



Certificate of Analysis 4061531

Dennis Searcy
SABIC Innovative Plastics Mt Vernon LLC
1 Lexan Lane
Mt Vernon, IN 47620-9364

Customer ID: 44-101590
Report Printed: 06/19/2024 15:46

Project Name: DMR/MMR 002 BIO IN 0002101	Workorder: 4061531
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Dear Dennis Searcy

Enclosed are the analytical results for samples received by the laboratory 06/05/2024 11:36.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Madisonville

If you have any questions concerning this report, please feel free to contact me.

NOTICE

Go to the Whole Effluent Toxicity (WET) Test Form for your next scheduled sampling event. Please mark your calendar!



#460210 Madisonville, KY
#460291 Pikeville, KY
#E871136 Englewood, OH

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Rob Whittington, Project Manager



SAMPLE SUMMARY

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4061531-01	BIO Acute 002/	Wastewater	06/03/2024 23:00	06/05/2024 11:36	Eisa Williams

ANALYTICAL RESULTS

Lab Sample ID: **4061531-01**
 Description: **BIO Acute 002**

Sample Collection Date Time: 06/03/2024 23:00
 Sample Received Date Time: 06/05/2024 11:36

Matrix: Wastewater

Discharge/Site No:

Regulatory ID: IN0002101

Whole Effluent Toxicity Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Ceriodaphnia dubia Toxicity	Pass		Pass/Fail	1.00		EPA 2002.0	06/05/2024 16:05	06/05/2024 16:05	CML

Notes for work order 4061531

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
 - Results contained in this report are only representative of the samples received.
 - PACE does not provide interpretation of these results unless otherwise stated .
 - All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
 - All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
 - Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
 - The Chain of Custody document is included as part of this report.
 - All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.
- Concentrations reported are estimated values.

Standard Qualifiers/Acronyms

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than

Whole Effluent Toxicity Testing reports required to be submitted to IDEM by permittees with WETT requirements based on **ACUTE** toxicity will need to include the following summary table of the results for each species tested:

Permittee/Location: SABIC				Permit number: IN0002101			Outfall number: 002	
Laboratory Name and Contact: Pace Analytical Services, LLC Je'Ton Wilkes, WET Team Lead jeton.wilkes@pacelabs.com				Report <u>Due</u> Date:			Report Date: June 12, 2024	
WETT Reporting Frequency or Type: (mark which one)	Monthly	Quarterly	Semi-annual	Annual	TRE	Post TRE	(per Reporting Frequency)? First	
			X				(per Reporting Frequency)?	

Test Organism	Test Type	Endpoint	Units	Result	Compliance Limit [4]	Pass/Fail [5]	Reporting
<i>Ceriodaphnia dubia</i>	48-hour Definitive Static-Renewal	48-hr. LC ₅₀	%	37.18			Laboratory Report
			TU _a	2.69			
		Toxicity (acute) [1]	TU_a	2.69	9.1	Pass	Laboratory Report and NetDMR (Parameter Code 61425)

PACE ANALYTICAL SERVICES, LLC KENTUCKY
P.O. BOX 907
MADISONVILLE, KY 42431
270-821-7375

WHOLE EFFLUENT TOXICITY TEST

SABIC Innovative Plastics
IN0002101
Mt Vernon, Indiana
June 2024

Attached are the results of the 48-hour definitive static renewal Whole Effluent Toxicity (WET) test conducted with samples of Outfall 002 final effluent. Testing was conducted per NPDES permit number IN0002101 and samples were collected on June 03, 2024. The samples were transported and received by Pace Analytical Services, LLC on June 05, 2024 at sample receipt temperatures below 6.0 °C and all samples were used within 36 hours of collection. The samples were received and utilized for testing with Ceriodaphnia dubia at Pace Analytical Services, LLC Kentucky. The test was initiated on June 05, 2024. Organisms were exposed at 25.0 ± 1 °C to effluent concentrations of 6.25, 12.5, 25, 50 and 100 percent effluent and a moderately hard synthetic water control.

