

CETIS Summary Report

 Report Date: 25 Sep-18 12:18 (p 4 of 8)
 Test Code/ID: 181441 / 01-7930-7990

Hyaella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
07-3942-6227	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.2794	WAL - TOX passed 10d survival rate	1
07-3942-6227	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.2794	INUG passed 10d survival rate	1
07-3942-6227	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.2794	Control Sedimen passed 10d survival rate	1
07-3942-6227	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.2794	WTN passed 10d survival rate	1
07-3942-6227	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.2794	PDL passed 10d survival rate	1
07-3942-6227	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.2794	MAM passed 10d survival rate	1
07-3942-6227	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.2794	LK8 passed 10d survival rate	1
07-3942-6227	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.2794	TPE - TOX passed 10d survival rate	1
11-6085-3995	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8060	Control Sedimen passed 10d survival rate	1
11-6085-3995	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8060	WTN passed 10d survival rate	1
11-6085-3995	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8060	TPE - TOX passed 10d survival rate	1
11-6085-3995	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8060	PDL passed 10d survival rate	1
11-6085-3995	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8060	WAL - TOX passed 10d survival rate	1
11-6085-3995	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8060	LK8 passed 10d survival rate	1
11-6085-3995	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8060	MAM passed 10d survival rate	1
11-6085-3995	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8060	INUG passed 10d survival rate	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9312	PDL passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9312	WTN passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9312	LK8 passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9312	WAL - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9312	INUG passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9312	TPE - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9312	MAM passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9312	Control Sedimen passed mean dry weight-	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8866	WAL - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8866	Control Sedimen passed mean dry weight-	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8866	LK8 passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8866	WTN passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8866	TPE - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8866	PDL passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8866	MAM passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8866	INUG passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7829	WTN passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7829	WAL - TOX passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7829	MAM passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7829	PDL passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7829	INUG passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7829	TPE - TOX passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7829	LK8 passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7829	Control Sedimen passed mean dry weight-	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8106	PDL passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8106	MAM passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8106	TPE - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8106	INUG passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8106	Control Sedimen passed mean dry weight-	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8106	WTN passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8106	LK8 passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8106	WAL - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0303	INUG failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0303	PDL failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0303	LK8 failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0303	WAL - TOX failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0303	WTN failed mean dry weight-mg	1

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Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0303	MAM failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0303	Control Sedimen failed mean dry weight-m	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0303	TPE - TOX failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0188	INUG failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0188	LK8 failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0188	TPE - TOX failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0188	WAL - TOX failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0188	MAM failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0188	Control Sedimen failed mean dry weight-m	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0188	PDL failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0188	WTN failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0319	MAM failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0319	INUG failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0319	WAL - TOX failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0319	LK8 failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0319	TPE - TOX failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0319	WTN failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0319	Control Sedimen failed mean dry weight-m	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0319	PDL failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9860	MAM passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9860	PDL passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9860	INUG passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9860	LK8 passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9860	WAL - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9860	Control Sedimen passed mean dry weight-	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9860	TPE - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9860	WTN passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9684	Control Sedimen passed mean dry weight-	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9684	WTN passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9684	PDL passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9684	TPE - TOX passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9684	INUG passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9684	MAM passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9684	WAL - TOX passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9684	LK8 passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9704	INUG passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9704	MAM passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9704	WAL - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9704	WTN passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9704	TPE - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9704	LK8 passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9704	PDL passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9704	Control Sedimen passed mean dry weight-	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.3314	TPE - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.3314	WAL - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.3314	WTN passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.3314	INUG passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.3314	PDL passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.3314	Control Sedimen passed mean dry weight-	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.3314	LK8 passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.3314	MAM passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2239	PDL passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2239	INUG passed mean dry weight-mg	1

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Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2239	TPE - TOX passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2239	WAL - TOX passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2239	Control Sedimen passed mean dry weight-	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2239	LK8 passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2239	WTN passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2239	MAM passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2835	INUG passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2835	MAM passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2835	WAL - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2835	TPE - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2835	Control Sedimen passed mean dry weight-	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2835	LK8 passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2835	WTN passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2835	PDL passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9896	MAM passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9896	WTN passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9896	LK8 passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9896	INUG passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9896	WAL - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9896	TPE - TOX passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9896	PDL passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9896	Control Sedimen passed mean dry weight-	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9758	Control Sedimen passed mean dry weight-	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9758	PDL passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9758	INUG passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9758	TPE - TOX passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9758	WAL - TOX passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9758	LK8 passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9758	WTN passed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9758	MAM passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9770	TPE - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9770	WTN passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9770	MAM passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9770	Control Sedimen passed mean dry weight-	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9770	LK8 passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9770	WAL - TOX passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9770	PDL passed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9770	INUG passed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	WTN failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	MAM failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	Control Sedimen failed mean dry weight-m	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	WAL - TOX failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	PDL failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	INUG failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	LK8 failed mean dry weight-mg	1
00-9560-0600	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	TPE - TOX failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	6.3E-04	LK8 failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	6.3E-04	TPE - TOX failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	6.3E-04	MAM failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	6.3E-04	WTN failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	6.3E-04	INUG failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	6.3E-04	PDL failed mean dry weight-mg	1
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	6.3E-04	WAL - TOX failed mean dry weight-mg	1

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Hyaella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
03-0947-9883	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	6.3E-04	Control Sedimen failed mean dry weight-m	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	Control Sedimen failed mean dry weight-m	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	PDL failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	TPE - TOX failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	WAL - TOX failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	LK8 failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	MAM failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	WTN failed mean dry weight-mg	1
20-1066-6377	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	INUG failed mean dry weight-mg	1

10d Survival Rate Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
Control Sedimen	N	5	0.9600	0.8920	1.0000	0.9000	1.0000	0.0245	0.0548	5.71%	0.00%
PDL		5	0.9800	0.9245	1.0000	0.9000	1.0000	0.0200	0.0447	4.56%	-2.08%
INUG	RS	5	0.9200	0.7581	1.0000	0.7000	1.0000	0.0583	0.1304	14.17%	4.17%
TPE - TOX		5	0.2800	0.0000	0.8241	0.0000	1.0000	0.1960	0.4382	156.49%	70.83%
WAL - TOX		5	0.9800	0.9245	1.0000	0.9000	1.0000	0.0200	0.0447	4.56%	-2.08%
LK8		5	0.9200	0.7840	1.0000	0.8000	1.0000	0.0490	0.1095	11.91%	4.17%
MAM		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-4.17%
WTN		5	0.8800	0.6760	1.0000	0.6000	1.0000	0.0735	0.1643	18.67%	8.33%

