

96hr Rainbow Trout Bioassay Report

Project: A527707-864157

(Acute Aquatic Toxicity Test)

Client Name :	Clear Flow Consulting Inc.
Location :	Edmonton, AB

Sample Data :

Sample Description : **Floc Log 703d**

Sampling Location : **n/a**

Sampling Method : **n/a**

Volume Obtained : **Received as a solid**

Sampled By : **William Gowdy**

Sample Date : **n/a** *Time :* **n/a**

Date Received : **05 07 11** *Time :* **1130**

Bioassay Date : **05 07 12** *Time :* **1030**

Report Date : **05 07 19**

Deviations from Method : **Range finding project + LC50
Prepared stock solution from solid.**

Bioassay Results :

LC50 @ 96 Hours : **1.90 g/L**

Method : **Probit**

95 % Confidence Interval : **1.25<1.90<2.50**

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

Results of Phenol Reference Bioassay :

LC50 @ 96 Hours : **13.7 mg/L**

95 % Confidence Interval : **12.2<13.7<15.4**

Method : **Probit**

95 % Confidence Interval : **7.00<12.0<16.9**

Method : **Schewhart Warning Limits**

Historical Mean ± 2SD : **12.0 ± 4.98**

Date of Reference Bioassay : **05 07 12**

Data

Verified By: H. Wilson

Data & QA/QC

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Test Information :

Type of Bioassay :	96 Hour Multiple Dilution Static Bioassay		
Test Species :	<i>Oncorhynchus mykiss</i> (Rainbow Trout)		
Test Protocol :	Environment Canada EPS 1/RM/13 (Dec.2000 ed.)		
Source of Test Species :	Sun Valley Trout Farms, Mission, BC.		
Culture Lot # :	SV0629-3		
Mean (± 1 SD) & Range Fork Length of Fish :	3.5 \pm 0.1 cm	3.3 - 3.7	n= 10
Mean (± 1 SD) & Range Weight of Fish :	0.33 \pm 0.03 g	0.30 - 0.37	
Cummulative Mortality of Fish Lot in the 7 Days Prior to Test :	0.1%		
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, 1.25, 2.5, 5.0, 7.5, 10 g/L		
Number of Fish per Test Vessel :	10		
Loading Density :	0.2 g/L		
Method of Aeration :	Carbon Filtered, Compressed Air Through Air-stone		
Aeration Rate during test :	6.5 \pm 1.0 mL/min./L		

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Setup	Sample 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: DT	Preaeration Time (at rate of 6.5 ± 1.0 mL / min / L) :		30 min		

Time	Description	Concentration (µg/L)				
		0	1.25	2.5	5	7.5
Start	Temperature (°C)	15.9	16.0	15.8	15.7	15.9
	pH	7.9	6.3	5.5	4.5	4.5
	EC (µS cm-1)	345	408	465	788	777
	Dissolved Oxygen (mg/L)	9.5	9.4	9.5	9.3	9.4
Analyst: DT						
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					
24 Hours	Temperature (°C)	15.4	15.3	14.9	14.7	15.0
	pH	8.0	7.7	5.3	4.4	4.4
	EC (µS cm-1)	346	413	486	867	833
	Dissolved Oxygen (mg/L)	9.2	9.5	9.7	9.7	9.7
	Number Dead	0	0	5	10	10
	Atypical/Stressed Behaviour	0	0	0	0	n/a
Analyst: DT						
48 Hours	Temperature (°C)	15.6	15.4	14.9	14.6	14.8
	pH	9.1	7.9	5.7	4.5	4.3
	EC (µS cm-1)	347	413	492	875	862
	Dissolved Oxygen (mg/L)	8.7	8.8	9.1	9.2	9.1
	Number Dead	0	0	7	10	10
	Atypical/Stressed Behaviour	0	0	0	0	n/a
Analyst: JG						
72 Hours	Temperature (°C)	15.6	15.4	15.4	15.0	14.7
	pH	8.1	7.9	7.0	5.4	4.3
	EC (µS cm-1)	349	413	464	878	870
	Dissolved Oxygen (mg/L)	9.4	9.6	9.7	9.6	9.5
	Number Dead	0	0	9	10	10
	Atypical/Stressed Behaviour	0	0	0	0	n/a
Analyst: JG						
96 Hours	Temperature (°C)	16.0	15.7	15.3	15.1	15.1
	pH	8.0	8.0	5.7	4.5	4.4
	EC (µS cm-1)	349	412	496	881	875
	Dissolved Oxygen (mg/L)	9.5	9.5	9.2	9.3	9.4
	Number Dead	0	0	9	10	10
	Atypical/Stressed Behaviour	0	0	0	0	n/a
Analyst: JG						

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