Acute toxicity test methods followed EPA-821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fifth Edition). Test controls met USEPA criteria for test acceptability. The results of the toxicity tests are:

TOXICITY TEST RESULTS FOR OUTFALL 002			
Test endpoints	Permit Limit		C. dubia
TUa	9.1		2.69
48 hr. LC50	10.98		37.18
96 hr. LC50	---		---
95% Lower Confidence Limits	---		36.07
95% Upper Confidence Limits	---		37.69
TUa – acute toxicity unit			
LC50 – percent effluent concentration that is lethal to 50% of the test organism (48-hr)			
NA – Not applicable			

Test results for Outfall 002 effluent exhibited adequate survival in the Ceriodaphnia dubia 48-hour acute definitive test, meeting the acute permit limit of 9.1 The report includes this summary, the statistics and raw test data, chain-of-custody documentation, and reference toxicant data.

Your next sampling event is scheduled for **___December 02, 2024___**. As a reminder, this schedule must be followed to avoid rescheduling fees.

If you have any questions or concerns regarding this report, please feel free to contact me at (270) 821-7375, Ext 220.

Sincerely,

Je'ton Wilkes
 WET Team Lead
jeton.wilkes@pacelabs.com

INFORMATION

Permit number:

- IN0002101

Toxicity testing requirements and Test Method:

- Ceriodaphnia dubia Acute Survival Test
- Ceriodaphnia dubia EPA Acute Toxicity Test. Method 2002.0

Plant location:

- SABIC Innovative Plastics
1 Lexan Lane
Mt Vernon, Indiana 47620

Name of receiving water body:

- Ohio River

Laboratory conducting the test (s):

- Pace Analytical Services, LLC Kentucky
825 Industrial Road
Madisonville, Kentucky 42431

SOURCE OF EFFLUENT AND DILUTION WATER

Effluent sample (s):

Sampling point:

- 002

Collection dates and times:

Start Date:

End Time:

-

June 03, 2024

23:00

Sample collection method:

- Composite sample

Dilution water sample (s):

Source:

- Moderately hard synthetic water
- Prepared in-house

Prepared date

- June 05, 2024

LIMS: 4034658(Cerio)

Pretreatment:

- None

CERIODAPHNIA DUBIA 48-HR SURVIVAL ACUTE TOXICITY TEST
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Toxicity test method used:

- Static-Non-Renewal Ceriodaphnia dubia survival

Endpoints of toxicity:

- 48-hr Survival Rate (LC₅₀, 95% Upper and Lower Confidence Limits)

Test method and deviations, if any:

- EPA-821-R-02-012, October 2002
- Test method 2002.0

Date and time test started:

- June 05, 2024 16:05

Date and time test terminated:

- June 07, 2024 16:10

Type of test chambers:

- Plastic, 30ml

Volume of solution used per chamber:

- 15ml

Number of organisms per chamber:

- Five

Number of replicate chambers per treatment:

- Four

Test Temperature:

- 25 ± 1 degree

Scientific name:

- Ceriodaphnia dubia (water fleas)

Age:

- Less than 24 hours

Life stage:

- Neonates

Source:

- Laboratory culture 052924-01(In House)

Methods used to calculate endpoints:

- Steel Many-One Rank Sum Test for survival endpoint
- Linear Interpolation Test for survival endpoint

Test Acceptability Criterion:

- 90% or greater survival in the control group

QUALITY ASSURANCE

Reference Toxicant used and source:

- Sodium Chloride, reagent grade, from Fisher, ID # 4019335

Date and time of most recent test:

- May 07 – May 09, 2024

Dilution water used in test:

- Moderately hard synthetic water (In-house)

Results for Ceriodaphnia dubia: (g/L)