Mean Dry Weight-mg Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
Control Sedimen	N	5	0.1967	0.1384	0.2551	0.1189	0.244	0.02102	0.04699	23.89%	0.00%
PDL		5	0.1966	0.1554	0.2379	0.139	0.2211	0.01486	0.03324	16.90%	0.05%
INUG	RS	5	0.1909	0.1778	0.204	0.175	0.204	0.004731	0.01058	5.54%	2.95%
TPE - TOX		2	0.1203	-0.1688	0.4093	0.0975	0.143	0.02275	0.03217	26.75%	38.87%
WAL - TOX		5	0.2085	0.1726	0.2443	0.18	0.2533	0.0129	0.02885	13.84%	-5.97%
LK8		5	0.1649	0.1347	0.195	0.1263	0.19	0.01085	0.02426	14.71%	16.20%
MAM		5	0.2104	0.1645	0.2563	0.18	0.268	0.01652	0.03694	17.56%	-6.96%
WTN		5	0.111	0.05602	0.1659	0.055	0.1656	0.01979	0.04426	39.88%	43.58%

10d Survival Rate Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	0.9000	1.0000	0.9000	1.0000	1.0000
PDL		0.9000	1.0000	1.0000	1.0000	1.0000
INUG	RS	0.7000	1.0000	0.9000	1.0000	1.0000
TPE - TOX		0.0000	0.0000	0.0000	0.4000	1.0000
WAL - TOX		0.9000	1.0000	1.0000	1.0000	1.0000
LK8		0.8000	1.0000	1.0000	0.8000	1.0000
MAM		1.0000	1.0000	1.0000	1.0000	1.0000
WTN		0.9000	0.6000	1.0000	1.0000	0.9000

Mean Dry Weight-mg Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	0.1189	0.244	0.1967	0.218	0.206
PDL		0.2211	0.202	0.204	0.217	0.139
INUG	RS	0.19	0.175	0.1956	0.19	0.204
TPE - TOX					0.0975	0.143
WAL - TOX		0.2533	0.18	0.191	0.219	0.199
LK8		0.1263	0.164	0.164	0.19	0.18
MAM		0.2	0.18	0.18	0.268	0.224
WTN		0.1033	0.055	0.144	0.087	0.1656

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Hyaella 14-d Survival and Growth Sediment Test

Nautilus Environmental

10d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	9/10	10/10	9/10	10/10	10/10
PDL		9/10	10/10	10/10	10/10	10/10
INUG	RS	7/10	10/10	9/10	10/10	10/10
TPE - TOX		0/10	0/10	0/10	4/10	10/10
WAL - TOX		9/10	10/10	10/10	10/10	10/10
LK8		8/10	10/10	10/10	8/10	11/11
MAM		10/10	10/10	10/10	10/10	10/10
WTN		9/10	6/10	10/10	10/10	9/10

CETIS Analytical Report

Report Date: 24 Sep-18 17:27 (p 1 of 2)
 Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 11-6085-3995 Endpoint: 10d Survival Rate CETIS Version: CETISv1.9.4
 Analyzed: 24 Sep-18 17:27 Analysis: STP 2xK Contingency Tables Status Level: 1

Batch ID: 18-2307-3027 Test Type: Growth-Survival (10d) Analyst: Karen Lee
 Start Date: 07 Sep-18 Protocol: EC/EPS 1/RM/33 Diluent: Reconstituted Water
 Ending Date: 21 Sep-18 Species: Hyalella azteca Brine:
 Test Length: 14d 0h Taxon: Malacostraca Source: Aquatic Biosystems, CO Age: 7-9d

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
Control Sedimen	18-0902-3464	07 Sep-18	07 Sep-18	n/a	Azimuth	
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)		
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
Control Sedimen	Sediment Sample	Azimuth	Control Sediment	
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Fisher Exact/Bonferroni-Holm Test

Sample I	vs	Sample II	Test Stat	P-Type	P-Value	Decision(α:5%)
Negative Control		PDL	0.8788	Exact	1.0000	Non-Significant Effect
		INUG	0.3389	Exact	1.0000	Non-Significant Effect
		TPE - TOX*	0.0000	Exact	1.4E-12	Significant Effect
		WAL - TOX	0.8788	Exact	1.0000	Non-Significant Effect
		LK8	0.3484	Exact	1.0000	Non-Significant Effect
		MAM	1.0000	Exact	1.0000	Non-Significant Effect
		WTN	0.1343	Exact	0.8060	Non-Significant Effect

Data Summary

Sample	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
Control Sedimen	N	48	2	50	0.96	0.04	2.04%
PDL		49	1	50	0.98	0.02	0.0%
INUG		46	4	50	0.92	0.08	6.12%
TPE - TOX		14	36	50	0.28	0.72	71.43%
WAL - TOX		49	1	50	0.98	0.02	0.0%
LK8		47	4	51	0.9216	0.07843	5.96%
MAM		50	0	50	1	0	-2.04%
WTN		44	6	50	0.88	0.12	10.2%

10d Survival Rate Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	0.9000	1.0000	0.9000	1.0000	1.0000
PDL		0.9000	1.0000	1.0000	1.0000	1.0000
INUG		0.7000	1.0000	0.9000	1.0000	1.0000
TPE - TOX		0.0000	0.0000	0.0000	0.4000	1.0000
WAL - TOX		0.9000	1.0000	1.0000	1.0000	1.0000
LK8		0.8000	1.0000	1.0000	0.8000	1.0000
MAM		1.0000	1.0000	1.0000	1.0000	1.0000
WTN		0.9000	0.6000	1.0000	1.0000	0.9000

CETIS Analytical Report

Report Date: 24 Sep-18 17:27 (p 2 of 2)
 Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

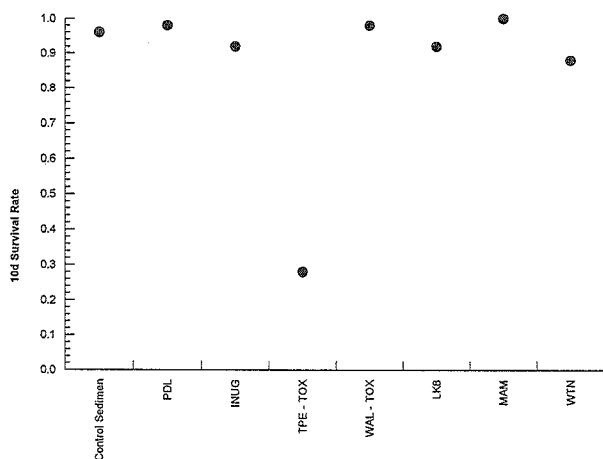
Analysis ID: 11-6085-3995 Endpoint: ^{14 d} 10d Survival Rate
 Analyzed: 24 Sep-18 17:27 Analysis: STP 2xK Contingency Tables

CETIS Version: CETISv1.9.4
 Status Level: 1

10d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	9/10	10/10	9/10	10/10	10/10
PDL		9/10	10/10	10/10	10/10	10/10
INUG		7/10	10/10	9/10	10/10	10/10
TPE - TOX		0/10	0/10	0/10	4/10	10/10
WAL - TOX		9/10	10/10	10/10	10/10	10/10
LK8		8/10	10/10	10/10	8/10	11/11
MAM		10/10	10/10	10/10	10/10	10/10
WTN		9/10	6/10	10/10	10/10	9/10

