



48hr *Daphnia magna* Bioassay Report

(Acute Aquatic Toxicity Test)

Project : B0C0794-Z00921

Client Name :	ClearFlow Consulting Ltd
Location :	Sherwood Park, AB

Sample Data :

Sample Description : Water Lynx CFPL 360
Visual Description: white gel
Sampling Location : Clear Flow
Sampling Method : Chemical Product
Volume Obtained : 200 g
Sampled By : JM

	YY MM DD		
Sample Date :	10 12 10	Time :	n/g
Date Received :	10 12 10	Time :	1530
Bioassay Date :	10 12 18	Time :	1000
Report Date :	10 12 24		
Deviations from Method :	none		

Bioassay Results :

CETIS Statistical Program

LC50 @ 48 Hours : >1500 mg/L
Method : n/a
95 % Confidence Interval : n/a

EC50 @ 48 Hours : 125 mg/L
Method : Spearman-Karber
95 % Confidence Interval : 80.6<125.0<193.8 mg/L

Legend: LC50/EC50 indicates concentration of sample, in percent, which kills or affects 50% of test organisms.

Note: Results relate only to the item tested.

General Comments:

chemical product cut into small pieces and dissolved in dilution water at loading rate of 1500 mg/L for 36 hours prior to test set-up.
EC50 value based on immobility of test organisms in test concentrations.

Data & QA/QC
Reviewed By :

Jay Abbott, Bioassay Supervisor



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Detailed Test Information :

Type of Bioassay :	48 hour static bioassay
Test Species :	<i>Daphnia magna</i>
Test Protocol :	Environment Canada EPS 1/RM/14 (December 2000 ed.)
Test Endpoint:	Mortality and/or Immobility
% Mortality in Culture 7 days Prior to Testing :	3%
Age of Test Animals :	Neonates (young), less than 24 hours old
Time, in Days, to First Brood :	11
Average Number of Neonates per Brood :	26
Source of Test Species :	In house culture initiated through Environment Canada <i>Daphnia magna</i>
Date Animals Obtained :	May 1991
Source of Culturing and Dilution Water :	Reconstituted water
Size of Test Container :	220 mL
Material of Test Container :	Polyethylene beaker
Volume of Test Solution per Container :	200 mL
Standard Concentrations of Test Material :	0, 125, 250, 500, 1000, 1500mg/L
Number of Neonates per Container :	10
Volume of Solution per Daphnid :	20 mL
Hardness Adjustment :	None
pH Adjustment :	None



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Setup	Effluent Properties Prior To Initial Setup:	Temperature °C	pH @ 20°C	EC µS cm-1	Dissolved Oxygen mg/L
		n/a	n/a	n/a	n/a
Analyst: JA	Preaeration Time (at rate of 50 mL / min / L) :	0 min			

Time	Description	Concentration (% by Volume)				
		0	125	250	500	1000

Start	Temperature °C	19.5	19.8	20.0	20.4	20.4	20.3
	pH @ 20°C	8.1	8.1	8.0	7.8	7.6	7.4
	EC µS cm-1	568	587	604	637	705	782
	Dissolved Oxygen mg/L	8.8	8.5	8.5	8.3	8.0	7.6
	Analyst: JA	Hardness mg/L CaCO3	160 mg/L				
1 Hour	Number Dead						
	Analyst:	Atypical/Stressed Behaviour					
4 Hours	Number Dead						
	Analyst:	Atypical/Stressed Behaviour					
24 Hours	Number Dead	0	0	0	0	0	2
	Analyst: HW	Atypical/Stressed Behaviour	0	7I	10I	10I	10I
48 Hours	Temperature °C	19.8	20.0	20.0	20.2	19.8	19.9
	pH @ 20°C	8.4	8.2	8.2	8.1	7.9	7.7
	EC µS cm-1	594	619	633	354	729	819
	Dissolved Oxygen mg/L	8.2	6.9	4.5	3.4	1.9	1.2
	Analyst: JA	Number Dead	0	0	0	0	0
	Atypical/Stressed Behaviour	0	5I	10I	10I	10I	7I

Observation Codes: I: Immobile F: Floating



Results of Sodium Chloride Reference Bioassay :

Current

LC50 @ 48 Hours : **5658 mg/L**
 95 % Confidence Interval : **5365<5658<5968**
 Method : **Spearman-Kärber**
 Date Initiated **10 12 14**

Historical

Geometric Mean : **5790 mg/L**
 Warning Limits : **5223<5790<6418**
 Method : **Shewhart**

The reference toxicant is conducted under the same conditions as the definitive testing (EENVSOP-00152).

