



96hr *Rainbow Trout* Bioassay Report

Project : B246481-DP0387

Client Name:	Shear Diamonds
Location:	Toronto ON

Sample Data :

Sample Description :	JER-SWQ-04		
Sampling Location :	n/a		
Sampling Method :	Grab		
Volume obtained :	60 L		
Sampled By :	WA		
	YY MM DD		
Sample Date :	12 06 04	Time :	n/a
Date Received :	12 06 04	Time :	0840
Bioassay Date :	12 06 06	Time :	1435
Report Date :	12 06 12		
Deviations from method :	none		

Bioassay Results :

CETIS Statistical Program

LC50 @ 96 Hours :	>100%
Method :	visual
95 % Confidence Interval :	n/a

EC50 @ 96 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: The results relate only to the item tested.

General Comments:

Data & QA/QC

Reviewed By :

Robert Vivian, Bioassay Senior Analyst



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Sample Description : JER-SWQ-04

Test Information :

Type of Bioassay :	96 Hour Multiple Dilution Static Bioassay		
Test Species :	<i>Oncorhynchus mykiss</i>	(Rainbow Trout)	
Test Protocols :	Environment Canada EPS 1/RM/13 (Dec.2000 ed. with May 2007 amendments) and EPS1/RM/50 March 2008 Lyndon Trout Hatcheries, New Dundee, ON		
Source of Test Species :	LF0523-3		
Culture Lot # :	LF0523-3		
Mean (± 1 SD) & Range Fork Length of Fish :	3.5 $\pm$ 0.2 cm	Pop.Range 3.2 - 3.9 cm	n=10
Mean (± 1 SD) & Range Weight of Fish :	0.33 $\pm$ 0.08 g	Pop.Range 0.2 - 0.5 g	
Cumulative Mortality of Fish Lot in the 7 Days Prior to Test :	<0.2%		
Source of Holding Water :	Ammonia Free, Dechlorinated City of Edmonton Tap Water		
Size of Test Container :	38 L		
Material of Test Container :	Disposable Plastic Liner in Glass Tank		
Volume of Test Solution in Each Test Vessel :	20 L		
Depth of Test Material in Each Test Vessel :	≥ 15 cm		
Concentrations of Test Material :	0, 20, 40, 60, 80, 100%		
Number of Fish per Test Vessel :	10		
Loading Density :	0.17 g/L		
Method of Aeration :	Carbon Filtered, Compressed Air Through Air-stone		
Aeration Rate during test :	6.5 $\pm$ 1.0 mL/min./L		
pH adjustment:	No pH adjustment of sample was made during testing.		



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Data Table :

Sample Description : JER-SWQ-04

Setup	Sample Properties Prior To Initial Setup:	Temperature °C	pH @ 20°C	EC µS cm-1	Dissolved Oxygen mg/L		
		8.4	7.6	96	12.9		
Analyst: GT	Preaeration Time (at rate of 6.5 ± 1.0 mL / min / L) :		30 min				
Time	Description	Concentration (% by Volume)					
		0	20	40	60	80	100
Start	Temperature (°C)	15.6	15.5	15.4	15.2	15.2	15.1
	pH	8.0	7.9	7.8	7.7	7.6	7.5
	EC (µS cm-1)	340	297	252	201	152	105
	Dissolved Oxygen (mg/L)	9.7	9.8	10.1	10.0	10.3	10.4
Analyst: JSO							
1/4 Hour	Number Dead						
	Atypical/Stressed Behaviour						
1/2 Hour	Number Dead						
	Atypical/Stressed Behaviour						
1 Hour	Number Dead						
	Atypical/Stressed Behaviour						
2 Hours	Number Dead						
	Atypical/Stressed Behaviour						
4 Hours	Number Dead						
	Atypical/Stressed Behaviour						
Analyst:							
24 Hours	Temperature (°C)	15.2	15.0	14.9	14.8	14.6	14.5
	pH	8.0	7.9	7.8	8.0	7.8	7.8
	EC (µS cm-1)	338	294	250	199	150	104
	Dissolved Oxygen (mg/L)	9.5	9.4	9.5	9.9	9.8	9.9
	Number Dead	0	0	0	0	0	0
	Atypical/Stressed Behaviour	0	0	0	0	0	0
Analyst: JSO							
48 Hours	Temperature (°C)	15.1	14.9	14.8	14.8	14.5	14.4
	pH	8.2	8.1	8.0	7.9	7.8	7.8
	EC (µS cm-1)	340	295	251	201	151	105
	Dissolved Oxygen (mg/L)	9.9	9.9	10.0	9.9	9.9	9.9
	Number Dead	0	0	0	0	0	0
	Atypical/Stressed Behaviour	0	0	0	0	0	0
Analyst: GT							
72 Hours	Temperature (°C)	15.0	14.8	14.8	14.7	14.5	14.4
	pH	8.1	8.0	7.9	7.9	7.8	7.7
	EC (µS cm-1)	338	297	252	202	152	106
	Dissolved Oxygen (mg/L)	9.8	9.9	9.9	9.9	9.8	9.9
	Number Dead	0	0	0	0	0	0
	Atypical/Stressed Behaviour	0	0	0	0	0	0
Analyst: GT							
96 Hours	Temperature (°C)	15.1	14.9	14.9	14.8	14.5	14.4
	pH	8.2	8.1	8.1	8.0	7.9	7.8
	EC (µS cm-1)	344	300	255	204	154	107
	Dissolved Oxygen (mg/L)	10.6	10.7	10.7	10.7	10.7	10.7
	Number Dead	0	0	0	0	0	0
	Atypical/Stressed Behaviour	0	0	0	0	0	0
Analyst: JSO							

Stress Codes: P:dark pigmentation U:light pigmentation L:lethargic H:hyperactive M:inhibited movement G:pronounced opercular movement S:extreme toxic shock D:disorientated

Note: Number Dead or Atypical/Stress Behaviour is out of 10 fish total in each concentration.



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Results of Phenol Reference Bioassay :

Current

LC50 @ 96 Hours : 9.10 mg/L
95 % Confidence Interval : 8.37<9.14<9.9 mg/L
Method : Probit
Date Initiated : 12 06 06

Historical

Geometric Mean : 10.67 mg/L
Warning Limits : 8.48<10.67<13.41mg/L
Method : Shewhart

The reference toxicant is conducted under the same conditions as the definitive testing.

