



April 5, 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.:	ME000000707
DATE RECEIVED:.	12 March -18
ABC LAB NO.:	WEC0318.122

#### **CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY**

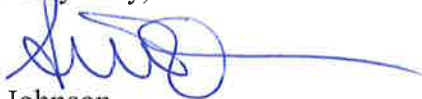
IWC = 100.00%

#### **TST RESULT**

SURVIVAL = PASS      % EFFECT = 0.00 %

REPRODUCTION = PASS      % EFFECT = 8.94 %

Yours very truly,



Scott Johnson  
Laboratory Director

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

# CETIS Summary Report

Report Date: 04 Apr-18 12:51 (p 1 of 1)  
Test Code: WEC0318.122 | 19-9917-0583

## Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 21-3565-3359	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 13 Mar-18 13:18	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 20 Mar-18 14:26	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 7d 1h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 10-5775-8845	Code: WEC0318.122	Client: Weck Laboratories
Sample Date: 11 Mar-18 04:00	Material: Sample Water	Project: County of Los Angeles, Dept. of Public
Receipt Date: 12 Mar-18 12:30	Source: Bioassay Report	
Sample Age: 57h (7.5 °C)	Station: ME000000707	

## Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
01-2171-0228	7d Survival Rate	Fisher Exact Test	1.0000	100% passed 7d survival rate
08-7099-5189	Reproduction	TST-Welch's t Test	0.0134	100% passed reproduction

## Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
01-2171-0228	7d Survival Rate	Control Resp	1	0.8	>>	Yes	Passes Criteria
08-7099-5189	Reproduction	Control Resp	27.4	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	27.4	24.27	30.53	15	40	1.495	6.684	24.39%	0.00%
100		20	24.95	21.73	28.17	10	40	1.536	6.871	27.54%	8.94%

## 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	27	31	25	32	40	40	33	20	28	33
		33	26	28	24	27	17	15	23	25	21
100		27	33	32	40	25	20	24	25	26	25
		28	24	16	22	29	28	13	10	22	30

## 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: 04 Apr-18 12:51 (p 1 of 2)  
Test Code: WEC0318.122 | 19-9917-0583

## Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 08-7099-5189	Endpoint: Reproduction	CETIS Version: CETISv1.9.2
Analyzed: 26 Mar-18 8:39	Analysis: Parametric Bioequivalence-Two Sample	Official Results: Yes
Batch ID: 21-3565-3359	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 13 Mar-18 13:18	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 20 Mar-18 14:26	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 7d 1h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 10-5775-8845	Code: WEC0318.122	Client: Weck Laboratories
Sample Date: 11 Mar-18 04:00	Material: Sample Water	Project: County of Los Angeles, Dept. of Public
Receipt Date: 12 Mar-18 12:30	Source: Bioassay Report	
Sample Age: 57h (7.5 °C)	Station: ME000000707	

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*	2.314	0.8523	34	CDF	0.0134	Non-Significant Effect

### Test Acceptability Criteria

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	27.4	15	>>	Yes	Passes Criteria

### ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	60.025	60.025	1	1.307	0.2602	Non-Significant Effect
Error	1745.75	45.9408	38			
Total	1805.78		39			

### Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Levene Equality of Variance Test	0.03999	7.353	0.8426	Equal Variances
Variances	Mod Levene Equality of Variance Test	0.03132	7.353	0.8605	Equal Variances
Variances	Variance Ratio F Test	1.057	3.432	0.9055	Equal Variances
Distribution	Anderson-Darling A2 Normality Test	0.3266	3.878	0.5367	Normal Distribution
Distribution	D'Agostino Kurtosis Test	0.5103	2.576	0.6098	Normal Distribution
Distribution	D'Agostino Skewness Test	0.1472	2.576	0.8830	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus Test	0.2821	9.21	0.8684	Normal Distribution
Distribution	Kolmogorov-Smirnov D Test	0.08066	0.1617	0.7428	Normal Distribution
Distribution	Shapiro-Wilk W Normality Test	0.9819	0.9236	0.7602	Normal Distribution

### Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	20	27.4	24.27	30.53	27	15	40	1.495	24.39%	0.00%
100		20	24.95	21.73	28.17	25	10	40	1.536	27.54%	8.94%

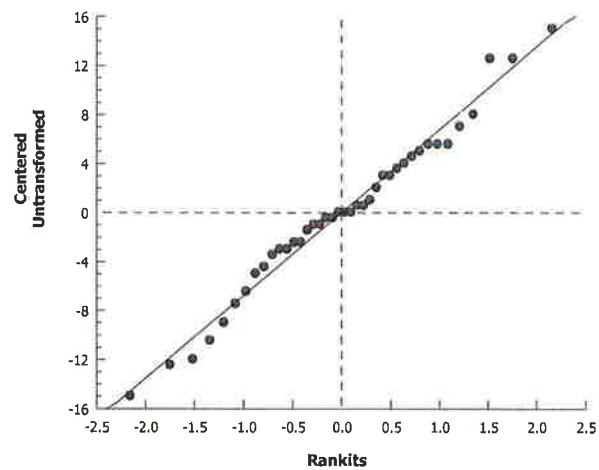
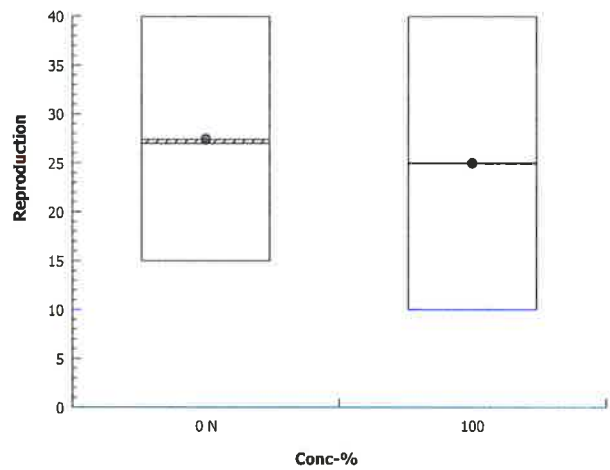
### Reproduction Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	27	31	25	32	40	40	33	20	28	33
		33	26	28	24	27	17	15	23	25	21
100		27	33	32	40	25	20	24	25	26	25
		28	24	16	22	29	28	13	10	22	30

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

Analysis ID: 08-7099-5189	Endpoint: Reproduction	CETIS Version: CETISv1.9.2
Analyzed: 26 Mar-18 8:39	Analysis: Parametric Bioequivalence-Two Sample	Official Results: Yes

Graphics



# CETIS Analytical Report

Report Date: 04 Apr-18 12:51 (p 1 of 2)  
Test Code: WEC0318.122 | 19-9917-0583

## Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 01-2171-0228	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.2
Analyzed: 26 Mar-18 8:39	Analysis: Single 2x2 Contingency Table	Official Results: Yes
Batch ID: 21-3565-3359	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 13 Mar-18 13:18	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 20 Mar-18 14:26	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 7d 1h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 10-5775-8845	Code: WEC0318.122	Client: Weck Laboratories
Sample Date: 11 Mar-18 04:00	Material: Sample Water	Project: County of Los Angeles, Dept. of Public
Receipt Date: 12 Mar-18 12:30	Source: Bioassay Report	
Sample Age: 57h (7.5 °C)	Station: ME000000707	

