

Work Order : 258664

Sample Number : 88100

SAMPLE IDENTIFICATION

Company :	Chestnut Springs LLC	Submitted By :	Not provided
Location :	Ridgefield CT	Submission Date :	2025-08-20
Test Item :	FINC-25 S / AFT--FINC25-AF	Date Received :	2025-08-21
Test Item Type :	Chemical	Time Received :	13:30
Batch/Lot Number :	W00173778	Storage Temperature :	Ambient room temp.
Volume/Container :	1 x 500 mL bottle	Initiation Date :	2025-09-22
Description :	Clear to slightly hazy liquid	Completion Date :	2025-09-26
Test Method(s) :	Acute Lethality Test Using Rainbow Trout. EPS 1/RM/9, Environment Canada, July 1990 (with May 1996 and May 2007 amendments).		

96-HOUR TEST RESULTS

Effect	Value	95% Confidence Limits	Statistical Method
LC50	616 mg/L	517 mg/L – 734 mg/L	Spearman-Kärber ^a

Results are based on nominal concentrations (w/v) of the test item.

The results reported relate only to the item tested and as received.

PREPARATION OF TEST SOLUTIONS

Testing followed the general conditions of the test method cited. Exposure solutions were prepared individually by weighing appropriate amounts of the test item to achieve the desired nominal test concentrations, and adding them to control/dilution water in individual test chambers. Exposure solutions were mixed thoroughly. The Control consisted of Control/Dilution Water without the addition of test item..

COMMENTS

- A range-finding test conducted on 2025-09-15 indicated that 50% mortality of test organisms would be expected to occur at a concentration of between 100 mg/L and 1000 mg/L of the test item.

- Analysis of test item concentration was not conducted. As such, test results were based on nominal concentrations only.

- All test validity criteria as specified in the test method were satisfied.

Approved By : _____

Project Manager

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TEST ORGANISM

Organism Batch :	T25-23	Mean Fork Length :	42.9 mm
Age (on test day 0):	≥ 46 days post swim-up	Range of Fork Lengths :	41 - 47 mm
Control Sample Size :	10	Mean Wet Weight :	0.7 g
Cumulative mortality rate :	0% (previous 7 days)	Stressed Control Organisms :	0 (at test completion)
Organism Loading Rate :	0.4 g/L		

TEST ORGANISM ACCLIMATION

Test Organism :	<i>Oncorhynchus mykiss</i>	Temperature :	15 ± 1 °C
Supplier :	Cedar Crest Trout Farm ¹	Light Intensity :	100 - 500 lux
Holding Tank :	~1 m ³ fiberglass (~ 400 L)	Photoperiod (light/dark) :	16 h / 8 h
Water :	Natural ground water ²	Light Source :	Cool white fluorescent
Water exchange rate :	≥1.0 L/min/kg	Acclimation Period:	≥ 14 days post treatment
Holding Density :	≤ 6 g/L	Food Type :	Commercial trout food
Dissolved Oxygen :	80 - 100% air saturation	Food Ration :	~2.5% wet weight daily
Disease Treatment :	None	Feeding Frequency :	Twice daily

¹Rainbow trout un-fertilized eggs/milt were supplied by Cedar Crest Trout Farm (33241 Allan Park Rd, Hanover, ON N4N 3B8). Eggs were fertilized and held at Nautilus Environmental Company Inc. (Suite 122, 704 Mara Street, Point Edward ON, N7V 1X4) until swim-up. They were then transported to Nautilus' Puslinch facility for acclimation and testing.

² Ground water was aerated vigorously at test temperature (15 ± 1°C). No additional chemicals were added.

TEST CONDITIONS

Test Type :	Static	Control/Dilution Water :	Natural ground water ²
pH Adjustment :	None	Source :	On-site well
Test Aeration :	Yes	Test Chamber :	23 L lined pail ³
Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Depth of Test Solution :	~26.5 cm
Duration of Pre-Aeration :	0 minutes	Volume per Replicate :	15 L
Duration of Aeration :	Continuous	Number of Replicates :	1
Manner of Aeration :	Air diffuser/blower	Organisms Per Replicate :	10
Light Intensity :	100 - 500 lux at water's surface	Organisms Per Test Level :	10
Photoperiod (light/dark) :	16 h / 8 h	Feeding during Test :	None
Light Source :	Cool white fluorescent	Test Method Deviation(s) :	None

³ polyethylene food-grade liner

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride	LC50 :	4142 mg/L
Organism Batch :	T25-23	95% Confidence Limits :	3815 - 4556 mg/L
Date Tested :	2025-09-16	Historical Mean LC50 :	3689 mg/L
Analyst(s) :	JGR, JCS, NWP	Warning Limits (± 2SD) :	2903 - 4688 mg/L
Statistical Method :	Linear Regression (MLE) ^a		

REFERENCES

^a CETIS™, © 2000-2022. v2.1.4.0 x64. Comprehensive Environmental Toxicity Information System. Tidepool Scientific Software, LLC, McKinleyville, CA 95519 [Program on disk and printed User's Guide].

