



January 17, 2017

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.:	E1603287005
DATE RECEIVED:	16 Dec- 2016
ABC LAB. NO.:	CLA1216.164

S28 Dominguez Channel

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

IWC = 100.00%

TST RESULT

SURVIVAL = PASS % EFFECT = -5.26 %

*REPRODUCTION = PASS % EFFECT = -1.98 %

* 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.

TST Summary Sheet

Lab Name	Aquatic Bioassay and Consulting Labs	Client Name	County of Los Angeles
Test ID	E1603287005	Test Species	<i>C. dubia</i> (water flea)
Test Date	12/16/2016	Test Type	Chronic
Test Duration	7 days	Endpoint	Reproduction
Critical Conc.	100%		

Statistic	Control	Critical Concentration
Mean of Raw Data	35.30	36.00
Mean used in Calculation (non-transformed)	35.30	36.00
Variance used in Calculation (non-transformed)	121.695	137.789
Standard Deviation of Raw Data	11.032	11.738
CV of Raw Data	0.313	0.326
n	20	20

Mean % Effect at Critical Conc.

-1.98

Calculated t-value	Degrees of Freedom	Table t-value	Percent Difference
2.9661	34	0.8523	

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	45	1	43
1	40	1	50
1	39	1	41
1	33	1	31
1	25	1	32
1	48	1	49
1	53	1	27
1	50	1	25
1	40	1	7
1	38	1	44
1	39	1	50
1	31	1	31
1	37	1	46
1	35	1	46
1	3	1	22
1	29	1	28
1	30	1	23
1	39	1	35
1	29	1	48
1	23	1	42

CETIS Summary Report

Report Date: 17 Jan-17 15:17 (p 1 of 2)
Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 06-6804-2937	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 16 Dec-16 17:05	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 23 Dec-16 15:05	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 03-7806-2261	Code: CLA1216.164	Client: County of Los Angeles
Sample Date: 16 Dec-16 06:15	Material: Sample Water	Project:
Receipt Date: 16 Dec-16 16:40	Source: Bioassay Report	
Sample Age: 11h (7.1 °C)	Station: E1603287005	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	TU	PMSD	✓
16-4504-1041	7d Survival Rate	Fisher Exact/Bonferroni-Holm Test	100	> 100	n/a	1	n/a	
13-7928-5232	Reproduction	Steel Many-One Rank Sum Test	100	> 100	n/a	1	20.0%	

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	%	95% LCL	95% UCL	TU	✓
06-4500-2984	7d Survival Rate	Linear Interpolation (ICPIN)	EC5	>100	n/a	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	✓
06-2729-9814	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		
06-4500-2984	7d Survival Rate	Control Resp	0.95	0.8	>>	Yes	Passes Criteria
16-4504-1041	7d Survival Rate	Control Resp	0.95	0.8	>>	Yes	Passes Criteria
06-2729-9814	Reproduction	Control Resp	35.3	15	>>	Yes	Passes Criteria
13-7928-5232	Reproduction	Control Resp	35.3	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	0.9500	0.8453	1.0000	0.0000	1.0000	0.0500	0.2236	23.54%	0.00%
50		20	0.9500	0.8453	1.0000	0.0000	1.0000	0.0500	0.2236	23.54%	0.00%
100		20	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-5.26%

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	20	35.3	30.14	40.46	3	53	2.467	11.03	31.25%	0.00%
50		20	40.1	34.69	45.51	5	54	2.585	11.56	28.83%	-13.60%
100		20	36	30.51	41.49	7	50	2.625	11.74	32.61%	-1.98%

CETIS Summary Report

Report Date: 17 Jan-17 15:17 (p 2 of 2)

Test Code: CLA1216.164 | 12-2941-0115

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	0.0000	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	0.0000	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	1.0000
		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	45	40	39	33	25	48	53	50	40	38
		39	31	37	35	3	29	30	39	29	23
50		51	38	41	36	41	37	28	34	32	54
		52	42	31	52	5	41	36	50	48	53
100		43	50	41	31	32	49	27	25	7	44
		50	31	46	46	22	28	23	35	48	42

