

CETIS Test Evaluation Report

Report Date: 25 Oct-23 13:45 (1 of 3)
Test Code/ID: CDUD1392 / 05-2686-3547

Facility: Yakima WWTP
Sample Site:
Sample Code: CDUD1392
Sample Date: 10 Jul-23 08:00
Sample Age: 28h (4.5 °C)
Project:
Permittee: Yakima
Address:
Contact:
Phone:
Email:

Test Name: Fathead Minnow 7-d Larval Survival and Growth Test
Organism: Pimephales promelas (fathead minnow)
Protocol: EPA/821/R-02-013 (2002)
Start Date: 11 Jul-23 12:30
End Date: 18 Jul-23 12:15
Duration: 7d Organism Age: <24h
Laboratory: Rainier Environmental Laboratory
Address: 5013 Pacific Highway E.
Suite 20
Fife, WA 98424
Contact: Eric Tollefson, Laboratory Manager
Phone: (253) 922-8898
Email: eric@rainierenvironmental.com

Chronic Toxicity Evaluation						
Analysis ID	Endpoint	Criteria	Conc-%	IWC	Decision	Method
07-4779-2777	7-day Survival	NOEL/LOEL	100/>100	9.88	Passes IWC	Steel Many-One Rank Sum Test
20-7264-2546	Biomass	NOEL/LOEL	100/>100	9.88	Passes IWC	Dunnett Multiple Comparison Test
06-6579-0153	Weight	NOEL/LOEL	100/>100	9.88	Passes IWC	Dunnett Multiple Comparison Test

Test Review Comments
This toxicity test is acceptable according to test review criteria. There were no significant deficiencies in sample handling, test performance, test organism response, or statistical analysis.
The sample tested was nontoxic to this test organism.

Test Reviewer
Reviewer: Chris Dudenhoeffer, WET Coordinator
Phone: 360-407-6445
Email: cdud461@ecy.wa.gov
Signature _____ Date _____

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7-day Survival 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%	0.00%
9.88		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
12.5		4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	2.50%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
53.8		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Biomass Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.4865	0.3906	0.5824	0.423	0.561	0.03013	0.06026	12.39%	0.00%
9.88		4	0.458	0.3445	0.5715	0.367	0.54	0.03567	0.07134	15.58%	5.86%
12.5		4	0.4515	0.3742	0.5288	0.411	0.522	0.0243	0.0486	10.76%	7.19%
25		4	0.4395	0.331	0.548	0.363	0.51	0.03411	0.06822	15.52%	9.66%
53.8		4	0.4577	0.3462	0.5693	0.362	0.525	0.03505	0.07011	15.32%	5.91%
100		4	0.4727	0.3571	0.5884	0.43	0.581	0.03635	0.07269	15.38%	2.83%

Weight Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.4865	0.3906	0.5824	0.423	0.561	0.03013	0.06026	12.39%	0.00%
9.88		4	0.458	0.3445	0.5715	0.367	0.54	0.03567	0.07134	15.58%	5.86%
12.5		4	0.466	0.3435	0.5885	0.411	0.58	0.0385	0.077	16.52%	4.21%
25		4	0.4395	0.331	0.548	0.363	0.51	0.03411	0.06822	15.52%	9.66%
53.8		4	0.4577	0.3462	0.5693	0.362	0.525	0.03505	0.07011	15.32%	5.91%
100		4	0.4727	0.3571	0.5884	0.43	0.581	0.03635	0.07269	15.38%	2.83%

7-day Survival Detail						MD5: 9FE484647BC2888C3405C469D3313ECE					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4						
0	D	1.0000	1.0000	1.0000	1.0000						
9.88		1.0000	1.0000	1.0000	1.0000						
12.5		1.0000	1.0000	1.0000	0.9000						
25		1.0000	1.0000	1.0000	1.0000						
53.8		1.0000	1.0000	1.0000	1.0000						
100		1.0000	1.0000	1.0000	1.0000						

Biomass Detail						MD5: 2E34B87FC7B9768B1CD7860372FD7CAF					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4						
0	D	0.456	0.506	0.423	0.561						
9.88		0.473	0.452	0.367	0.54						
12.5		0.44	0.411	0.433	0.522						
25		0.51	0.363	0.403	0.482						
53.8		0.525	0.362	0.454	0.49						
100		0.581	0.43	0.449	0.431						

Weight Detail						MD5: FAAD5CD81B4DA8B7C8D17AEA08D8F569					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4						
0	D	0.456	0.506	0.423	0.561						
9.88		0.473	0.452	0.367	0.54						
12.5		0.44	0.411	0.433	0.58						
25		0.51	0.363	0.403	0.482						
53.8		0.525	0.362	0.454	0.49						
100		0.581	0.43	0.449	0.431						

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7-day Survival Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
9.88		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	9/10
25		10/10	10/10	10/10	10/10
53.8		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10