



# 96hr Rainbow Trout Bioassay Report

(Acute Aquatic Toxicity Test)

Project: B0C0794-Z00921

<b>Client Name:</b>	<b>ClearFlow Consulting Inc</b>
<b>Location:</b>	<b>Sherwood Park, AB</b>

Sample Data :

**Sample Description :** Water Lynx CFPL 360  
**Sampling Location :** ClearFlow  
**Sampling Method :** Chemical Product  
**Volume obtained :** 200g  
**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 :** 1200  
**Report Date :** 10 12 24  
**Deviations from method :** none-chemical test per EPS 1/RM/9

Bioassay Results :

**CETIS Statistical Program**

**LC50 @ 96 Hours :** 147.5 mg/L  
**Method :** Probit  
**95 % Confidence Interval :** 70.4<147.5<203.7 mg/L

**EC50 @ 96 Hours :** 140.3 mg/L  
**Method :** Spearman-Karber  
**95 % Confidence Interval :** 104.1<140.3<189.1 mg/L

**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.**

Results of Phenol Reference Bioassay :

**LC50 @ 96 Hours :** 11.64 mg/L  
**95 % Confidence Interval :** 10.98<11.64<12.35 mg/L  
**Method :** Spearman-Karber  
**95 % Confidence Interval :** 8.48<10.64<13.35  
**Method :** Schewhart Warning Limit  
**Historical Mean ± 2SD :** 10.64+/-2.52  
**Date of Reference Bioassay :** 10 12 10

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

Data & QA/QC

Reviewed By :  Jay Abbott, Bioassay Supervisor



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Sample Description : Water Lynx CFPL 360

## Test Information :

Type of Bioassay :	<b>96 Hour Multiple Dilution Static Bioassay</b>		
Test Species :	<b><i>Oncorhynchus mykiss</i> (Rainbow Trout)</b>		
Test Protocol :	<b>Environment Canada EPS 1/RM/9 and 1/RM/13 (Dec.2000 ed. with May 2007 amendments).</b>		
Source of Test Species :	<b>Lyndon Trout Hatcheries, New Dundee, ON</b>		
Culture Lot # :	<b>LF1125-1</b>		
Mean ( $\pm 1$ SD) & Range Fork Length of Fish :	<b>3.7 <math>\pm</math> 0.1 cm</b>	<i>Pop.Range</i> <b>3.5 - 3.9 cm</b>	<b>n=10</b>
Mean ( $\pm 1$ SD) & Range Weight of Fish :	<b>0.63 <math>\pm</math> 0.08 g</b>	<i>Pop.Range</i> <b>0.5 - 0.8 g</b>	
Cumulative Mortality of Fish Lot in the 7 Days Prior to Test :	<b>0.8%</b>		
Source of Holding Water :	<b>Ammonia Free, Dechlorinated City of Edmonton Tap Water</b>		
Size of Test Container :	<b>38 L</b>		
Material of Test Container :	<b>Disposable Plastic Liner in Glass Tank</b>		
Volume of Test Solution in Each Test Vessel :	<b>20 L</b>		
Depth of Test Material in Each Test Vessel :	<b><math>\geq 15</math> cm</b>		
Concentrations of Test Material :	<b>0, 125, 250, 500, 1000, 1500mg/L</b>		
Number of Fish per Test Vessel :	<b>10</b>		
Loading Density :	<b>0.32 g/L</b>		
Method of Aeration :	<b>Carbon Filtered, Compressed Air Through Air-stone</b>		
Aeration Rate during test :	<b>6.5 <math>\pm</math> 1.0 mL/min./L</b>		
pH adjustment:	<b>No pH adjustment of sample was made during testing.</b>		



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Sample Description : Water Lynx CFPL 360

Setup	Sample Properties Prior To Initial Setup:	Temperature °C	pH @ 20°C	EC µS cm-1	Dissolved Oxygen mg/L
Analyst: JA	Preaeration Time (at rate of 6.5 ± 1.0 mL / min / L) :	n/a	n/a	n/a	n/a
		30 min			

Time	Description	Concentration (mg/L)					
		0	125	250	500	1000	1500

Start	Temperature (°C)	14.8	14.7	14.6	14.8	15.2	15.5
	pH	8.1	7.9	7.8	7.7	7.5	7.5
	EC (µS cm-1)	311	325	336	358	424	490
	Dissolved Oxygen (mg/L)	9.9	9.4	9.4	9.2	7.9	5.6
Analyst: JA							
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)	14.9	15.0	15.1	15.3	15.6	15.7
	pH	8.3	8.2	8.1	7.9	7.9	7.8
	EC (µS cm-1)	322	332	343	369	422	469
	Dissolved Oxygen (mg/L)	9.3	8.8	7.4	4.8	5.5	2.6
	Number Dead:	0	1	6	10	10	10
	Atypical/Stressed Behaviour	0	9LS	4LS	n/a	n/a	n/a
Analyst: HW							
48 Hours	Temperature (°C)	14.9	14.9	15.1	15.4	15.5	15.6
	pH	8.3	8.2	8.2	7.9	7.8	7.8
	EC (µS cm-1)	324	336	345	377	422	468
	Dissolved Oxygen (mg/L)	9.3	8.9	8.9	6.1	0.4	0.4
	Number Dead:	0	4	7	10	10	10
	Atypical/Stressed Behaviour	0	6L/S	3L/S	n/a	n/a	n/a
Analyst: JA							
72 Hours	Temperature (°C)	15.2	15.1	15.1	15.2	15.4	15.5
	pH	8.3	8.1	8.2	8.0	7.8	7.8
	EC (µS cm-1)	329	343	348	385	426	473
	Dissolved Oxygen (mg/L)	9.0	8.6	8.7	6.7	3.0	2.5
	Number Dead:	0	4	8	10	10	10
	Atypical/Stressed Behaviour	0	0	2L	n/a	n/a	n/a
Analyst: JA							
96 Hours	Temperature (°C)	14.6	14.3	14.5	14.9	15.1	15.1
	pH	8.2	8.1	8.1	7.8	7.8	7.9
	EC (µS cm-1)	327	340	348	392	430	476
	Dissolved Oxygen (mg/L)	9.1	9.1	8.7	5.8	5.0	4.8
	Number Dead:	0	4	8	10	10	10
	Atypical/Stressed Behaviour	0	0	2L	n/a	n/a	n/a
Analyst: JA							

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

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.