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	0/1	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	0/1	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	1/1
		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: 17 Jan-17 15:17 (p 1 of 2)

Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 13-7928-5232	Endpoint: Reproduction	CETIS Version: CETISv1.9.2
Analyzed: 16 Jan-17 17:00	Analysis: Nonparametric-Control vs Treatments	Official Results: Yes
Batch ID: 06-6804-2937	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 16 Dec-16 17:05	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 23 Dec-16 15:05	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 03-7806-2261	Code: CLA1216.164	Client: County of Los Angeles
Sample Date: 16 Dec-16 06:15	Material: Sample Water	Project:
Receipt Date: 16 Dec-16 16:40	Source: Bioassay Report	
Sample Age: 11h (7.1 °C)	Station: E1603287005	

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	> 100	n/a	1	20.04%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		50	470	339	6	38	Asymp	0.9870	Non-Significant Effect
		100	421	339	6	38	Asymp	0.7757	Non-Significant Effect

Test Acceptability Criteria

TAC Limits

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	35.3	15	>>	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	268.933	134.467	2	1.026	0.3649	Non-Significant Effect
Error	7470	131.053	57			
Total	7738.93		59			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	0.0771	9.21	0.9622	Equal Variances
Variances	Levene Equality of Variance Test	0.4148	4.998	0.6625	Equal Variances
Variances	Mod Levene Equality of Variance Test	0.4413	4.998	0.6453	Equal Variances
Distribution	Anderson-Darling A2 Normality Test	0.911	3.878	0.0204	Normal Distribution
Distribution	D'Agostino Kurtosis Test	1.928	2.576	0.0539	Normal Distribution
Distribution	D'Agostino Skewness Test	2.964	2.576	0.0030	Non-Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus Test	12.5	9.21	0.0019	Non-Normal Distribution
Distribution	Kolmogorov-Smirnov D Test	0.07904	0.1331	0.4307	Normal Distribution
Distribution	Shapiro-Wilk W Normality Test	0.9263	0.9459	0.0014	Non-Normal Distribution

Reproduction Summary

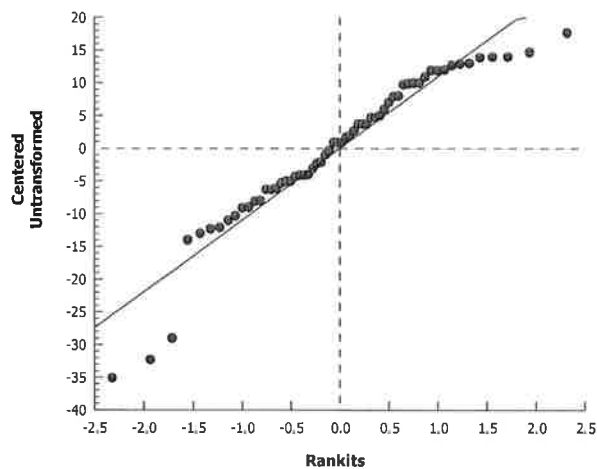
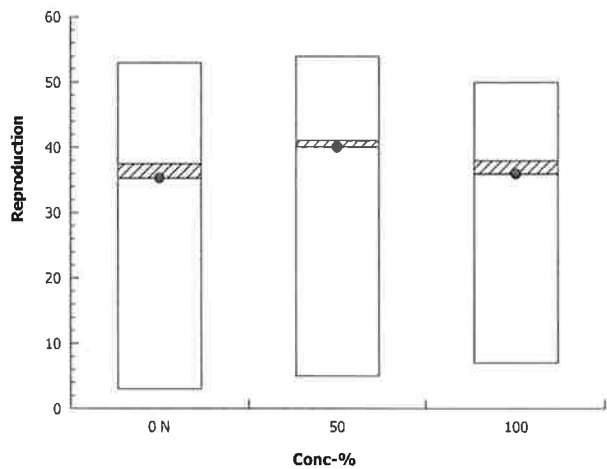
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	20	35.3	30.14	40.46	37.5	3	53	2.467	31.25%	0.00%
50		20	40.1	34.69	45.51	41	5	54	2.585	28.83%	-13.60%
100		20	36	30.51	41.49	38	7	50	2.625	32.61%	-1.98%

