5	90.0		
	507	NO_2	585233	1	1.001			0.05	mg/L		1			
	192	Br	110439	1	0.973			0.05	mg/L		1			
	508	NO_3	637667	1	0.986			0.05	mg/L		1			
	539	HPO_4	219730	1	0.964			0.05	mg/L		1			
G	681	SO_4	936838	1	5.001	5		0.25	mg/L		5	100.0		
	A445472 10-Jun-98 20:38													
	367	F	64774	1	0.164			0.1	mg/L					
	223	Cl	10568093	1	29.652	HIGH		0.25	mg/L					
	507	NO_2	12508	1	0.026			0.05	mg/L					
	192	Br	13113	1	0.125			0.05	mg/L					
	508	NO_3	68607	1	0.110			0.05	mg/L					
	539	HPO_4	0	1	0.010			0.05	mg/L					
	681	SO_4	24721553	1	104.103	HIGH		0.25	mg/L					
	SPI01 A445472 10-Jun-98 20:56													
	367	F	475133	1	1.103			0.1	mg/L		1			
	223	Cl	10415078	1	29.228	HIGH		0.25	mg/L		2.5			
	507	NO_2	604417	1	0.965			0.05	mg/L		1			
	192	Br	122720	1	1.074			0.05	mg/L		1			
	508	NO_3	712397	1	1.011			0.05	mg/L		1			
	539	HPO_4	145937	1	0.644			0.05	mg/L		1			
	681	SO_4	23058915	1	97.146	HIGH		0.25	mg/L		5			
	DSP01 A445472 10-Jun-98 21:14													
	367	F	472219	1	1.097			0.1	mg/L		1			
	223	Cl	10382991	1	29.139	HIGH		0.25	mg/L		2.5			
	507	NO_2	604715	1	0.965			0.05	mg/L		1			
	192	Br	123453	1	1.080			0.05	mg/L		1			
	508	NO_3	715239	1	1.014			0.05	mg/L		1			
	539	HPO_4	186682	1	0.821			0.05	mg/L		1			
	681	SO_4	23098222	1	97.311	HIGH		0.25	mg/L		5			

E300.0

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	A445243 10-Jun-98 21:31													
	367	F	117403	1	0.296			0.1	mg/L					
	223	Cl	4648846	1	13.249			0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	2866	1	0.031			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	61234	1	0.276			0.05	mg/L					
	681	SO_4	16614486	1	70.181	HIGH		0.25	mg/L					
	A445244 10-Jun-98 21:49													
	367	F	860705	1	1.942			0.1	mg/L					
	223	Cl	3065788	1	8.862			0.25	mg/L					
	507	NO_2	23344	1	0.044			0.05	mg/L					
	192	Br	4535	1	0.047			0.05	mg/L					
	508	NO_3	10062	1	0.019			0.05	mg/L					
	539	HPO_4	14873	1	0.075			0.05	mg/L					
	681	SO_4	3019	1	-0.033			0.25	mg/L					
	SPI01 A445244 10-Jun-98 22:06													
	367	F	1217171	1	2.718			0.1	mg/L		1			
	223	Cl	3600595	1	10.344			0.25	mg/L		2.5			
	507	NO_2	612967	1	0.977			0.05	mg/L		1			
	192	Br	114370	1	1.005			0.05	mg/L		1			
	508	NO_3	638397	1	0.987			0.05	mg/L		1			
	539	HPO_4	191760	1	0.843			0.05	mg/L		1			
	681	SO_4	948482	1	4.631			0.25	mg/L		5			
	DSP01 A445244 10-Jun-98 22:24													
	367	F	1211325	1	2.705			0.1	mg/L		1			
	223	Cl	3580328	1	10.288			0.25	mg/L		2.5			
	507	NO_2	615030	1	0.980			0.05	mg/L		1			
	192	Br	114347	1	1.005			0.05	mg/L		1			
	508	NO_3	645484	1	0.998			0.05	mg/L		1			
	539	HPO_4	210666	1	0.925			0.05	mg/L		1			
	681	SO_4	938734	1	5.012			0.25	mg/L		5			
	A444771 1:5 10-Jun-98 22:42													
	367	F	47233	5	0.601			0.5	mg/L					
G300.2	**223**	**Cl**	**1987679**	**5**	**29.373**	**29**		**1.3**	**mg/L**					
	507	NO_2	0	5	0.024			0.25	mg/L					
	192	Br	0	5	0.026			0.25	mg/L					
	508	NO_3	0	5	0.019			0.25	mg/L					
	539	HPO_4	29769	5	0.697			0.25	mg/L					
	681	SO_4	1850600	5	42.027			1.3	mg/L					
	A444775 1:10 10-Jun-98 22:59													
	367	F	27408	10	0.706			1	mg/L					
	223	Cl	429818	10	15.944			2.5	mg/L					
	507	NO_2	0	10	0.047			0.5	mg/L					
	192	Br	0	10	0.053			0.5	mg/L					
	508	NO_3	0	10	0.039			0.5	mg/L					
	539	HPO_4	15986	10	0.795			0.5	mg/L					
G300.7	**681**	**SO_4**	**4530646**	**10**	**196.195**	**200**		**2.5**	**mg/L**					
	CCV L 10-Jun-98 23:17													
	367	F	194454	1	0.488	0.488		0.1	mg/L		0.5	97.6		
	223	Cl	342480	1	1.269	1.27		0.25	mg/L		1.25	101.6		
	507	NO_2	286000	1	0.492	0.492		0.05	mg/L		0.5	98.4		
	192	Br	53943	1	0.496	0.496		0.05	mg/L		0.5	99.2		
	508	NO_3	310894	1	0.483	0.483		0.05	mg/L		0.5	96.6		
	539	HPO_4	120765	1	0.534	0.534		0.05	mg/L		0.5	106.8		
	681	SO_4	467611	1	2.472	2.47		0.25	mg/L		2.5	98.8		

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD #
	CCV H 10-Jun-98 23:34												
	367	F	2235293	1	4.933	4.93		0.1	mg/L		5	98.6	
	223	Cl	4137733	1	11.833	11.8		0.25	mg/L		12.5	94.4	
	507	NO_2	3285539	1	4.956	4.96		0.05	mg/L		5	99.2	
	192	Br	587780	1	4.886	4.89		0.05	mg/L		5	97.8	
	508	NO_3	3744406	1	4.707	4.71		0.05	mg/L		5	94.2	
	539	HPO_4	1215866	1	4.686	4.69		0.05	mg/L		5	93.8	
	681	SO_4	5371345	1	23.137	23.1		0.25	mg/L		25	92.4	
	BLA01 10-Jun-98 23:52												
	367	F	0	1	0.002	< 0.04		0.1	mg/L				
	223	Cl	0	1	-0.008	< 0.1		0.25	mg/L				
	507	NO_2	0	1	0.005	< 0.02		0.05	mg/L				
	192	Br	0	1	0.005	< 0.02		0.05	mg/L				
	508	NO_3	0	1	0.004	< 0.02		0.05	mg/L				
	539	HPO_4	26153	1	0.124	0.12		0.05	mg/L				
	681	SO_4	0	1	-0.049	< 0.1		0.25	mg/L				
	A444776 1:25 11-Jun-98 00:10												
	367	F	8140	25	0.560			2.5	mg/L				
	223	Cl	127805	25	11.708			6.3	mg/L				
	507	NO_2	0	25	0.119			1.3	mg/L				
	192	Br	0	25	0.132			1.3	mg/L				
	508	NO_3	0	25	0.096			1.3	mg/L				
	539	HPO_4	5369	25	0.835			1.3	mg/L				
G300.7	681	SO_4	3163858	25	347.512	350		6.3	mg/L				
	A444777 1:5 11-Jun-98 00:27												
	367	F	44626	5	0.568			0.5	mg/L				
	223	Cl	213541	5	3.940			1.3	mg/L				
	507	NO_2	0	5	0.024			0.25	mg/L				
	192	Br	0	5	0.026			0.25	mg/L				
	508	NO_3	0	5	0.019			0.25	mg/L				
	539	HPO_4	0	5	0.051			0.25	mg/L				
G300.7	681	SO_4	3562543	5	77.843	78		1.3	mg/L				
	A444778 1:5 11-Jun-98 00:45												
	367	F	45025	5	0.573			0.5	mg/L				
	223	Cl	214907	5	3.965			1.3	mg/L				
	507	NO_2	0	5	0.024			0.25	mg/L				
	192	Br	0	5	0.026			0.25	mg/L				
	508	NO_3	0	5	0.019			0.25	mg/L				
	539	HPO_4	0	5	0.051			0.25	mg/L				
G300.7	681	SO_4	3618110	5	79.006	79		1.3	mg/L				
	A444784 1:5 11-Jun-98 01:03												
	367	F	3804	5	0.058			0.5	mg/L				
	223	Cl	760727	5	12.372			1.3	mg/L				
	507	NO_2	0	5	0.024			0.25	mg/L				
	192	Br	0	5	0.026			0.25	mg/L				
	508	NO_3	0	5	0.019			0.25	mg/L				
	539	HPO_4	0	5	0.051			0.25	mg/L				
G300.7	681	SO_4	3566561	5	77.927	78		1.3	mg/L				
	A444785 1:5 11-Jun-98 01:20												
	367	F	21156	5	0.275			0.5	mg/L				
	223	Cl	524526	5	9.737			1.3	mg/L				
	507	NO_2	0	5	0.024			0.25	mg/L				
	192	Br	0	5	0.026			0.25	mg/L				
	508	NO_3	0	5	0.019			0.25	mg/L				
	539	HPO_4	0	5	0.051			0.25	mg/L				
G300.7	681	SO_4	2243349	5	50.244	50		1.3	mg/L				

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD #
	A444786 1:5 11-Jun-98 01:38												
	367	F	16022	5	0.211			0.5	mg/L				
	223	Cl	1123754	5	17.402			1.3	mg/L				
	507	NO_2	0	5	0.024			0.25	mg/L				
	192	Br	0	5	0.026			0.25	mg/L				
	508	NO_3	0	5	0.019			0.25	mg/L				
	539	HPO_4	0	5	0.051			0.25	mg/L				
G300.7	681	SO_4	3556392	5	77.715	78		1.3	mg/L				
	A444789 1:5 11-Jun-98 01:55												
	367	F	245642	5	3.082			0.5	mg/L				
G300.2	223	Cl	5808459	5	82.312	82		1.3	mg/L				
	507	NO_2	0	5	0.024			0.25	mg/L				
	192	Br	9578	5	0.462			0.25	mg/L				
	508	NO_3	0	5	0.019			0.25	mg/L				
	539	HPO_4	0	5	0.051			0.25	mg/L				
	681	SO_4	220161	5	5.688			1.3	mg/L				
	A444790 1:10 11-Jun-98 02:13												
	367	F	10175	10	0.275			1	mg/L				
G300.2	223	Cl	6068128	10	171.820	170		2.5	mg/L				
	507	NO_2	0	10	0.047			0.5	mg/L				
	192	Br	0	10	0.053			0.5	mg/L				
	508	NO_3	0	10	0.039			0.5	mg/L				
	539	HPO_4	0	10	0.101			0.5	mg/L				
	681	SO_4	768754	10	40.953			2.5	mg/L				
	A444794 1:5 11-Jun-98 02:31												
	367	F	5823	5	0.083			0.5	mg/L				
	223	Cl	836958	5	13.429			1.3	mg/L				
	507	NO_2	0	5	0.024			0.25	mg/L				
	192	Br	0	5	0.026			0.25	mg/L				
	508	NO_3	0	5	0.019			0.25	mg/L				
	539	HPO_4	0	5	0.051			0.25	mg/L				
G300.7	681	SO_4	3344777	5	73.287	73		1.3	mg/L				
	A444796 1:5 11-Jun-98 02:48												
	367	F	2648	5	0.043			0.5	mg/L				
	223	Cl	813242	5	13.100			1.3	mg/L				
	507	NO_2	0	5	0.024			0.25	mg/L				
	192	Br	0	5	0.026			0.25	mg/L				
	508	NO_3	0	5	0.019			0.25	mg/L				
	539	HPO_4	0	5	0.051			0.25	mg/L				
G300.7	681	SO_4	5744012	5	123.482	120		1.3	mg/L				
	CCV L 11-Jun-98 03:06												
	367	F	184699	1	0.464	0.464		0.1	mg/L		0.5	92.8	
	223	Cl	344572	1	1.277	1.28		0.25	mg/L		1.25	102.4	
	507	NO_2	283317	1	0.487	0.487		0.05	mg/L		0.5	97.4	
	192	Br	53514	1	0.492	0.492		0.05	mg/L		0.5	98.4	
	508	NO_3	309356	1	0.480	0.48		0.05	mg/L		0.5	96.0	
	539	HPO_4	103557	1	0.460	0.46		0.05	mg/L		0.5	92.0	
	681	SO_4	460208	1	2.432	2.43		0.25	mg/L		2.5	97.2	
	CCV H 11-Jun-98 03:24												
	367	F	2238180	1	4.939	4.94		0.1	mg/L		5	98.8	
	223	Cl	4126182	1	11.801	11.8		0.25	mg/L		12.5	94.4	
	507	NO_2	3268455	1	4.930	4.93		0.05	mg/L		5	98.6	
	192	Br	584627	1	4.861	4.86		0.05	mg/L		5	97.2	
	508	NO_3	3717282	1	4.674	4.67		0.05	mg/L		5	93.4	
	539	HPO_4	1196434	1	4.613	4.61		0.05	mg/L		5	92.2	
	681	SO_4	5394429	1	23.234	23.2		0.25	mg/L		25	92.8	

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	BLA01 11-Jun-98 03:41													
	367	F	0	1	0.002	< 0.04		0.1	mg/L					
	223	Cl	0	1	-0.008	< 0.1		0.25	mg/L					
	507	NO_2	0	1	0.005	< 0.02		0.05	mg/L					
	192	Br	0	1	0.005	< 0.02		0.05	mg/L					
	508	NO_3	0	1	0.004	< 0.02		0.05	mg/L					
	539	HPO_4	23943	1	0.114	0.11		0.05	mg/L					
	681	SO_4	0	1	-0.049	< 0.1		0.25	mg/L					
	A444797 1:25 11-Jun-98 03:59													
	367	F	0	25	0.051			2.5	mg/L					
G300.2	223	Cl	3449022	25	248.103	250		6.3	mg/L					
	507	NO_2	0	25	0.119			1.3	mg/L					
	192	Br	0	25	0.132			1.3	mg/L					
	508	NO_3	0	25	0.096			1.3	mg/L					
	539	HPO_4	3371	25	0.618			1.3	mg/L					
G300.7	681	SO_4	1027321	25	124.016	120		6.3	mg/L					
	SPI01 A444797 1:25 11-Jun-98 04:16													
	367	F	463783	25	26.967			2.5	mg/L		25			
G	223	Cl	4117950	25	294.445	294		6.3	mg/L	223	62.5	113.6		
	507	NO_2	658990	25	26.144			1.3	mg/L		25			
	192	Br	125948	25	27.507			1.3	mg/L		25			
	508	NO_3	737051	25	26.026			1.3	mg/L		25			
	539	HPO_4	225806	25	24.761			1.3	mg/L		25			
G	681	SO_4	2108950	25	237.162	237		6.3	mg/L	112	125	100.0		
	DSP01 A444797 1:25 11-Jun-98 04:34													
	367	F	455139	25	26.497			2.5	mg/L		25			
	223	Cl	4126586	25	295.043	295		6.3	mg/L	223	62.5	115.2	1.4	
	507	NO_2	663076	25	26.297			1.3	mg/L		25			
	192	Br	126758	25	27.673			1.3	mg/L		25			
	508	NO_3	742851	25	26.203			1.3	mg/L		25			
	539	HPO_4	247514	25	26.077			1.3	mg/L		25			
G	681	SO_4	2109304	25	237.199	237		6.3	mg/L	112	125	100.0	0	
	A444798 1:5 11-Jun-98 04:52													
	367	F	6191	5	0.088			0.5	mg/L					
	223	Cl	111463	5	2.037			1.3	mg/L					
	507	NO_2	0	5	0.024			0.25	mg/L					
	192	Br	0	5	0.026			0.25	mg/L					
	508	NO_3	0	5	0.019			0.25	mg/L					
	539	HPO_4	34746	5	0.805			0.25	mg/L					
G300.7	681	SO_4	3689908	5	80.508	81		1.3	mg/L					
	A444799 1:5 11-Jun-98 05:09													
	367	F	11241	5	0.151			0.5	mg/L					
	223	Cl	387148	5	7.176			1.3	mg/L					
	507	NO_2	0	5	0.024			0.25	mg/L					
	192	Br	0	5	0.026			0.25	mg/L					
	508	NO_3	91250	5	0.722			0.25	mg/L					
	539	HPO_4	0	5	0.051			0.25	mg/L					
G300.7	681	SO_4	2472315	5	55.034	55		1.3	mg/L					
	A444801 1:5 11-Jun-98 05:27													
	367	F	8310	5	0.114			0.5	mg/L					
02	223	Cl	3083191	5	44.552	45		1.3	mg/L					
	507	NO_2	0	5	0.024			0.25	mg/L					
	192	Br	3110	5	0.168			0.25	mg/L					
	508	NO_3	0	5	0.019			0.25	mg/L					
	539	HPO_4	0	5	0.051			0.25	mg/L					
G300.7	681	SO_4	5805537	5	124.770	120		1.3	mg/L					

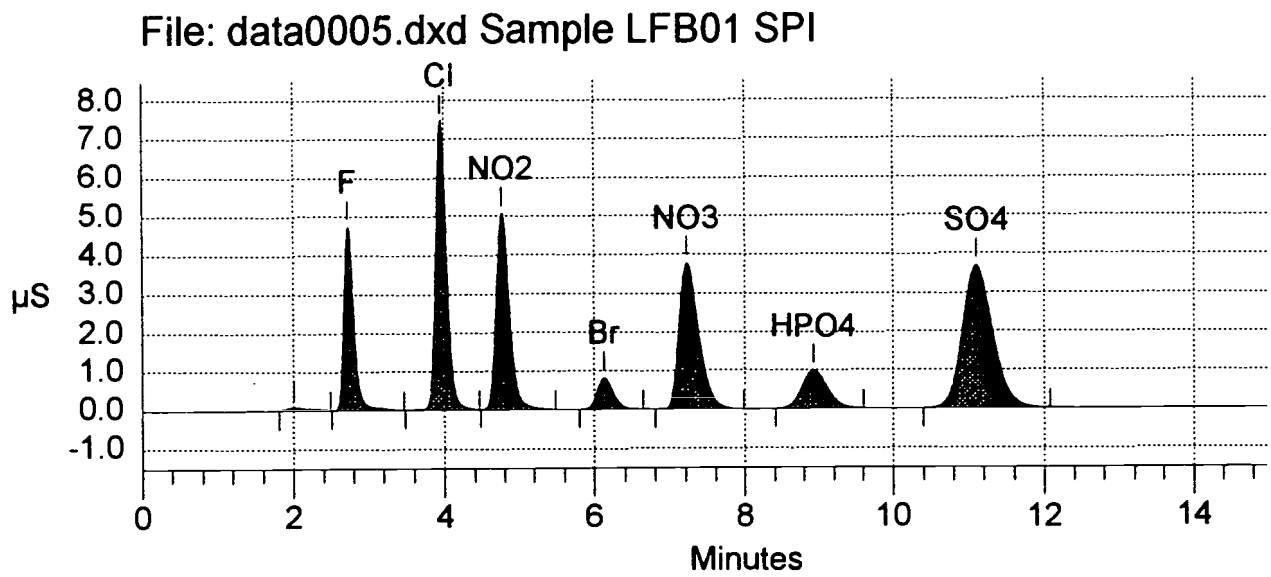
Data File :	NET\DATA\06099801\data0005.dxd	Report Date:	6/10/98 8:24:18 PM
Sample Name:	LFB01 SPI	Collected :	6/9/98 7:03:05 PM
Injection # :	5	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	10	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	10.142	438643	2.73	-1.44	2	4.95
3	Cl	24.781	748182	3.95	-2.95	2	2.84
4	NO2	9.776	624550	4.77	-2.45	2	3.87
5	Br	10.493	120089	6.13	-1.76	1	2.55
6	NO3	9.828	678506	7.22	0.00	1	3.08
7	HPO4	10.421	238907	8.93	0.00	1	3.21
8	SO4	49.674	1017793	11.11	-1.68	1	0.00
Totals		125.116	3866670				



Data File :	NET\DATA\06099801\data0015.dxd	Report Date:	6/10/98 8:24:24 PM
Sample Name:	CCV L	Collected :	6/9/98 9:59:20 PM
[redacted]ject # :	15	Vial # :	
[redacted]thod File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

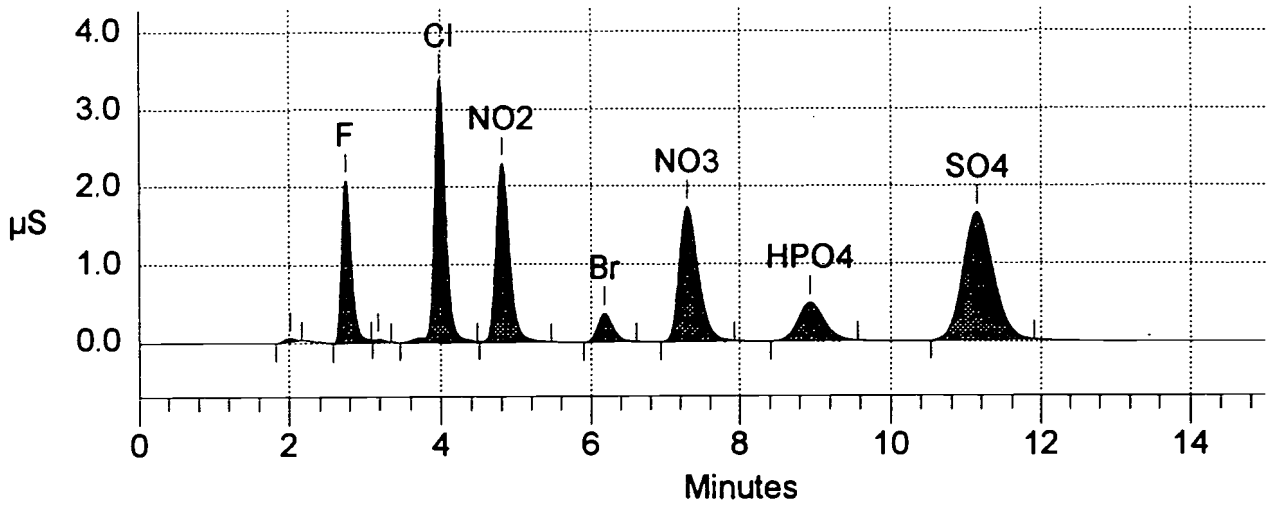
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	0.457	192885	2.75	-0.72	3	1.81
4	Cl	1.211	346648	3.98	-2.21	2	2.87
5	NO2	0.451	285720	4.81	-1.64	2	3.90
6	Br	0.461	53328	6.18	-0.96	1	2.62
7	NO3	0.452	308372	7.30	1.11	1	2.92
8	HPO4	0.537	121397	8.94	0.00	1	3.18
9	SO4	2.218	457492	11.14	-1.42	1	0.00
Totals		5.788	1765841				