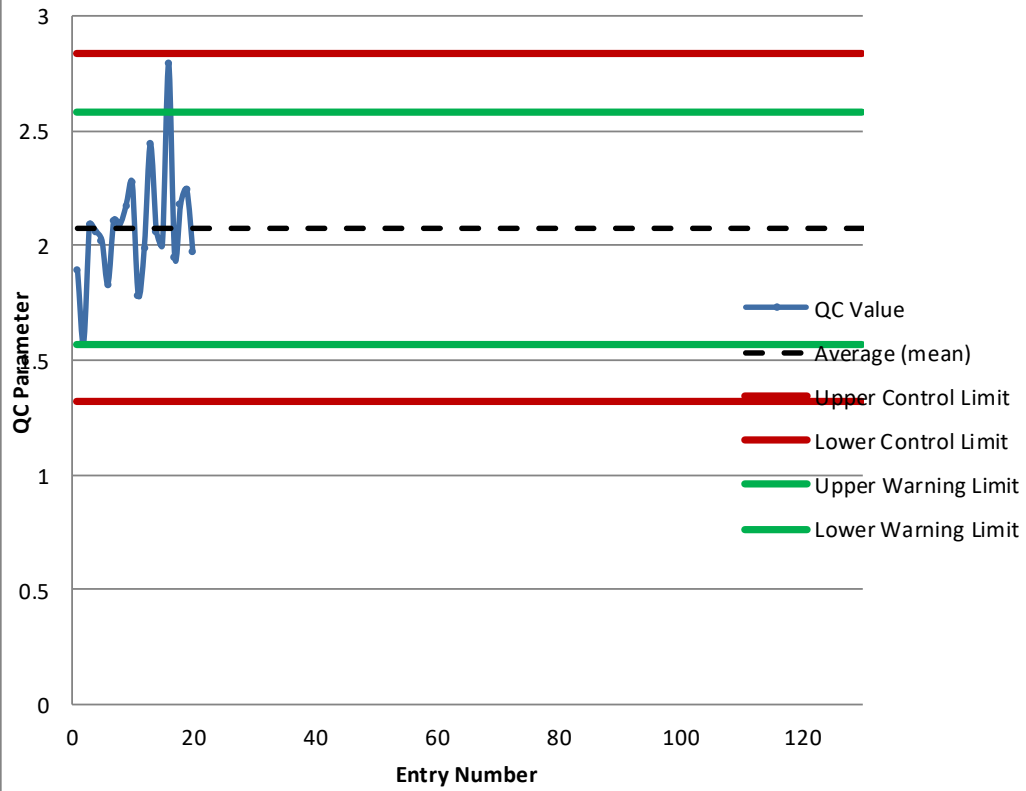
- 48-hr LC₅₀ = 1.97
- 95% Lower Confidence Limit = 1.82
- 95% Upper Confidence Limit = 2.14

QA Reference Toxicity Data Summary

Laboratory Name: Pace Analytical Services, LLC Kentucky
 Scientific Name: Ceriodaphnia dubia
 Reference Toxicant: NaCl
 Test Type : Acute
 Dilution Series: 13.35, 17.80, 23.73, 31.64, 42.19 %
 Control Water: MHSW (In-House)
 Reporting Period: October 2022 – May 2024
 Number Exposed: 20
 Duration: 48-hr

Test Date	Organism Age	LC ₅₀ (g/L)	Upper 95% Limit	Lower 95% Limit	PMSD (%)	Control Survival (%)
10/04/22	<24-hr	1.89	2.03	1.76	12.2	100
11/08/22	<24-hr	1.57	1.61	1.55	10.6	100
12/06/22	<24-hr	2.09	2.25	2.01	10.8	100
01/10/23	<24-hr	2.06	2.08	2.00	10.6	100
02/07/23	<24-hr	2.02	2.11	1.90	16.8	100
03/07/23	<24-hr	1.83	2.02	1.63	15.5	100
04/04/23	<24-hr	2.11	2.28	1.96	17.0	100
05/02/23	<24-hr	2.09	2.22	1.96	13.3	100
06/06/23	<24-hr	2.17	2.35	2.01	16.3	100
07/11/23	<24-hr	2.26	2.44	2.11	14.8	100
08/08/23	<24-hr	1.78	2.05	1.57	20.5	100
09/07/23	<24-hr	1.99	2.13	1.87	17.2	100
10/03/23	<24-hr	2.44	2.75	2.16	17.2	100
11/07/23	<24-hr	2.06	2.14	1.99	13.3	100
12/05/23	<24-hr	2.00	2.09	1.87	14.6	100
01/09/24	<24-hr	2.79	2.96	2.61	35.9	100
02/06/24	<24-hr	1.95	2.10	1.84	24.2	100
03/05/24	<24-hr	2.18	2.33	2.03	17.2	100
04/02/24	<24-hr	2.24	2.40	2.08	26.8	100
05/07/24	<24-hr	1.97	2.14	1.82	15.3	100