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	45	40	39	33	25	48	53	50	40	38
		39	31	37	35	3	29	30	39	29	23
50		51	38	41	36	41	37	28	34	32	54
		52	42	31	52	5	41	36	50	48	53
100		43	50	41	31	32	49	27	25	7	44
		50	31	46	46	22	28	23	35	48	42

Ceriodaphnia 7-d Survival and Reproduction Test			Aquatic Bioassay & Consulting Labs, Inc.	
Analysis ID:	13-7928-5232	Endpoint:	Reproduction	CETIS Version: CETISv1.9.2
Analyzed:	16 Jan-17 17:00	Analysis:	Nonparametric-Control vs Treatments	Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 17 Jan-17 15:17 (p 1 of 4)
 Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 06-4500-2984	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.2
Analyzed: 16 Jan-17 17:00	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes
Batch ID: 06-6804-2937	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 16 Dec-16 17:05	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 23 Dec-16 15:05	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 03-7806-2261	Code: CLA1216.164	Client: County of Los Angeles
Sample Date: 16 Dec-16 06:15	Material: Sample Water	Project:
Receipt Date: 16 Dec-16 16:40	Source: Bioassay Report	
Sample Age: 11h (7.1 °C)	Station: E1603287005	

Linear Interpolation Options

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

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.95	0.8	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	n/a	n/a	<1	n/a	n/a
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

Conc-%	Code	Count	Calculated Variate(A/B)								A	B
			Mean	Min	Max	Std Err	Std Dev	CV%	%Effect			
0	N	20	0.9500	0.0000	1.0000	0.0500	0.2236	23.54%	0.0%		19	20
50		20	0.9500	0.0000	1.0000	0.0500	0.2236	23.54%	0.0%		19	20
100		20	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-5.26%		20	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	0.0000	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	0.0000	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	1.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

7d Survival Rate Binomials

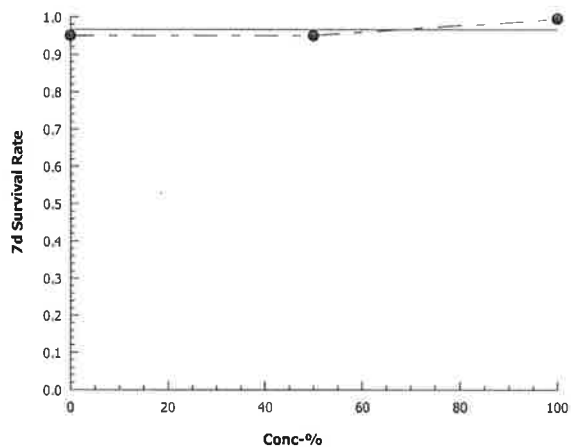
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1	1/1	0/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1	1/1	0/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
		1/1	1/1	1/1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

CETIS Analytical Report

Report Date: 17 Jan-17 15:17 (p 2 of 4)
Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test		Aquatic Bioassay & Consulting Labs, Inc.	
Analysis ID:	06-4500-2984	Endpoint:	7d Survival Rate
Analyzed:	16 Jan-17 17:00	Analysis:	Linear Interpolation (ICPIN)
		CETIS Version:	CETISv1.9.2
		Official Results:	Yes

Graphics



CETIS Analytical Report

Report Date: 17 Jan-17 15:17 (p 3 of 4)

Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 06-2729-9814	Endpoint: Reproduction	CETIS Version: CETISv1.9.2
Analyzed: 16 Jan-17 17:00	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes
Batch ID: 06-6804-2937	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 16 Dec-16 17:05	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 23 Dec-16 15:05	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 03-7806-2261	Code: CLA1216.164	Client: County of Los Angeles
Sample Date: 16 Dec-16 06:15	Material: Sample Water	Project:
Receipt Date: 16 Dec-16 16:40	Source: Bioassay Report	
Sample Age: 11h (7.1 °C)	Station: E1603287005	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	518413	280	Yes	Two-Point Interpolation

Test Acceptability Criteria

TAC Limits

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	35.3	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