File: data0015.dxd Sample CCV L



Data File :	NET\DATA\06099801\data0016.dxd	Report Date:	6/10/98 8:24:25 PM
Sample Name:	CCV H	Collected :	6/9/98 10:16:57 PM
Injection # :	16	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

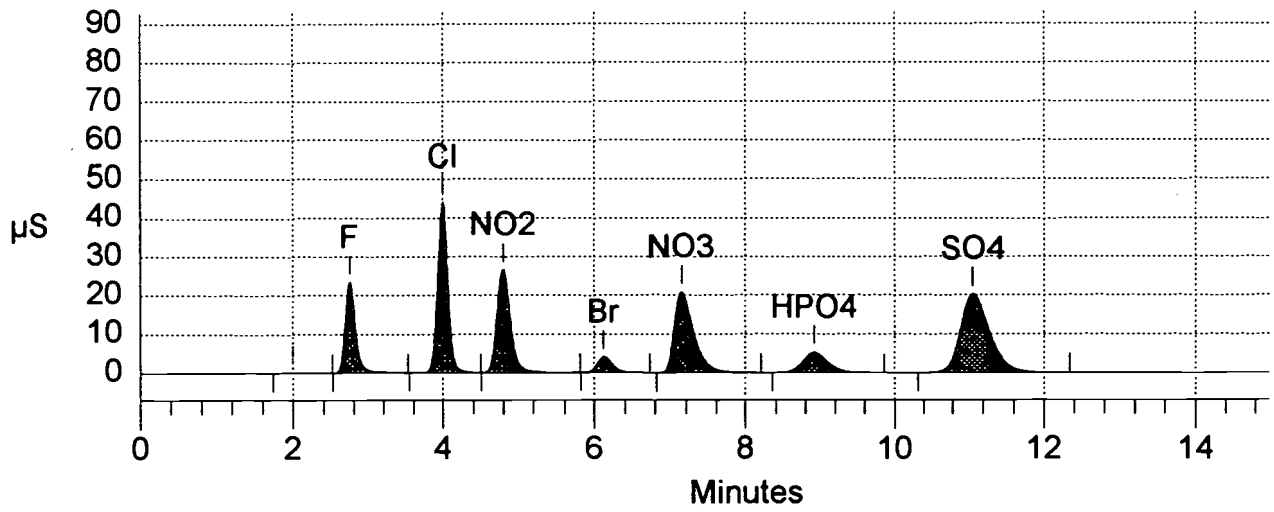
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	5.080	2271941	2.75	-0.72	2	5.07
3	Cl	12.818	4242355	4.00	-1.72	2	2.82
4	NO2	5.097	3333835	4.80	-1.84	2	3.79
5	Br	5.107	597997	6.12	-1.92	2	2.40
6	NO3	5.104	3781181	7.14	-1.11	2	3.27
7	HPO4	5.062	1235988	8.92	0.00	2	3.26
8	SO4	25.159	5448031	11.07	-2.04	1	0.00
Totals		63.428	20911328				

File: data0016.dxd Sample CCV H



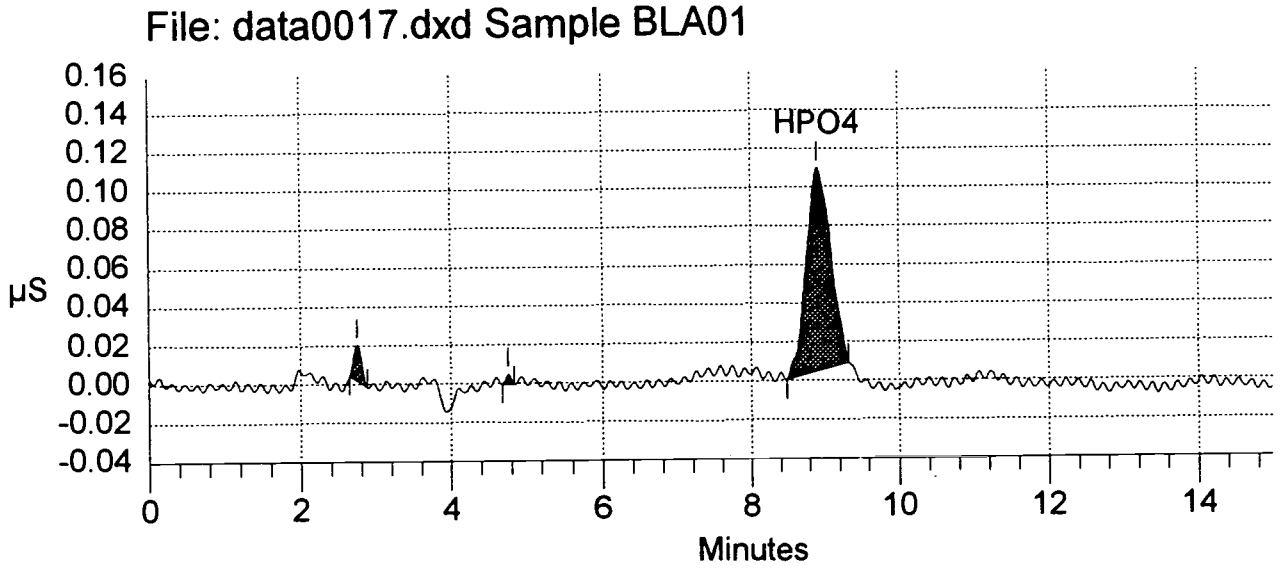
Data File	: NET\DATA\06099801\data0017.dxd	Report Date	: 6/10/98 8:24:26 PM
Sample Name	: BLA01	Collected	: 6/9/98 10:34:31 PM
Injection #	: 17	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.96

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
3	HPO4	0.114	24258	8.92	0.00	1	0.00
	Totals	0.114	24258				



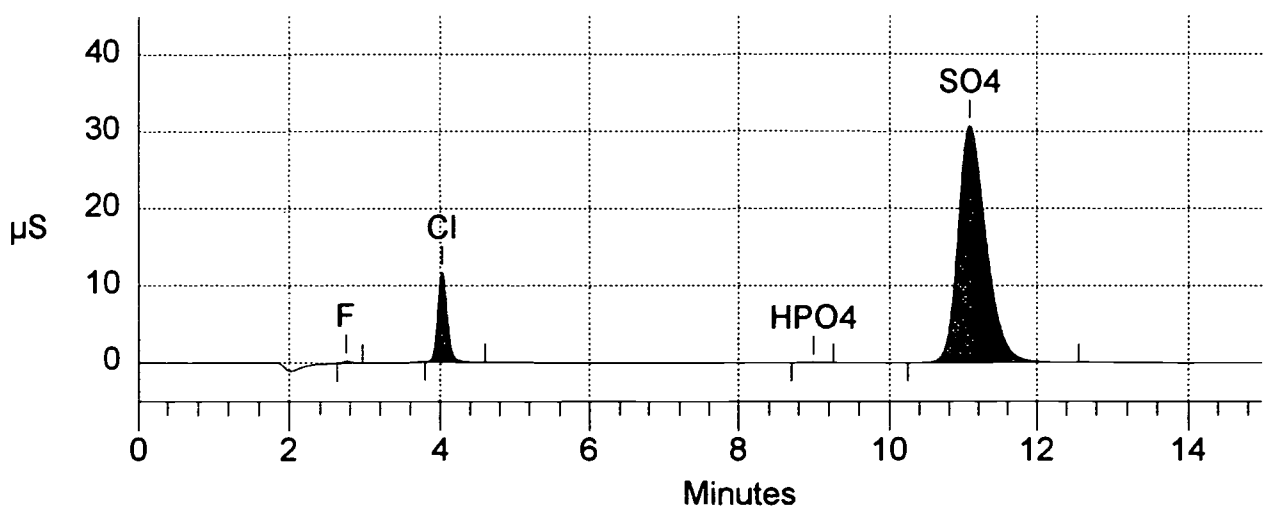
Data File	: NET\DATA\06099801\data0025.dxd	Report Date	: 6/10/98 8:24:31 PM
Sample Name	: A444782	Collected	: 6/10/98 12:55:31 AM
Injection #	: 25	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.071	23315	2.75	-0.72	1	5.60
2	Cl	3.276	1003865	4.02	-1.23	1	12.21
3	HPO4	0.026	4254	9.00	0.00	1	3.22
4	SO4	36.319	8199461	11.08	-1.95	1	0.00
Totals		39.693	9230895				



Schedule: \PEAKNET\SCHEDULE\06099802.SCH

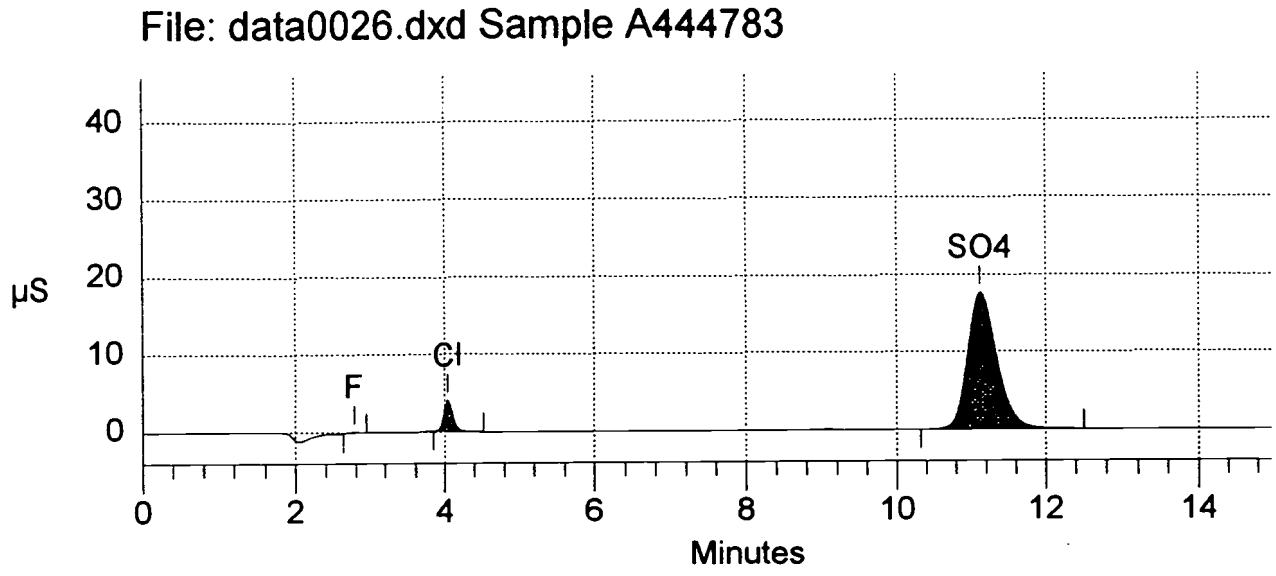
Data File	: NET\DATA\06099801\data0026.dxd	Report Date	: 6/10/98 8:24:32 PM
Sample Name	: A444783	Collected	: 6/10/98 1:13:10 AM
Injection #	: 26	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.049	13713	2.78	0.36	1	5.49
2	Cl	1.216	347918	4.04	-0.74	1	15.26
3	SO4	22.166	4751488	11.13	-1.50	1	0.00
	Totals	23.431	5113120				



Data File :	NET\DATA\06099801\data0027.dxd	Report Date:	6/10/98 8:24:32 PM
Sample Name:	A444784	Collected :	6/10/98 1:30:48 AM
Injection # :	27	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

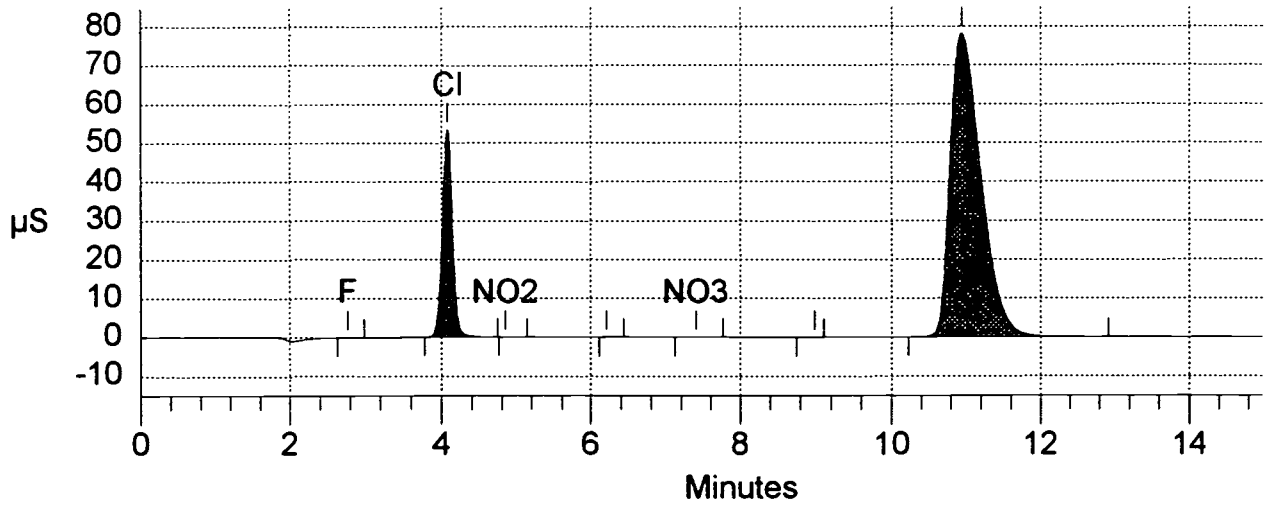
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.070	22823	2.77	0.00	1	5.64
2	Cl	14.109	4710166	4.08	0.25	1	3.40
3	NO2	0.008	2268	4.85	-0.82	1	5.16
5	NO3	0.014	7105	7.40	2.49	1	4.19
7	SO4	76.924	22302535	10.94	-3.19	1	0.00
Totals		91.126	27044896				

File: data0027.dxd Sample A444784



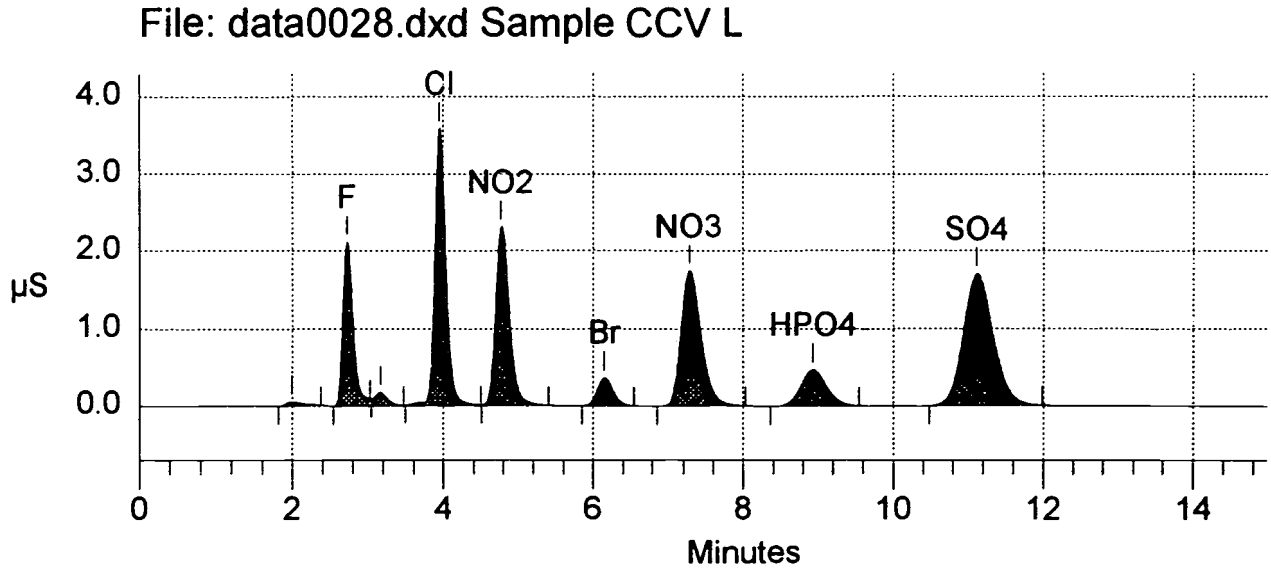
Data File :	NET\DATA\06099801\data0028.dxd	Report Date:	6/10/98 8:24:33 PM
Sample Name:	CCV L	Collected :	6/10/98 1:48:26 AM
Injection # :	28	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	0.473	199805	2.73	-1.44	3	1.52
4	Cl	1.277	367420	3.95	-2.95	2	2.81
5	NO2	0.454	287383	4.77	-2.45	2	3.87
6	Br	0.463	53544	6.15	-1.44	1	2.59
7	NO3	0.468	319286	7.28	0.83	1	2.93
8	HPO4	0.512	115624	8.93	0.00	1	3.18
9	SO4	2.295	473035	11.12	-1.59	1	0.00
Totals		5.941	1816097				



Data File :	NET\DATA\06099801\data0029.dxd	Report Date:	6/10/98 8:24:34 PM
Sample Name:	CCV H	Collected :	6/10/98 2:06:03 AM
Injection # :	29	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

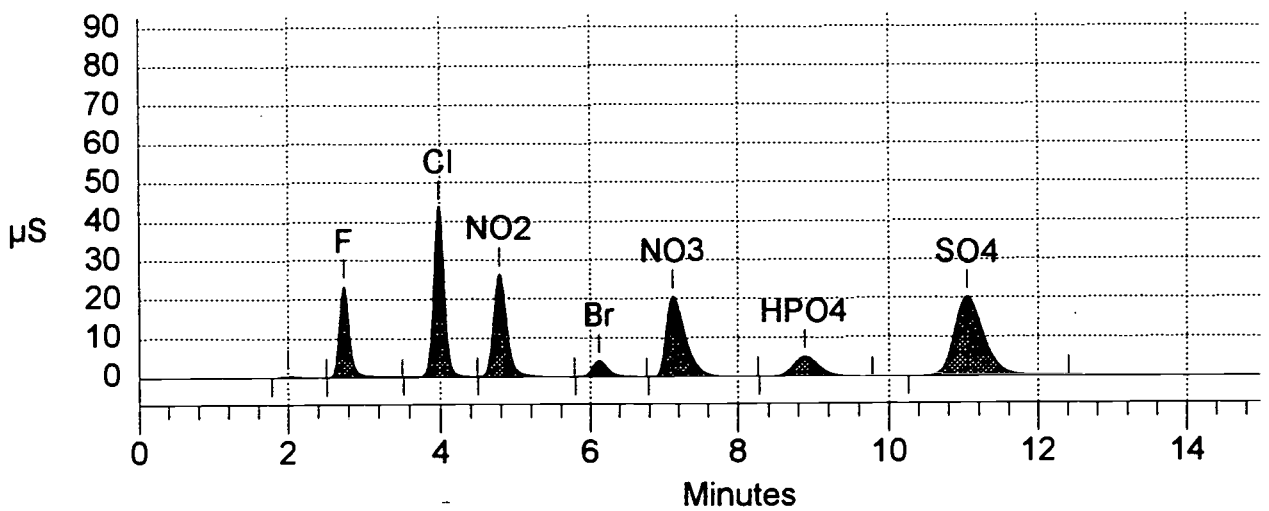
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	5.034	2250614	2.74	-1.08	2	5.03
3	Cl	12.781	4229334	3.98	-2.21	2	2.82
4	NO2	5.055	3305186	4.78	-2.25	2	3.81
5	Br	5.065	592878	6.12	-1.92	2	2.35
6	NO3	5.075	3757572	7.13	-1.25	2	3.18
7	HPO4	5.001	1219887	8.88	0.00	2	3.27
8	SO4	25.100	5434065	11.05	-2.21	1	0.00
Totals		63.111	20789536				

File: data0029.dxd Sample CCV H



Schedule: \PEAKNET\SCHEDULE\06099802.SCH
Release 4.30 Page 1 of 1 6/10/98 8:24:34 PM

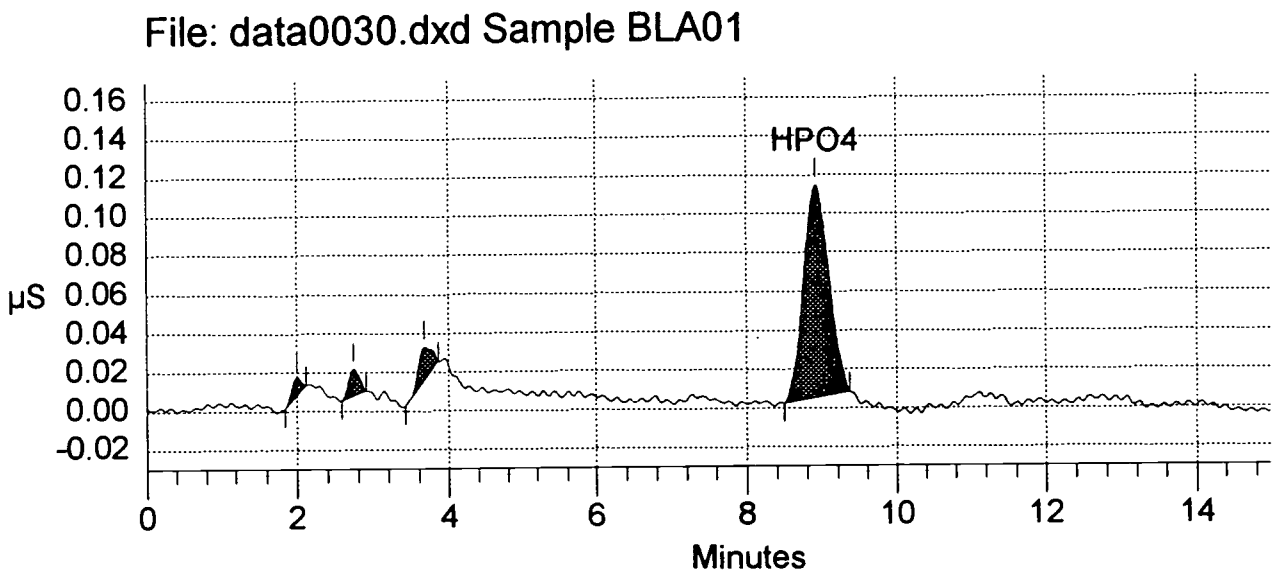
Data File	: NET\DATA\06099801\data0030.dxd	Report Date	: 6/10/98 8:24:35 PM
Sample Name	: BLA01	Collected	: 6/10/98 2:23:41 AM
Injection #	: 30	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
4	HPO4	0.119	25555	8.92	0.00	1	0.00
	Totals	0.119	25555				



