

February 8, 2018

Ms. Kim Tu
Weck Laboratories, Inc.
14859 East Clark Avenue
City of Industry, CA 91745-1396

Dear Ms. Tu:

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:	Weck Laboratories, Inc.
SAMPLE I.D.:	8A09088-01/ME000000578
DATE RECEIVED:.	10 Jan -18
ABC LAB NO.:	WEC0118.083

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

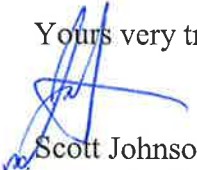
IWC = 100.00%

TST RESULT

SURVIVAL = PASS % EFFECT = 0.00 %

REPRODUCTION = PASS % EFFECT = 12.40%

Yours very truly,


Scott Johnson
Laboratory Director

*Note: The chronic survival TST analysis is not available for ceriodaphnia dubia.

CETIS Summary Report

Report Date: 07 Feb-18 15:52 (p 1 of 1)

Test Code: WEC0118.083cer | 15-6382-7442

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 04-2006-7420	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 10 Jan-18 15:51	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 17 Jan-18 14:35	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 16-3361-5088	Code: WEC0118.083c	Client: Weck Laboratories
Sample Date: 09 Jan-18 09:30	Material: Sample Water	Project: Flood Control District-ME05
Receipt Date: 10 Jan-18 11:05	Source: Bioassay Report	
Sample Age: 30h (2.8 °C)	Station: 8A09088-01/ME000000578	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
15-9945-9521	7d Survival Rate	Fisher Exact Test	1.0000	100% passed 7d survival rate
01-8955-1253	Reproduction	TST-Welch's t Test	0.0473	100% passed reproduction

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
15-9945-9521	7d Survival Rate	Control Resp	1	0.8	>>	Yes	Passes Criteria
01-8955-1253	Reproduction	Control Resp	31.05	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%
100		20	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	20	31.05	27.6	34.5	18	43	1.65	7.38	23.77%	0.00%
100		20	27.2	23.21	31.19	6	41	1.905	8.52	31.32%	12.40%

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
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	30	34	26	31	22	20	35	30	36	31
		18	33	22	27	37	26	43	43	35	42
100		36	39	21	19	30	6	35	41	33	25
		26	19	17	29	28	31	20	24	32	33

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
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: 07 Feb-18 15:52 (p 1 of 2)
Test Code: WEC0118.083cer | 15-6382-7442

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 01-8955-1253	Endpoint: Reproduction	CETIS Version: CETISv1.9.2
Analyzed: 07 Feb-18 15:51	Analysis: Parametric Bioequivalence-Two Sample	Official Results: Yes
Batch ID: 04-2006-7420	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 10 Jan-18 15:51	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 17 Jan-18 14:35	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 16-3361-5088	Code: WEC0118.083c	Client: Weck Laboratories
Sample Date: 09 Jan-18 09:30	Material: Sample Water	Project: Flood Control District-ME05
Receipt Date: 10 Jan-18 11:05	Source: Bioassay Report	
Sample Age: 30h (2.8 °C)	Station: 8A09088-01/ME000000578	

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed reproduction

TST-Welch's t Test

Control	vs	Control II	Test Stat	Critical	DF	P-Type	P-Value	Decision(α:20%)
Negative Control		100*	1.722	0.853	32	CDF	0.0473	Non-Significant Effect

Test Acceptability Criteria

TAC Limits					
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	31.05	15	>>	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	148.225	148.225	1	2.333	0.1349	Non-Significant Effect
Error	2414.15	63.5303	38			
Total	2562.37		39			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Levene Equality of Variance Test	0.4018	7.353	0.5299	Equal Variances
Variances	Mod Levene Equality of Variance Test	0.3171	7.353	0.5766	Equal Variances
Variances	Variance Ratio F Test	1.333	3.432	0.5375	Equal Variances
Distribution	Anderson-Darling A2 Normality Test	0.2406	3.878	0.8024	Normal Distribution
Distribution	D'Agostino Kurtosis Test	0.1711	2.576	0.8642	Normal Distribution
Distribution	D'Agostino Skewness Test	1	2.576	0.3172	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus Test	1.03	9.21	0.5975	Normal Distribution
Distribution	Kolmogorov-Smirnov D Test	0.06548	0.1617	1.0000	Normal Distribution
Distribution	Shapiro-Wilk W Normality Test	0.9784	0.9236	0.6293	Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	20	31.05	27.6	34.5	31	18	43	1.65	23.77%	0.00%
100		20	27.2	23.21	31.19	28.5	6	41	1.905	31.32%	12.40%

