



Stantec

Fathead Minnow Survival and Growth Test
Biological Test Method EPA 821-R-02-013
October 2002, Fourth Edition

Client:	Sea To Sky Innovations Ltd. Coquitlam, BC	Date	
Sample Name:	SPC-909 Neutral	Sample Received:	03-Dec-05
Test Item:	chemical	Date Initiated:	03-Dec-08
Test Number:	20031227-1	Time Initiated:	16:50
		Initiated by:	R. Dorosz

TEST RESULTS

<i>*Results expressed in percentage</i>				<i>*all values reported as nominal</i>	
	%v/v	95% CI	Method of Calculation	MSD (%)	Software Packages
IC25	>100	na	Linear Interpolation	na	The ICp Approach
IC50	>100	na			Version 2.0, 1993
LC50	>100	na	na	na	LC50 Program C.E.Stephen, 1986
<i>*Results expressed in parts per million</i>					
	ppm	95% CI	Method of Calculation	MSD (%)	Software Packages
IC25	>5.0	na	Linear Interpolation	na	The ICp Approach
IC50	>5.0	na			Version 2.0, 1993
LC50	>5.0	na	na	na	LC50 Program C.E.Stephen, 1986

QUALITY ASSURANCE INFORMATION: Reference Toxicant Test #20031191-0

Chemical Used:	Potassium Chloride		
Date of Test:	03-December-04		
7-Day LC50:	873 mg/L	7-Day IC50:	888 mg/L
95% Confidence Interval:	816-933	95% Confidence Interval:	832-922
Historical Warning Limits (LC50):	726-1170	Historical Warning Limits (IC50):	776-1080
Historical Control Limits (LC50):	644-1320	Historical Control Limits (IC50):	714-1170

Acronyms

LC50	median lethal concentration (concentration that causes mortality in 50% of the test organisms)
IC25	inhibition concentration (concentration at which response is impaired by 25%)
IC50	inhibition concentration (concentration at which response is impaired by 50%)
na	not applicable
MSD	minimum significant difference (difference between groups that is necessary to conclude that that they are significantly different).

Buildings
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TEST DATA

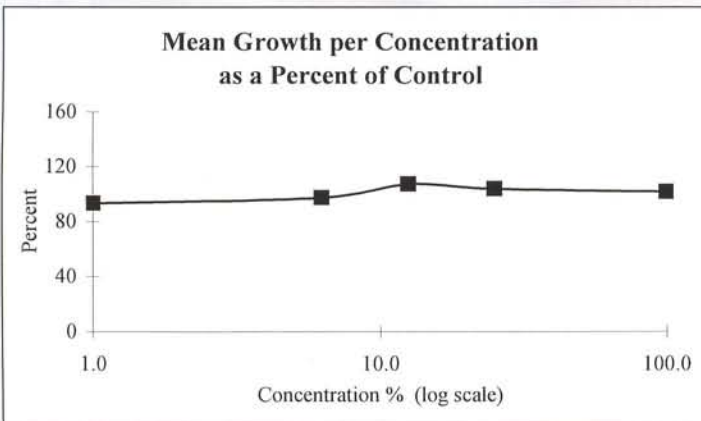
Mean Fish Weight per Replicate (mg)

replicate	concentration % (ppm)					
	(control)	(0.05)	(0.313)	(0.625)	(1.25)	(5.0)
A	0.79	0.72	0.72	0.80	0.81	0.82
B	0.63	0.72	0.73	0.89	0.79	0.73
C	0.75	0.73	0.67	0.78	0.68	0.74
D	0.82	0.62	0.79	0.75	0.84	0.75
mean/conc.	0.75	0.70	0.73	0.80	0.78	0.76
stdev / conc.	0.08	0.05	0.05	0.06	0.07	0.04

Percent Mortality per Replicate

(total exposed per concentration = 40)

replicate	concentration % (ppm)					
	(control)	(0.05)	(0.313)	(0.625)	(1.25)	(5.0)
A	0	0	0	0	10	10
B	0	0	0	0	0	0
C	0	0	0	0	0	0
D	0	0	0	0	0	0
mean / conc.	0	0	0	0	3	3
stdev / conc.	0	0	0	0	5	5



Sample Preparation: The highest test concentration and all dilutions were prepared fresh on a daily basis.

Test Organism

Test Organism: *Pimephales promelas*
Organism Source: In House Culture
Organism Age: <24 hours

Test Conditions

Test Type: Static renewal
Test Temperature: 25±1°C
Lighting: 16 hours light/8 hours dark, 500-1000 lux
Test Volume: 300 ml per replicate
Test Vessels: 420 ml disposable polystyrene "cup" shape containers.
Test Depth: 8.5 cm
Control/Dilution Water: 3/4 Reconstituted Water + 1/4 Dechlorinated Tap

Stantec

Reported by:

Date:

04-01-05