Schedule: \PEAKNET\SCHEDULE\06099802.SCH
Release 4.30 Page 1 of 1 6/10/98 8:24:35 PM

Data File	: NET\DATA\06099801\data0031.dxd	Report Date	: 6/10/98 8:24:35 PM
Sample Name	: A444785	Collected	: 6/10/98 2:41:19 AM
Injection #	: 31	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

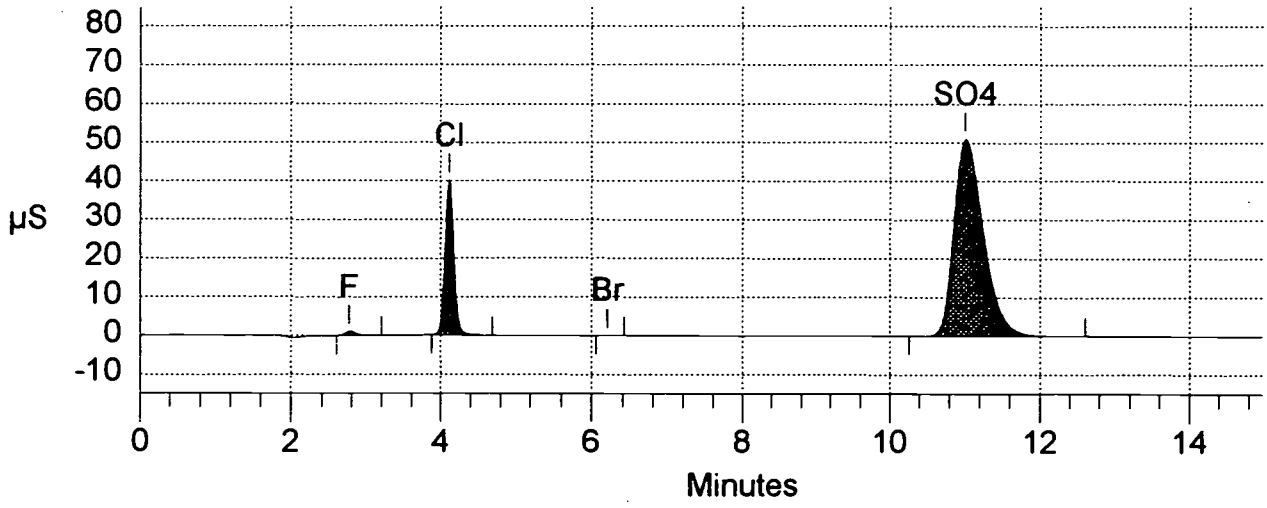
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.283	116486	2.77	0.00	1	5.81
2	Cl	9.874	3204332	4.12	1.23	1	8.38
3	Br	0.000	1517	6.21	-0.48	1	9.52
4	SO4	56.260	13959771	11.01	-2.57	1	0.00
Totals		66.418	17282107				

File: data0031.dxd Sample A444785



Schedule: \PEAKNET\SCHEDULE\06099802.SCH
Release 4.30 Page 1 of 1 6/10/98 8:24:35 PM

Data File	: NET\DATA\06099801\data0032.dxd	Report Date:	6/10/98 8:24:36 PM
Sample Name:	SPI01 A444785	Collected	: 6/10/98 2:58:56 AM
Injection #	: 32	Vial #	:
Method File:	c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name:	DX-500	Detector	: CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points:	4500	Rate	: 5.00 Hz
Module Name:	ID:24 04 47	Moduleware	: 2.10

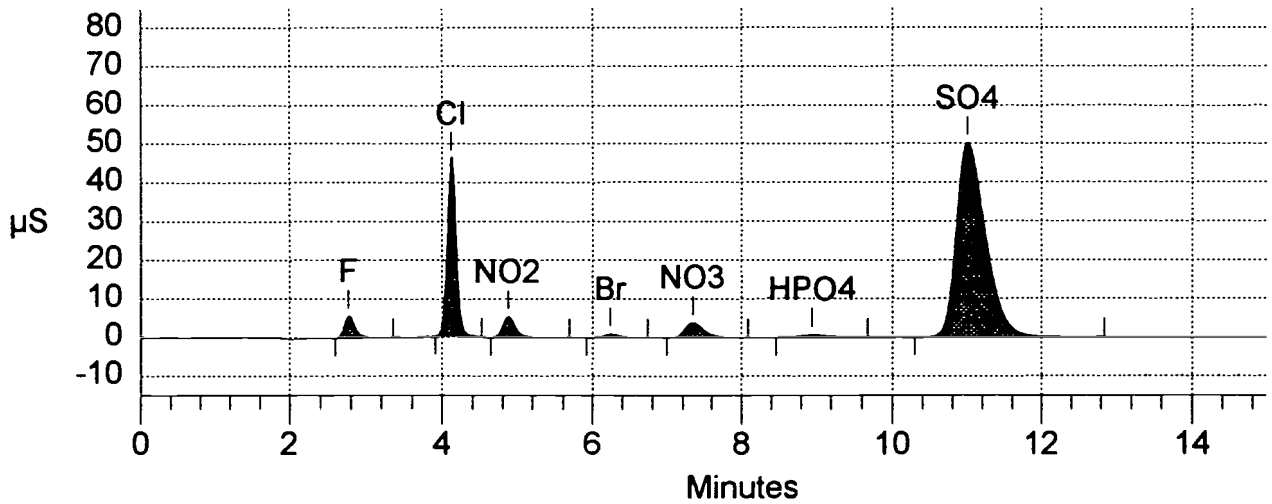
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	1.264	549407	2.77	0.00	1	5.74
2	Cl	11.616	3813906	4.12	1.23	1	2.94
3	NO2	0.943	602266	4.87	-0.41	1	4.06
4	Br	1.036	118534	6.24	0.00	1	2.61
5	NO3	0.972	671043	7.34	1.66	1	2.91
6	HPO4	0.693	157505	8.95	0.00	1	3.01
7	SO4	55.552	13729608	11.00	-2.65	1	0.00
Totals		72.076	19642269				

File: data0032.dxd Sample SPI01 A444785



Schedule: \PEAKNET\SCHEDULE\06099802.SCH

Data File	: NET\DATA\06099801\data0033.dxd	Report Date	: 6/10/98 8:24:37 PM
Sample Name	: DSP01 A444785	Collected	: 6/10/98 3:16:33 AM
Injection #	: 33	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

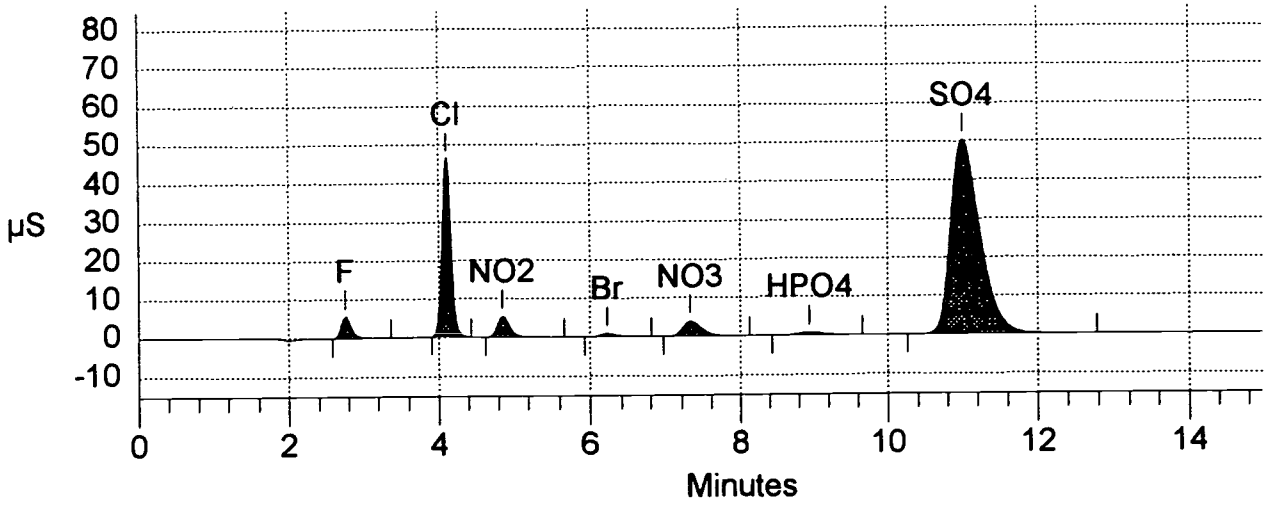
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	1.264	549434	2.76	-0.36	1	5.77
2	Cl	11.617	3814501	4.10	0.74	1	2.91
3	NO2	0.951	607420	4.85	-0.82	1	4.03
4	Br	1.041	119092	6.22	-0.32	1	2.61
5	NO3	0.982	677939	7.32	1.39	1	2.94
6	HPO4	0.872	199194	8.95	0.00	1	3.00
7	SO4	55.631	13755185	11.00	-2.65	1	0.00
Totals		72.359	19722765				

File: data0033.dxd Sample DSP01 A444785



Data File	: NET\DATA\06099801\data0034.dxd	Report Date	: 6/10/98 8:24:37 PM
Sample Name	: A444786	Collected	: 6/10/98 3:34:11 AM
Injection #	: 34	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

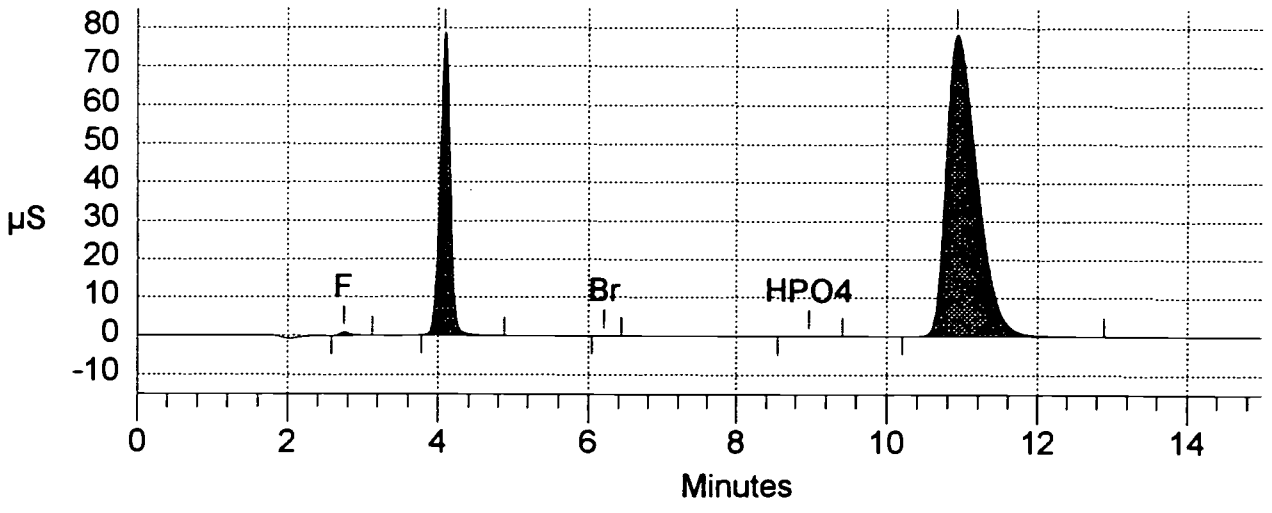
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.221	88897	2.75	-0.72	1	5.56
2	Cl	20.447	7133448	4.09	0.49	1	7.06
3	Br	0.017	3346	6.21	-0.48	1	5.53
4	HPO4	0.113	24118	8.97	0.00	1	2.81
5	SO4	76.739	22205203	10.92	-3.36	1	0.00
	Totals	97.537	29455013				

File: data0034.dxd Sample A444786



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Schedule: \PEAKNET\SCHEDULE\06099802.SCH

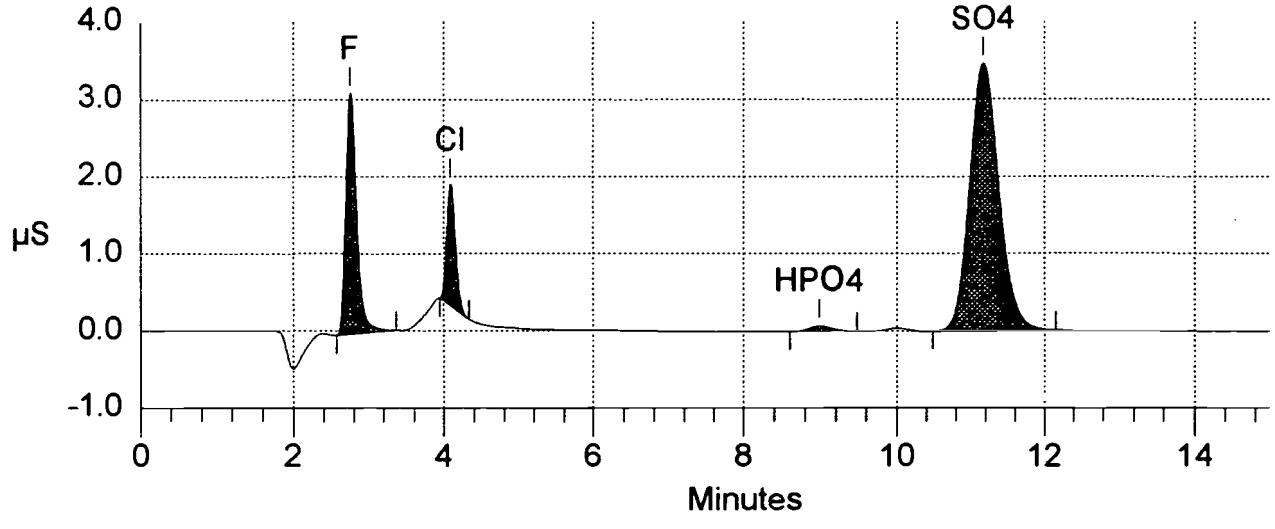
Data File	: NET\DATA\06099801\data0035.dxd	Report Date	: 6/10/98 8:24:38 PM
Sample Name	: A444787	Collected	: 6/10/98 3:51:48 AM
Injection #	: 35	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.745	319889	2.75	-0.72	1	5.63
2	Cl	0.505	124719	4.09	0.49	1	11.61
3	HPO4	0.082	17058	8.99	0.00	1	3.23
4	SO4	4.600	942335	11.17	-1.15	1	0.00
Totals		5.932	1404001				



Schedule: \PEAKNET\SCHEDULE\06099802.SCH

Data File	: NET\DATA\06099801\data0036.dxd	Report Date	: 6/10/98 8:24:39 PM
Sample Name	: A444788	Collected	: 6/10/98 4:09:25 AM
Injection #	: 36	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

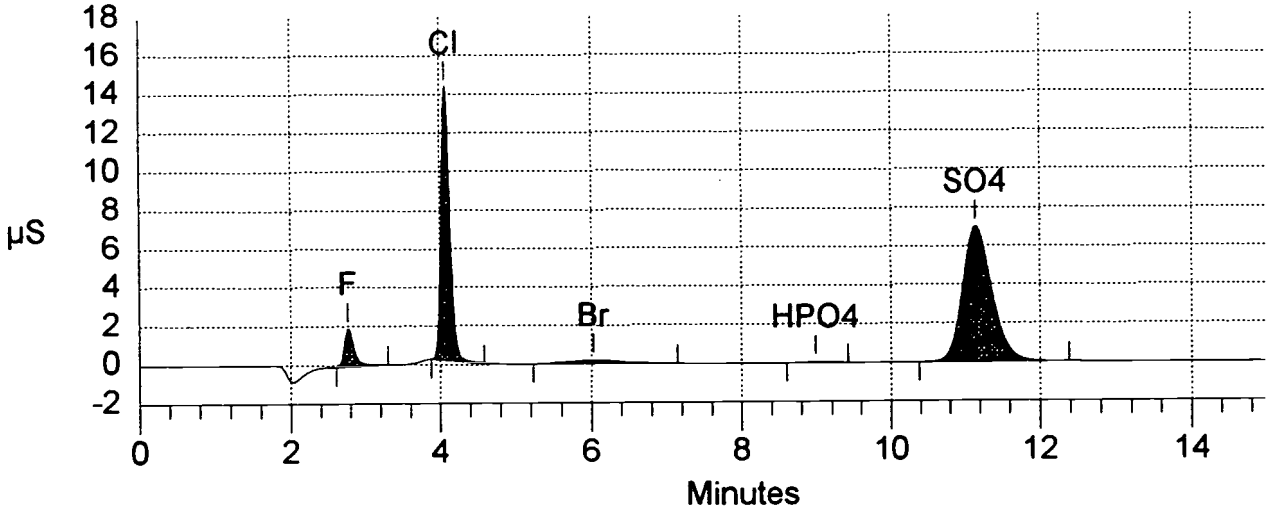
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.427	179428	2.77	0.00	1	5.81
2	Cl	3.800	1172819	4.07	0.00	1	2.39
3	Br	0.751	86208	6.02	-3.53	1	2.88
4	HPO4	0.054	10655	8.99	0.00	1	3.19
5	SO4	9.230	1904836	11.15	-1.33	1	0.00
Totals		14.262	3353947				

File: data0036.dxd Sample A444788



Data File	: NET\DATA\06099801\data0037.dxd	Report Date	: 6/10/98 8:24:39 PM
Sample Name	: A444789	Collected	: 6/10/98 4:27:02 AM
Injection #	: 37	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/10/98 4:25:09 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

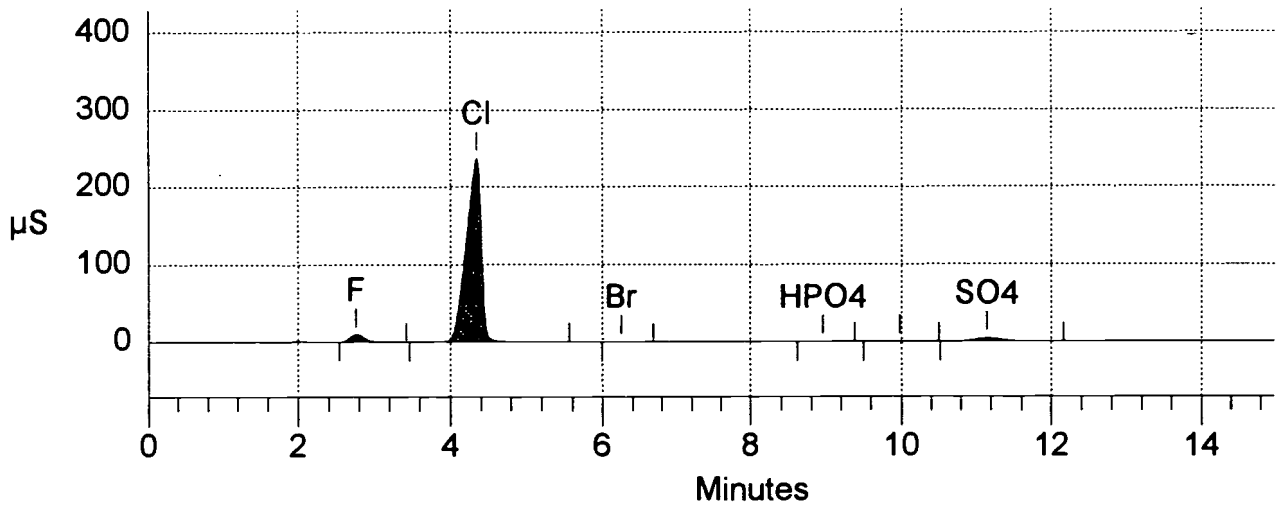
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	2.970	1311830	2.76	-0.36	1	4.22
2	Cl	51.432	32849213	4.34	-1.14	1	5.15
3	Br	0.438	50725	6.25	0.16	1	5.56
4	HPO4	0.056	11173	8.96	0.00	1	1.59
6	SO4	5.626	1153295	11.15	-1.33	2	0.00
Totals		60.522	35376236				

File: data0037.dxd Sample A444789



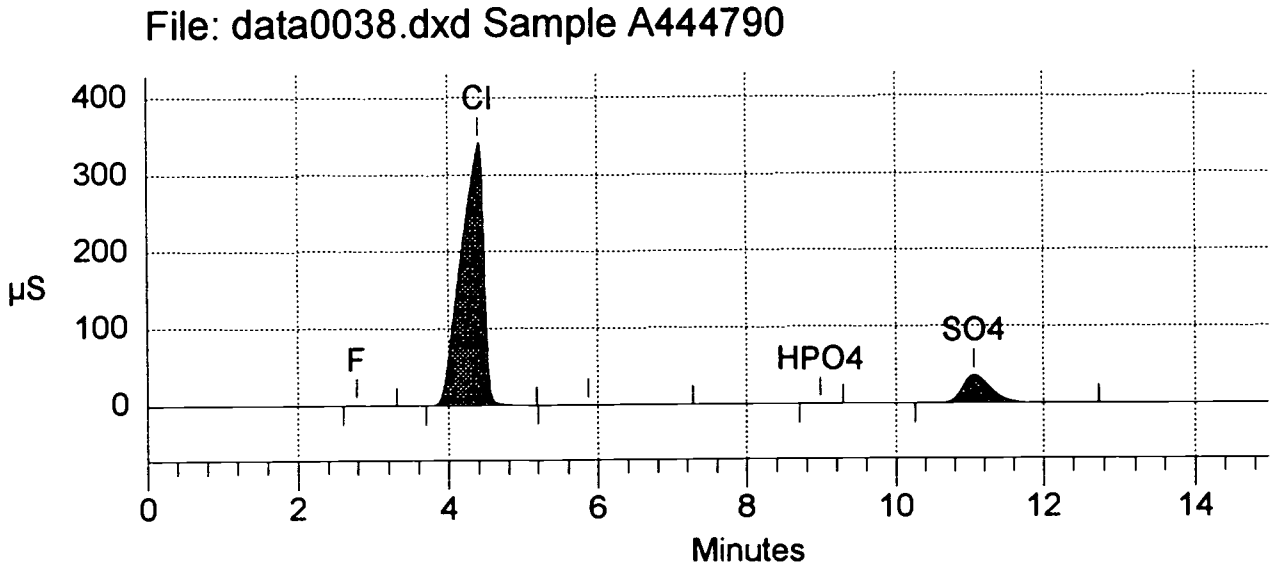
Data File	: NET\DATA\06099801\data0038.dxd	Report Date	: 6/10/98 8:24:40 PM
Sample Name	: A444790	Collected	: 6/10/98 4:44:40 AM
Injection #	: 38	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/10/98 4:25:33 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.280	114815	2.78	0.36	1	3.66
2	Cl	-28.929	72055189	4.41	0.46	2	1.33
4	HPO4	0.021	3093	8.99	0.00	1	3.20
5	SO4	42.279	9787396	11.06	-2.12	1	0.00
Totals		13.651	81960493				