Calculated Variate

Conc-%	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	20	35.3	3	53	2.467	11.03	31.25%	0.0%
50		20	40.1	5	54	2.585	11.56	28.83%	-13.6%
100		20	36	7	50	2.625	11.74	32.61%	-1.98%

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	45	40	39	33	25	48	53	50	40	38
		39	31	37	35	3	29	30	39	29	23
50		51	38	41	36	41	37	28	34	32	54
		52	42	31	52	5	41	36	50	48	53
100		43	50	41	31	32	49	27	25	7	44
		50	31	46	46	22	28	23	35	48	42

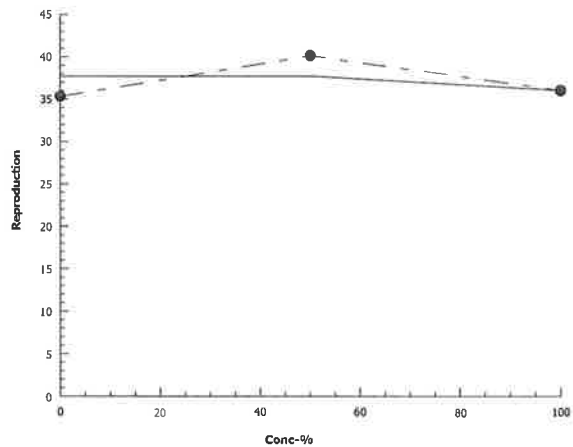
CETIS Analytical Report

Report Date: 17 Jan-17 15:17 (p 4 of 4)
Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	06-2729-9814	Endpoint:	Reproduction	CETIS Version:	CETISv1.9.2
Analyzed:	16 Jan-17 17:00	Analysis:	Linear Interpolation (ICPIN)	Official Results:	Yes

Graphics



CETIS Analytical Report

Report Date: 17 Jan-17 15:17 (p 1 of 2)

Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 16-4504-1041	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.2
Analyzed: 16 Jan-17 17:00	Analysis: STP 2xK Contingency Tables	Official Results: Yes
Batch ID: 06-6804-2937	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 16 Dec-16 17:05	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 23 Dec-16 15:05	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 03-7806-2261	Code: CLA1216.164	Client: County of Los Angeles
Sample Date: 16 Dec-16 06:15	Material: Sample Water	Project:
Receipt Date: 16 Dec-16 16:40	Source: Bioassay Report	
Sample Age: 11h (7.1 °C)	Station: E1603287005	

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	0.7564	Exact	1.0000	Non-Significant Effect
		100	1.0000	Exact	1.0000	Non-Significant Effect

Test Acceptability Criteria

TAC Limits

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.95	0.8	>>	Yes	Passes Criteria

Data Summary

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	N	19	1	20	0.95	0.05	0.0%
50		19	1	20	0.95	0.05	0.0%
100		20	0	20	1	0	-5.26%

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	0.0000	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	0.0000	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	1.0000
		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	0/1	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	0/1	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	1/1
		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: 17 Jan-17 15:17 (p 2 of 2)

Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 16-4504-1041

Endpoint: 7d Survival Rate

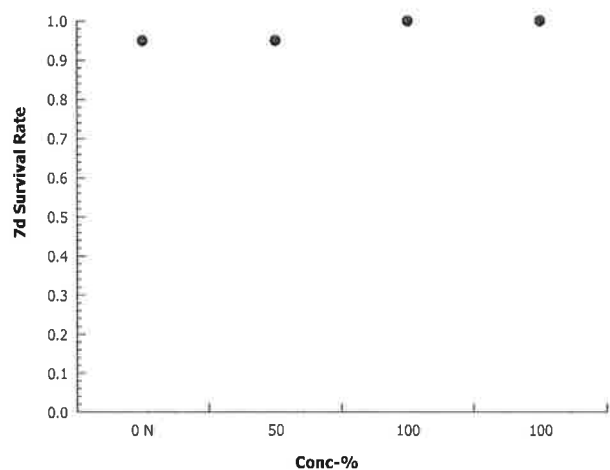
CETIS Version: CETISv1.9.2

Analyzed: 16 Jan-17 17:00

Analysis: STP 2xK Contingency Tables

Official Results: Yes

Graphics



CETIS Measurement Report

Report Date: 17 Jan-17 15:17 (p 1 of 2)
Test Code: CLA1216.164 | 12-2941-0115

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 06-6804-2937	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 16 Dec-16 17:05	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 23 Dec-16 15:05	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 03-7806-2261	Code: CLA1216.164	Client: County of Los Angeles
Sample Date: 16 Dec-16 06:15	Material: Sample Water	Project:
Receipt Date: 16 Dec-16 16:40	Source: Bioassay Report	
Sample Age: 11h (7.1 °C)	Station: E1603287005	

