

December 15, 2016

Dr. Thant Zin Win, D.V.M., M.P.H., Chief
County of Los Angeles-ACWMD
Environmental Toxicology Laboratory
11012 Garfield Avenue-Bldg. B
South Gate, CA 90280

Dear Dr. Win:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*" EPA-821-R-02-013. Results were as follows:

CLIENT:	County of Los Angeles
SAMPLE I.D.:	ME000000061
DATE RECEIVED:	21 Nov- 2016
ABC LAB. NO.:	CLA1116.231

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

IWC = 100.00%


TST RESULT

SURVIVAL = PASS % EFFECT = 5.00 %

*REPRODUCTION = PASS % EFFECT = - 8.04 %

* Passes permit TIE limitation of $\geq 50\%$ effect

Yours very truly,


Scott Johnson
Laboratory Director

*Note: The chronic survival TST analysis is not available for ceriodaphnia dubia, see CETIS report using TST-Welch's t Test

TST Summary Sheet

Lab Name	Aquatic Bioassay and Consulting Labs	Client Name	County of Los Angeles
Test ID	ME000000061	Test Species	<i>C. dubia</i> (water flea)
Test Date	11/22/2016	Test Type	Chronic
Test Duration	7 days	Endpoint	Reproduction
Critical Conc.	100%		

Statistic	Control	Critical Concentration
Mean of Raw Data	32.95	35.60
Mean used in Calculation (non-transformed)	32.95	35.60
Variance used in Calculation (non-transformed)	55.839	229.621
Standard Deviation of Raw Data	7.473	15.153
CV of Raw Data	0.227	0.426
n	20	20

Mean % Effect at Critical Conc.

-8.04

Calculated t-value	Degrees of Freedom	Table t-value	Percent Difference
3.0137	24	0.8569	

Results

Pass Sample is Non-toxic

Raw Data

Control Data		Critical Concentration Data	
No. of Organisms Exposed or Counted	Response (Final Count, Weight, Length, etc.)	No. of Organisms Exposed or Counted	Response (Final Count, Weight, Length, etc.)
1	35	1	9
1	26	1	38
1	33	1	50
1	42	1	53
1	28	1	35
1	18	1	39
1	33	1	32
1	25	1	34
1	28	1	42
1	34	1	0
1	41	1	6
1	43	1	46
1	41	1	53
1	41	1	41
1	42	1	45
1	20	1	41
1	33	1	26
1	36	1	40
1	27	1	31
1	33	1	51

CETIS Summary Report

Report Date: 13 Dec-16 14:12 (p 1 of 2)
Test Code: CLA1116.231cer | 08-3075-5945

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 00-6555-4496	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 22 Nov-16 14:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 29 Nov-16 12:41	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 08-9471-8254	Code: CLA1116.231c	Client: County of Los Angeles
Sample Date: 20 Nov-16 10:30	Material: Sample Water	Project:
Receipt Date: 21 Nov-16 13:51	Source: Bioassay Report	
Sample Age: 52h (9 °C)	Station: ME000000061	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	TU	PMSD	✓
14-4482-5770	7d Survival Rate	Fisher Exact/Bonferroni-Holm Test	100	> 100	n/a	1	n/a	
18-2228-3364	Reproduction	Dunnett Multiple Comparison Test	100	> 100	n/a	1	22.3%	

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	%	95% LCL	95% UCL	TU	✓
14-9055-1559	7d Survival Rate	Linear Interpolation (ICPIN)	EC5	100	62.5	n/a	1	✓
			EC10	>100	n/a	n/a	<1	✓
			EC15	>100	n/a	n/a	<1	✓
			EC20	>100	n/a	n/a	<1	✓
			EC25	>100	n/a	n/a	<1	✓
			EC40	>100	n/a	n/a	<1	✓
			EC50	>100	n/a	n/a	<1	✓
01-4416-0691	Reproduction	Linear Interpolation (ICPIN)	IC5	>100	n/a	n/a	<1	✓
			IC10	>100	n/a	n/a	<1	✓
			IC15	>100	n/a	n/a	<1	✓
			IC20	>100	n/a	n/a	<1	✓
			IC25	>100	n/a	n/a	<1	✓
			IC40	>100	n/a	n/a	<1	✓
			IC50	>100	n/a	n/a	<1	✓