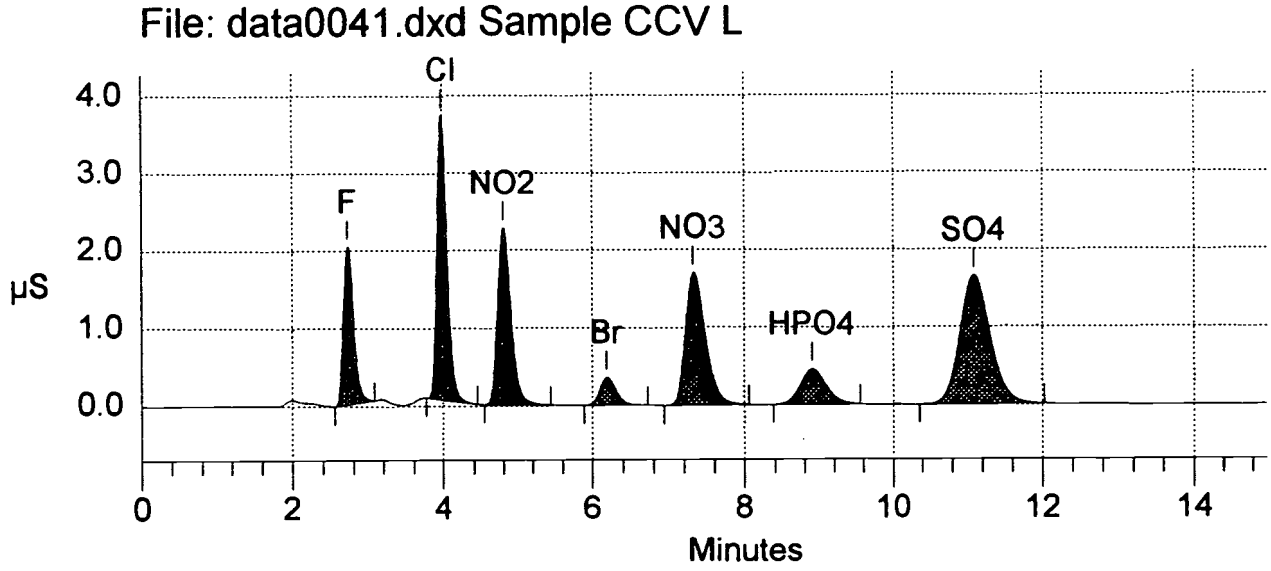
Data File	: NET\DATA\06099801\data0041.dxd	Report Date	: 6/10/98 8:24:42 PM
Sample Name	: CCV L	Collected	: 6/10/98 5:37:34 AM
Inject #	: 41	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.438	184454	2.73	-1.44	1	5.13
2	Cl	1.211	346436	3.98	-2.21	1	2.87
3	NO2	0.442	279735	4.80	-1.84	1	3.86
4	Br	0.465	53793	6.19	-0.80	1	2.61
5	NO3	0.454	309850	7.33	1.52	1	2.80
6	HPO4	0.494	111480	8.90	0.00	1	3.17
7	SO4	2.260	465791	11.09	-1.86	1	0.00
	Totals	5.763	1751539				



Data File	: NET\DATA\06099801\data0042.dxd	Report Date	: 6/10/98 8:24:42 PM
Sample Name	: CCV H	Collected	: 6/10/98 5:55:11 AM
Injection #	: 42	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

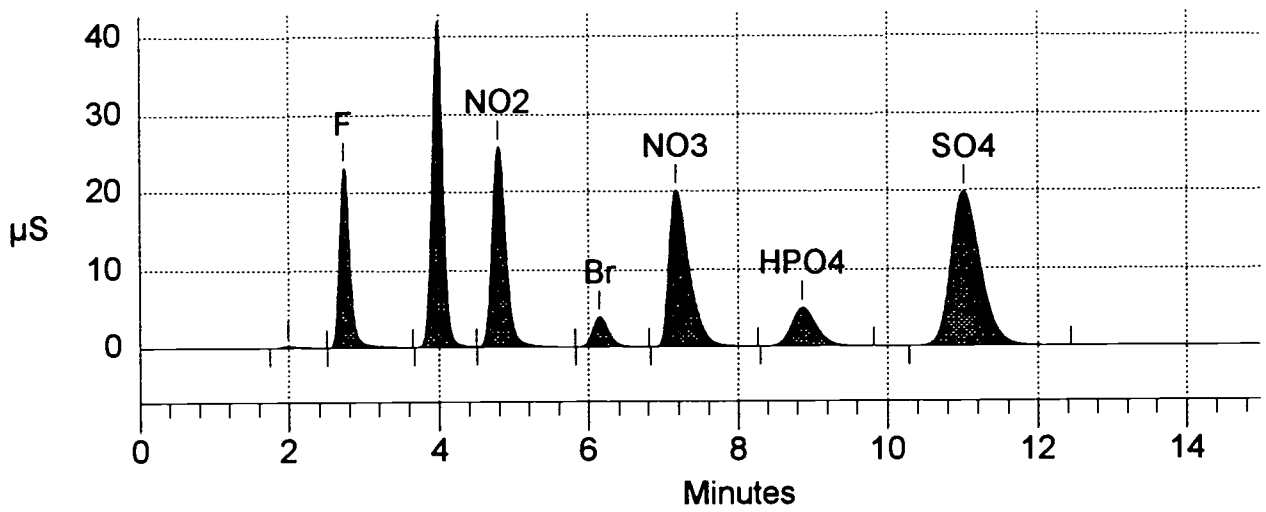
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	5.002	2235828	2.73	-1.44	2	5.01
3	Cl	12.571	4153834	3.98	-2.21	2	2.80
4	NO2	5.018	3280513	4.79	-2.04	2	3.84
5	Br	4.993	584152	6.15	-1.44	2	2.37
6	NO3	5.030	3721049	7.17	-0.69	2	3.09
7	HPO4	4.914	1197001	8.87	0.00	2	3.26
8	SO4	24.728	5346767	11.02	-2.48	1	0.00
Totals		62.256	20519144				

File: data0042.dxd Sample CCV H



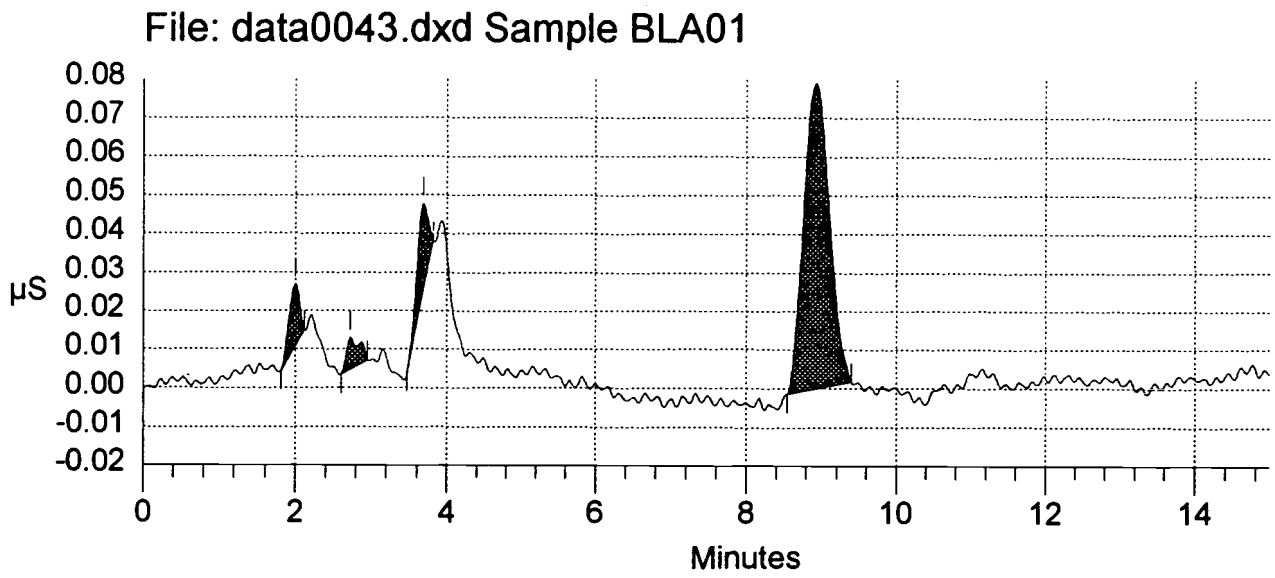
Data File	: NET\DATA\06099801\data0043.dxd	Report Date	: 6/10/98 8:24:43 PM
Sample Name	: BLA01	Collected	: 6/10/98 6:12:48 AM
Injection #	: 43	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
4	HPO4	0.090	18882	8.92	0.00	1	0.00
	Totals	0.090	18882				



Schedule: \PEAKNET\SCHEDULE\06099802.SCH
Release 4.30 Page 1 of 1 6/10/98 8:24:43 PM

Data File	: NET\DATA\06109801\data0005.dxd	Report Date	: 6/11/98 9:29:47 PM
Sample Name	: LFB01 SPI	Collected	: 6/10/98 8:21:10 PM
Injection #	: 5	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

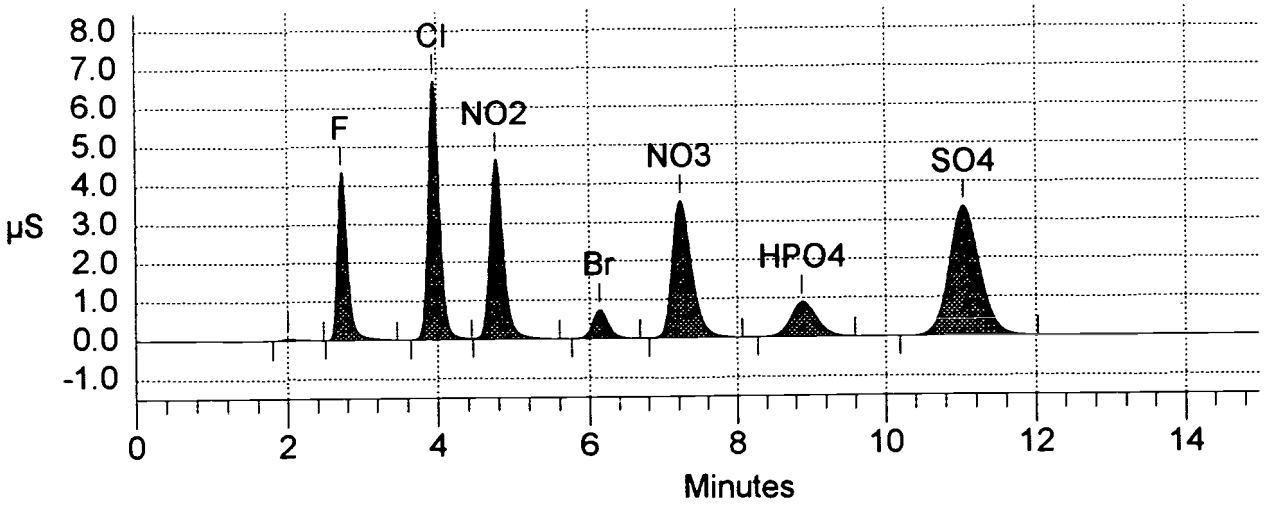
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	0.934	402956	2.73	-1.44	2	4.95
3	Cl	2.266	680575	3.95	-2.95	2	2.84
4	NO2	0.917	585233	4.77	-2.45	2	3.84
5	Br	0.965	110439	6.13	-1.76	2	2.55
6	NO3	0.925	637667	7.23	0.14	1	2.97
7	HPO4	0.960	219730	8.89	0.00	1	3.14
8	SO4	4.573	936838	11.04	-2.30	1	0.00
	Totals	11.538	3573438				

File: data0005.dxd Sample LFB01 SPI



Data File	: NET\DATA\06109801\data0015.dxd	Report Date	: 6/11/98 9:29:54 PM
Sample Name	: CCV L	Collected	: 6/10/98 11:17:21 PM
Injection #	: 15	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

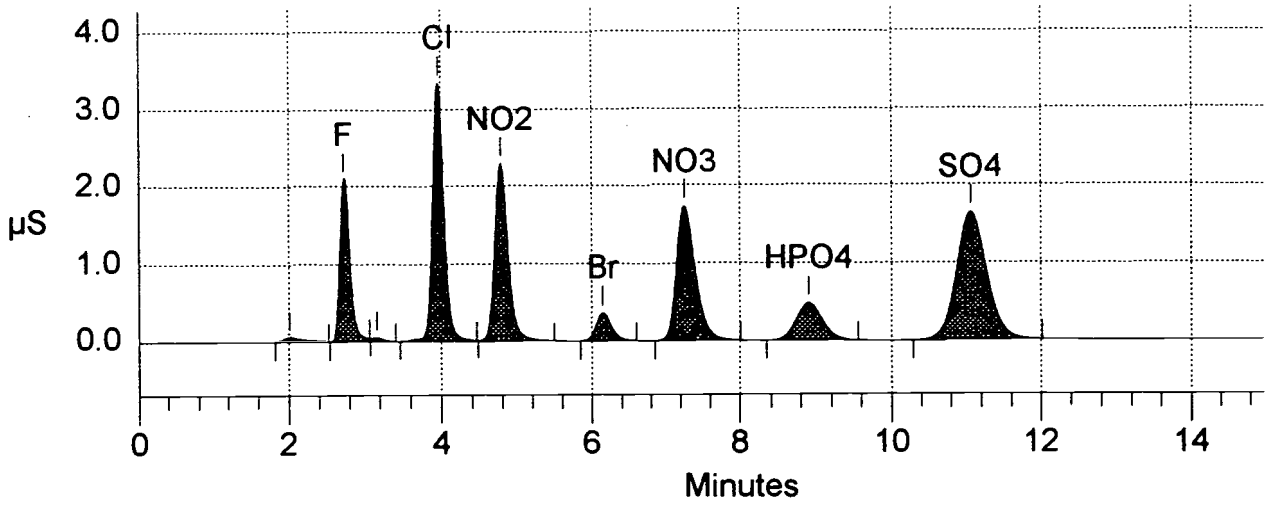
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	0.461	194454	2.73	-1.44	3	1.81
4	Cl	1.198	342480	3.96	-2.70	2	2.78
5	NO2	0.451	286000	4.78	-2.25	2	3.87
6	Br	0.466	53943	6.15	-1.44	1	2.59
7	NO3	0.456	310894	7.26	0.55	1	2.92
8	HPO4	0.534	120765	8.90	0.00	1	3.10
9	SO4	2.269	467611	11.06	-2.12	1	0.00
	Totals	5.835	1776147				

File: data0015.dxd Sample CCV L



Schedule: \PEAKNET\SCHEDULE\06109802.SCH
Release 4.30 Page 1 of 1 6/11/98 9:29:54 PM

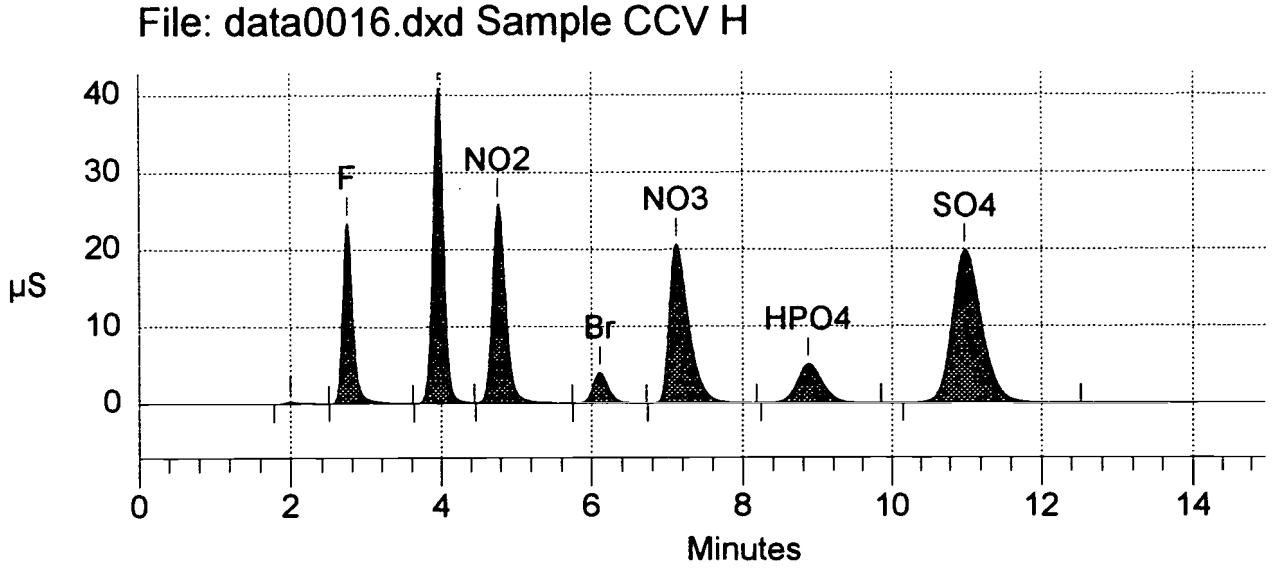
Data File :	NET\DATA\06109801\data0016.dxd	Report Date:	6/11/98 9:29:55 PM
Sample Name:	CCV H	Collected :	6/10/98 11:34:55 PM
Inject # :	16	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	5.000	2235293	2.74	-1.08	2	4.88
3	Cl	12.526	4137733	3.97	-2.46	2	2.71
4	NO2	5.025	3285539	4.77	-2.45	2	3.81
5	Br	5.023	587780	6.11	-2.08	2	2.38
6	NO3	5.059	3744406	7.12	-1.39	2	3.18
7	HPO4	4.986	1215866	8.87	0.00	2	3.18
8	SO4	24.833	5371345	10.99	-2.74	1	0.00
	Totals	62.452	20577963				



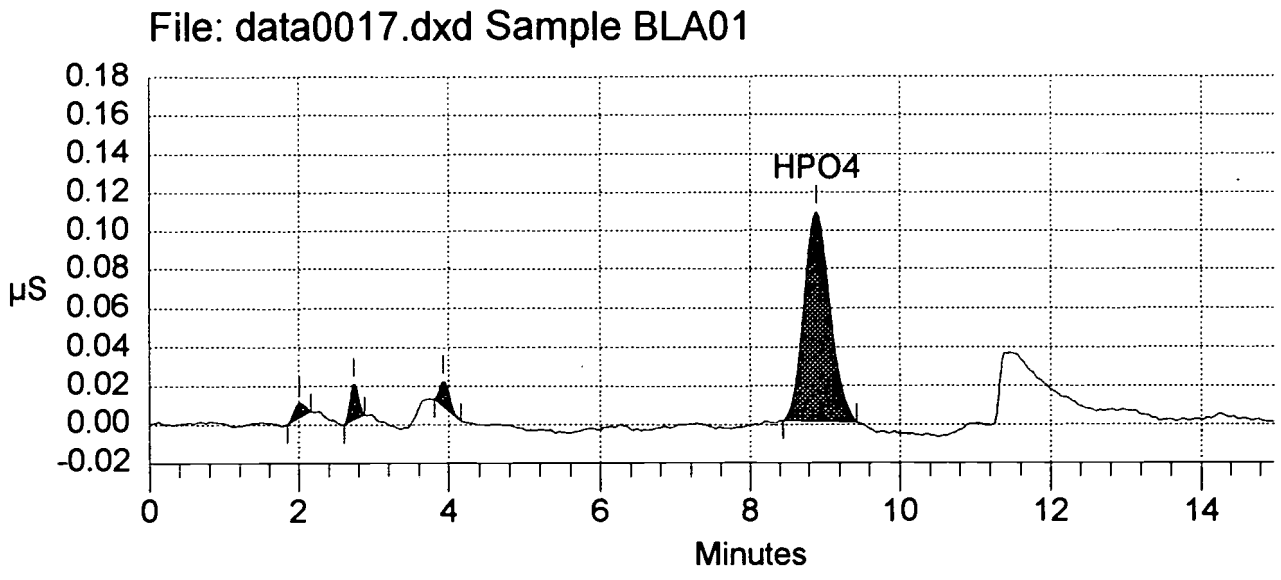
Data File	: NET\DATA\06109801\data0017.dxd	Report Date	: 6/11/98 9:29:56 PM
Sample Name	: BLA01	Collected	: 6/10/98 11:52:32 PM
Injection #	: 17	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
4	HPO4	0.122	26153	8.90	0.00	1	0.00
	Totals	0.122	26153				



Schedule: \PEAKNET\SCHEDULE\06109802.SCH
Release 4.30 Page 1 of 1 6/11/98 9:29:56 PM

Data File :	NET\DATA\06109801\data0021.dxd	Report Date:	6/11/98 9:29:59 PM
Sample Name:	A444784 1:5	Collected :	6/11/98 1:03:01 AM
Injection # :	21	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