Graphics



CETIS Analytical Report

Report Date: 24 Sep-18 17:28 (p 1 of 2)
Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 20-1066-6377	Endpoint: Mean Dry Weight-mg	CETIS Version: CETISv1.9.4
Analyzed: 24 Sep-18 17:28	Analysis: Parametric-Control vs Treatments	Status Level: 1
Batch ID: 18-2307-3027	Test Type: Growth-Survival (10d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/33	Diluent: Reconstituted Water
Ending Date: 21 Sep-18	Species: Hyalella azteca	Brine:
Test Length: 14d 0h	Taxon: Malacostraca	Source: Aquatic Biosystems, CO Age: 7-9d

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
Control Sedimen	18-0902-3464	07 Sep-18	07 Sep-18	n/a	Azimuth	
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)		
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
Control Sedimen	Sediment Sample	Azimuth	Control Sediment	
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	PDL passed mean dry weight-mg	27.08%
		INUG passed mean dry weight-mg	27.08%
		TPE - TOX failed mean dry weight-mg	27.08%
		WAL - TOX passed mean dry weight-mg	27.08%
		LK8 passed mean dry weight-mg	27.08%
		MAM passed mean dry weight-mg	27.08%
		WTN failed mean dry weight-mg	27.08%

Dunnett Multiple Comparison Test

Sample I	vs	Sample II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		PDL	0.004271	2.471	0.053	8	CDF	0.8866	Non-Significant Effect
		INUG	0.2692	2.471	0.053	8	CDF	0.8106	Non-Significant Effect
		TPE - TOX*	2.68	2.471	0.070	5	CDF	0.0319	Significant Effect
		WAL - TOX	-0.545	2.471	0.053	8	CDF	0.9704	Non-Significant Effect
		LK8	1.478	2.471	0.053	8	CDF	0.2835	Non-Significant Effect
		MAM	-0.6345	2.471	0.053	8	CDF	0.9770	Non-Significant Effect
		WTN*	3.976	2.471	0.053	8	CDF	0.0013	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.044135	0.006305	7	5.424	4.7E-04	Significant Effect
Error	0.0337107	0.0011624	29			
Total	0.0778457		36			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	7.48	18.48	0.3807	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9804	0.9185	0.7440	Normal Distribution

CETIS Analytical Report

Report Date: 24 Sep-18 17:28 (p 2 of 2)
Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 20-1066-6377 Endpoint: Mean Dry Weight-mg
Analyzed: 24 Sep-18 17:28 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.9.4
Status Level: 1

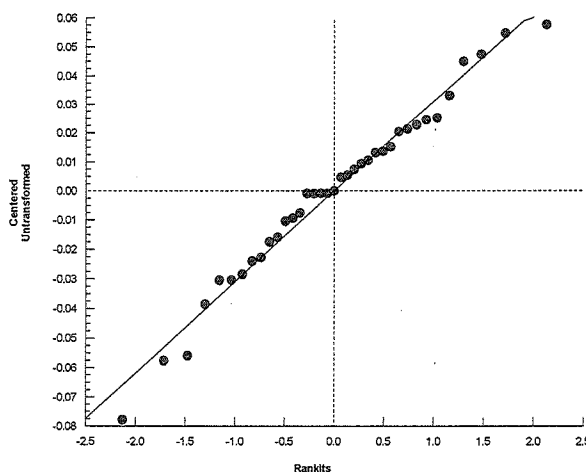
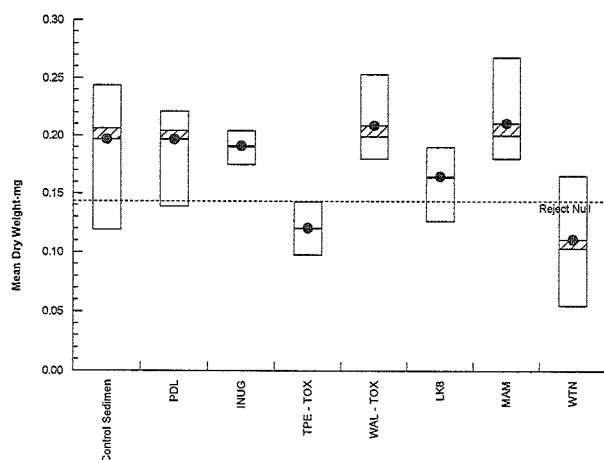
Mean Dry Weight-mg Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
Control Sedimen	N	5	0.1967	0.1384	0.2551	0.206	0.1189	0.244	0.02102	23.89%	0.00%
PDL		5	0.1966	0.1554	0.2379	0.204	0.139	0.2211	0.01486	16.90%	0.05%
INUG		5	0.1909	0.1778	0.204	0.19	0.175	0.204	0.004731	5.54%	2.95%
TPE - TOX		2	0.1203	-0.1688	0.4093	0.1203	0.0975	0.143	0.02275	26.75%	38.87%
WAL - TOX		5	0.2085	0.1726	0.2443	0.199	0.18	0.2533	0.0129	13.84%	-5.97%
LK8		5	0.1649	0.1347	0.195	0.164	0.1263	0.19	0.01085	14.71%	16.20%
MAM		5	0.2104	0.1645	0.2563	0.2	0.18	0.268	0.01652	17.56%	-6.96%
WTN		5	0.111	0.05602	0.1659	0.1033	0.055	0.1656	0.01979	39.88%	43.58%

Mean Dry Weight-mg Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	0.1189	0.244	0.1967	0.218	0.206
PDL		0.2211	0.202	0.204	0.217	0.139
INUG		0.19	0.175	0.1956	0.19	0.204
TPE - TOX		0.0975	0.143			
WAL - TOX		0.2533	0.18	0.191	0.219	0.199
LK8		0.1263	0.164	0.164	0.19	0.18
MAM		0.2	0.18	0.18	0.268	0.224
WTN		0.1033	0.055	0.144	0.087	0.1656

Graphics



CETIS Analytical Report

Report Date: 25 Sep-18 12:15 (p 1 of 2)
 Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 07-3942-6227	Endpoint: ^{W5} 10d Survival Rate	CETIS Version: CETISv1.9.4
Analyzed: 25 Sep-18 12:15	Analysis: STP 2xK Contingency Tables	Status Level: 1
Batch ID: 18-2307-3027	Test Type: Growth-Survival (10d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/33	Diluent: Reconstituted Water
Ending Date: 21 Sep-18	Species: Hyalella azteca	Brine:
Test Length: 14d 0h	Taxon: Malacostraca	Source: Aquatic Biosystems, CO Age: 7-9d

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)	Azimuth	
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Fisher Exact/Bonferroni-Holm Test

Sample I	vs	Sample II	Test Stat	P-Type	P-Value	Decision(α:5%)
Reference Sed (PDL)		INUG	0.1811	Exact	0.7244	Non-Significant Effect
		TPE - TOX*	0.0000	Exact	8.3E-14	Significant Effect
		WAL - TOX	0.7525	Exact	1.0000	Non-Significant Effect
		LK8	0.1874	Exact	0.5622	Non-Significant Effect
		MAM	1.0000	Exact	1.0000	Non-Significant Effect
		WTN	0.0559	Exact	0.2794	Non-Significant Effect