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TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%) ⁴
Initial Water Chemistry (1000 mg/L) :	7.3	9.8	822	14	100
After 30 min pre-aeration :	–	–	–	–	–

0 HOURS

Date & Time 2025-09-22 13:50

Analyst(s) : JGR

Concentration mg/L	Dead		Impaired		pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%) ⁴
	Number	%	Number	%					
1000	0	0	0	0	7.3	9.8	822	14	100
500	0	0	0	0	7.6	9.8	763	14	–
250	0	0	0	0	7.8	9.8	736	14	–
125	0	0	0	0	8.1	9.8	718	14	–
62.5	0	0	0	0	8.2	9.8	711	14	–
Control	0	0	0	0	8.3	9.7	698	14	99

Notes:

24 HOURS

Date & Time 2025-09-23 13:45

Analyst(s) : JGR

Concentration mg/L	Dead		Impaired		pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)
	Number	%	Number	%				
1000	0	0	0	0	7.8	9.1	784	15
500	0	0	0	0	8.0	9.2	736	15
250	0	0	0	0	8.1	9.2	717	15
125	0	0	0	0	8.1	9.2	707	15
62.5	0	0	0	0	8.1	9.2	702	15
Control	0	0	0	0	8.2	9.1	684	15

Notes:

48 HOURS

Date & Time 2025-09-24 12:15

Analyst(s) : NWP

Concentration mg/L	Dead		Impaired		pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)
	Number	%	Number	%				
1000	8	80	2	20	8.1	9.6	764	14
500	0	0	0	0	8.2	9.4	730	14
250	0	0	0	0	8.3	9.4	717	14
125	0	0	0	0	8.3	9.4	710	14
62.5	0	0	0	0	8.3	9.4	705	14
Control	0	0	0	0	8.3	9.2	686	14

Notes: Impaired test organisms are dark in colour, swimming upside down and are exhibiting rapid gill movement.

"-" = not measured/not required

Number impaired does not include number dead.

⁴ adjusted for temperature and barometric pressure

 Test Data Reviewed By : EM

 Date : 2025-10-04

Work Order : 258664

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TEST DATA

72 HOURS

Date & Time 2025-09-25 12:55

Analyst(s) : JGR

Concentration mg/L	Dead		Impaired		pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)
	Number	%	Number	%				
1000	10	100	0	0	8.4	9.5	750	14
500	0	0	0	0	8.3	9.4	726	14
250	0	0	0	0	8.4	9.5	716	14
125	0	0	0	0	8.4	9.5	709	14
62.5	0	0	0	0	8.4	9.4	704	14
Control	0	0	0	0	8.3	9.2	669	14

Notes:

96 HOURS

Date & Time 2025-09-26 13:15

Analyst(s) : JGR

Concentration mg/L	Dead		Impaired		pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)
	Number	%	Number	%				
1000	10	100	0	0	—	—	—	—
500	2	20	0	0	8.1	9.4	724	15
250	0	0	0	0	8.2	9.4	715	15
125	0	0	0	0	8.2	9.4	711	15
62.5	0	0	0	0	8.2	9.3	707	15
Control	0	0	0	0	8.2	9.4	666	15

Notes:

"—" = not measured/not required

Number impaired does not include number dead.

Test Data Reviewed By : EM

Date : 2025-10-04



CHAIN OF CUSTODY RECORD

Nautilus Work Order No: 2025-08-21 88100 258664	Nautilus Project No:
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Shipping Address: Nautilus Environmental Guelph.
B-11 Nicholas Beaver Road
Puslinch, Ontario Canada N0B 2J0

Voice: (519) 763-4412 Fax: (519) 763-4419

P.O. Number: 250814-TEST
Affiliation:
Custody Relinquished by (print):
Signature:
Date/Time Shipped: *
Sample Storage (prior to shipping):

Client: Chestnut Springs LLC. 277 Silver spring Road Ridgefield CT. USA
Phone: (646) 287-4545
Fax:
Contact: Stephen Scala

Sample Identification				Analyses Requested										
# of Containers and Volume (eg. 1 x 1L, 1 x 500 g)	Lot# / Batch	Sample Name and Description	Nautilus Sample Number	Rainbow Trout LC50 (EPS 1/RM/9)	Daphnia magna LC50 (EPS 1/RM/11)	Pseudokirchneriella subcapitata Growth (OECD 201)	Ready Biodegradation (OECD 301D)	Other Biodegradation Test (please specify)	Microtox Test		Ceriodaphnia dubia Survival & Reproduction	Other (please specify below)		
1 x 500mL	100173778	FINC-25 S /AFT--FINC25-AF	88100	✓	✓									

For Lab Use Only
Received By: SSP
Date: 2025-08-21
Time: 13:30
Storage Location:
Storage Temp.(C):

Please list any special requests or instructions:
96-h rainbow trout LC50 range-finding and definiti48ve test EEC EPS 1/RM/9
48-h daphnia magna LC50 range-finding and definitive test
*Sample shipped on 2025-08-20 as per shipping packing slip.
PC 2025-08-21.

PC