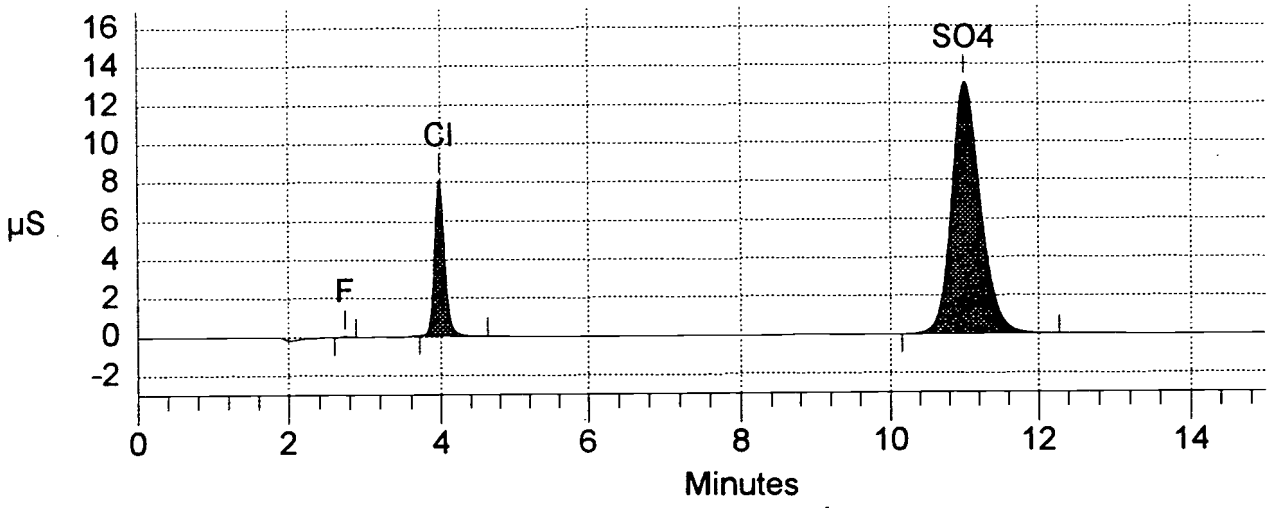
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	5	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.133	3804	2.74	-1.08	1	5.21
2	Cl	12.587	760727	3.98	-2.21	1	14.86
3	SO4	84.594	3566561	11.01	-2.57	1	0.00
Totals		97.314	4331092				

File: data0021.dxd Sample A444784 1:5



Schedule: \PEAKNET\SCHEDULE\06109802.SCH
Release 4.30 Page 1 of 1 6/11/98 9:29:59 PM

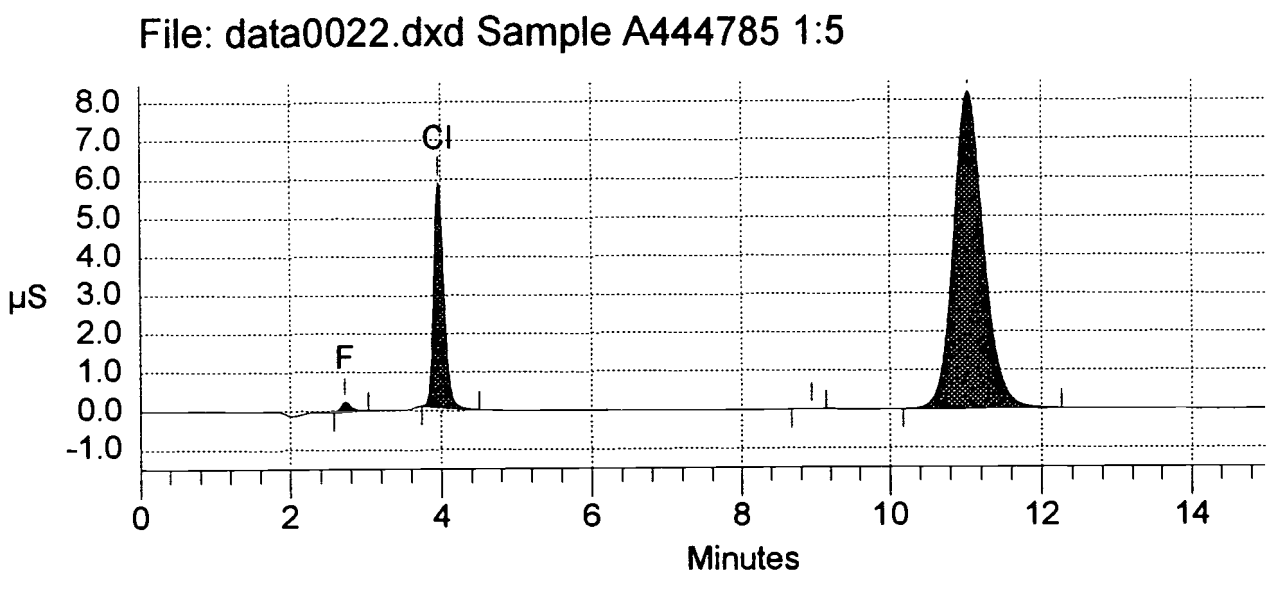
Data File	: NET\DATA\06109801\data0022.dxd	Report Date	: 6/11/98 9:29:59 PM
Sample Name	: A444785 1:5	Collected	: 6/11/98 1:20:40 AM
[redacted]ject #	: 22	Vial #	:
[redacted]thod File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	5	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.331	21156	2.73	-1.44	1	5.27
2	Cl	8.873	524526	3.97	-2.46	1	14.29
4	SO4	54.137	2243349	11.03	-2.39	1	0.00
	Totals	63.341	2789031				



Data File	: NET\DATA\06109801\data0023.dxd	Report Date	: 6/11/98 9:30:00 PM
Sample Name	: A444786 1:5	Collected	: 6/11/98 1:38:17 AM
Injection #	: 23	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

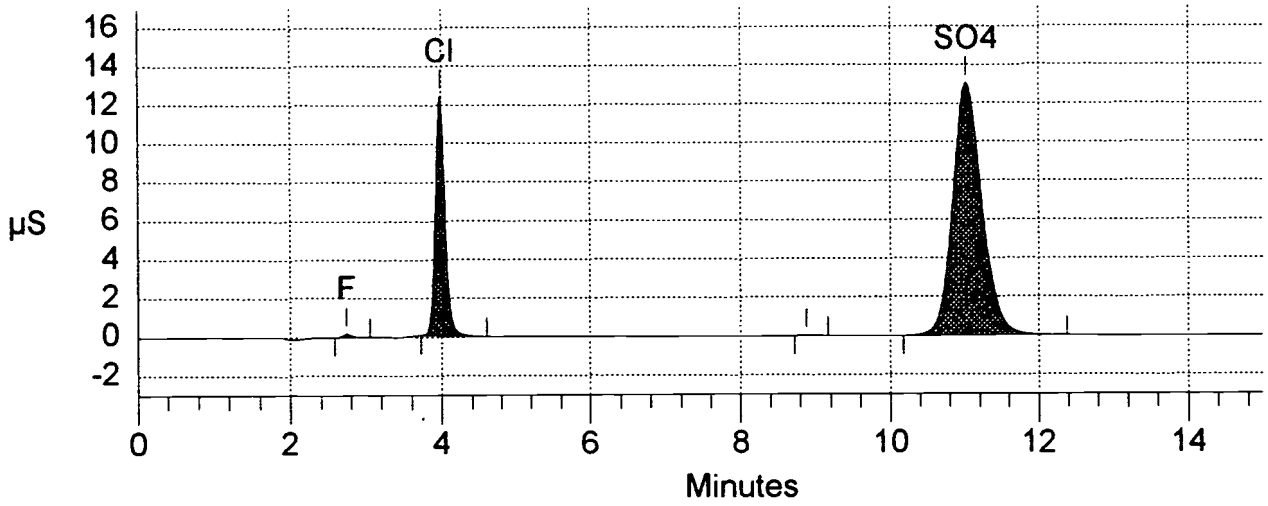
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	5	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.273	16022	2.74	-1.08	1	5.21
2	Cl	18.241	1123754	3.98	-2.21	1	14.20
4	SO4	84.365	3556392	11.02	-2.48	1	0.00
	Totals	102.878	4696167				

File: data0023.dxd Sample A444786 1:5



Schedule: \PEAKNET\SCHEDULE\06109802.SCH
Release 4.30 Page 1 of 1 6/11/98 9:30:00 PM

Data File	: NET\DATA\06109801\data0024.dxd	Report Date	: 6/11/98 9:30:00 PM
Sample Name	: A444789 1:5	Collected	: 6/11/98 1:55:57 AM
Injection #	: 24	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

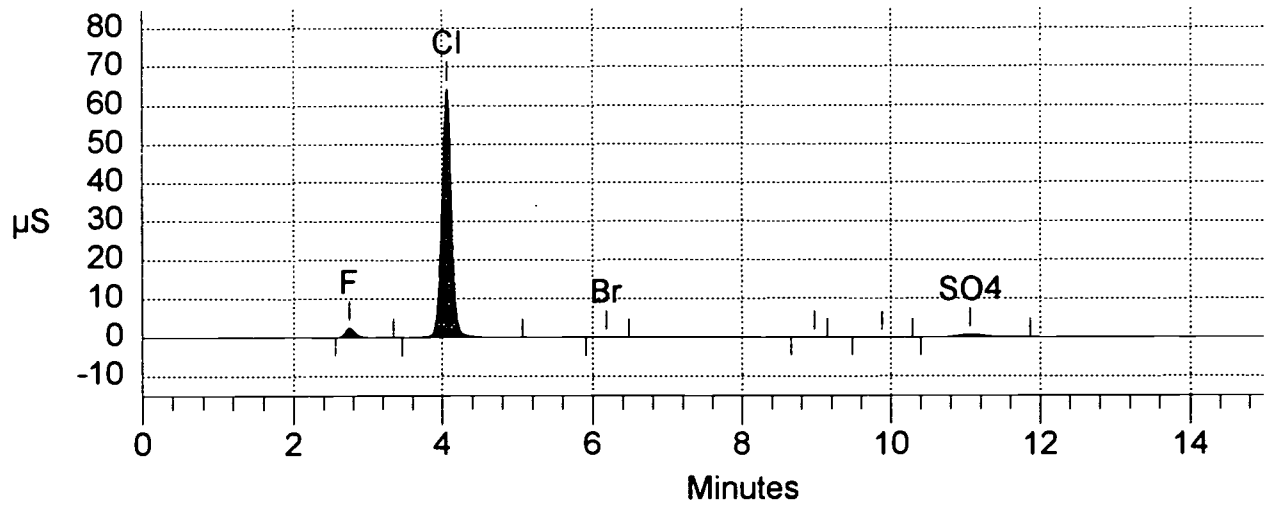
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	5	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	2.885	245642	2.75	-0.72	1	5.42
2	Cl	85.273	5808459	4.07	0.00	1	6.96
3	Br	0.361	9578	6.18	-0.96	1	6.35
6	SO4	5.204	220161	11.07	-2.04	2	0.00
Totals		93.723	6283840				

File: data0024.dxd Sample A444789 1:5



Schedule: \PEAKNET\SCHEDULE\06109802.SCH
Release 4.30 Page 1 of 1 6/11/98 9:30:00 PM

Data File	: NET\DATA\06109801\data0025.dxd	Report Date	: 6/11/98 9:30:01 PM
Sample Name	: A444790 1:10	Collected	: 6/11/98 2:13:34 AM
[illegible]ject #	: 25	Vial #	:
[illegible]thod File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

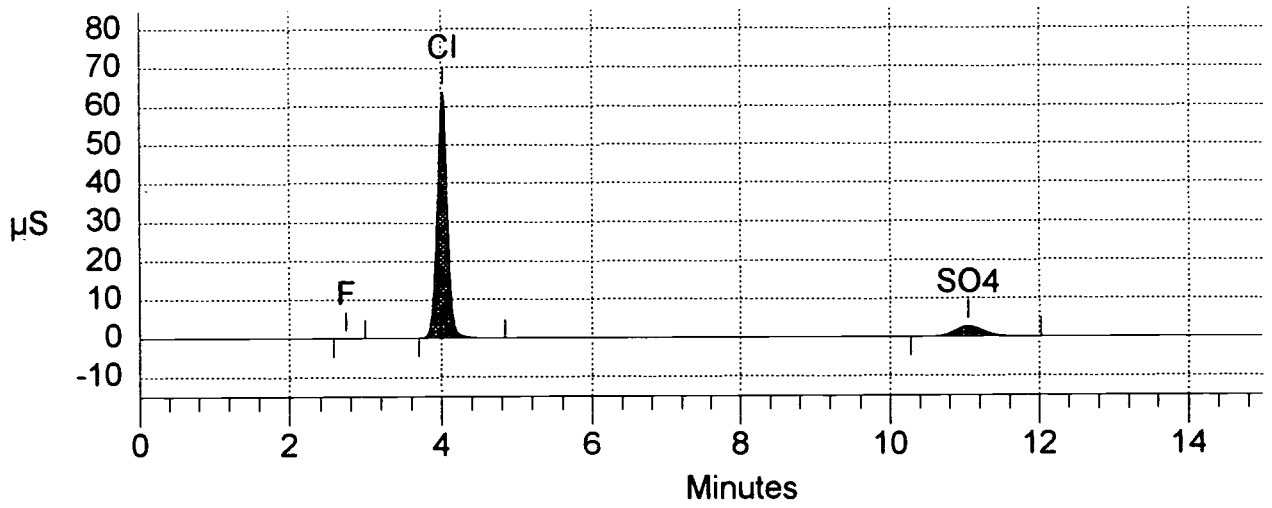
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	10	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.412	10175	2.74	-1.08	1	5.31
2	Cl	177.333	6068128	4.02	-1.23	1	14.34
3	SO4	37.510	768754	11.05	-2.21	1	0.00
	Totals	215.255	6847057				

File: data0025.dxd Sample A444790 1:10



Schedule: \PEAKNET\SCHEDULE\06109802.SCH
Release 4.30 Page 1 of 1 6/11/98 9:30:01 PM

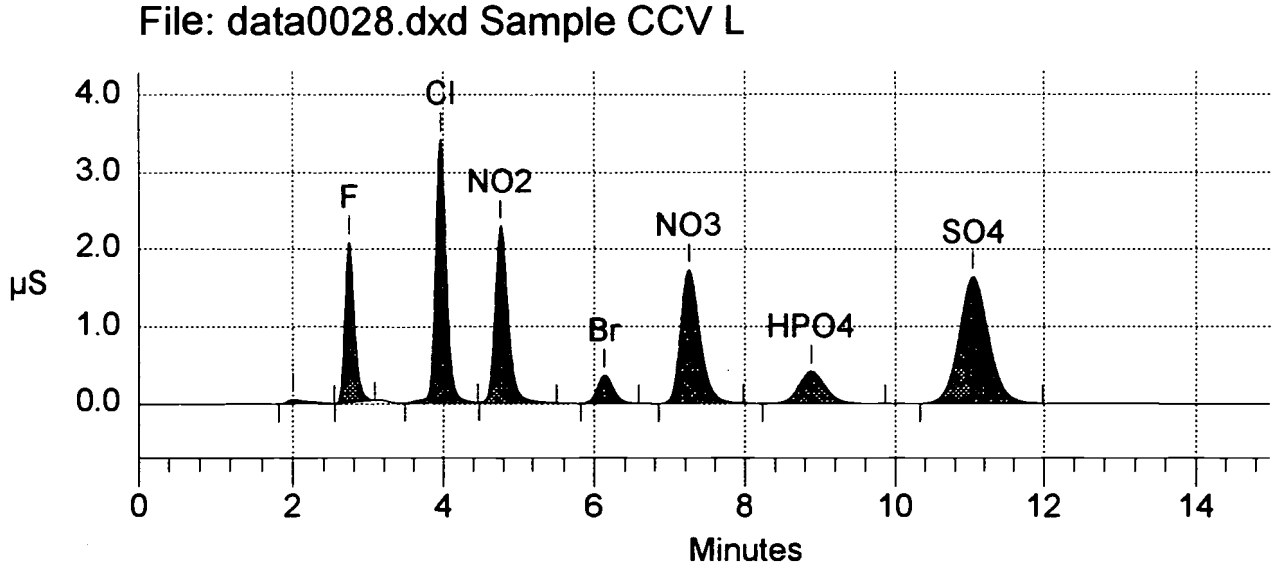
Data File	: NET\DATA\06109801\data0028.dxd	Report Date	: 6/11/98 9:30:03 PM
Sample Name	: CCV L	Collected	: 6/11/98 3:06:27 AM
[redacted]ject #	: 28	Vial #	:
[redacted]thod File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	0.439	184699	2.74	-1.08	1	4.89
3	Cl	1.205	344572	3.96	-2.70	2	2.80
4	NO2	0.447	283317	4.77	-2.45	2	3.87
5	Br	0.462	53514	6.13	-1.76	1	2.62
6	NO3	0.454	309356	7.25	0.42	1	2.91
7	HPO4	0.459	103557	8.88	0.00	1	3.13
8	SO4	2.232	460208	11.05	-2.21	1	0.00
Totals		5.698	1739222				



Data File	: NET\DATA\06109801\data0029.dxd	Report Date	: 6/11/98 9:30:04 PM
Sample Name	: CCV H	Collected	: 6/11/98 3:24:05 AM
Injection #	: 29	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:21 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

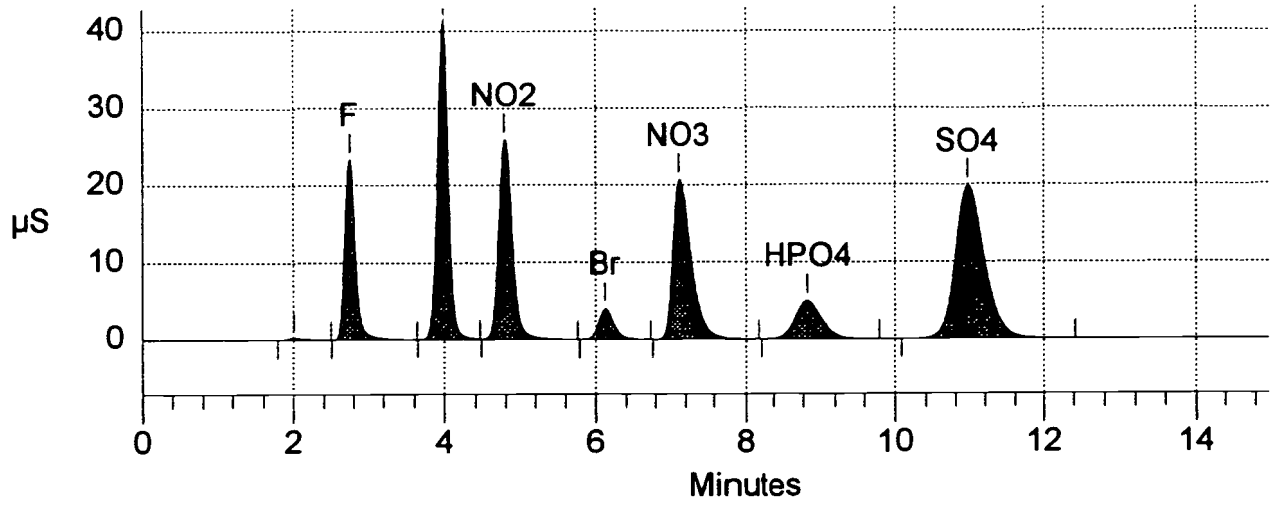
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	5.007	2238180	2.75	-0.72	2	4.97
3	Cl	12.494	4126182	3.99	-1.97	2	2.77
4	NO2	5.000	3268455	4.79	-2.04	2	3.79
5	Br	4.997	584627	6.12	-1.92	2	2.37
6	NO3	5.025	3717282	7.12	-1.39	2	3.18
7	HPO4	4.912	1196434	8.85	0.00	2	3.18
8	SO4	24.931	5394429	10.97	-2.92	1	0.00
	Totals	62.365	20525588				

File: data0029.dxd Sample CCV H



Schedule: \PEAKNET\SCHEDULE\06109802.SCH
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Data File :	NET\DATA\06109801\data0030.dxd	Report Date:	6/11/98 9:30:04 PM
Sample Name:	BLA01	Collected :	6/11/98 3:41:43 AM
Injection # :	30	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:21 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

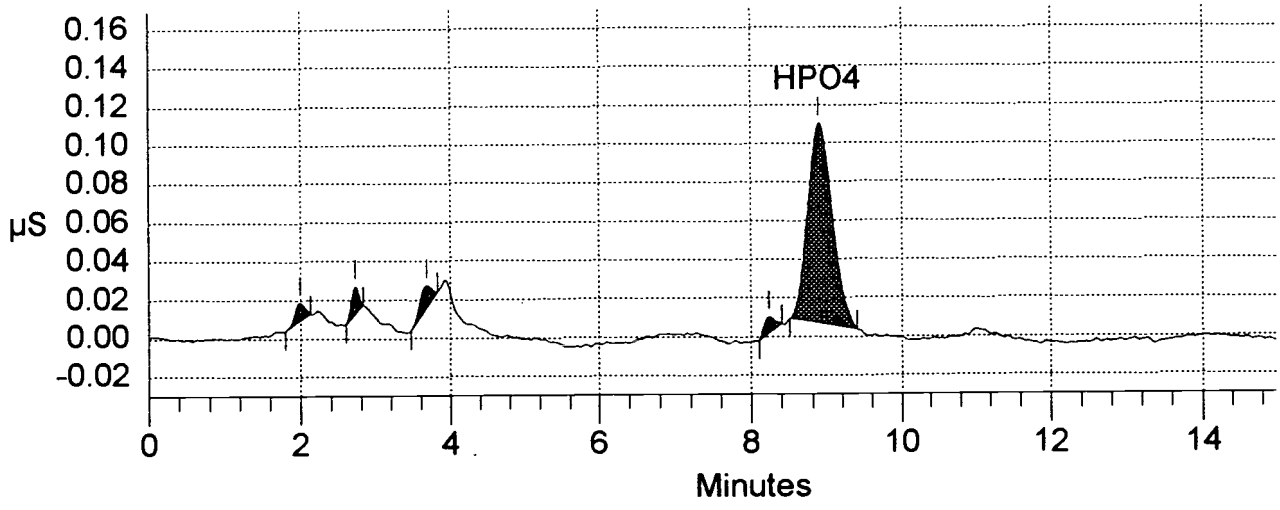
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
5	HPO4	0.112	23943	8.89	0.00	1	0.00
	Totals	0.112	23943				

File: data0030.dxd Sample BLA01



Schedule: \PEAKNET\SCHEDULE\06109802.SCH
Release 4.30 Page 1 of 1 6/11/98 9:30:04 PM