Data Summary

Sample	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
PDL	RS	49	1	50	0.98	0.02	0.0%
INUG		46	4	50	0.92	0.08	6.12%
TPE - TOX		14	36	50	0.28	0.72	71.43%
WAL - TOX		49	1	50	0.98	0.02	0.0%
LK8		47	4	51	0.9216	0.07843	5.96%
MAM		50	0	50	1	0	-2.04%
WTN		44	6	50	0.88	0.12	10.2%

10d Survival Rate Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	0.9000	1.0000	1.0000	1.0000	1.0000
INUG		0.7000	1.0000	0.9000	1.0000	1.0000
TPE - TOX		0.0000	0.0000	0.0000	0.4000	1.0000
WAL - TOX		0.9000	1.0000	1.0000	1.0000	1.0000
LK8		0.8000	1.0000	1.0000	0.8000	1.0000
MAM		1.0000	1.0000	1.0000	1.0000	1.0000
WTN		0.9000	0.6000	1.0000	1.0000	0.9000

CETIS Analytical Report

Report Date: 25 Sep-18 12:15 (p 2 of 2)
Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

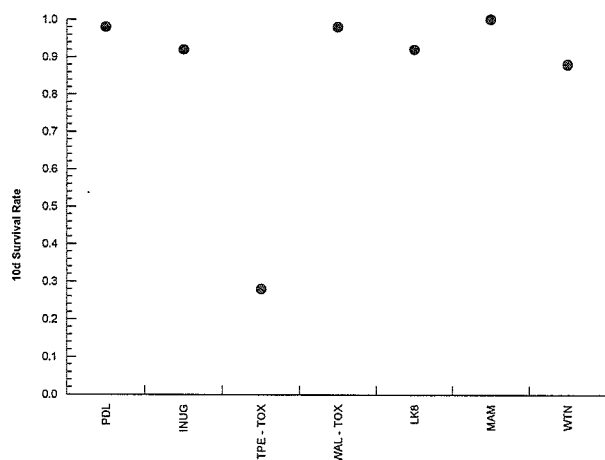
Analysis ID: 07-3942-6227 Endpoint: 10d Survival Rate
Analyzed: 25 Sep-18 12:15 Analysis: STP 2xK Contingency Tables

CETIS Version: CETISv1.9.4
Status Level: 1

10d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	9/10	10/10	10/10	10/10	10/10
INUG		7/10	10/10	9/10	10/10	10/10
TPE - TOX		0/10	0/10	0/10	4/10	10/10
WAL - TOX		9/10	10/10	10/10	10/10	10/10
LK8		8/10	10/10	10/10	8/10	11/11
MAM		10/10	10/10	10/10	10/10	10/10
WTN		9/10	6/10	10/10	10/10	9/10

Graphics



CETIS Analytical Report

Report Date: 25 Sep-18 12:15 (p 1 of 2)
Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 03-0947-9883	Endpoint: Mean Dry Weight-mg	CETIS Version: CETISv1.9.4
Analyzed: 25 Sep-18 12:15	Analysis: Parametric-Control vs Treatments	Status Level: 1
Batch ID: 18-2307-3027	Test Type: Growth-Survival (14d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/33	Diluent: Reconstituted Water
Ending Date: 21 Sep-18	Species: Hyalella azteca	Brine:
Test Length: 14d 0h	Taxon: Malacostraca	Source: Aquatic Biosystems, CO Age: 7-9d

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)	Azimuth	
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	INUG passed mean dry weight-mg	24.73%
		TPE - TOX failed mean dry weight-mg	24.73%
		WAL - TOX passed mean dry weight-mg	24.73%
		LK8 passed mean dry weight-mg	24.73%
		MAM passed mean dry weight-mg	24.73%
		WTN failed mean dry weight-mg	24.73%

Dunnett Multiple Comparison Test

Sample I	vs	Sample II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed (PDL)		INUG	0.2864	2.437	0.049	8	CDF	0.7829	Non-Significant Effect
		TPE - TOX*	2.894	2.437	0.064	5	CDF	0.0188	Significant Effect
		WAL - TOX	-0.5937	2.437	0.049	8	CDF	0.9684	Non-Significant Effect
		LK8	1.592	2.437	0.049	8	CDF	0.2239	Non-Significant Effect
		MAM	-0.6904	2.437	0.049	8	CDF	0.9758	Non-Significant Effect
		WTN*	4.293	2.437	0.049	8	CDF	6.3E-04	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0423877	0.0070646	6	7.099	1.7E-04	Significant Effect
Error	0.0248779	0.0009951	25			
Total	0.0672657		31			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	6.271	16.81	0.3935	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9852	0.9081	0.9289	Normal Distribution

CETIS Analytical Report

Report Date: 25 Sep-18 12:15 (p 2 of 2)
Test Code/ID: 181441 / 01-7930-7990

Hyaella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 03-0947-9883 Endpoint: Mean Dry Weight-mg
Analyzed: 25 Sep-18 12:15 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.9.4
Status Level: 1

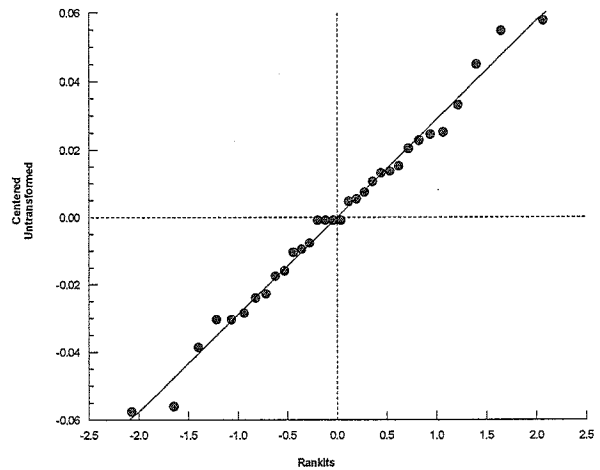
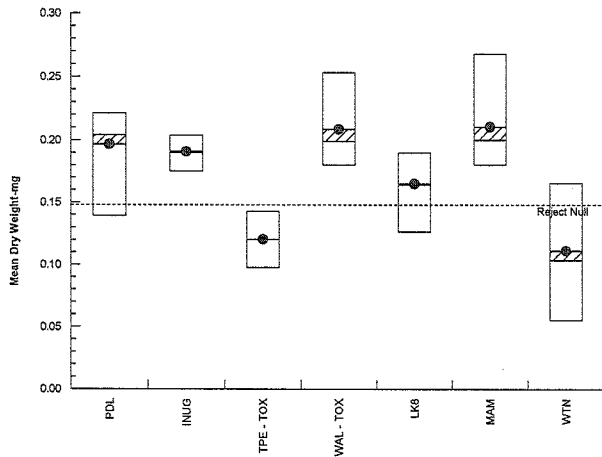
Mean Dry Weight-mg Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
PDL	RS	5	0.1966	0.1554	0.2379	0.204	0.139	0.2211	0.01486	16.90%	0.00%
INUG		5	0.1909	0.1778	0.204	0.19	0.175	0.204	0.004731	5.54%	2.91%
TPE - TOX		2	0.1203	-0.1688	0.4093	0.1203	0.0975	0.143	0.02275	26.75%	38.84%
WAL - TOX		5	0.2085	0.1726	0.2443	0.199	0.18	0.2533	0.0129	13.84%	-6.02%
LK8		5	0.1649	0.1347	0.195	0.164	0.1263	0.19	0.01085	14.71%	16.16%
MAM		5	0.2104	0.1645	0.2563	0.2	0.18	0.268	0.01652	17.56%	-7.01%
WTN		5	0.111	0.05602	0.1659	0.1033	0.055	0.1656	0.01979	39.88%	43.56%