QC Control Chart Ceriodaphnia dubia Acute



CETIS Summary Report

Report Date: 11 Jun-24 16:48 (p 1 of 1)
 Test Code/ID: 4061531-01CA / 19-5298-6147

Ceriodaphnia 48-h Acute Survival Test

Pace Analytical Services, LLC

Batch ID: 17-0561-1008	Test Type: Survival (48h)	Analyst: Lab Tech
Start Date: 05 Jun-24 16:05	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 07 Jun-24 16:10	Species: Ceriodaphnia dubia	Brine: Not Applicable
Test Length: 48h	Taxon: Branchiopoda	Source: Aquatic Research Organisms Age: <24
Sample ID: 01-9954-7572	Code: 4061531-01CA	Project: WET Quarterly Compliance Test (1Q)
Sample Date: 03 Jun-24 23:00	Material: Dilution Water	Source: NPDES Permit # IN0002101
Receipt Date: 05 Jun-24 11:36	CAS (PC):	Station: 002
Sample Age: 41h (6 °C)	Client: SABIC	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	TU	S
09-2197-1854	48h Survival Rate	Steel Many-One Rank Sum Test	25	50	35.36	10.0%	4	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	%	95% LCL	95% UCL	TU	S
13-5236-7557	48h Survival Rate	Linear Interpolation (ICPIN)	LC10	26.92	24.93	27.85	3.714	1
			LC15	28.21	26.32	29.08	3.545	
			LC20	29.49	27.71	30.31	3.391	
			LC25	30.77	29.11	31.54	3.25	
			LC40	34.62	33.28	35.23	2.889	
			LC50	37.18	36.07	37.69	2.69	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
09-2197-1854	48h Survival Rate	Control Resp	1	0.9	>>	Yes	Passes Criteria
13-5236-7557	48h Survival Rate	Control Resp	1	0.9	>>	Yes	Passes Criteria

48h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	0.00%
6.25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	0.00%
12.5		4	0.9500	0.7909	1.1090	0.8000	1.0000	0.0500	0.1000	10.53%	5.00%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	0.00%
50		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%
100		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%

48h Survival Rate Detail

MD5: 45498724E8875983BAAD4D2E53CB134D

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	0.8000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		0.0000	0.0000	0.0000	0.0000
100		0.0000	0.0000	0.0000	0.0000

48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	5/5	5/5	5/5	5/5
6.25		5/5	5/5	5/5	5/5
12.5		5/5	5/5	4/5	5/5
25		5/5	5/5	5/5	5/5
50		0/5	0/5	0/5	0/5
100		0/5	0/5	0/5	0/5

CETIS Analytical Report

Report Date: 11 Jun-24 16:48 (p 1 of 2)
Test Code/ID: 4061531-01CA / 19-5298-6147

Ceriodaphnia 48-h Acute Survival Test

Pace Analytical Services, LLC

Analysis ID: 09-2197-1854 **Endpoint:** 48h Survival Rate **CETIS Version:** CETISv1.9.7
Analyzed: 11 Jun-24 16:46 **Analysis:** Nonparametric-Control vs Treatments **Status Level:** 1
Edit Date: 11 Jun-24 16:44 **MD5 Hash:** 45498724E8875983BAAD4D2E53CB134D **Editor ID:** 006-153-011-8