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	64.5	63.32	65.68	61	65	0.5	1.414	2.19%	0
100		8	24	24	24	24	24	0	0	0.0%	0
Overall		16	44.25	33.09	55.41	24	65	5.234	20.94	47.31%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	336.4	326.7	346.1	323	362	4.11	11.62	3.46%	0
50		8	215.1	212.7	217.6	211	221	1.043	2.949	1.37%	0
100		8	106.5	105.1	107.9	103	108	0.5976	1.69	1.59%	0
Overall		24	219.3	178.7	259.9	103	362	19.63	96.15	43.84%	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	16.23	-3.296	35.75	7.3	74	8.255	23.35	143.9%	0
50		8	8.325	7.926	8.724	7.7	9.1	0.1688	0.4773	5.73%	0
100		8	8.788	7.915	9.66	7.9	11	0.3691	1.044	11.88%	0
Overall		24	11.11	5.447	16.78	7.3	74	2.739	13.42	120.70%	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	84	84	84	84	84	0	0	0.0%	0
100		8	35	35	35	35	35	0	0	0.0%	0
Overall		16	59.5	46.02	72.98	35	84	6.326	25.3	42.53%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	8.013	7.861	8.164	7.8	8.2	0.06391	0.1808	2.26%	0
50		8	7.525	7.372	7.678	7.3	7.8	0.06478	0.1832	2.44%	0
100		8	7.663	7.502	7.823	7.3	7.9	0.06797	0.1923	2.51%	0
Overall		24	7.733	7.617	7.849	7.3	8.2	0.05604	0.2745	3.55%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24.45	23.93	24.97	24	25.6	0.2204	0.6234	2.55%	0
50		8	24.12	23.97	24.28	24	24.4	0.06478	0.1832	0.76%	0
100		8	24.07	23.96	24.19	24	24.3	0.04911	0.1389	0.58%	0
Overall		24	24.22	24.05	24.39	24	25.6	0.08246	0.404	1.67%	0 (0%)

CETIS Measurement Report

Report Date: 17 Jan-17 15:17 (p 2 of 2)
Test Code: CLA1216.164 | 12-2941-0115

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	61	65	65	65	65	65	65	65
100		24	24	24	24	24	24	24	24

Conductivity-µmhos

Conc.-%	Code	1	2	3	4	5	6	7	8
0	N	323	333	342	332	331	336	332	362
50		216	214	211	213	216	214	216	221
100		103	106	106	108	106	107	108	108

Dissolved Oxygen-mg/L

Conc.-%	Code	1	2	3	4	5	6	7	8
0	N	7.8	7.7	7.4	7.3	7.9	7.7	8.8	8.6
50		8.9	9.1	8.1	8.4	8	8.4	7.7	8
100		11	9.6	8.5	8.3	8.2	8.8	7.9	8

Hardness (CaCO3)-mg/L

Conc.-%	Code	1	2	3	4	5	6	7	8
0	N	84	84	84	84	84	84	84	84
100		35	35	35	35	35	35	35	35

pH-Units

Conc.-%	Code	1	2	3	4	5	6	7	8
0	N	7.8	8.1	8.2	8.1	7.8	8.2	7.8	8.1
50		7.5	7.7	7.6	7.8	7.3	7.3	7.4	7.6
100		7.7	7.8	7.7	7.9	7.5	7.3	7.6	7.8

Temperature-°C

Conc.-%	Code	1	2	3	4	5	6	7	8
0	N	24	24	25.2	24.3	24	24.5	25.6	24
50		24	24	24.4	24	24	24.4	24.2	24
100		24	24	24.3	24	24	24.3	24	24