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

#### 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%
100		20	0	20	1	0	0.0%

### 7d Survival Rate Detail

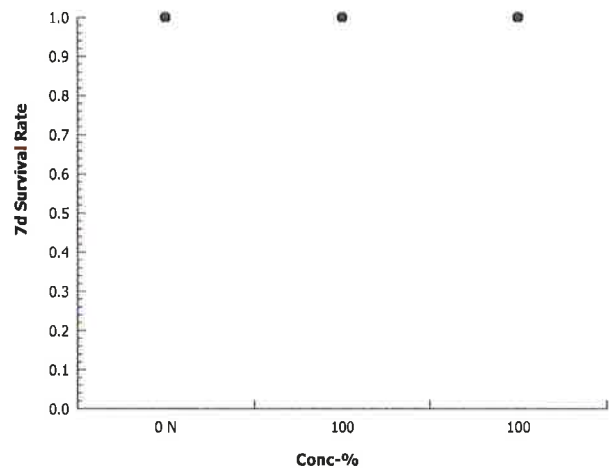
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
		1.0000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

Ceriodaphnia 7-d Survival and Reproduction Test		Aquatic Bioassay & Consulting Labs, Inc.	
Analysis ID:	01-2171-0228	Endpoint:	7d Survival Rate
Analyzed:	26 Mar-18 8:39	Analysis:	Single 2x2 Contingency Table
		CETIS Version:	CETISv1.9.2
		Official Results:	Yes

Graphics



# CETIS Measurement Report

Report Date: 04 Apr-18 12:51 (p 1 of 2)  
Test Code: WEC0318.122 | 19-9917-0583

## Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 21-3565-3359	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 13 Mar-18 13:18	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 20 Mar-18 14:26	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 7d 1h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 10-5775-8845	Code: WEC0318.122	Client: Weck Laboratories
Sample Date: 11 Mar-18 04:00	Material: Sample Water	Project: County of Los Angeles, Dept. of Public
Receipt Date: 12 Mar-18 12:30	Source: Bioassay Report	
Sample Age: 57h (7.5 °C)	Station: ME000000707	

### Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	63.38	62.49	64.26	63	66	0.375	1.061	1.67%	0
100		8	34	34	34	34	34	0	0	0.0%	0
Overall		16	48.69	40.6	56.78	34	66	3.797	15.19	31.19%	0 (0%)

### Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	347.5	342.7	352.3	338	355	2.027	5.732	1.65%	0
100		8	184.9	182.5	187.3	181	188	1.008	2.85	1.54%	0
Overall		16	266.2	221.4	311	181	355	21.02	84.09	31.59%	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	7.75	7.497	8.003	7.2	8.2	0.1069	0.3024	3.9%	0
100		8	7.738	7.346	8.129	6.9	8.6	0.1658	0.4689	6.06%	0
Overall		16	7.744	7.541	7.947	6.9	8.6	0.09529	0.3812	4.92%	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	97.5	96.32	98.68	94	98	0.5	1.414	1.45%	0
100		8	68	68	68	68	68	0	0	0.0%	0
Overall		16	82.75	74.62	90.88	68	98	3.816	15.26	18.45%	0 (0%)

### pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.963	7.829	8.096	7.7	8.2	0.0565	0.1598	2.01%	0
100		8	7.288	7.174	7.401	7	7.4	0.04795	0.1356	1.86%	0
Overall		16	7.625	7.424	7.826	7	8.2	0.09421	0.3768	4.94%	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	24.04	23.98	24.1	24	24.2	0.02629	0.07436	0.31%	0
Overall		16	24.02	23.99	24.05	24	24.2	0.0136	0.05439	0.23%	0 (0%)

# CETIS Measurement Report

Report Date: 04 Apr-18 12:51 (p 2 of 2)

Test Code: WEC0318.122 | 19-9917-0583

## Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

### Alkalinity (CaCO<sub>3</sub>)-mg/L

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	66	63	63	63	63	63	63	63
100		34	34	34	34	34	34	34	34

### Conductivity-µmhos

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	338	355	352	345	346	345	345	354
100		186	182	182	185	188	187	188	181

### Dissolved Oxygen-mg/L

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	7.9	8	8.2	7.8	7.7	7.6	7.6	7.2
100		8.6	7.9	7.8	7.7	7.5	7.8	7.7	6.9

### Hardness (CaCO<sub>3</sub>)-mg/L

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	94	98	98	98	98	98	98	98
100		68	68	68	68	68	68	68	68