Batch ID: 17-0561-1008 **Test Type:** Survival (48h) **Analyst:** Lab Tech
Start Date: 05 Jun-24 16:05 **Protocol:** EPA/821/R-02-012 (2002) **Diluent:** Mod-Hard Synthetic Water
Ending Date: 07 Jun-24 16:10 **Species:** Ceriodaphnia dubia **Brine:** Not Applicable
Test Length: 48h **Taxon:** Branchiopoda **Source:** Aquatic Research Organism **Age:** <24

Sample ID: 01-9954-7572 **Code:** 4061531-01CA **Project:** WET Quarterly Compliance Test (1Q)
Sample Date: 03 Jun-24 23:00 **Material:** Dilution Water **Source:** NPDES Permit # IN0002101
Receipt Date: 05 Jun-24 11:36 **CAS (PC):** **Station:** 002
Sample Age: 41h (6 °C) **Client:** SABIC

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Angular (Corrected)	C > T	25	50	35.36	4	0.1	10.00%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	18	10	1	6	CDF	0.7500	Non-Significant Effect
		12.5	16	10	1	6	CDF	0.5065	Non-Significant Effect
		25	18	10	1	6	CDF	0.7500	Non-Significant Effect

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Outlier	Grubbs Extreme Value Test	3.354	2.586	4.7E-05	Outlier Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0106327	0.0035442	3	1	0.4262	Non-Significant Effect
Error	0.0425309	0.0035442	12			
Total	0.0531637		15			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.5647	0.8408	<1.0E-05	Non-Normal Distribution

48h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
6.25		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
12.5		4	0.9500	0.7909	1.0000	1.0000	0.8000	1.0000	0.0500	10.53%	5.00%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
50		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%
100		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.3450	1.3450	1.3460	1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
6.25		4	1.3450	1.3450	1.3460	1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
12.5		4	1.2860	1.0960	1.4750	1.3450	1.1070	1.3450	0.0595	9.26%	4.43%
25		4	1.3450	1.3450	1.3460	1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
50		4	0.2255	0.2255	0.2256	0.2255	0.2255	0.2255	0.0000	0.00%	83.24%
100		4	0.2255	0.2255	0.2256	0.2255	0.2255	0.2255	0.0000	0.00%	83.24%

CETIS Analytical Report

Report Date: 11 Jun-24 16:48 (p 2 of 2)
 Test Code/ID: 4061531-01CA / 19-5298-6147

Ceriodaphnia 48-h Acute Survival Test

Pace Analytical Services, LLC

Analysis ID: 09-2197-1854 Endpoint: 48h Survival Rate CETIS Version: CETISv1.9.7
 Analyzed: 11 Jun-24 16:46 Analysis: Nonparametric-Control vs Treatments Status Level: 1
 Edit Date: 11 Jun-24 16:44 MD5 Hash: 45498724E8875983BAAD4D2E53CB134D Editor ID: 006-153-011-8

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	0.8000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		0.0000	0.0000	0.0000	0.0000
100		0.0000	0.0000	0.0000	0.0000