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
14-4482-5770	7d Survival Rate	Control Resp	1	0.8	>>	Yes	Passes Criteria
14-9055-1559	7d Survival Rate	Control Resp	1	0.8	>>	Yes	Passes Criteria
01-4416-0691	Reproduction	Control Resp	32.95	15	>>	Yes	Passes Criteria
18-2228-3364	Reproduction	Control Resp	32.95	15	>>	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	20	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
50		20	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		20	0.9500	0.8453	1.0000	0.0000	1.0000	0.0500	0.2236	23.54%	5.00%

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	20	32.95	29.45	36.45	18	43	1.671	7.473	22.68%	0.00%
50		20	35.45	29.94	40.96	15	56	2.63	11.76	33.18%	-7.59%
100		20	35.6	28.51	42.69	0	53	3.388	15.15	42.57%	-8.04%

CETIS Summary Report

Report Date: 13 Dec-16 14:12 (p 2 of 2)
 Test Code: CLA1116.231cer | 08-3075-5945

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Reproduction Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	35	26	33	42	28	18	33	25	28	34
		41	43	41	41	42	20	33	36	27	33
50		33	16	26	56	43	42	50	47	32	43
		22	40	47	29	32	31	25	29	15	51
100		9	38	50	53	35	39	32	34	42	0
		6	46	53	41	45	41	26	40	31	51

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

CETIS Analytical Report

Report Date: 13 Dec-16 14:12 (p 1 of 2)
Test Code: CLA1116.231cer | 08-3075-5945

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 18-2228-3364	Endpoint: Reproduction	CETIS Version: CETISv1.9.2
Analyzed: 13 Dec-16 14:12	Analysis: Parametric-Control vs Treatments	Official Results: Yes
Batch ID: 00-6555-4496	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 22 Nov-16 14:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 29 Nov-16 12:41	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 08-9471-8254	Code: CLA1116.231c	Client: County of Los Angeles
Sample Date: 20 Nov-16 10:30	Material: Sample Water	Project:
Receipt Date: 21 Nov-16 13:51	Source: Bioassay Report	
Sample Age: 52h (9 °C)	Station: ME000000061	

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	> 100	n/a	1	22.29%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		50	-0.6651	1.954	7.344	38	CDF	0.8764	Non-Significant Effect
		100	-0.705	1.954	7.344	38	CDF	0.8851	Non-Significant Effect

Test Acceptability Criteria

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	32.95	15	>>	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	88.6333	44.3167	2	0.3137	0.7320	Non-Significant Effect
Error	8052.7	141.275	57			
Total	8141.33		59			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	8.602	9.21	0.0136	Equal Variances
Variances	Levene Equality of Variance Test	3.096	4.998	0.0529	Equal Variances
Variances	Mod Levene Equality of Variance Test	1.978	4.998	0.1478	Equal Variances
Distribution	Anderson-Darling A2 Normality Test	0.6437	3.878	0.0936	Normal Distribution
Distribution	D'Agostino Kurtosis Test	1.4	2.576	0.1616	Normal Distribution
Distribution	D'Agostino Skewness Test	2.544	2.576	0.0110	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus Test	8.429	9.21	0.0148	Normal Distribution
Distribution	Kolmogorov-Smirnov D Test	0.07596	0.1331	0.4940	Normal Distribution
Distribution	Shapiro-Wilk W Normality Test	0.9569	0.9459	0.0334	Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	20	32.95	29.45	36.45	33	18	43	1.671	22.68%	0.00%
50		20	35.45	29.94	40.96	32.5	15	56	2.63	33.18%	-7.59%
100		20	35.6	28.51	42.69	39.5	0	53	3.388	42.57%	-8.04%

Reproduction Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	35	26	33	42	28	18	33	25	28	34
		41	43	41	41	42	20	33	36	27	33
50		33	16	26	56	43	42	50	47	32	43
		22	40	47	29	32	31	25	29	15	51
100		9	38	50	53	35	39	32	34	42	0
		6	46	53	41	45	41	26	40	31	51

