



48hr *Daphnia magna* Bioassay Report

(Acute Aquatic Toxicity Test)

Project : B246481-DP0387

Client Name :	Shear Diamonds
Location :	Toronto, ON

Sample Data :

Sample Description : JER-SWQ-04
Visual Description: Clear, colourless
Sampling Location : n/a
Sampling Method : Grab
Volume Obtained : 1L
Sampled By : WA

YY MM DD

Sample Date :	12 06 04	Time :	1700
Date Received :	12 06 06	Time :	0840
Bioassay Date :	12 06 07	Time :	1500
Report Date :	12 06 11		
Deviations from Method :	none, but hardness was adjusted upwards to 40 mg/L CaCO ₃ as per S		

Bioassay Results :

CETIS Statistical Program

LC50 @ 48 Hours : >100%

Method : Visual

95 % Confidence Interval : n/a

EC50 @ 48 Hours : >100%

Method : Visual

95 % Confidence Interval : n/a

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:

Hardness was adjusted upwards to 40 mg/L CaCO₃ in order to proceed with testing.

Data & QA/QC

Reviewed By :

Michelle Hospedales, Analyst II



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Sample Description : JER-SWQ-04

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 :	1.3%
Age of Test Animals :	Neonates (young), less than 24 hours old
Time, in Days, to First Brood :	11
Average Number of Neonates per Brood :	44
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, 6.25, 12.5, 25, 50, 100%
Number of Neonates per Container :	10
Volume of Solution per Daphnid :	20 mL
Hardness Adjustment :	Yes
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
		19.6	7.5	130	8.9
Analyst: MH	Preaeration Time (at rate of 50 mL / min / L) :		0 min		

Time	Description	Concentration (% by Volume)					
		0	6.25	12.5	25	50	100

Start	Temperature °C	20.6	20.6	20.7	20.8	21.0	21.3
	pH @ 20°C	8.1	8.1	8.1	8.0	7.8	7.6
	EC µS cm-1	687	654	629	569	436	168
	Dissolved Oxygen mg/L	8.4	8.4	8.4	8.4	8.5	8.7
	Hardness mg/L CaCO3	160					40
Analyst: MH							
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	0
Analyst: MH	Atypical/Stressed Behaviour	0	0	0	0	0	0
48 Hours	Temperature °C	19.9	20.3	20.5	20.1	20.3	20.4
	pH @ 20°C	8.4	8.4	8.4	8.4	8.3	8.1
	EC µS cm-1	703	655	632	571	437	187
	Dissolved Oxygen mg/L	8.2	8.3	8.3	8.3	8.4	8.1
	Number Dead	0	0	0	0	0	0
Analyst: HW	Atypical/Stressed Behaviour	0	0	0	0	0	0

Observation Codes: I: Immobile F: Floating



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Results of Sodium Chloride Reference Bioassay :Current

LC50 @ 48 Hours : **5555 mg/L**
 95 % Confidence Interval : **5247<5555<5880 mg/L**
 Method : **SK**
 Date Initiated **12 06 07**

Historical

Geometric Mean : **5610 mg/L**
 Warning Limits : **5126<5610<6139 mg/L**
 Method : **Shewhart**

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