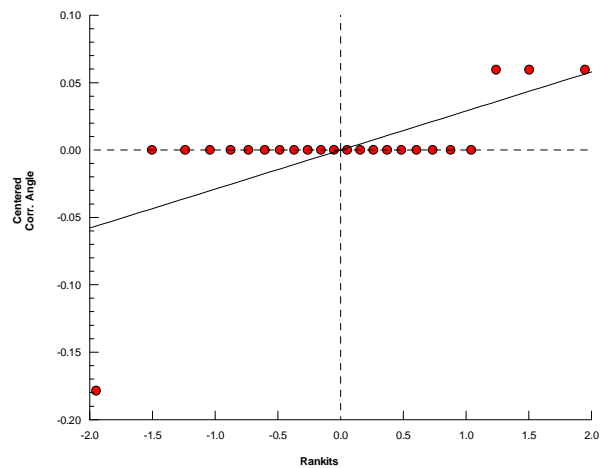
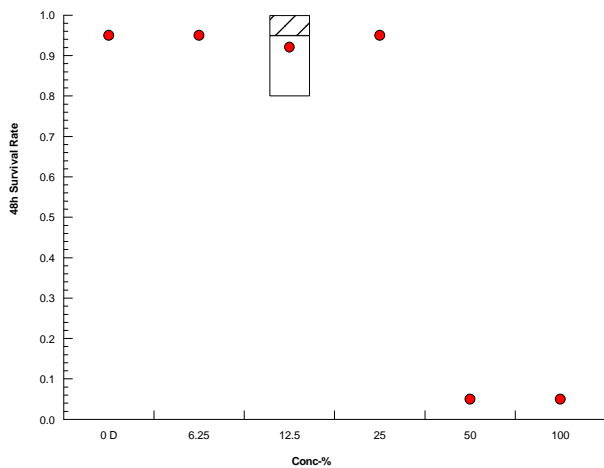
Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.3450	1.3450	1.3450	1.3450
6.25		1.3450	1.3450	1.3450	1.3450
12.5		1.3450	1.3450	1.1070	1.3450
25		1.3450	1.3450	1.3450	1.3450
50		0.2255	0.2255	0.2255	0.2255
100		0.2255	0.2255	0.2255	0.2255

48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	5/5	5/5	5/5	5/5
6.25		5/5	5/5	5/5	5/5
12.5		5/5	5/5	4/5	5/5
25		5/5	5/5	5/5	5/5
50		0/5	0/5	0/5	0/5
100		0/5	0/5	0/5	0/5

Graphics



CETIS Analytical Report

Report Date: 11 Jun-24 16:48 (p 1 of 2)
Test Code/ID: 4061531-01CA / 19-5298-6147

Ceriodaphnia 48-h Acute Survival Test

Pace Analytical Services, LLC

Analysis ID: 13-5236-7557	Endpoint: 48h Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 11 Jun-24 16:46	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 11 Jun-24 16:44	MD5 Hash: 45498724E8875983BAAD4D2E53CB134D	Editor ID: 006-153-011-8
Batch ID: 17-0561-1008	Test Type: Survival (48h)	Analyst: Lab Tech
Start Date: 05 Jun-24 16:05	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 07 Jun-24 16:10	Species: Ceriodaphnia dubia	Brine: Not Applicable
Test Length: 48h	Taxon: Branchiopoda	Source: Aquatic Research Organism Age: <24
Sample ID: 01-9954-7572	Code: 4061531-01CA	Project: WET Quarterly Compliance Test (1Q)
Sample Date: 03 Jun-24 23:00	Material: Dilution Water	Source: NPDES Permit # IN0002101
Receipt Date: 05 Jun-24 11:36	CAS (PC):	Station: 002
Sample Age: 41h (6 °C)	Client: SABIC	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1022448	1000	Yes	Two-Point Interpolation

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC10	26.92	24.93	27.85	3.714	3.591	4.012
LC15	28.21	26.32	29.08	3.545	3.439	3.799
LC20	29.49	27.71	30.31	3.391	3.299	3.608
LC25	30.77	29.11	31.54	3.25	3.171	3.436
LC40	34.62	33.28	35.23	2.889	2.838	3.004
LC50	37.18	36.07	37.69	2.69	2.653	2.772

48h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Median	Min	Max	CV%	%Effect	A/B	Mean	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
6.25		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	1.0000	0.00%
12.5		4	0.9500	1.0000	0.8000	1.0000	10.53%	5.00%	19/20	0.9750	2.50%
25		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	20/20	0.9750	2.50%
50		4	0.0000	0.0000	0.0000	0.0000	---	100.00%	0/20	0.0000	100.00%
100		4	0.0000	0.0000	0.0000	0.0000	---	100.00%	0/20	0.0000	100.00%

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	0.8000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		0.0000	0.0000	0.0000	0.0000
100		0.0000	0.0000	0.0000	0.0000