CETIS Analytical Report

Report Date: 13 Dec-16 14:12 (p 2 of 2)
Test Code: CLA1116.231cer | 08-3075-5945

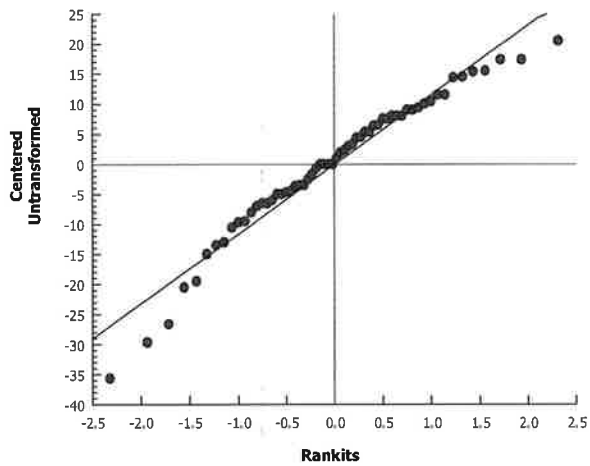
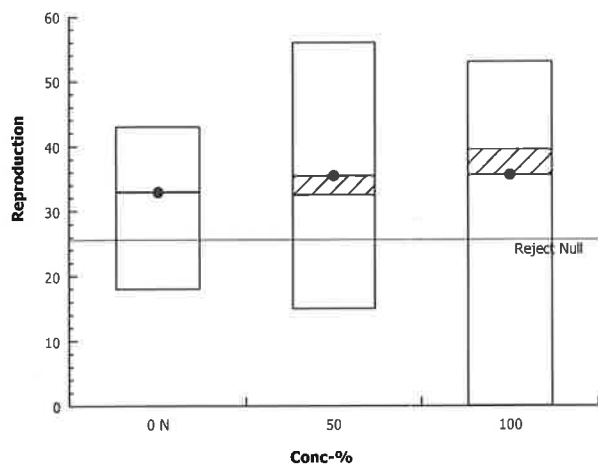
Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 18-2228-3364 Endpoint: Reproduction
Analyzed: 13 Dec-16 14:12 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.9.2
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 13 Dec-16 14:12 (p 1 of 4)
Test Code: CLA1116.231cer | 08-3075-5945

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 14-9055-1559	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.2
Analyzed: 13 Dec-16 14:12	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes
Batch ID: 00-6555-4496	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 22 Nov-16 14:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 29 Nov-16 12:41	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 08-9471-8254	Code: CLA1116.231c	Client: County of Los Angeles
Sample Date: 20 Nov-16 10:30	Material: Sample Water	Project:
Receipt Date: 21 Nov-16 13:51	Source: Bioassay Report	
Sample Age: 52h (9 °C)	Station: ME000000061	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits		Overlap	Decision
Attribute	Test Stat	Lower	Upper		
Control Resp	1	0.8	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	100	62.5	n/a	1	n/a	1.6
EC10	>100	n/a	n/a	<1	n/a	n/a
EC15	>100	n/a	n/a	<1	n/a	n/a
EC20	>100	n/a	n/a	<1	n/a	n/a
EC25	>100	n/a	n/a	<1	n/a	n/a
EC40	>100	n/a	n/a	<1	n/a	n/a
EC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)									
Conc-%	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B	
0	N	20	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.0%	20	20	
50		20	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.0%	20	20	
100		20	0.9500	0.0000	1.0000	0.0500	0.2236	23.54%	5.0%	19	20	

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

CETIS Analytical Report

Report Date: 13 Dec-16 14:12 (p 2 of 4)
Test Code: CLA1116.231cer | 08-3075-5945

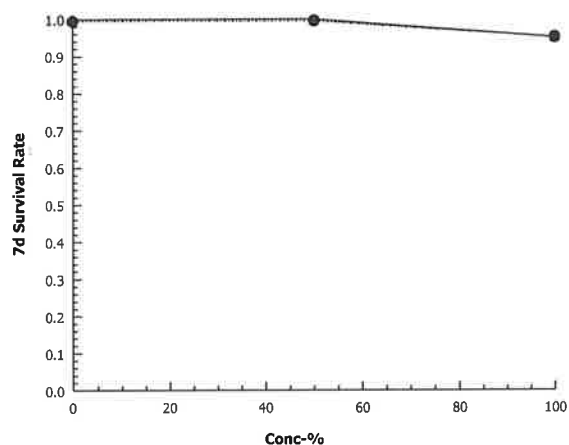
Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 14-9055-1559 Endpoint: 7d Survival Rate
Analyzed: 13 Dec-16 14:12 Analysis: Linear Interpolation (ICPIN)

CETIS Version: CETISv1.9.2
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 13 Dec-16 14:12 (p 3 of 4)
Test Code: CLA1116.231cer | 08-3075-5945