Sample Name	Collection Date	Dilution Factor	F Area	Cl Area	NO2 Area	Br Area	NO3 Area	HPO4 Are	SO4 Area
AUTOCAL 1	6/3/98 17:57	1	0	0	0	0	0	0	0
AUTOCAL 2	6/3/98 18:15	1	39266	77796	56687	10383	65854	21211	120989
AUTOCAL 3	6/3/98 18:33	1	79996	135110	114316	21207	123563	43688	192218
AUTOCAL 4	6/3/98 18:50	1	195927	328880	284880	53656	317163	107689	461948
AUTOCAL 5	6/3/98 19:08	1	400337	676136	587633	109807	649505	230378	939962
AUTOCAL 6	6/3/98 19:25	1	840353	1495182	1249195	227318	1371109	465863	2031327
AUTOCAL 7	6/3/98 19:43	1	2243046	4170491	3288107	582247	3731435	1219615	5463352
AUTOCAL 8	6/3/98 20:01	1	4585676	9019214	6700205	1222489	8227712	2670777	11989530
		low correl	**0.9999**	**0.9997**	**0.9999**	**0.9999**	**0.9999**	**0.9995**	**0.9995**
		correl	**0.9998**	**0.9990**	**0.9999**	**0.9997**	**0.9988**	**0.9991**	**0.9989**
		std % rec	**100.00**	**112.80**	**101.00**	**100.00**	**105.00**	**102.00**	**120.60**
			101.00	**99.20**	**99.50**	**99.00**	**97.00**	**100.00**	**98.70**
			98.40	**97.44**	**98.00**	**98.60**	**98.40**	**95.60**	**97.64**
			94.10	**89.60**	**94.00**	**96.80**	**93.40**	**97.90**	**91.90**
			94.90	**90.20**	**96.20**	**96.55**	**90.70**	**93.25**	**91.62**
			99.00	**95.38**	**99.18**	**96.82**	**93.82**	**94.00**	**94.09**
			100.47	**101.44**	**100.39**	**100.90**	**101.73**	**101.60**	**101.66**

Calibration Date/Time 98-Jun-03 17:57 to 98-Jun-03 20:01

	AUTOCAL 1	AUTOCAL 2	AUTOCAL 3	AUTOCAL 4	AUTOCAL 5	AUTOCAL 6	AUTOCAL 7	AUTOCAL 8
F Area	0	39266	79996	195927	400337	840353	2243046	4585676
Cl Area	0	77796	135110	328880	676136	1495182	4170491	9019214
NO2 Area	0	56687	114316	284880	587633	1249195	3288107	6700205
Br Area	0	10383	21207	53656	109807	227318	582247	1222489
NO3 Area	0	65854	123563	317163	649505	1371109	3731435	8227712
HPO4 Area	0	21211	43688	107689	230378	465863	1219615	2670777
SO4 Area	0	120989	192218	461948	939962	2031327	5463352	11989530

	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Fl Conc	0	0.1	0.2	0.5	1	2	5	10
Cl Conc	0	0.25	0.5	1.25	2.5	5	12.5	25
NO2 Conc	0	0.1	0.2	0.5	1	2	5	10
Br Conc	0	0.1	0.2	0.5	1	2	5	10
NO3 Conc	0	0.1	0.2	0.5	1	2	5	10
HPO4 Conc	0	0.1	0.2	0.5	1	2	5	10
SO4 Conc	0	0.5	1	2.5	5	10	25	50

Low Calibration Curve Autocal 1 - 5

Parameter	Slope	Intercept	Cor. Coef
F	2.5012e-06	0.00206	0.99994
Cl	3.7285e-06	-0.00821	0.99972
NO_2	1.7022e-06	0.00474	0.99988
Br	9.0927e-06	0.00529	0.99993
NO_3	1.5403e-06	0.00386	0.99988
HPO_4	4.3415e-06	0.01010	0.99945
SO_4	5.3914e-06	-0.04938	0.99948

High Calibration Curve Autocal 1 - 8

Parameter	Slope	Intercept	Cor. Coef
F	2.1758e-06	0.06956	0.99983
Cl	2.7711e-06	0.36638	0.99900
NO_2	1.4886e-06	0.06481	0.99988
Br	8.1981e-06	0.06774	0.99972
NO_3	1.2191e-06	0.14253	0.99879
HPO_4	3.7621e-06	0.11190	0.99906
SO_4	4.1843e-06	0.66208	0.99887

Sample Areas less than L5 area are calculated using the low calibration.
Sample Areas between L5 area and the L8 are calculated using the high calibration.

Concentration = (Slope)*(area)+Intercept
y = (mx+b)

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
AUTOCAL 1	**03-Jun-98 17:57**													
	367	F	0	1	0.002			0.1	mg/L					
	223	Cl	0	1	-0.008			0.25	mg/L					
	507	NO_2	0	1	0.005			0.05	mg/L					
	192	Br	0	1	0.005			0.05	mg/L					
	508	NO_3	0	1	0.004			0.05	mg/L					
	539	HPO_4	0	1	0.010			0.05	mg/L					
	681	SO_4	0	1	-0.049			0.25	mg/L					
AUTOCAL 2	**03-Jun-98 18:15**													
	367	F	39266	1	0.100			0.1	mg/L					
	223	Cl	77796	1	0.282			0.25	mg/L					
	507	NO_2	56687	1	0.101			0.05	mg/L					
	192	Br	10383	1	0.100			0.05	mg/L					
	508	NO_3	65854	1	0.105			0.05	mg/L					
	539	HPO_4	21211	1	0.102			0.05	mg/L					
	681	SO_4	120989	1	0.603			0.25	mg/L					
AUTOCAL 3	**03-Jun-98 18:33**													
	367	F	79996	1	0.202			0.1	mg/L					
	223	Cl	135110	1	0.496			0.25	mg/L					
	507	NO_2	114316	1	0.199			0.05	mg/L					
	192	Br	21207	1	0.198			0.05	mg/L					
	508	NO_3	123563	1	0.194			0.05	mg/L					
	539	HPO_4	43688	1	0.200			0.05	mg/L					
	681	SO_4	192218	1	0.987			0.25	mg/L					
AUTOCAL 4	**03-Jun-98 18:50**													
	367	F	195927	1	0.492			0.1	mg/L					
	223	Cl	328880	1	1.218			0.25	mg/L					
	507	NO_2	284880	1	0.490			0.05	mg/L					
	192	Br	53656	1	0.493			0.05	mg/L					
	508	NO_3	317163	1	0.492			0.05	mg/L					
	539	HPO_4	107689	1	0.478			0.05	mg/L					
	681	SO_4	461948	1	2.441			0.25	mg/L					
AUTOCAL 5	**03-Jun-98 19:08**													
	367	F	400337	1	0.941			0.1	mg/L					
	223	Cl	676136	1	2.240			0.25	mg/L					
	507	NO_2	587633	1	0.940			0.05	mg/L					
	192	Br	109807	1	0.968			0.05	mg/L					
	508	NO_3	649505	1	0.934			0.05	mg/L					
	539	HPO_4	230378	1	0.979			0.05	mg/L					
	681	SO_4	939962	1	4.595			0.25	mg/L					
AUTOCAL 6	**03-Jun-98 19:25**													
	367	F	840353	1	1.898			0.1	mg/L					
	223	Cl	1495182	1	4.510			0.25	mg/L					
	507	NO_2	1249195	1	1.924			0.05	mg/L					
	192	Br	227318	1	1.931			0.05	mg/L					
	508	NO_3	1371109	1	1.814			0.05	mg/L					
	539	HPO_4	465863	1	1.865			0.05	mg/L					
	681	SO_4	2031327	1	9.162			0.25	mg/L					
AUTOCAL 7	**03-Jun-98 19:43**													
	367	F	2243046	1	4.950			0.1	mg/L					
	223	Cl	4170491	1	11.923			0.25	mg/L					
	507	NO_2	3288107	1	4.959			0.05	mg/L					
	192	Br	582247	1	4.841			0.05	mg/L					
	508	NO_3	3731435	1	4.691			0.05	mg/L					
	539	HPO_4	1219615	1	4.700			0.05	mg/L					
	681	SO_4	5463352	1	23.522			0.25	mg/L					

Test ID	Sample	Analyte	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
AUTOCAL 8	**03-Jun-98 20:01**													
	367	F	4585676	1	10.047			0.1	mg/L					
	223	Cl	9019214	1	25.360			0.25	mg/L					
	507	NO_2	6700205	1	10.039			0.05	mg/L					
	192	Br	1222489	1	10.090			0.05	mg/L					
	508	NO_3	8227712	1	10.173			0.05	mg/L					
	539	HPO_4	2670777	1	10.160			0.05	mg/L					
	681	SO_4	11989530	1	50.829			0.25	mg/L					

********** AUTOMATIC CALIBRATION UPDATE **********

Data File : Net\DATA\06039801\data0001.dxd	Report Date: 6/3/98 8:43:15 PM
Sample Name: AUTOCAL 1	Collected : 6/3/98 5:57:49 PM
Inject # : 1	Vial # :
Method File: c:\peaknet\method\as14_an1.met	Last Update: 6/3/98 6:15:22 PM
System Name: DX-500	Detector : CD20
Cal. Level : 1	Analyst :

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE

Data File : Net\DATA\06039801\data0001.dxd	Report Date: 6/3/98 8:43:15 PM
Sample Name: AUTOCAL 1	Collected : 6/3/98 5:57:49 PM
Inject # : 1	Vial # :
Method File: c:\peaknet\method\as14_an1.met	Calibrated : 6/3/98 8:43:15 PM
System Name: DX-500	Detector : CD20
Column Type: AS9-SC (4 x 250 mm)	Operator : MAA-4317
Data Points: 4500	Rate : 5.00 Hz
Module Name: ID:24 04 47	Moduleware : 2.10

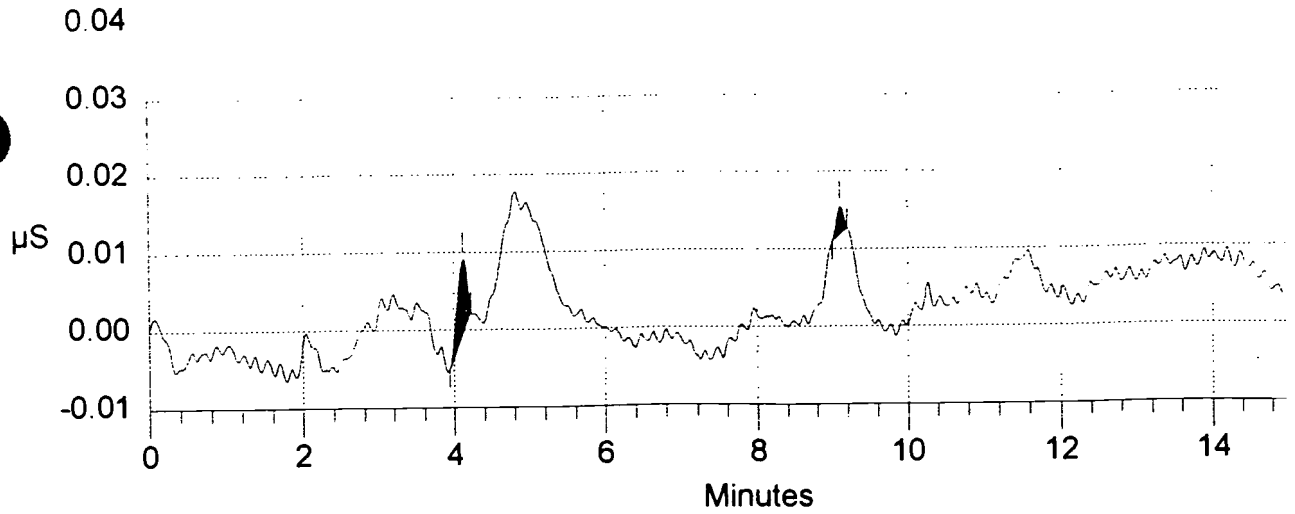
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
Totals		0.000	0				

File: data0001.dxd Sample AUTOCAL 1



Schedule: \PEAKNET\SCHEDULE\060398CA.SCH
Release 4.30 Page 2 of 2 6/3/98 8:43:15 PM

********** AUTOMATIC CALIBRATION UPDATE **********

Data File :	Net\DATA\06039801\data0002.dxd	Report Date:	6/3/98 8:43:16 PM
Sample Name:	AUTOCAL 2	Collected :	6/3/98 6:15:28 PM
Inject # :	2	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Last Update:	6/3/98 6:32:58 PM
System Name:	DX-500	Detector :	CD20
Cal. Level :	2	Analyst :	

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	F	2.74	2.74	2.74	3.983e+004	3.927e+004	3.927e+004
2	Cl	4.01	4.01	4.01	9.235e+004	7.780e+004	7.780e+004
3	NO2	4.87	4.87	4.87	5.949e+004	5.669e+004	5.669e+004
4	Br	6.31	6.31	6.31	1.038e+004	1.038e+004	1.038e+004
5	NO3	7.52	7.52	7.52	6.585e+004	6.585e+004	6.585e+004
6	HPO4	9.09	9.09	9.09	2.121e+004	2.121e+004	2.121e+004
7	SO4	11.44	11.44	11.44	1.210e+005	1.210e+005	1.210e+005

Data File :	Net\DATA\06039801\data0002.dxd	Report Date:	6/3/98 8:43:16 PM
Sample Name:	AUTOCAL 2	Collected :	6/3/98 6:15:28 PM
Inject # :	2	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:16 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

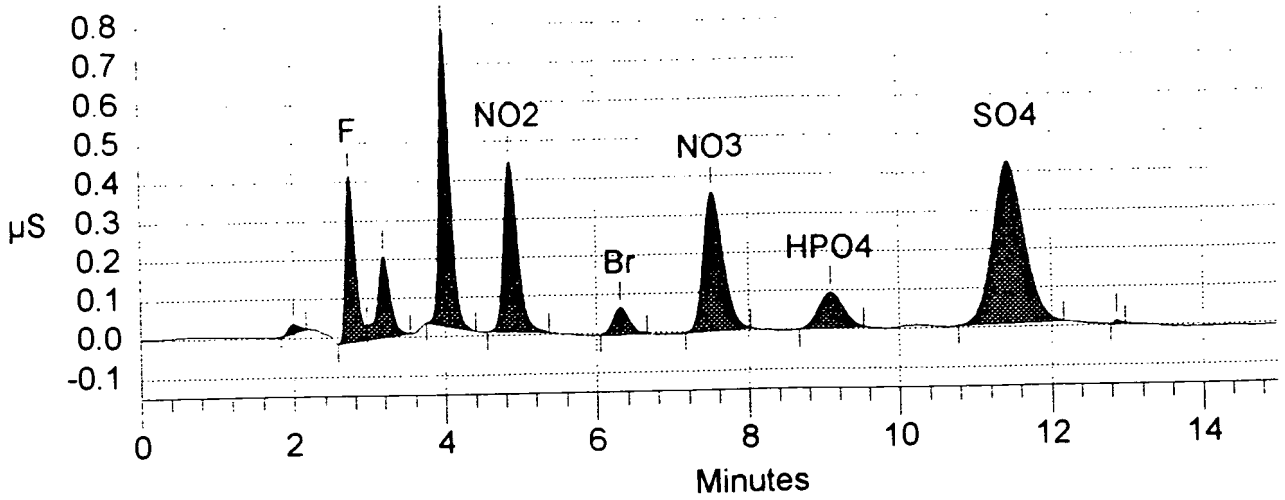
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	0.100	39266	2.74	0.00	2	1.71
4	Cl	0.250	77796	4.01	0.00	1	2.86
5	NO2	0.100	56687	4.87	0.00	1	3.94
6	Br	0.100	10383	6.31	0.00	1	2.72
7	NO3	0.100	65854	7.52	0.00	1	2.77
8	HPO4	0.100	21211	9.09	0.00	1	3.33
9	SO4	0.500	120989	11.44	0.00	1	3.12
	Totals	1.250	392185				

File: data0002.dxd Sample AUTOCAL 2



Schedule: \PEAKNET\SCHEDULE\060398CA.SCH
Release 4.30

6/3/98 8:43:16 PM

********** AUTOMATIC CALIBRATION UPDATE **********

Data File	: Net\DATA\06039801\data0003.dxd	Report Date	: 6/3/98 8:43:17 PM
Sample Name	: AUTOCAL 3	Collected	: 6/3/98 6:33:03 PM
Inject #	: 3	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Last Update	: 6/3/98 6:50:36 PM
System Name	: DX-500	Detector	: CD20
Cal. Level	: 3	Analyst	:

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	F	2.74	2.74	2.74	8.000e+004	8.000e+004	8.000e+004
2	Cl	4.00	4.00	4.00	1.434e+005	1.351e+005	1.351e+005
3	NO2	4.86	4.86	4.86	1.179e+005	1.143e+005	1.143e+005
4	Br	6.29	6.29	6.29	2.121e+004	2.121e+004	2.121e+004
5	NO3	7.49	7.49	7.49	1.236e+005	1.236e+005	1.236e+005
6	HPO4	9.08	9.08	9.08	4.369e+004	4.369e+004	4.369e+004
7	SO4	11.44	11.44	11.44	1.922e+005	1.922e+005	1.922e+005

Data File	: Net\DATA\06039801\data0003.dxd	Report Date	: 6/3/98 8:43:17 PM
Sample Name	: AUTOCAL 3	Collected	: 6/3/98 6:33:03 PM
Inject #	: 3	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:17 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

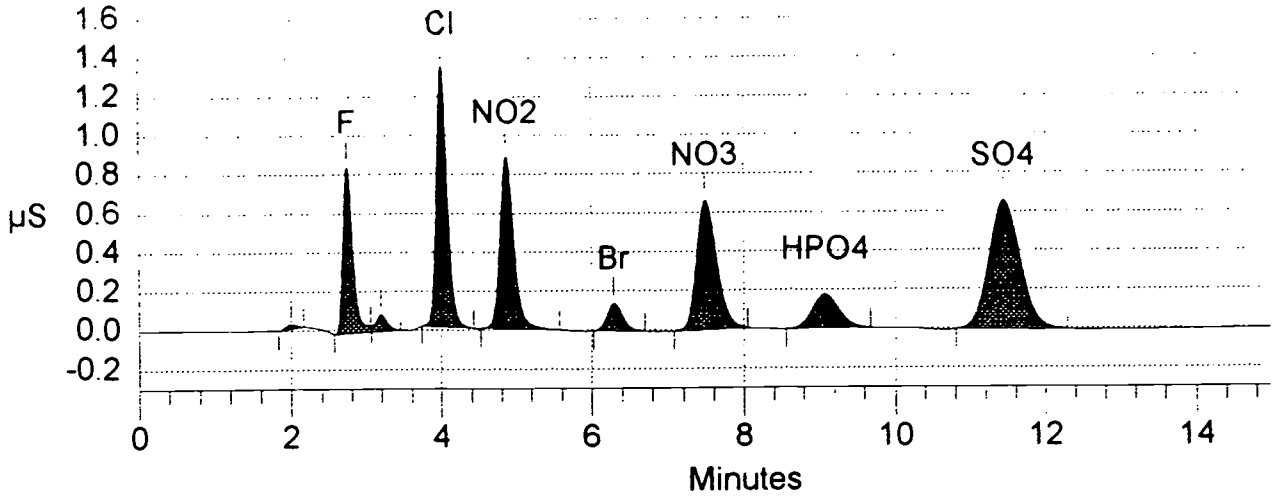
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
2	F	0.200	79996	2.74	0.00	3	1.76
4	Cl	0.500	135110	4.00	0.00	1	2.89
5	NO2	0.200	114316	4.86	0.00	1	3.94
6	Br	0.200	21207	6.29	0.00	1	2.71
7	NO3	0.200	123563	7.49	0.00	1	2.76
8	HPO4	0.200	43688	9.08	0.00	1	3.32
9	SO4	1.000	192218	11.44	0.00	1	0.00
	Totals	2.500	710098				

File: data0003.dxd Sample AUTOCAL 3



Schedule: \PEAKNET\SCHEDULE\060398CA.SCH
Release 4.30 Page 2 of 2 6/3/98 8:43:17 PM

********** AUTOMATIC CALIBRATION UPDATE **********

Data File	: Net\DATA\06039801\data0004.dxd	Report Date	: 6/3/98 8:43:18 PM
Sample Name	: AUTOCAL 4	Collected	: 6/3/98 6:50:41 PM
Inject #	: 4	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Last Update	: 6/3/98 7:08:13 PM
System Name	: DX-500	Detector	: CD20
Cal. Level	: 4	Analyst	:

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	F	2.74	2.74	2.74	1.959e+005	1.959e+005	1.959e+005
2	Cl	4.00	4.00	4.00	3.349e+005	3.289e+005	3.289e+005
3	NO2	4.85	4.85	4.85	2.873e+005	2.849e+005	2.849e+005
4	Br	6.27	6.27	6.27	5.366e+004	5.366e+004	5.366e+004
5	NO3	7.45	7.45	7.45	3.172e+005	3.172e+005	3.172e+005
6	HPO4	9.08	9.08	9.08	1.077e+005	1.077e+005	1.077e+005
7	SO4	11.44	11.44	11.44	4.619e+005	4.619e+005	4.619e+005

Data File	: Net\DATA\06039801\data0004.dxd	Report Date	: 6/3/98 8:43:18 PM
Sample Name	: AUTOCAL 4	Collected	: 6/3/98 6:50:41 PM
Inject #	: 4	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:18 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

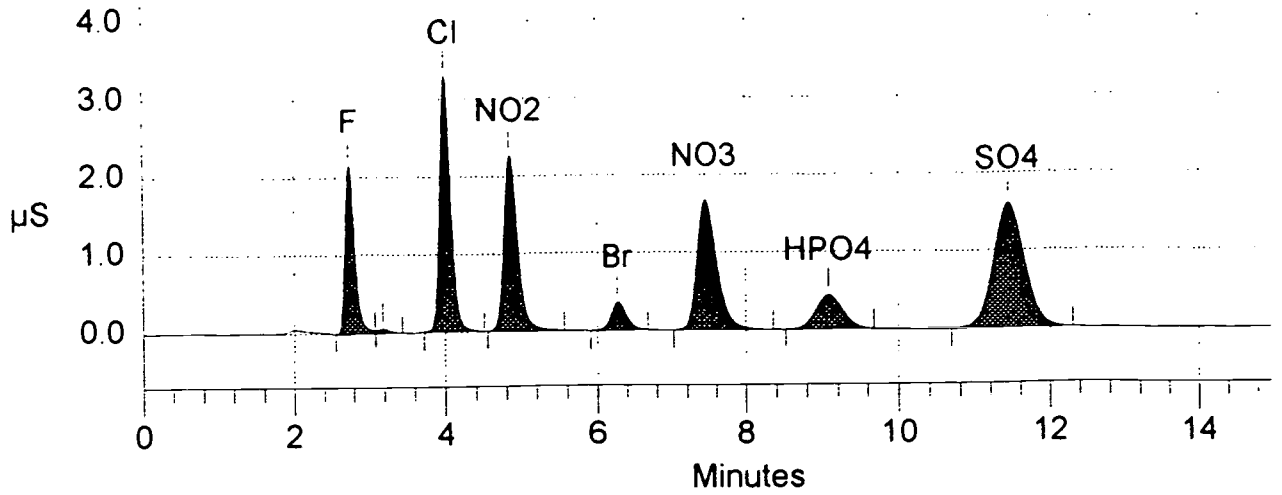
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	0.500	195927	2.74	0.00	3	1.89
3	Cl	1.250	328880	4.00	0.00	2	2.88
4	NO2	0.500	284880	4.85	0.00	2	3.92
5	Br	0.500	53656	6.27	0.00	1	2.64
6	NO3	0.500	317163	7.45	0.00	1	2.83
7	HPO4	0.500	107689	9.08	0.00	1	3.35
8	SO4	2.500	461948	11.44	0.00	1	0.00
	Totals	6.250	1750144				