Mean Dry Weight-mg Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	0.2211	0.202	0.204	0.217	0.139
INUG		0.19	0.175	0.1956	0.19	0.204
TPE - TOX		0.0975	0.143			
WAL - TOX		0.2533	0.18	0.191	0.219	0.199
LK8		0.1263	0.164	0.164	0.19	0.18
MAM		0.2	0.18	0.18	0.268	0.224
WTN		0.1033	0.055	0.144	0.087	0.1656

Graphics



CETIS Analytical Report

Report Date: 25 Sep-18 12:18 (p 1 of 2)
Test Code/ID: 181441 / 01-7930-7990

Hyaella 14-d Survival and Growth Sediment Test				Nautilus Environmental	
Analysis ID: 01-1225-6856	Endpoint: 10d Survival Rate	CETIS Version: CETISv1.9.4			
Analyzed: 25 Sep-18 12:18	Analysis: STP 2xK Contingency Tables	Status Level: 1			
Batch ID: 18-2307-3027	Test Type: Growth-Survival (10d)	Analyst: Karen Lee			
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/33	Diluent: Reconstituted Water			
Ending Date: 21 Sep-18	Species: Hyaella azteca	Brine:			
Test Length: 14d 0h	Taxon: Malacostraca	Source: Aquatic Biosystems, CO		Age: 7-9d	

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)	Azimuth	
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Fisher Exact/Bonferroni-Holm Test

Sample I	vs	Sample II	Test Stat	P-Type	P-Value	Decision(α:5%)
Reference Sed (INUG)		PDL	0.9719	Exact	1.0000	Non-Significant Effect
		TPE - TOX*	0.0000	Exact	9.7E-11	Significant Effect
		WAL - TOX	0.9719	Exact	1.0000	Non-Significant Effect
		LK8	0.6536	Exact	1.0000	Non-Significant Effect
		MAM	1.0000	Exact	1.0000	Non-Significant Effect
		WTN	0.3703	Exact	1.0000	Non-Significant Effect

Data Summary

Sample	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
PDL		49	1	50	0.98	0.02	0.0%
INUG	RS	46	4	50	0.92	0.08	6.12%
TPE - TOX		14	36	50	0.28	0.72	71.43%
WAL - TOX		49	1	50	0.98	0.02	0.0%
LK8		47	4	51	0.9216	0.07843	5.96%
MAM		50	0	50	1	0	-2.04%
WTN		44	6	50	0.88	0.12	10.2%

10d Survival Rate Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL		0.9000	1.0000	1.0000	1.0000	1.0000
INUG	RS	0.7000	1.0000	0.9000	1.0000	1.0000
TPE - TOX		0.0000	0.0000	0.0000	0.4000	1.0000
WAL - TOX		0.9000	1.0000	1.0000	1.0000	1.0000
LK8		0.8000	1.0000	1.0000	0.8000	1.0000
MAM		1.0000	1.0000	1.0000	1.0000	1.0000
WTN		0.9000	0.6000	1.0000	1.0000	0.9000

CETIS Analytical Report

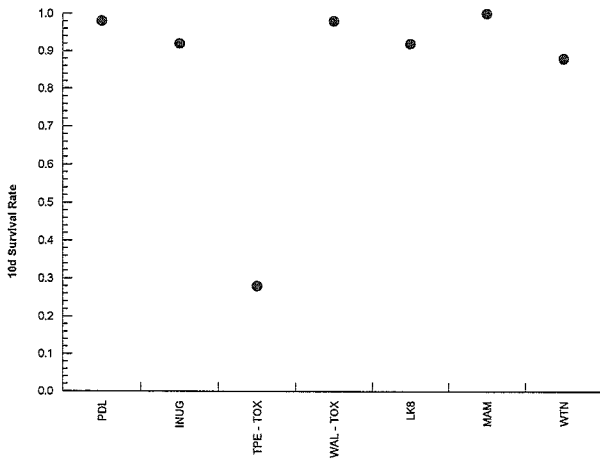
Report Date: 25 Sep-18 12:18 (p 2 of 2)
 Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test			Nautilus Environmental		
Analysis ID: 01-1225-6856	Endpoint: 14d Survival Rate	CETIS Version: CETISv1.9.4			
Analyzed: 25 Sep-18 12:18	Analysis: STP 2xK Contingency Tables	Status Level: 1			

14d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	9/10	10/10	10/10	10/10	10/10
INUG		7/10	10/10	9/10	10/10	10/10
TPE - TOX		0/10	0/10	0/10	4/10	10/10
WAL - TOX		9/10	10/10	10/10	10/10	10/10
LK8		8/10	10/10	10/10	8/10	11/11
MAM		10/10	10/10	10/10	10/10	10/10
WTN		9/10	6/10	10/10	10/10	9/10

Graphics



CETIS Analytical Report

Report Date: 25 Sep-18 12:18 (p 1 of 2)
 Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 00-9560-0600	Endpoint: Mean Dry Weight-mg	CETIS Version: CETISv1.9.4
Analyzed: 25 Sep-18 12:18	Analysis: Parametric-Control vs Treatments	Status Level: 1
Batch ID: 18-2307-3027	Test Type: Growth-Survival (14d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/33	Diluent: Reconstituted Water
Ending Date: 21 Sep-18	Species: Hyalella azteca	Brine:
Test Length: 14d 0h	Taxon: Malacostraca	Source: Aquatic Biosystems, CO Age: 7-9d

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)	Azimuth	
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	PDL passed mean dry weight-mg	25.47%
		TPE - TOX failed mean dry weight-mg	25.47%
		WAL - TOX passed mean dry weight-mg	25.47%
		LK8 passed mean dry weight-mg	25.47%
		MAM passed mean dry weight-mg	25.47%
		WTN failed mean dry weight-mg	25.47%

Dunnett Multiple Comparison Test

Sample I	vs	Sample II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed		PDL	-0.2864	2.437	0.049	8	CDF	0.9312	Non-Significant Effect
(INUG)		TPE - TOX*	2.677	2.437	0.064	5	CDF	0.0303	Significant Effect
		WAL - TOX	-0.88	2.437	0.049	8	CDF	0.9860	Non-Significant Effect
		LK8	1.306	2.437	0.049	8	CDF	0.3314	Non-Significant Effect
		MAM	-0.9767	2.437	0.049	8	CDF	0.9896	Non-Significant Effect
		WTN*	4.006	2.437	0.049	8	CDF	0.0013	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0423877	0.0070646	6	7.099	1.7E-04	Significant Effect
Error	0.0248779	0.0009951	25			
Total	0.0672657		31			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	6.271	16.81	0.3935	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9852	0.9081	0.9289	Normal Distribution