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	30	34	26	31	22	20	35	30	36	31
		18	33	22	27	37	26	43	43	35	42
100		36	39	21	19	30	6	35	41	33	25
		26	19	17	29	28	31	20	24	32	33

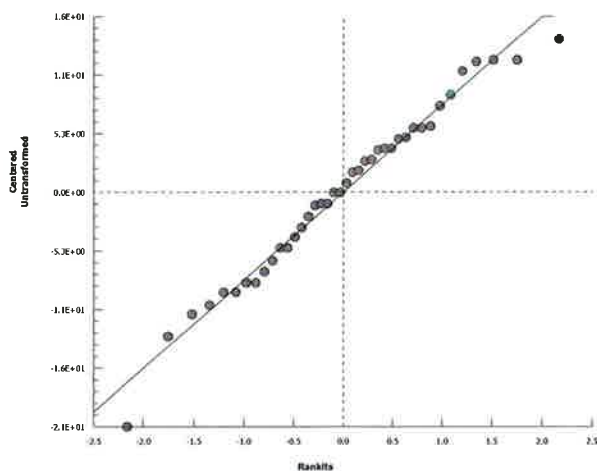
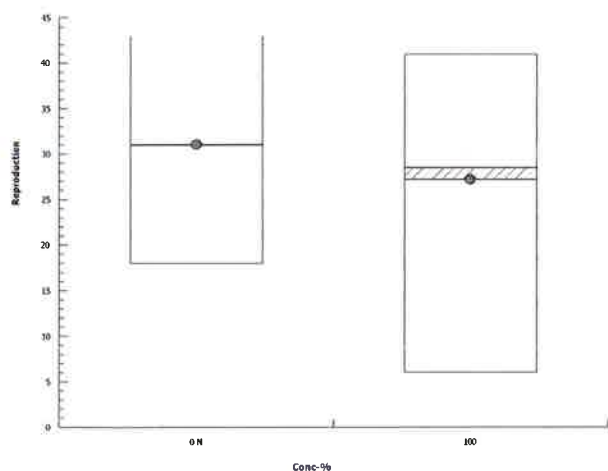
Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 01-8955-1253 Endpoint: Reproduction
 Analyzed: 07 Feb-18 15:51 Analysis: Parametric Bioequivalence-Two Sample

CETIS Version: CETISv1.9.2
 Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 07 Feb-18 15:52 (p 1 of 2)

Test Code: WEC0118.083cer | 15-6382-7442

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 15-9945-9521	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.2
Analyzed: 07 Feb-18 15:51	Analysis: Single 2x2 Contingency Table	Official Results: Yes
Batch ID: 04-2006-7420	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 10 Jan-18 15:51	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 17 Jan-18 14:35	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 16-3361-5088	Code: WEC0118.083c	Client: Weck Laboratories
Sample Date: 09 Jan-18 09:30	Material: Sample Water	Project: Flood Control District-ME05
Receipt Date: 10 Jan-18 11:05	Source: Bioassay Report	
Sample Age: 30h (2.8 °C)	Station: 8A09088-01/ME000000578	

Data Transform	Alt Hyp	Comparison Result
Untransformed	C > T	100% passed 7d survival rate

Fisher Exact Test

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

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
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%
100		20	0	20	1	0	0.0%

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
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	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	1/1
		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Aquatic Bioassay & Consulting Labs, Inc.

CETIS Version: CETISv1.9.2
Official Results: Yes

Figure 1 is a line graph showing the 7-day survival rate of *Drosophila melanogaster* larvae under different concentrations of a substance. The y-axis is labeled '7d Survival Rate' and ranges from 0.0 to 1.0. The x-axis is labeled 'Conc-%' and has two points: 0% and 100%. The survival rate is 1.0 for both concentrations.