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 01-4416-0691	Endpoint: Reproduction	CETIS Version: CETISv1.9.2
Analyzed: 13 Dec-16 14:12	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes
Batch ID: 00-6555-4496	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 22 Nov-16 14:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 29 Nov-16 12:41	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 08-9471-8254	Code: CLA1116.231c	Client: County of Los Angeles
Sample Date: 20 Nov-16 10:30	Material: Sample Water	Project:
Receipt Date: 21 Nov-16 13:51	Source: Bioassay Report	
Sample Age: 52h (9 °C)	Station: ME000000061	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	947668	280	Yes	Two-Point Interpolation

Test Acceptability Criteria

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	32.95	15	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Reproduction Summary

Conc-%	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	20	32.95	18	43	1.671	7.473	22.68%	0.0%
50		20	35.45	15	56	2.63	11.76	33.18%	-7.59%
100		20	35.6	0	53	3.388	15.15	42.57%	-8.04%

Reproduction Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	35	26	33	42	28	18	33	25	28	34
		41	43	41	41	42	20	33	36	27	33
50		33	16	26	56	43	42	50	47	32	43
		22	40	47	29	32	31	25	29	15	51
100		9	38	50	53	35	39	32	34	42	0
		6	46	53	41	45	41	26	40	31	51

CETIS Analytical Report

Report Date: 13 Dec-16 14:12 (p 4 of 4)
Test Code: CLA1116.231cer | 08-3075-5945

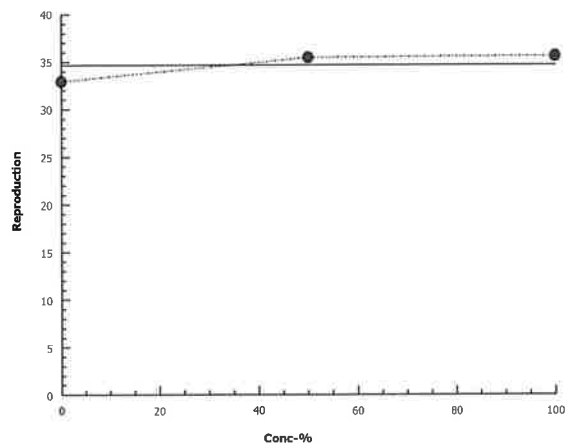
Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 01-4416-0691 Endpoint: Reproduction
Analyzed: 13 Dec-16 14:12 Analysis: Linear Interpolation (ICPIN)

CETIS Version: CETISv1.9.2
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 13 Dec-16 14:12 (p 1 of 2)
Test Code: CLA1116.231cer | 08-3075-5945

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 14-4482-5770	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.2
Analyzed: 13 Dec-16 14:12	Analysis: STP 2xK Contingency Tables	Official Results: Yes
Batch ID: 00-6555-4496	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 22 Nov-16 14:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 29 Nov-16 12:41	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 08-9471-8254	Code: CLA1116.231c	Client: County of Los Angeles
Sample Date: 20 Nov-16 10:30	Material: Sample Water	Project:
Receipt Date: 21 Nov-16 13:51	Source: Bioassay Report	
Sample Age: 52h (9 °C)	Station: ME000000061	

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	> 100	n/a	1

Fisher Exact/Bonferroni-Holm Test

Control	vs	Group	Test Stat	P-Type	P-Value	Decision(α:5%)
Negative Control		50	1.0000	Exact	1.0000	Non-Significant Effect
		100	0.5000	Exact	0.5000	Non-Significant Effect

Test Acceptability Criteria

TAC Limits

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	1	0.8	>>	Yes	Passes Criteria

Data Summary

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	N	20	0	20	1	0	0.0%
50		20	0	20	1	0	0.0%
100		19	1	20	0.95	0.05	5.0%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

CETIS Analytical Report

Report Date: 13 Dec-16 14:12 (p 2 of 2)
Test Code: CLA1116.231cer | 08-3075-5945

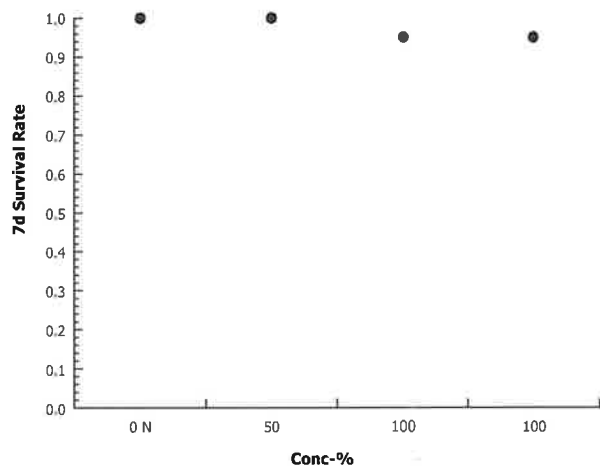
Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 14-4482-5770 Endpoint: 7d Survival Rate
Analyzed: 13 Dec-16 14:12 Analysis: STP 2xK Contingency Tables