File: data0004.dxd Sample AUTOCAL 4



Schedule: \PEAKNET\SCHEDULE\060398CA.SCH
Release 4.30 Page 2 of 2 6/3/98 8:43:18 PM

********** AUTOMATIC CALIBRATION UPDATE **********

Data File :	Net\DATA\06039801\data0005.dxd	Report Date:	6/3/98 8:43:19 PM
Sample Name:	AUTOCAL 5	Collected :	6/3/98 7:08:17 PM
Inject # :	5	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Last Update:	6/3/98 7:25:49 PM
System Name:	DX-500	Detector :	CD20
Cal. Level :	5	Analyst :	

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	F	2.74	2.74	2.74	4.048e+005	4.003e+005	4.003e+005
2	Cl	3.99	3.99	3.99	6.910e+005	6.761e+005	6.761e+005
3	NO2	4.84	4.84	4.84	5.985e+005	5.876e+005	5.876e+005
4	Br	6.26	6.26	6.26	1.106e+005	1.098e+005	1.098e+005
5	NO3	7.41	7.41	7.41	6.495e+005	6.495e+005	6.495e+005
6	HPO4	9.07	9.07	9.07	2.304e+005	2.304e+005	2.304e+005
7	SO4	11.42	11.42	11.42	9.400e+005	9.400e+005	9.400e+005

Data File :	Net\DATA\06039801\data0005.dxd	Report Date:	6/3/98 8:43:19 PM
Sample Name:	AUTOCAL 5	Collected :	6/3/98 7:08:17 PM
Inject # :	5	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:19 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

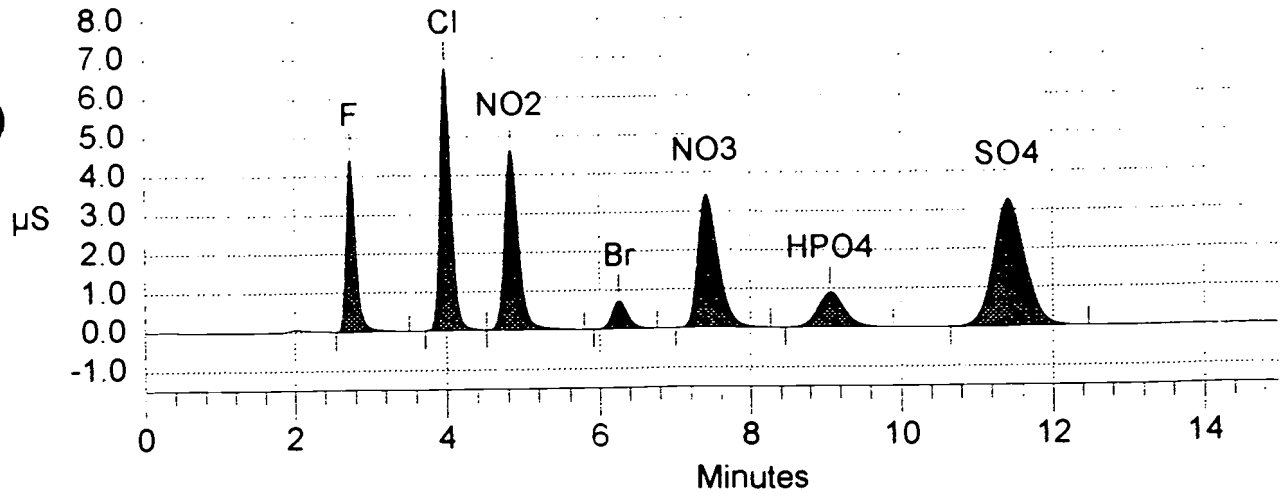
Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	1.000	400337	2.74	0.00	1	5.13
2	Cl	2.500	676136	3.99	0.00	2	2.91
3	NO2	1.000	587633	4.84	0.00	2	3.92
4	Br	1.000	109807	6.26	0.00	1	2.57
5	NO3	1.000	649505	7.41	0.00	2	2.87
6	HPO4	1.000	230378	9.07	0.00	2	3.33
7	SO4	5.000	939962	11.42	0.00	1	0.00
	Totals	12.500	3593758				

60

File: data0005.dxd Sample AUTOCAL 5



Schedule: \PEAKNET\SCHEDULE\060398CA.SCH
Release 4.30

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********** AUTOMATIC CALIBRATION UPDATE **********

Data File	: Net\DATA\06039801\data0006.dxd	Report Date	: 6/3/98 8:43:19 PM
Sample Name	: AUTOCAL 6	Collected	: 6/3/98 7:25:54 PM
Inject #	: 6	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Last Update	: 6/3/98 7:43:25 PM
System Name	: DX-500	Detector	: CD20
Cal. Level	: 6	Analyst	:

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	F	2.74	2.74	2.74	8.414e+005	8.404e+005	8.404e+005
2	Cl	4.01	4.01	4.01	1.504e+006	1.495e+006	1.495e+006
3	NO2	4.85	4.85	4.85	1.257e+006	1.249e+006	1.249e+006
4	Br	6.27	6.27	6.27	2.303e+005	2.273e+005	2.273e+005
5	NO3	7.38	7.38	7.38	1.373e+006	1.371e+006	1.371e+006
6	HPO4	9.07	9.07	9.07	4.664e+005	4.659e+005	4.659e+005
7	SO4	11.40	11.40	11.40	2.031e+006	2.031e+006	2.031e+006

Data File	: Net\DATA\06039801\data0006.dxd	Report Date	: 6/3/98 8:43:19 PM
Sample Name	: AUTOCAL 6	Collected	: 6/3/98 7:25:54 PM
Inject #	: 6	Vial #	:
Method File	: c:\peaknet\method\as14_an1.met	Calibrated	: 6/3/98 8:43:19 PM
System Name	: DX-500	Detector	: CD20
Column Type	: AS9-SC (4 x 250 mm)	Operator	: MAA-4317
Data Points	: 4500	Rate	: 5.00 Hz
Module Name	: ID:24 04 47	Moduleware	: 2.10

Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

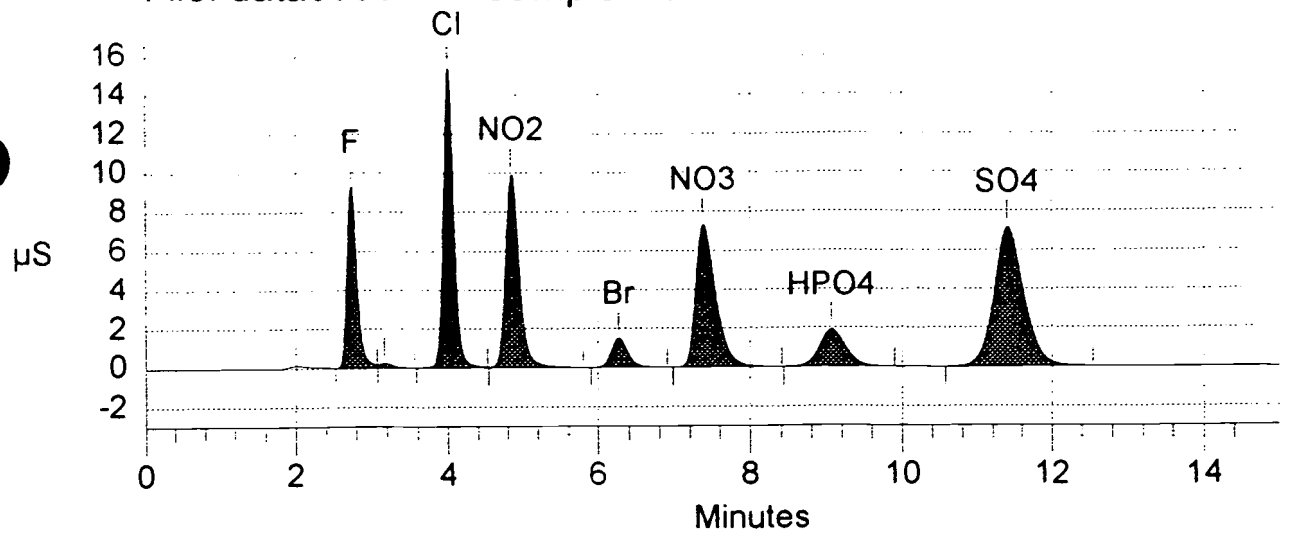
Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	2.000	840353	2.74	0.00	3	1.85
3	Cl	5.000	1495182	4.01	0.00	2	2.94
4	NO2	2.000	1249195	4.85	0.00	2	3.98
5	Br	2.000	227318	6.27	0.00	2	2.53
6	NO3	2.000	1371109	7.38	0.00	2	3.00
7	HPO4	2.000	465863	9.07	0.00	2	3.37
8	SO4	10.000	2031327	11.40	0.00	1	0.00
Totals		25.000	7680346				

Schedule: \PEAKNET\SCHEDULE\060398CA.SCH

File: data0006.dxd Sample AUTOCAL 6



Schedule: \PEAKNET\SCHEDULE\060398CA.SCH
Release 4.30 Page 2 of 2 6/3/98 8:43:19 PM

********** AUTOMATIC CALIBRATION UPDATE **********

Data File :	Net\DATA\06039801\data0007.dxd	Report Date:	6/3/98 8:43:20 PM
Sample Name:	AUTOCAL 7	Collected :	6/3/98 7:43:31 PM
Inject # :	7	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Last Update:	6/3/98 8:01:00 PM
System Name:	DX-500	Detector :	CD20
Cal. Level :	7	Analyst :	

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	F	2.75	2.75	2.75	2.267e+006	2.243e+006	2.243e+006
2	Cl	4.03	4.03	4.03	4.185e+006	4.170e+006	4.170e+006
3	NO2	4.87	4.87	4.87	3.303e+006	3.288e+006	3.288e+006
4	Br	6.26	6.26	6.26	5.862e+005	5.822e+005	5.822e+005
5	NO3	7.32	7.32	7.32	3.732e+006	3.731e+006	3.731e+006
6	HPO4	9.05	9.05	9.05	1.220e+006	1.220e+006	1.220e+006
7	SO4	11.37	11.37	11.37	5.463e+006	5.463e+006	5.463e+006

Data File :	Net\DATA\06039801\data0007.dxd	Report Date:	6/3/98 8:43:20 PM
Sample Name:	AUTOCAL 7	Collected :	6/3/98 7:43:31 PM
Inject # :	7	Vial # :	
Method File:	c:\peaknet\method\as14_an1.met	Calibrated :	6/3/98 8:43:20 PM
System Name:	DX-500	Detector :	CD20
Column Type:	AS9-SC (4 x 250 mm)	Operator :	MAA-4317
Data Points:	4500	Rate :	5.00 Hz
Module Name:	ID:24 04 47	Moduleware :	2.10

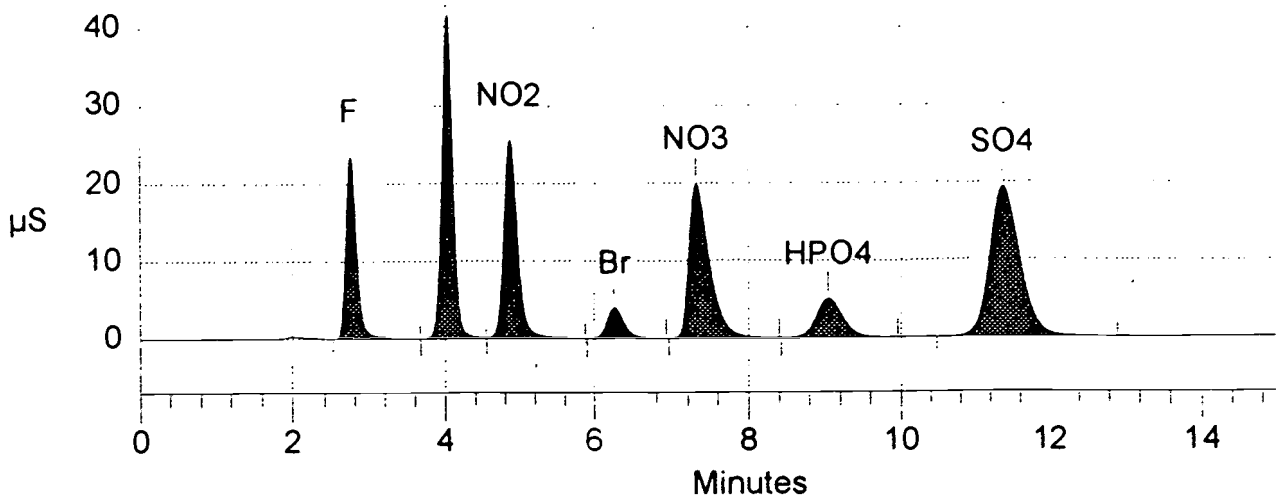
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	5.000	2243046	2.75	0.00	1	5.08
2	Cl	12.500	4170491	4.03	0.00	2	2.85
3	NO2	5.000	3288107	4.87	0.00	2	3.86
4	Br	5.000	582247	6.26	0.00	2	2.43
5	NO3	5.000	3731435	7.32	0.00	2	3.10
6	HPO4	5.000	1219615	9.05	0.00	2	3.41
7	SO4	25.000	5463352	11.37	0.00	1	0.00
Totals		62.500	20698293				

File: data0007.dxd Sample AUTOCAL 7



Schedule: \PEAKNET\SCHEDULE\060398CA.SCH
Release 4.30 Page 2 of 2 6/3/98 8:43:20 PM

********** AUTOMATIC CALIBRATION UPDATE **********

Data File : Net\DATA\06039801\data0008.dxd	Report Date: 6/3/98 8:43:21 PM
Sample Name: AUTOCAL 8	Collected : 6/3/98 8:01:05 PM
Inject # : 8	Vial # :
Method File: c:\peaknet\method\as14_an1.met	Last Update: 6/3/98 8:18:39 PM
System Name: DX-500	Detector : CD20
Cal. Level : 8	Analyst :

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	F	2.77	2.77	2.77	4.632e+006	4.586e+006	4.586e+006
2	Cl	4.07	4.07	4.07	9.047e+006	9.019e+006	9.019e+006
3	NO2	4.89	4.89	4.89	6.736e+006	6.700e+006	6.700e+006
4	Br	6.24	6.24	6.24	1.243e+006	1.222e+006	1.222e+006
5	NO3	7.22	7.22	7.22	8.248e+006	8.228e+006	8.228e+006
6	HPO4	9.01	9.01	9.01	2.679e+006	2.671e+006	2.671e+006
7	SO4	11.30	11.30	11.30	1.199e+007	1.199e+007	1.199e+007

Data File : Net\DATA\06039801\data0008.dxd	Report Date: 6/3/98 8:43:21 PM
Sample Name: AUTOCAL 8	Collected : 6/3/98 8:01:05 PM
Inject # : 8	Vial # :
Method File: c:\peaknet\method\as14_an1.met	Calibrated : 6/3/98 8:43:21 PM
System Name: DX-500	Detector : CD20
Column Type: AS9-SC (4 x 250 mm)	Operator : MAA-4317
Data Points: 4500	Rate : 5.00 Hz
Module Name: ID:24 04 47	Moduleware : 2.10

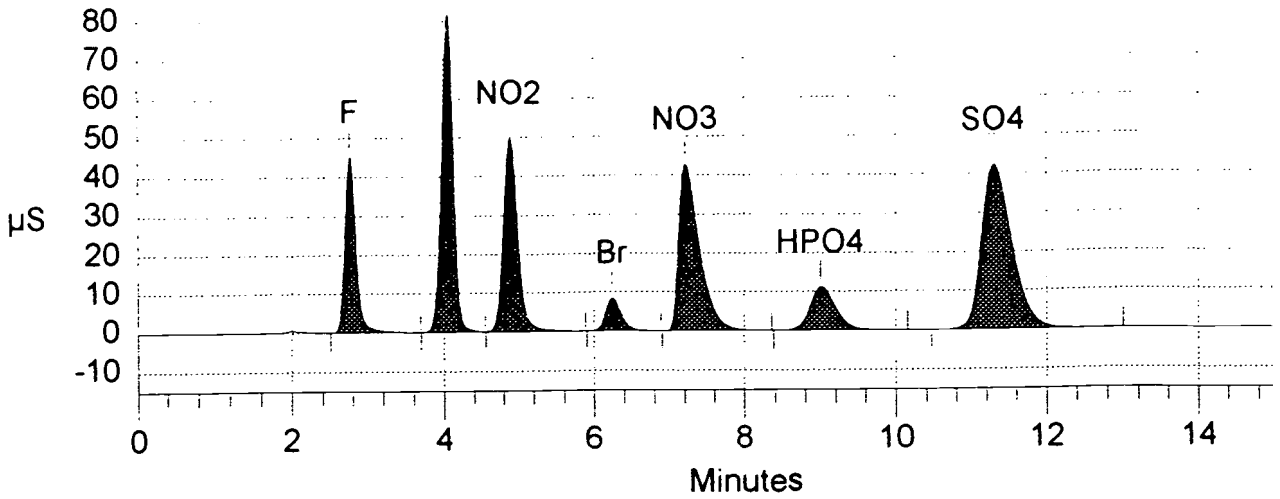
Calibration	Volume	Dilution	Start	Stop	Area Reject	Pk. Width	Threshold
External	1	1	0.00	15.00	1500	5.00	0.51

Filter type: Moving Average Size:19 points (3.8 sec) 1 iteration(s)

********** Component Report: Components Found **********

Pk. Num	Para-meter	Est. Conc.	Area	Ret Time	% Delta RT	Baseline Code	Resolution
1	F	10.000	4585676	2.77	0.00	1	4.73
2	Cl	25.000	9019214	4.07	0.00	2	2.58
3	NO2	10.000	6700205	4.89	0.00	2	3.72
4	Br	10.000	1222489	6.24	0.00	2	2.23
5	NO3	10.000	8227712	7.22	0.00	2	3.21
6	HPO4	10.000	2670777	9.01	0.00	2	3.37
7	SO4	50.000	11989530	11.30	0.00	1	0.00
Totals		125.000	44415603				

File: data0008.dxd Sample AUTOCAL 8



Schedule: \PEAKNET\SCHEDULE\060398CA.SCH
Release 4.30 Page 2 of 2 6/3/98 8:43:21 PM

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

DATE: September 25, 1998

TO: Mike Yarling **THRU:** Rob Duncan

FROM: Mitt Denney

SUBJECT: Samples DK11771-DK11779 for Inorganics

Sample Comments

I have reviewed the attached results and have determined that the results are acceptable for use. The results have been evaluated for the quality criteria contained in the Ground Water Quality Assurance Program Plan and BAA 97-044. Any qualifications for the acceptance of these results will be identified in the memorandum. This memorandum should remain attached to the original results.

The samples were analyzed for hardness, sulfate, nitrate-nitrite, TKN, barium, calcium, chloride, iron, magnesium, potassium, and sodium.