### pH-Units

Conc-%	Code	1	2	3	4	5	6	7	8
0	N	7.7	8	8.1	8.2	7.9	8	8	7.8
100		7	7.3	7.3	7.4	7.2	7.3	7.4	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		24	24	24	24	24.2	24.1	24	24



COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
900 S. FREMONT AVE., ALHAMBRA, CA 91803

CHAIN-OF-CUSTODY RECORD

Page 1 of 2



<b>Project Name</b>	Mass Emission Monitoring @ San Gabriel River	<b>ProjectCode(UD)</b>	LACFCD_ME05	<b>Date</b>	3/11/18 @ 0400
<b>AgencyCode</b>	LACDPW - Watershed Management	<b>Address</b>	Watershed Management 900 S. Fremont Ave. Alhambra, CA 91803-1331	<b>Sampler Names</b>	HEADIN T. Marino
<b>Contact Name</b>	Cung Nguyen	<b>Phone</b>	626-458-4341	<b>Special Instructions</b>	1. Measure pH immediately upon receipt. 2. Filter and acidify dissolved metals upon receipt. 3. Perform MS/MSD on designated sample for all analyses except for conventionals and bacteria.
<b>Fax</b>		<b>Email</b>	cunguyen@dpw.lacounty.gov		

<b>LabSampleID</b>	SampleID (FSID)	SampleDate	CollectionTime (AM/PM)	StationCode (Site No.)	Site Name	Analysis Group (list attached)	# of Containers	Sample MatrixName	Collection Method	SampleType	Comments	Received Temp.
	ME000000707	3/11	4:00 AM	S14	San Gabriel River @ SGR Parkway	ME_TOX		samplewater	Water_Grab	Grab		

Temp. deg. C = 7.5°C  
Chlorine (mg/L) = 0.4  
NH3 (mg/L) = 0.4

<b>1 RELINQUISHED BY</b>	SIGNATURE	DATE	TIME	<b>3 RELINQUISHED BY</b>	SIGNATURE	DATE	TIME	<b>Sample Conditions</b>	<b>Total No. of Containers:</b>
	[Signature]	3/11			[Signature]	3-12-18		Ice: (YES) NO Sealed: YES / NO	
<b>PRINT NAME</b>	ASHAH / Tim	<b>TIME</b>	8:40	<b>PRINT NAME</b>	ALBERT H.	<b>TIME</b>	9:50	<input type="checkbox"/> HOLD ANALYSIS	<b>Special shipping/handling or storage requirements:</b>
<b>COMPANY</b>		<b>COMPANY</b>		<b>COMPANY</b>	ALB. CLAS	<b>DATE</b>	3-12-18	<input checked="" type="checkbox"/> FINAL SAMPLE	
<b>2 RELINQUISHED BY</b>	SIGNATURE	DATE	TIME	<b>4 RELINQUISHED BY</b>	SIGNATURE	DATE	TIME	<input type="checkbox"/> PRE-MIXED SAMPLE	
	[Signature]	3/12/18			[Signature]	3-12-18		<input type="checkbox"/> MIX AS INSTRUCTED	
<b>PRINT NAME</b>	JOSE LUIS ESCALEDA	<b>TIME</b>	9:00 AM	<b>PRINT NAME</b>		<b>DATE</b>			
<b>COMPANY</b>	LACDPW	<b>COMPANY</b>		<b>COMPANY</b>		<b>TIME</b>	12:30		

If you suspect fraud or wrongdoing by a county employee, please report it to the County Fraud Hotline at 1 (800) 544-6861 or www.lacountyfraud.org. You may remain anonymous.



COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
900 S FREMONT AVE, ALHAMBRA CA 91803



CHAIN-OF-CUSTODY RECORD

ATTACHMENT

ME_TOX Analysis Groups						
FSID	Site ID	Constituent	EPA Method	POL(RL)	MDL	UNITS
ME000000707	S14	Ceriodaphnia dubia (TOX), 0% and 100% dilution				