48h Survival Rate Binomials

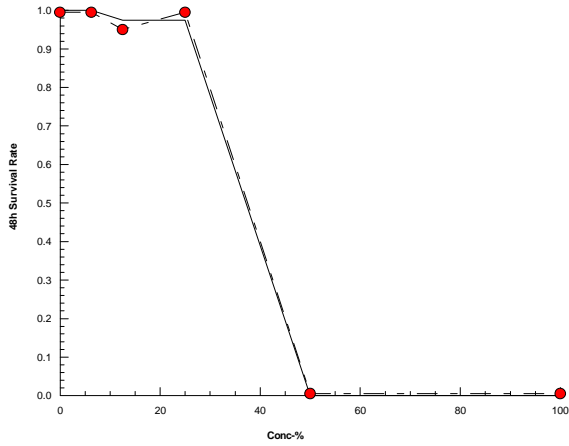
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	5/5	5/5	5/5	5/5
6.25		5/5	5/5	5/5	5/5
12.5		5/5	5/5	4/5	5/5
25		5/5	5/5	5/5	5/5
50		0/5	0/5	0/5	0/5
100		0/5	0/5	0/5	0/5

Ceriodaphnia 48-h Acute Survival Test

Pace Analytical Services, LLC

Analysis ID: 13-5236-7557	Endpoint: 48h Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 11 Jun-24 16:46	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 11 Jun-24 16:44	MD5 Hash: 45498724E8875983BAAD4D2E53CB134D	Editor ID: 006-153-011-8

Graphics



Control AM						
	pH	DO	Temp cC	Alk	Hardness	Cond
Start	8.05	8.09	24.5	61	84	288
24 hr.	8.17	7.22	25.1	61	84	288
48 hr.	8.40	8.19	24.8	61	84	288

Sample ID: 4061531-01																			
Dilution	6.25%			12.50%			25.00%			50.00%			100.00%			Alk	Hardness	Cond	Cl2
pH	DO	°C	pH	DO	°C	pH	DO	°C	pH	DO	°C	pH	DO	°C					
8.62	7.93	25.9	8.63	7.83	25.9	8.71	7.72	25.9	8.69	7.51	25.9	8.60	5.99	25.9	1197	79	10.84 millimhos	0.03	
8.70	7.15	25.1	8.78	7.25	25.1	9.06	7.23	25.1	9.14	7.07	25.1	9.13	7.19	25.1	1197	79	10.84 millimhos	0.03	
8.98	8.20	24.8	9.04	8.24	24.8	9.19	8.30	24.8	9.33	8.22	24.8	9.40	8.28	24.8	1197	79	10.84 millimhos	0.03	



P.O. Box 907 - 825 Industrial Rd - Madisonville, KY 42431

CLIENT: SABIC
 START DATE/TIME/INITIALS: 6/15/24 1605 cm
 END DATE/TIME: 6/17/24 11010 ART
 ANALYST: JLW, CML, ART

MHSF LIMS ID#: 40341058
 LIMS SAMPLE ID#: 4061531-01/02 for 6/12/24
 C. DUBIA TRAY #: 032924-01 RANDOMIZATION: #1
 DATA REVIEWED BY: glw DATE 6/12/24

CONTROL	PH	DO	°C	ALK	HARD	COND	10.25 %			12.5 %			25 %			50 %			100 %			ALK/TRC	HARD	COND
							PH	DO	°C	PH	DO	°C	PH	DO	°C	PH	DO	°C	PH	DO	°C			
START	8.05	8.09	24.5				8.02	7.93	25.9	8.13	7.83	25.9	8.71	7.72	25.9	8.17	7.51	25.9	8.60	5.99	25.9	1197		
24HRS	8.17	7.27	25.1	101	84	288	8.20	7.15	25.1	8.78	7.25	25.1	9.06	7.23	25.1	9.14	7.07	25.1	9.13	7.19	25.1	12	79	10.84
48HRS	8.40	8.19	24.8				8.98	8.20	24.8	9.04	8.24	24.8	9.19	8.30	24.8	9.33	8.22	24.8	9.40	8.28	24.8	0.03		millimhos