Conc-%	7d Survival Rate
0%	1.0
100%	1.0

CETIS Measurement Report

Report Date: 07 Feb-18 15:52 (p 1 of 2)

Test Code: WEC0118.083cer | 15-6382-7442

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 04-2006-7420
 Start Date: 10 Jan-18 15:51
 Ending Date: 17 Jan-18 14:35
 Duration: 6d 23h
 Test Type: Reproduction-Survival (7d)
 Protocol: EPA/821/R-02-013 (2002)
 Species: Ceriodaphnia dubia
 Source: Aquatic Biosystems, CO

Analyst:
 Diluent: Laboratory Water
 Brine: Not Applicable
 Age:

Sample ID: 16-3361-5088
 Sample Date: 09 Jan-18 09:30
 Receipt Date: 10 Jan-18 11:05
 Sample Age: 30h (2.8 °C)
 Code: WEC0118.083c
 Material: Sample Water
 Source: Bioassay Report
 Station: 8A09088-01/ME000000578

Client: Weck Laboratories
 Project: Flood Control District-ME05

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	66	62.9	69.1	60	68	1.309	3.703	5.61%	0
100		8	30	30	30	30	30	0	0	0.0%	0
Overall		16	48	38	58	30	68	4.69	18.76	39.09%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	338.8	333.5	344	330	348	2.226	6.296	1.86%	0
100		8	290.8	154.6	426.9	167	531	57.56	162.8	55.99%	0
Overall		16	314.8	254	375.5	167	531	28.51	114	36.23%	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	7.55	7.345	7.755	7.1	7.9	0.0866	0.2449	3.24%	0
100		8	6.35	5.875	6.825	5.7	7.4	0.2009	0.5682	8.95%	0
Overall		16	6.95	6.55	7.35	5.7	7.9	0.1875	0.7501	10.79%	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	97.75	95.81	99.69	94	99	0.8183	2.315	2.37%	0
100		8	55	55	55	55	55	0	0	0.0%	0
Overall		16	76.38	64.58	88.17	55	99	5.533	22.13	28.98%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.988	7.758	8.217	7.5	8.4	0.09717	0.2748	3.44%	0
100		8	7.238	7.149	7.326	7.1	7.4	0.0375	0.1061	1.47%	0
Overall		16	7.613	7.38	7.845	7.1	8.4	0.1091	0.4365	5.73%	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
100		8	24.3	23.72	24.88	24	26	0.2457	0.6949	2.86%	0
Overall		16	24.15	23.88	24.42	24	26	0.1248	0.4993	2.07%	0 (0%)

CETIS Measurement Report

Report Date: 07 Feb-18 15:52 (p 2 of 2)

Test Code: WEC0118.083cer | 15-6382-7442

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	60	60	68	68	68	68	68	68
100		30	30	30	30	30	30	30	30

Conductivity-µmhos

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	339	348	339	330	342	330	338	344
100		462	464	531	167	172	176	177	177

Dissolved Oxygen-mg/L

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	7.5	7.6	7.8	7.9	7.6	7.4	7.5	7.1
100		6.2	5.9	6.3	5.7	6.2	7.4	7	6.1

Hardness (CaCO₃)-mg/L

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	94	94	99	99	99	99	99	99
100		55	55	55	55	55	55	55	55

pH-Units

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	8.1	8.1	7.5	8	8.4	8	8.1	7.7
100		7.1	7.3	7.3	7.3	7.1	7.2	7.2	7.4

Temperature-°C

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	24	24	24	24	24	24	24	24
100		26	24	24.1	24.3	24	24	24	24

Subcontracted Laboratory:

Aquatic Bioassay & Consulting Labs, Inc.
29 North Olive Street
Ventura, CA 93001
Phone: (805) 643-5621
Fax: (805) 643-2930

Turn Around Time:

Normal unless noted in comments

Project Manager:

Kim G. Tu

Project Name:

Flood Control District - ME05

Project Number:

Flood Control District - ME05

Sampler Employed by:

Work Order: 8A09088

Analysis	Expires	Comments
Sample ID: 8A09088-01/ME000000578 Sample comment: Bioassay EPA 821-R-02-013 Chronic (Freshwater) Containers Supplied: Other (A)	01/10/2018 21:30	Matrix: Water Ceriodaphnia Dubia, 36 HR, require 0% and 100% dilution, i

Sampled: 01/09/2018 09:30

Sampled By: Client

WEC.0118.083

NH₃ = 1

Chlorine = <0.1

Remarks / Special Comments:

Sample Condition

Temperature:

2.8

Preserved:

Yes / No

Evidence Seal Intact:

Yes / No

Container Attacked:

Yes / No

Preserved at Lab:

Yes / No

Relinquished By

Date / Time

Received By

Date / Time

Relinquished By

Date / Time

Received By

Date / Time