CETIS Version: CETISv1.9.2
Official Results: Yes

Graphics



CETIS Measurement Report

Report Date: 13 Dec-16 14:12 (p 1 of 2)
Test Code: CLA1116.231cer | 08-3075-5945

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 00-6555-4496	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 22 Nov-16 14:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 29 Nov-16 12:41	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 08-9471-8254	Code: CLA1116.231c	Client: County of Los Angeles
Sample Date: 20 Nov-16 10:30	Material: Sample Water	Project:
Receipt Date: 21 Nov-16 13:51	Source: Bioassay Report	
Sample Age: 52h (9 °C)	Station: ME000000061	

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	61.38	60.94	61.81	61	62	0.183	0.5175	0.84%	0
100		8	26	26	26	26	26	0	0	0.0%	0
Overall		16	43.69	33.95	53.42	26	62	4.568	18.27	41.82%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	333.4	329.1	337.6	327	343	1.802	5.097	1.53%	0
50		8	249.2	222	276.5	230	322	11.51	32.56	13.06%	0
100		8	139.2	136	142.5	135	147	1.373	3.882	2.79%	0
Overall		24	240.6	205.5	275.8	135	343	16.99	83.23	34.59%	0 (0%)

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.925	7.554	8.296	7.6	9	0.1567	0.4432	5.59%	0
50		8	7.888	7.637	8.138	7.5	8.3	0.106	0.2997	3.8%	0
100		8	7.725	7.436	8.014	7.3	8.4	0.1221	0.3454	4.47%	0
Overall		24	7.846	7.693	7.999	7.3	9	0.07396	0.3623	4.62%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	89.88	87.71	92.04	88	93	0.9149	2.588	2.88%	0
100		8	45	45	45	45	45	0	0	0.0%	0
Overall		16	67.44	55.05	79.82	45	93	5.81	23.24	34.46%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.925	7.654	8.196	7.3	8.3	0.1146	0.324	4.09%	0
50		8	7.738	7.523	7.952	7.5	8.3	0.09051	0.256	3.31%	0
100		8	7.763	7.535	7.99	7.3	8.1	0.09625	0.2722	3.51%	0
Overall		24	7.808	7.688	7.929	7.3	8.3	0.05833	0.2858	3.66%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.0%	0
50		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
100		8	24.05	23.93	24.17	24	24.4	0.05	0.1414	0.59%	0
Overall		24	24.02	23.99	24.06	24	24.4	0.017	0.0833	0.35%	0 (0%)

CETIS Measurement ReportReport Date: 13 Dec-16 14:12 (p 2 of 2)
Test Code: CLA1116.231cer | 08-3075-5945**Ceriodaphnia 7-d Survival and Reproduction Test****Aquatic Bioassay & Consulting Labs, Inc.****Alkalinity (CaCO₃)-mg/L**

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	62	62	62	61	61	61	61	61
100		26	26	26	26	26	26	26	26

Conductivity-µmhos

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	329	335	334	334	336	343	329	327
50		234	230	234	233	234	234	273	322
100		135	138	137	139	137	138	143	147

Dissolved Oxygen-mg/L

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	7.6	7.8	7.8	7.8	7.9	7.7	7.8	9
50		7.6	7.5	7.7	7.8	7.9	8.3	8.3	8
100		7.3	7.4	7.7	7.7	7.6	8	8.4	7.7

Hardness (CaCO₃)-mg/L

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	93	93	93	88	88	88	88	88
100		45	45	45	45	45	45	45	45

pH-Units

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	7.3	7.8	8.1	8.1	7.9	8.2	7.7	8.3
50		7.6	7.7	7.8	7.8	7.5	7.7	8.3	7.5
100		7.5	7.6	7.9	7.9	7.3	7.8	8	8.1

Temperature-°C

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	24	24	24	24	24	24	24	24
50		24	24	24	24.1	24	24	24	24
100		24	24	24	24.4	24	24	24	24