SAMPLE ID: _____

CONTROL	PH	DO	°C	ALK	HARD	COND	PH	DO	°C	PH	DO	°C	PH	DO	°C	PH	DO	°C	PH	DO	°C	ALK/TRC	HARD	COND	
START																									
24HRS																									
48HRS																									

Units: pH - STD, DO - mg/L, Hardness - mg/L, Conductivity - umhos/cm, Total Residual Chlorine - mg/L EPA-821-R-02-012 METHOD 2002.0 C. DUBIA STATIC NON-RENEWAL

SPECIES: Ceriodaphnia dubia AGE: <24hrs

Sample ID #: _____ AM	24 HR REPLICATES AM					48 HR REPLICATES AM					CONTROL	DO 2HR:	DO 4HR:	DO 6HR:	DO 8HR:	TIME	UL: _____	LL: _____	LC50: <u>37.18</u>	%TRIM: _____	Comments:	
	1	2	3	4	TOTAL LIVE ORG	1	2	3	4	TOTAL LIVE ORG												
CONTROL	5	5	5	5	20	5	5	5	5	20												
<u>6.25</u> %	5	5	5	5	20	5	5	4	5	20												
<u>12.5</u> %	5	5	5	5	20	5	5	4	5	20												
<u>25</u> %	5	5	5	5	20	5	5	5	5	19												
<u>50</u> %	5	4	5	3	17	0	0	0	0	0												
<u>100</u> %	0	0	0	0	0	0	0	0	0	0												

Sample ID #: _____ PM	24 HR REPLICATES PM					48 HR REPLICATES PM					CONTROL	DO 2HR:	DO 4HR:	DO 6HR:	DO 8HR:	TIME	UL: _____	LL: _____	LC50: _____	%TRIM: _____	Comments:	
	1	2	3	4	TOTAL LIVE ORG	1	2	3	4	TOTAL LIVE ORG												
CONTROL																						
_____ %																						
_____ %																						
_____ %																						
_____ %																						
_____ %																						

Chain of Custody

Scheduled for: 06/03/2024



Client: SABIC Innovative Plastics Mt Vernon LLC

Report To:
SABIC Innovative Plastics Mt Vernon LLC

Invoice To:
SABIC Innovative Plastics Mt Vernon LLC

Project: DMR/MMR 002 BIO IN 0002101

Dennis Searcy
1 Lexan Lane
Mt Vernon, IN 47620-9364

Accounts Payable
1 Lexan Lane
Mt Vernon, IN 47620-9364

Phone: (812) 833-1222
PWS ID#: IN0002101
State: _____

PO#: _____
Quote# _____

Please Print Legibly

Collected by (Signature): Eisa Williams
required information

Compliance Monitoring? Yes No

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes No

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date 6/3/24 Start time 0000 End Date 6/3/24 End Time 2300 Temp (oC) _____

LAB USE ONLY	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection					
Sample ID#	(mm/dd/yy):	Time (24 hr):					
4061531-01 A	<u>06/03/24</u>	<u>2300</u>	Plastic 1gal	1	BIO Acute 002	g <input checked="" type="radio"/>	Acute Ceriodaphnia Dubia
4061531-01 B	<u>06/03/24</u>	<u>2300</u>	Plastic 1gal	1	BIO Acute 002	g <input checked="" type="radio"/>	Acute Ceriodaphnia Dubia

3.2°C @ 1121
6/5/24

Thermometer Serial Number
 181390287
 181460057
Temp 6.0°C

Preservation Check Performed by: S. T. T.

pH Paper Lot #: _____

Field data collected by: _____ Date (mm/dd/yy) _____ Time (24 hr) _____

pH _____ Cond (umho) _____ Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) _____ or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ MGD CFS g/min GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Eisa Williams
Mac Boerner
Wendy Markowitz

Mac Boerner
Wendy Markowitz
Sgt. T. T.

06/04/24
6/4/24
06/01/24
6/5/24

0600
1800
11:0825
11:36

PACE- Check here if trip charge applied to associated COC

Printed: 5/28/2024 1:17:15PM

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