QA/QC Samples

There were no problems encountered in the review of the QC for these samples

QUALITY ASSURANCE REPORT

Service Location
HERITAGE ENVIRONMENTAL SERVICES, LLC
COMMERCIAL LABORATORY OPERATIONS
7901 W. MORRIS ST.
INDIANAPOLIS, IN 46231
(317)243-8304

Report Date
06-JUL-98

Submitter
INDIANA DEPARTMENT OF ENVIRONMENTAL MGMT
.
P O BOX 6015
INDIANAPOLIS, IN 46206

Client ID	Lab ID	Date-Time Sampled	Date Received	Date Complete	Description
DK11771	A444782	03-JUN-98 12:14	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2
DK11772	A444783	03-JUN-98 13:18	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2
DK11773	A444784	03-JUN-98 15:10	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2
DK11774	A444785	03-JUN-98 15:57	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2
DK11775	A444786	04-JUN-98 09:27	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2
DK11776	A444787	04-JUN-98 10:15	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2
DK11777	A444788	04-JUN-98 10:58	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2
DK11778	A444789	04-JUN-98 11:52	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2
DK11779	A444790	04-JUN-98 12:56	05-JUN-98	02-JUL-98	DESCRIPTION: DK11727-DK12026
					DESCRIPTION: WATERS - GROUP IA - TASKS 1 & 2

NITROGEN, NITRATE-NITRITE EPA 353.2 G113.3

Run: R350145 Analyst.: C PEREGRINE Run Date...: 10-JUN-98 Instrument: AUTO-ANALYZER
ANALYTICAL Reviewer: B SHRAKE Review Date: 11-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q846648		NITROGEN, NITRATE-NITRITE			-.0045	mg/L		
CDL01	Q846649		NITROGEN, NITRATE-NITRITE	0.05		0.0492	mg/L	98.4	
ICV01	Q846652		NITROGEN, NITRATE-NITRITE	1.53		1.56	mg/L	102	
DUP01	Q846653	A444770	NITROGEN, NITRATE-NITRITE	0		BDL	mg/L		
CCV	Q846654		NITROGEN, NITRATE-NITRITE	1		1.01	mg/L	101	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SPI01	Q846662	A444786	NITROGEN, NITRATE-NITRITE	0	1	1	mg/L	100	
DPS01	Q846663	A444786	NITROGEN, NITRATE-NITRITE	0	1	1.01	mg/L	101	1
CCV	Q846664		NITROGEN, NITRATE-NITRITE	1		1.02	mg/L	102	
BLA01	Q846665		NITROGEN, NITRATE-NITRITE			-.0029	mg/L		
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
DUP01	Q846666	A444787	NITROGEN, NITRATE-NITRITE	0		BDL	mg/L		
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
SPI01	Q846667	A444795	NITROGEN, NITRATE-NITRITE	1.35	1	2.32	mg/L	97	
DPS01	Q846668	A444795	NITROGEN, NITRATE-NITRITE	1.35	1	2.33	mg/L	98	1
CCV	Q846669		NITROGEN, NITRATE-NITRITE	1		1.02	mg/L	102	
BLA01	Q846670		NITROGEN, NITRATE-NITRITE			0.0012	mg/L		

KJELDAHL NITROGEN, TOTAL (TKN), ION SELECTIVE ELECT EPA 351.4 G202.6

Run: R350958 Analyst.: K BUNCH Run Date...: 23-JUN-98
ANALYTICAL Reviewer: K FULLMER Review Date: 23-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q852463		NITROGEN, KJELDAHL			0.0322	mg/L		
ICV01	Q852464		NITROGEN, KJELDAHL	1.95		1.93	mg/L	99	
CDL01	Q852465		NITROGEN, KJELDAHL	0.1		0.101	mg/L	101	
LFB01	Q852467		NITROGEN, KJELDAHL	17.3		18.8	mg/L	108.7	
CCV	Q852468		NITROGEN, KJELDAHL	1		0.94	mg/L	94	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
CCV	Q852470		NITROGEN, KJELDAHL	1		0.902	mg/L	90.2	
BLA01	Q852471		NITROGEN, KJELDAHL			0.0309	mg/L		
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCV	Q852472		NITROGEN, KJELDAHL	1		0.981	mg/L	98.1	
BLA01	Q852473		NITROGEN, KJELDAHL			0.0296	mg/L		
SPI01	Q852474	A444794	NITROGEN, KJELDAHL	0.32	3.46	3.95	mg/L	104.9	
DPS01	Q852475	A444794	NITROGEN, KJELDAHL	0.32	3.46	3.79	mg/L	100.3	4.5

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q852476	A445020	NITROGEN, KJELDAHL	0.5		0.46	mg/L		8.3

CHLORIDE BY ION CHROMATOGRAPHY EPA 300.0 G300.2

Run: R350051 Analyst.: M ADKINS Run Date...: 09-JUN-98 Instrument: IC
ANALYTICAL Reviewer: E WERNZ Review Date: 11-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q845820		CHLORIDE			< 0.1	mg/L		
CCVL	Q847053		CHLORIDE	1.25		1.26	mg/L	100.8	
CCVH	Q847054		CHLORIDE	12.5		12	mg/L	96	
LFB01	Q845823		CHLORIDE	25		24.4	mg/L	97.6	
SPI01	Q845829	A444774	CHLORIDE	1.17	2.5	3.49	mg/L	92.8	
DPS01	Q845830	A444774	CHLORIDE	1.17	2.5	3.48	mg/L	92.4	.4
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
CCVL	Q847057		CHLORIDE	1.25		1.36	mg/L	108.8	
CCVH	Q847058		CHLORIDE	12.5		12.1	mg/L	96.8	
BLA01	Q845833		CHLORIDE			< 0.1	mg/L		
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SPI01	Q845834	A444785	CHLORIDE	8.32	2.5	10.9	mg/L	103.2	
DPS01	Q845835	A444785	CHLORIDE	8.32	2.5	10.9	mg/L	103.2	0
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
CCVL	Q847059		CHLORIDE	1.25		1.28	mg/L	102.4	
CCV	Q847060		CHLORIDE	12.5		11.9	mg/L	95.2	
BLA01	Q845838		CHLORIDE			< 0.1	mg/L		
CCVH	Q847062		CHLORIDE	12.5		11.9	mg/L	95.2	

Run: R350257 Analyst.: M ADKINS Run Date...: 10-JUN-98 Instrument: IC
ANALYTICAL Reviewer: E WERNZ Review Date: 12-JUN-98

BLA01	Q847478		CHLORIDE			< 0.1	mg/L		
CCVL	Q847479		CHLORIDE	1.25		1.26	mg/L	100.8	
CCVH	Q847480		CHLORIDE	12.5		11.8	mg/L	94.4	
LFB01	Q847481		CHLORIDE	2.5		2.25	mg/L	90	
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCVL	Q847487		CHLORIDE	1.25		1.28	mg/L	102.4	
CCVH	Q847488		CHLORIDE	12.5		11.8	mg/L	94.4	
BLA01	Q847489		CHLORIDE			< 0.1	mg/L		
SPI01	Q847490	A444797	CHLORIDE	223	62.5	294	mg/L	113.6	
DPS01	Q847491	A444797	CHLORIDE	223	62.5	295	mg/L	115.2	1.4

SULFATE BY ION CHROMATOGRAPHY EPA 300.0 G300.7

Run: R350051 Analyst.: M ADKINS Run Date...: 09-JUN-98 Instrument: IC
ANALYTICAL Reviewer: E WERNZ Review Date: 11-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q845820		SULFATE			< 0.1	mg/L		
CCVL	Q847053		SULFATE	2.5		2.43	mg/L	97.2	
CCVH	Q847054		SULFATE	25		23.7	mg/L	94.8	
LFB01	Q845823		SULFATE	50		49.2	mg/L	98.4	

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q845829	A444774	SULFATE	21.8	5	26.8	mg/L	100	
DPS01	Q845830	A444774	SULFATE	21.8	5	26.9	mg/L	102	2
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
CCVL	Q847057		SULFATE	2.5		2.5	mg/L	100	
CCVH	Q847058		SULFATE	25		23.4	mg/L	93.6	
BLA01	Q845833		SULFATE			< 0.1	mg/L		
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCVL	Q847059		SULFATE	2.5		2.46	mg/L	98.4	
CCV	Q847060		SULFATE	25		23	mg/L	92	
BLA01	Q845838		SULFATE			< 0.1	mg/L		
SPI01	Q845839	A444795	SULFATE	26.9	5	32.3	mg/L	108	
DPS01	Q845840	A444795	SULFATE	26.9	5	32.3	mg/L	108	0
CCVH	Q847062		SULFATE	25		23.2	mg/L	92.8	

Run: R350257 Analyst.: M ADKINS Run Date...: 10-JUN-98 Instrument: IC
ANALYTICAL Reviewer: E WERNZ Review Date: 12-JUN-98

BLA01	Q847478		SULFATE			< 0.1	mg/L		
CCVL	Q847479		SULFATE	2.5		2.43	mg/L	97.2	
CCVH	Q847480		SULFATE	25		23.1	mg/L	92.4	
LFB01	Q847481		SULFATE	5		5	mg/L	100	
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
CCVL	Q847487		SULFATE	2.5		2.43	mg/L	97.2	
CCVH	Q847488		SULFATE	25		23.2	mg/L	92.8	
BLA01	Q847489		SULFATE			< 0.1	mg/L		
SPI01	Q847490	A444797	SULFATE	112	125	237	mg/L	100	
DPS01	Q847491	A444797	SULFATE	112	125	237	mg/L	100	0

HARDNESS EDTA TITRIMETRIC EPA 130.2 G621.0

Run: R350011 Analyst.: J ALLEN Run Date...: 08-JUN-98
ANALYTICAL Reviewer: B SHRAKE Review Date: 09-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q845511		HARDNESS			0	mg/L		
LFB01	Q845512		HARDNESS	72.8		70.6	mg/L	97	
SPI01	Q845513	A444776	HARDNESS	360	500	841	mg/L	96.2	
DPS01	Q845514	A444776	HARDNESS	360	500	827	mg/L	93.4	3
CCV	Q845515		HARDNESS	1000		976	mg/L	97.6	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SPI01	Q845517	A444787	HARDNESS	120	500	610	mg/L	98	
DPS01	Q845518	A444787	HARDNESS	120	500	602	mg/L	96.4	1.6
CCV	Q845519		HARDNESS	1000		996	mg/L	99.6	
BLA01	Q845520		HARDNESS			0	mg/L		
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
SPI01	Q845523	A444797	HARDNESS	310	500	792	mg/L	96.4	
CCV	Q845525		HARDNESS	1000		972	mg/L	97.2	
BLA01	Q845526		HARDNESS			0	mg/L		

BARIUM ICP EPA 200.7 M404.3

Prep: FAA OR ICP ACID DIGESTION EPA 200.0

Run: R350705 Analyst.: T NEED, JR. Run Date...: 20-JUN-98
PREP Reviewer: W WATNESS Review Date: 22-JUN-98

QC Type	Lab ID	Source	Anal Run
LCS	Q850572	SPEX	R350825
BLA02	Q850573	NA	R350825
SPI02	Q850574	A444782	R350825
DPS02	Q850575	A444782	R350825
SAMPLE	A444782	Rep: 0	R350825
SAMPLE	A444783	Rep: 0	R350825
SAMPLE	A444784	Rep: 0	R350825
SAMPLE	A444785	Rep: 0	R350825
SAMPLE	A444786	Rep: 0	R350825
SAMPLE	A444787	Rep: 0	R350825
SAMPLE	A444788	Rep: 0	R350825
SAMPLE	A444789	Rep: 0	R350825
SAMPLE	A444790	Rep: 0	R350825

Run: R350825 Analyst.: A HILSCHER Run Date...: 22-JUN-98 Instrument: ICP
ANALYTICAL Reviewer: S ENDERSON Review Date: 23-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q851307	INORGAN	BARIUM	5.00		4.73	mg/L	95	
BLA01	Q851308	NA	BARIUM			< 0.00400	mg/L		
ICV01	Q851310	PERKIN	BARIUM	1		0.983	mg/L	98	
CDL01	Q851314	INORGAN	BARIUM	10		9.77	mg/L	98	
ICS-A	Q851315	PERKIN	BARIUM	0.500		0.462	mg/L	92	
BLA02	Q850573	NA	BARIUM			< 0.00400	mg/L		
LCS	Q850572	SPEX	BARIUM	20.0		19.1	mg/L	96	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
CCV	Q851342	INORGAN	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q851343	NA	BARIUM			< 0.00400	mg/L		
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCV	Q851344	INORGAN	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q851345	NA	BARIUM			< 0.00400	mg/L		
ICS-A	Q851361	PERKIN	BARIUM	0.500		0.499	mg/L	100	
SPI02	Q850574	A444782	BARIUM	0.0204	2.00	1.96	mg/L	97	
DPS02	Q850575	A444782	BARIUM	0.0204	2.00	2.01	mg/L	100	3

CALCIUM ICP EPA 200.7 — M409.3

Prep: FAA OR ICP ACID DIGESTION EPA 200.0

Run: R350705 Analyst.: T NEED, JR. Run Date...: 20-JUN-98
PREP Reviewer: W WATNESS Review Date: 22-JUN-98

QC Type	Lab ID	Source	Anal Run
LCS	Q850572	SPEX	R350825
BLA02	Q850573	NA	R350825
SPI02	Q850574	A444782	R350825
DPS02	Q850575	A444782	R350825
SAMPLE	A444782	Rep: 0	R350825
SAMPLE	A444783	Rep: 0	R350825
SAMPLE	A444784	Rep: 0	R350825
SAMPLE	A444785	Rep: 0	R350825
SAMPLE	A444786	Rep: 0	R350825
SAMPLE	A444787	Rep: 0	R350825
SAMPLE	A444788	Rep: 0	R350825
SAMPLE	A444789	Rep: 0	R350825
SAMPLE	A444790	Rep: 0	R350825

Run: R350825 Analyst.: A HILSCHER Run Date...: 22-JUN-98 Instrument: ICP
ANALYTICAL Reviewer: S ENDERSON Review Date: 23-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q851307	INORGAN	CALCIUM	50.0		47.3	mg/L	95	
BLA01	Q851308	NA	CALCIUM			< 0.0800	mg/L		
ICV01	Q851311	SPEX	CALCIUM	20		20.4	mg/L	102	
ICS-A	Q851315	PERKIN	CALCIUM	500		470.	mg/L	94	
BLA02	Q850573	NA	CALCIUM			< 0.0800	mg/L		
LCS	Q850572	SPEX	CALCIUM	100		91.8	mg/L	92	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
CCV	Q851342	INORGAN	CALCIUM	50.0		48.7	mg/L	97	
BLA01	Q851343	NA	CALCIUM			< 0.0800	mg/L		
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCV	Q851344	INORGAN	CALCIUM	50.0		48.6	mg/L	97	
BLA01	Q851345	NA	CALCIUM			< 0.0800	mg/L		
ICS-A	Q851360	PERKIN-	CALCIUM	500		479.	mg/L	96	
SPI02	Q850574	A444782	CALCIUM	23.5	100	116.	mg/L	93	
DPS02	Q850575	A444782	CALCIUM	23.5	100	120.	mg/L	97	4

IRON ICP EPA 200.7 — M415.3

Prep: FAA OR ICP ACID DIGESTION EPA 200.0

Run: R350705 Analyst.: T NEE0, JR. Run Date...: 20-JUN-98
PREP Reviewer: W WATNESS Review Oate: 22-JUN-98

QC Type	Lab ID	Source	Anal Run
LCS	Q850572	SPEX	R350825
BLA02	Q850573	NA	R350825
SPI02	Q850574	A444782	R350825

QC Type	Lab ID	Source	Anal Run
DPS02	Q850575	A444782	R350825
SAMPLE	A444782	Rep: 0	R350825
SAMPLE	A444783	Rep: 0	R350825
SAMPLE	A444784	Rep: 0	R350825
SAMPLE	A444785	Rep: 0	R350825
SAMPLE	A444786	Rep: 0	R350825
SAMPLE	A444787	Rep: 0	R350825
SAMPLE	A444788	Rep: 0	R350825
SAMPLE	A444789	Rep: 0	R350825
SAMPLE	A444790	Rep: 0	R350825

Run: R350825 Analyst.: A HILSCHER Run Date...: 22-JUN-98 Instrument: ICP
ANALYTICAL Reviewer: S ENDERSON Review Date: 23-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q851307	INORGAN	IRON	5.00		4.71	mg/L	94	
BLA01	Q851308	NA	IRON			< 0.0100	mg/L		
ICV01	Q851309	PERKIN	IRON	1		1.02	mg/L	102	
CDL01	Q851314	INORGAN	IRON	10		10.0	mg/L	100	
ICS-A	Q851315	PERKIN	IRON	200		175.	mg/L	88	
BLA02	Q850573	NA	IRON			0.0109	mg/L		
LCS	Q850572	SPEX	IRON	10.0		9.11	mg/L	91	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
CCV	Q851342	INORGAN	IRON	5.00		4.82	mg/L	96	
BLA01	Q851343	NA	IRON			< 0.0100	mg/L		
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCV	Q851344	INORGAN	IRON	5.00		4.83	mg/L	97	
BLA01	Q851345	NA	IRON			< 0.0100	mg/L		
ICS-A	Q851360	PERKIN-	IRON	200		179.	mg/L	90	
SPI02	Q850574	A444782	IRON	0.162	1.00	1.06	mg/L	90	
DPS02	Q850575	A444782	IRON	0.162	1.00	1.10	mg/L	94	4

MAGNESIUM ICP EPA 200.7 M418.3

Prep: FAA OR ICP ACID DIGESTION EPA 200.0

Run: R350705 Analyst.: T NEED, JR. Run Date...: 20-JUN-98
PREP Reviewer: W WATNESS Review Date: 22-JUN-98

QC Type	Lab ID	Source	Anal Run
LCS	Q850572	SPEX	R350825
BLA02	Q850573	NA	R350825
SPI02	Q850574	A444782	R350825
DPS02	Q850575	A444782	R350825
SAMPLE	A444782	Rep: 0	R350825
SAMPLE	A444783	Rep: 0	R350825
SAMPLE	A444784	Rep: 0	R350825
SAMPLE	A444785	Rep: 0	R350825
SAMPLE	A444786	Rep: 0	R350825
SAMPLE	A444787	Rep: 0	R350825

QC Type	Lab ID	Source	Anal Run
SAMPLE	A444788	Rep: 0	R350825
SAMPLE	A444789	Rep: 0	R350825
SAMPLE	A444790	Rep: 0	R350825

Run: R350825 Analyst.: A HILSCHER Run Date...: 22-JUN-98 Instrument: ICP
ANALYTICAL Reviewer: S ENDERSON Review Date: 23-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q851307	INORGAN	MAGNESIUM	50.0		48.0	mg/L	96	
BLA01	Q851308	NA	MAGNESIUM			< 0.0800	mg/L		
ICV01	Q851311	SPEX	MAGNESIUM	20		19.6	mg/L	98	
ICS-A	Q851315	PERKIN	MAGNESIUM	500		490.	mg/L	98	
BLA02	Q850573	NA	MAGNESIUM			< 0.0800	mg/L		
LCS	Q850572	SPEX	MAGNESIUM	100		94.1	mg/L	94	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
CCV	Q851342	INORGAN	MAGNESIUM	50.0		49.9	mg/L	100	
BLA01	Q851343	NA	MAGNESIUM			< 0.0800	mg/L		
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCV	Q851344	INORGAN	MAGNESIUM	50.0		49.9	mg/L	100	
BLA01	Q851345	NA	MAGNESIUM			< 0.0800	mg/L		
ICS-A	Q851360	PERKIN-	MAGNESIUM	500		509.	mg/L	102	
SPI02	Q850574	A444782	MAGNESIUM	6.49	100	101.	mg/L	95	
DPS02	Q850575	A444782	MAGNESIUM	6.49	100	104.	mg/L	98	3

POTASSIUM ICP EPA 200.7 M426.3

Prep: FAA OR ICP ACID DIGESTION EPA 200.0

Run: R350705 Analyst.: T NEED, JR. Run Date...: 20-JUN-98
PREP Reviewer: W WATNESS Review Date: 22-JUN-98

QC Type	Lab ID	Source	Anal Run
LCS	Q850572	SPEX	R350825
BLA02	Q850573	NA	R350825
SPI02	Q850574	A444782	R350825
DPS02	Q850575	A444782	R350825
SAMPLE	A444782	Rep: 0	R350825
SAMPLE	A444783	Rep: 0	R350825
SAMPLE	A444784	Rep: 0	R350825
SAMPLE	A444785	Rep: 0	R350825
SAMPLE	A444786	Rep: 0	R350825
SAMPLE	A444787	Rep: 0	R350825
SAMPLE	A444788	Rep: 0	R350825
SAMPLE	A444789	Rep: 0	R350825
SAMPLE	A444790	Rep: 0	R350825

Run: R350825 Analyst.: A HILSCHER Run Date...: 22-JUN-98 Instrument: ICP
ANALYTICAL Reviewer: S ENDERSON Review Date: 23-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q851307	INORGAN	POTASSIUM	50		49.2	mg/L	98	
BLA01	Q851308	NA	POTASSIUM			< 0.0800	mg/L		

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q851310	PERKIN	POTASSIUM	10		10.0	mg/L	100	
ICV01	Q851311	SPEX	POTASSIUM	20		19.8	mg/L	99	
BLA02	Q850573	NA	POTASSIUM			0.124	mg/L		
LCS	Q850572	SPEX	POTASSIUM	100		98.4	mg/L	98	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
CCV	Q851342	INORGAN	POTASSIUM	50		51.4	mg/L	103	
BLA01	Q851343	NA	POTASSIUM			< 0.0800	mg/L		
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCV	Q851344	INORGAN	POTASSIUM	50		51.5	mg/L	103	
BLA01	Q851345	NA	POTASSIUM			< 0.0800	mg/L		
SPI02	Q850574	A444782	POTASSIUM	0.553	100	98.5	mg/L	98	
DPS02	Q850575	A444782	POTASSIUM	0.553	100	102.	mg/L	101	3

SODIUM ICP EPA 200.7 M431.3

Prep: FAA OR ICP ACID DIGESTION EPA 200.0

Run: R350705 Analyst.: T NEED, JR. Run Date...: 20-JUN-98
PREP Reviewer: W WATNESS Review Date: 22-JUN-98

QC Type	Lab ID	Source	Anal Run
LCS	Q850572	SPEX	R350825
BLA02	Q850573	NA	R350825
SPI02	Q850574	A444782	R350825
DPS02	Q850575	A444782	R350825
SAMPLE	A444782	Rep: 0	R350825
SAMPLE	A444783	Rep: 0	R350825
SAMPLE	A444784	Rep: 0	R350825
SAMPLE	A444785	Rep: 0	R350825
SAMPLE	A444786	Rep: 0	R350825
SAMPLE	A444787	Rep: 0	R350825
SAMPLE	A444788	Rep: 0	R350825
SAMPLE	A444789	Rep: 0	R350825
SAMPLE	A444790	Rep: 0	R350825

Run: R350825 Analyst.: A HILSCHER Run Date...: 22-JUN-98 Instrument: ICP
ANALYTICAL Reviewer: S ENDERSON Review Date: 23-JUN-98

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q851307	INORGAN	SODIUM	50		48.3	mg/L	97	
BLA01	Q851308	NA	SODIUM			< 0.0800	mg/L		
ICV01	Q851310	PERKIN	SODIUM	1		1.01	mg/L	101	
ICV01	Q851311	SPEX	SODIUM	20		19.8	mg/L	99	
BLA02	Q850573	NA	SODIUM			0.211	mg/L		
LCS	Q850572	SPEX	SODIUM	100		105.	mg/L	105	
SAMPLE	A444782		See Cert. of Analysis, Rep: 0						
CCV	Q851342	INORGAN	SODIUM	50		49.8	mg/L	100	
BLA01	Q851343	NA	SODIUM			< 0.0800	mg/L		
SAMPLE	A444783		See Cert. of Analysis, Rep: 0						
SAMPLE	A444784		See Cert. of Analysis, Rep: 0						

HERITAGE ENVIRONMENTAL SERVICES, LLC

QC Type	Lab ID	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A444785		See Cert. of Analysis, Rep: 0						
SAMPLE	A444786		See Cert. of Analysis, Rep: 0						
SAMPLE	A444787		See Cert. of Analysis, Rep: 0						
SAMPLE	A444788		See Cert. of Analysis, Rep: 0						
SAMPLE	A444789		See Cert. of Analysis, Rep: 0						
SAMPLE	A444790		See Cert. of Analysis, Rep: 0						
CCV	Q851344	INORGAN	SODIUM	50		49.9	mg/L	100	
BLA01	Q851345	NA	SODIUM			< 0.0800	mg/L		
SPI02	Q850574	A444782	SODIUM	2.41	100	107.	mg/L	105	
DPS02	Q850575	A444782	SODIUM	2.41	100	110.	mg/L	108	2

QC Sample Comments

< Less Than Lower Detection Limit
BDL Below Detection Limit

Approved by: _____