CETIS Analytical Report

Report Date: 25 Sep-18 12:18 (p 2 of 2)
Test Code/ID: 181441 / 01-7930-7990

Hyalella 14-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 00-9560-0600 Endpoint: Mean Dry Weight-mg
Analyzed: 25 Sep-18 12:18 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.9.4
Status Level: 1

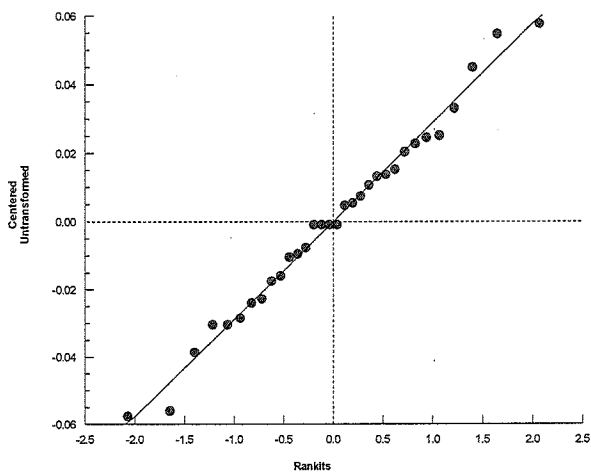
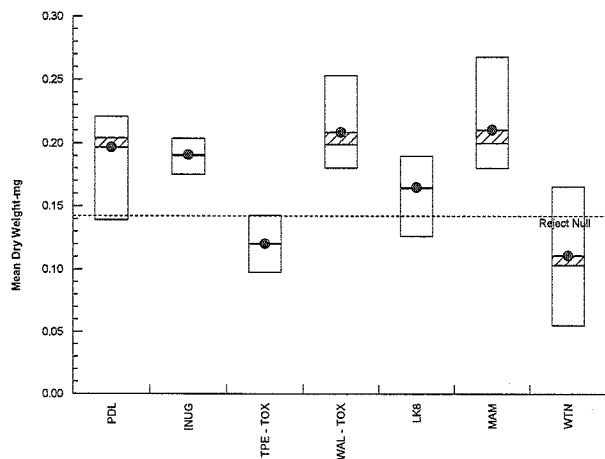
Mean Dry Weight-mg Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
PDL	RS	5	0.1966	0.1554	0.2379	0.204	0.139	0.2211	0.01486	16.90%	0.00%
INUG		5	0.1909	0.1778	0.204	0.19	0.175	0.204	0.004731	5.54%	2.91%
TPE - TOX		2	0.1203	-0.1688	0.4093	0.1203	0.0975	0.143	0.02275	26.75%	38.84%
WAL - TOX		5	0.2085	0.1726	0.2443	0.199	0.18	0.2533	0.0129	13.84%	-6.02%
LK8		5	0.1649	0.1347	0.195	0.164	0.1263	0.19	0.01085	14.71%	16.16%
MAM		5	0.2104	0.1645	0.2563	0.2	0.18	0.268	0.01652	17.56%	-7.01%
WTN		5	0.111	0.05602	0.1659	0.1033	0.055	0.1656	0.01979	39.88%	43.56%

Mean Dry Weight-mg Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	0.2211	0.202	0.204	0.217	0.139
INUG		0.19	0.175	0.1956	0.19	0.204
TPE - TOX		0.0975	0.143			
WAL - TOX		0.2533	0.18	0.191	0.219	0.199
LK8		0.1263	0.164	0.164	0.19	0.18
MAM		0.2	0.18	0.18	0.268	0.224
WTN		0.1033	0.055	0.144	0.087	0.1656

Graphics



Client : Azimuth
W.O.: 181441
Date see below

Table of PKa values

Temperature (°C)	TDS (mg/L)			Salinity (g/kg)		
	0	250	2000	10	20	30
12	9.662	9.699	9.754	9.788	9.819	9.837
15	9.564	9.601	9.655	9.688	9.719	9.737
18	9.465	9.502	9.557	9.588	9.619	9.636
20	9.401	9.438	9.492	9.523	9.554	9.571
22		9.391				
23	9.307	9.344	9.398	9.426	9.459	9.476
25	9.246	9.283	9.337	9.366	9.397	9.414

Sample ID	Temperature (C)	pH	Salinity (ppt)	Total Ammonia as N (mg/L)	pKa	Unionized Ammonia (mg/L N)
PDL	22.0	7.4		0.1700	9.391	0.001718
INUG	22.0	6.9		0.3300	9.391	0.001062
PDL	22.0	7.2		1.0000	9.391	0.006400
INUG	22.0	6.9		0.8000	9.391	0.002574
PDL	23.0	7.3		1.6000	9.344	0.014329
INUG	23.0	6.6		2.1000	9.344	0.003780
PDL	23.5	7.4		2.0000	9.314	0.024086
INUG	23.5	6.7		2.3000	9.314	0.005580
PDL	23.5	7.6		2.6000	9.314	0.049279
INUG	23.5	6.9		2.9	9.314	0.011136
PDL	23.0	7.3		2.700	9.344	0.024180
INUG	23.0	6.9		2.9	9.344	0.010395

JGL
Oct-10/18

Nautilus Environmental Water Quality Data For Ammonia

Client :

Azimuth Consultants

Species :

H. artecea

Work Order No:

181441

Sample Type:

overlying ammonia

Date Measured:

see below

Date	Sample ID	Temperature (°C)	pH	Total Ammonia as N (mg/L)	Unionized Ammonia (mg/L)	Tech. Init.
Sept 7	PDL	22.0	7.4	0.17	0.0017	JD
	INUG	22.0	6.9	0.33	0.0011	JD
Sept 10	PDL	22.0	7.2	1.00	0.0064	ML
	INUG	22.0	6.9	0.80	0.0026	ML
Sept 12	PDL	23.0	7.3	1.6	0.0143	KSL
	INUG	23.0	6.6	2.1	0.0038	KSL
Sept 14	PDL	23.0 ^{mg}	7.4 ^{mg}	2.0	0.024	ML
	INUG	23.0 ^{mg}	6.7	2.3	0.0056	ML
Sept 17	PDL	23.5	7.6	2.6	0.0549 ^{mg}	ML
	INUG	23.5	6.9	2.9	0.011	ML
Sept 19	PDL	23.0	7.3	2.7	0.024	ML
	INUG	23.0	6.9	2.9	0.0104	ML

Ammonia Salicylate Lot #:

A8109

Ammonia Cyanurate Lot #:

A8129

Comments:

Reviewed by:

JKH

Date Reviewed:

Oct-10/18

Client: Azimath Consulting

W.O.#: 181440-441

Hardness and Alkalinity Datasheet

Alkalinity										Hardness		
Sample ID	Subsample Date	Date Measured	Sample Volume (mL)	(mL) 0.02N HCL/H ₂ SO ₄ used to pH 4.5	(mL) of 0.02N HCL/H ₂ SO ₄ used to pH 4.2	Total Alkalinity (mg/LCaCO ₃)	Sample Volume (mL)	Volume of 0.01M EDTA Used (mL)	Total Hardness (mg/L CaCO ₃)	Technician		
Control	Sept 7/18		50	2.5	2.6	48	50	5.1	102	SD		
PDL	↓		50	1.9	2.0	36	50	4.9	98	SD		
INUG			50	1.0	1.1	18	50	3.9	78	SD		
TPE			50	2.5	2.6	48	50	4.5	90	SD		
WAL			50	2.0	2.1	38	50	4.8	96	SD		
LK8			50	1.9	2.0	36	50	4.6	92	SD		
MAM			50	1.5	1.6	28	50	4.1	82	SD		
WTN			50	0.8	0.9	14	50	3.2	64	SD		
Control	Sept 17/18		50	2.9	3.0	56	50	4.8	96	SD		
PDL	↓		50	0.1	0.2	0	50	3.1	62	SD		
INUG			50	0.05	0.1	0	50	2.5	50	SD		
TPE			50	2.3	2.4	44	50	3.5	70	SD		
WAL			50	0.6	0.7	10	50	5.4	108	SD		
LK8			50	0.4	0.5	6	50	3.4	68	SD		
MAM			50	0.1	0.2	0	50	3.5	70	SD		
WTN			50	0.1	0.2	0	50	2.2	44	SD		

Notes:

Reviewed by: JGR

Date Reviewed: Oct 12/18

Client: Aimath Consulting
W.O.#: 181441

Hardness and Alkalinity Datasheet

[illegible]

Notes:

Reviewed by:

Date Reviewed:

Qc-10/18

Sediment Description Data Sheet

Client: Azimut Consulting Date: Sept 6/18
 Work Order No.: 181440-441 Test Organism: Hyalella azteca / C. dubia

Sample ID	Grain Size	Colour	Odour	Debris	Other	Initials
Control Sediment	Sand	grey	none			
TDL 1	clay	Grey/light brown	none	none - very smooth		SAB
2	clay	grey	none			
3	clay	light brown	none			
4	clay	grey	none			
5	clay	grey/light brown	none			
INUG 1	Sand Silt	Dark Brown	none	N/A		IML
2	"	"	"	"		
3	"	"	"	"		
4	"	"	"	"		
5	"	Dark Brown	"	"		
TPE 1	Silt	grey	none			IML
2		grey				
3		grey				
4		brown grey				
5	wet clay	light brown	none	"		
WAL 1	Silt Sand	Dark Grey	Detritus / Pond silt	None		IML
2	Sand	"	"		Quite Liquid	
3	Sand	"	"			
4	Sand	"	"		Quite Liquid	
5	Sand	"	"			

Reviewed by: JGB Date Reviewed: Oct-10/18

Sediment Description Data Sheet

Client: Asimuth Consulting
 Work Order No.: 181440-441

Date: Sept 6/18
 Test Organism: Hyalella azteca / C. dubia

Sample ID	Grain Size	Colour	Odour	Debris	Other	Initials
Centrot-Sediment						
LK8 1	Clay	Reddish Brown	N/A	V. Small pebbles		gcl
2	"	Light Brown/Grey	N/A	N/A		gcl
3	"	Brown	N/A	N/A		
4	"	Reddish Brown	N/A	N/A		
5	"	Brown	N/A	V. Small pebbles		
MAM 1	Clay	Grey	N/A	N/A		SAB
2	Clay	Light brown/grey	N/A	Some small rocks		
3	Clay	Grey	N/A	N/A		
4	Clay	Grey	N/A	Some small rocks		
5	clay	Grey	N/A	N/A		
WTN 1	clay silt	Brown	N/A none	N/A		mm
2	silt	brown	new			
3	silt	brown-grey	none			
4	silt	brown	none			
5	silt	brown	none			

Reviewed by: JGlu Date Reviewed: Oct 10/18

APPENDIX B – *Chironomus dilutus* Toxicity Test Data

Chironomus dilutus Sediment Test Summary Sheet

Client: Azimuth
Work Order No.: 181440

Start Date: Sept 7/18
Set up by: KJL, KL

Sample Information:

Sample ID: Various, see below
Sample Date: Aug 10, 11, 14, 16, 17 and 18, 2018
Date Received: Aug 30/18
Sample Volume: 5x12 per sample

Test Organism Information:

Species: C. dilutus
Supplier: Aquatic Biosystems, CO
Date received: Sept 7/18
Age or size (Day 0): 3rd in-star

KCI Reference Toxicant Results:

Reference Toxicant ID: CT69
Stock Solution ID: n/a
Date Initiated: Sept 7/18

96-h LC50 (95% CL): 3.8 (2.7-5.2)

96-h LC50 Reference Toxicant Mean and Range: 5.1 (2.9-8.9) CV (%): 28

Test Results:

Sample ID	Survival $\pm$ SD (%)	Average Dry Wt. $\pm$ SD (mg)
Control Sediment	92.0 $\pm$ 8.4	1.87 $\pm$ 0.26
PDL	94.0 $\pm$ 8.49	2.32 $\pm$ 0.14
INUG	99.0 $\pm$ 5.5	2.35 $\pm$ 0.08
TPE-TOX	96.0 $\pm$ 8.9	1.86 $\pm$ 0.00*, ^a
WAL-TOX	84.0 $\pm$ 15.2	2.38 $\pm$ 0.28
LK8	86.0 $\pm$ 13.47 ^b	2.15 $\pm$ 0.17
MAM	84.0 $\pm$ 8.9	2.40 $\pm$ 0.25
WTN	90.0 $\pm$ 8.97 ^b	2.12 $\pm$ 0.19

* significantly different compared to reference sediment PDL
a significantly different compared to reference sediment INUG

Reviewed by: Jlu

Date reviewed: Oct. 24/18

10-d Chironomid Sediment Toxicity Test Data Sheet
Freshwater Sediment 10-d Water Quality

Client:
W.O #:

Azimuth Consulting
181440

Start Date: Sept 7/18
Termination Date: Sept 17/18
CER #: 9
Test Organism: Chironomus dilutus

Temperature (°C)

Sample ID	Day										
	0	1	2	3	4	5	6	7	8	9	10
Control	22.0	22.5	22.5	22.0	23.0	23.0	23.0	23.5	24.0	23.0	23.5
PDL	22.0	22.5	22.5	22.0	23.0	23.0	23.0	23.5	24.0	23.0	23.5
INUG	22.0	22.5	22.5	22.0	23.0	23.0	23.0	23.5	24.0	23.0	23.5
TPE	22.0	22.5	22.5	22.0	23.0	23.0	23.0	23.5	24.0	23.0	23.5
WAL	22.0	22.5	22.5	22.0	23.0	23.0	23.0	23.5	24.0	23.0	23.5
LKS	22.0	22.5	22.5	22.0	23.0	23.0	23.0	23.5	24.0	23.0	23.5
MAM	22.0	22.5	22.5	22.0	23.0	23.0	23.0	23.5	24.0	23.0	23.5
WTN	22.0	22.5	22.5	22.0	23.0	23.0	23.0	23.5	24.0	23.0	23.5
Technician Initials	ML	A	A	ML	KV	ML	KVL	KVL	A	A	KV

Thermometer:

15

Conductivity (µS)

Sample ID	Day										
	0	1	2	3	4	5	6	7	8	9	10
Control	396	410	414	424	420	440	450	456	453	454	464
PDL	350	326	305	295	291	286	281	278	275	277	278
INUG	294	277	263	254	259	261	263	266	263	270	282
TPE	363	346	334	326	330	330	326	321	317	314	318
WAL	340	335	328	317	320	314	320	318	318	319	329
LKS	344	326	310	300	307	298	296	291	291	292	300
MAM	325	315	300	281	290	271	260	256	257	257	265
WTN	309	295	273	262	280	264	274	268	269	272	281
Technician Initials	ML	A	A	ML	KV	ML	KVL	KVL	A	A	KV

Conductivity meter/probe:

3 1.3

Comments:

Reviewed by:

JOU

Date Reviewed:

Oct. 12/18

10-d Chironomid Sediment Toxicity Test Data Sheet
Freshwater Sediment 10-d Water Quality

Client:
W.O. #:

Azimath Consulting
181440

Start Date: Sept 7/18
Termination Date: Sept 17/18
CER #: 9
Test Organism: Chironomus dilutus

Dissolved oxygen (mg/L)

Sample ID	Day										
	0	1	2	3	4	5	6	7	8	9	10
Control	8.4	8.1	8.2	8.0	8.0	8.1	8.1	8.0	7.8	7.9	8.0
PDL	8.3	8.2	8.1	8.0	8.0	8.1	8.1	7.9	7.9	7.8	7.9
INUG	8.3	8.1	8.2	8.1	8.1	8.2	8.2	8.0	7.8	7.8	7.9
TPE	8.3	8.2	8.2	7.9	8.0	8.1	8.1	7.7	7.7	7.8	8.0
WAL	8.3	8.2	8.1	7.9	8.1	8.0	8.1	7.6	7.6	7.8	8.0
LKS	8.3	8.1	8.2	8.0	8.1	8.0	8.1	7.6	7.6	7.6	7.4
MAM	8.4	8.2	8.1	7.9	8.0	7.9	8.1	7.8	7.7	7.6	7.8
WTN	8.4	8.2	8.2	8.1	8.1	8.0	8.1	7.8	7.8	7.8	7.9
Technician Initials	ML	A	A	ML	KJL	ML	KJL	KJL	A	A	KJL

DO meter/probe:

3 / 3

pH

Sample ID	Day										
	0	1	2	3	4	5	6	7	8	9	10
Control	7.4	7.3	7.4	7.4	7.4	7.5	7.3	7.6	7.4	7.5	7.5
PDL	7.3	7.4	7.4	7.1	7.0	7.1	6.8	6.9	7.0	6.9	6.5
INUG	6.8	7.3	7.5	6.8	6.4	6.2	6.0	6.5	6.1	6.0	5.9
TPE	7.3	7.4	7.4	7.2	7.2	7.2	7.0	7.1	7.2	7.1	7.1
WAL	7.3	7.4	7.3	7.3	7.3	7.3	7.0	7.0	7.0	7.0	7.1
LKS	7.4	7.3	7.4	7.3	7.3	7.1	6.9	7.1	6.9	6.9	7.0
MAM	7.2	7.2	7.3	7.2	7.2	7.1	6.8	6.5	6.7	6.6	6.4
WTN	6.9	7.2	7.3	7.0	6.9	6.6	6.2	6.1	6.3	6.1	5.3
Technician Initials	ML	A	A	ML	KJL	ML	KJL	KJL	A	A	KJL

pH meter/probe:

3 / 3

Light meter:

Lit-1

Light intensity (Lux):

260-670

Comments:

① checked rep A-4.8, B-6.2, C-6.4, D-6.3, E-5.7

Reviewed by:

② checked rep A-6.2, B-6.0, C-6.4, D-5.5, E-6.2

Date Reviewed:

John

Oct-12/18

10-d Chironomid Sediment Toxicity Test Data Sheet Freshwater Sediment 10-d Survival and Weight

Client:

Aimurth Consulting

W.O. #:

181440

Sample ID:

see below

Start Date:

Sept 7/18

Termination Date:

Sept 17/18

Test Organism:

Chironomus dilutus

Balance:

1

Sample ID	Pan No.	Rep	No. alive	No. dead	No. missing	Initials	Pan weight (mg)	Pan + organism (mg)	No. weighed	Initials
Control Sediment	1	A	90	0	1	KSL	1017.35	1032.22	8	KSL
	2	B	90	0	1		99.18 988.51	1007.63	7	
	3	C	100	0	0		1027.86	1042.60	9	
	4	D	10	0	0		1010.88	1026.67	10	
	5	E	80	0	2		1033.51	1043.99	5	
PDL	6	A	90	1	0	VW	1035.65	1055.59	8	
	7	B	8	0	2		1030.03	1049.55	8	
	8	C	10	0	0		1013.23	1035.11	10	
	9	D	10	0	0		1028.55	1051.92	10	
	10	E	100	0	0		1023.25	1042.98	9	
INUG	11	A	10	0	0	JAB	1016.10	1038.65	10	
	12	B	100	0	0		1007.90	1028.51	9	
	13	C	90	0	1		1029.41	1041.23	5	
	14	D	9	0	1		1016.21	1038.50	9	
	15	E	90	0	1		1007.35	1026.10	8	
TPE	16	A	10	0	0	ML	1010.18	1028.70	10	
	17	B	8	0	2		1014.33	1028.41	8	
	18	C	10	0	0		1022.12	1039.88	10	
	19	D	10	0	0		1018.42	1037.45	10	
	20	E	10	0	0		1003.18	1023.15	10	

Comments:

① 1 pupae ② 2 pupae ③ 2 pupae ④ 3 midge ⑤ 1 midge
Reweighed pans 6-1055.43 11-1032.23

Reviewed by:

JOK

Date Reviewed:

Oct. 12/18

10-d Chironomid Sediment Toxicity Test Data Sheet
Freshwater Sediment 10-d Survival and Weight

Client: Azimuth Consulting Start Date: Sept 7/18
W.O. #: 181440 Termination Date: Sept 17/18
Sample ID: See below Test Organism: Chironomus dilutus
Balance: 1

Sample ID	A ₂ Pan No.	Rep	No. alive	No. dead	No. missing	Initials	Pan weight (mg)	Pan + organism (mg)	No. weighed	Initials
Control Sediment	21	A	90	1	0	ML	981.61	998.75	8	KSL
WAL	22	B	10	0	0		1010.84	1036.89	10	
	23	C	9	0	1		993.07	1011.48	9	
	24	D	6 (2)	0	4		1017.67	1030.07	5	
	25	E	80	0	2		1013.84	1032.41	7	
LK8	26	A	90	0	1	WML	998.86	1014.96	8	
	27	B	9	0	1		1023.30	1042.30	9	
	28	C	9 (10)	0	4		1028.82	1040.45	5	
	29	D	10 (9)	0	0		1029.17	1050.16	9	
	30	E	9	0	1		1026.07	1048.87	9	
MAM	31	A	8	0	2	KSL	1011.46	1033.43	8	
	32	B	8	0	2		1028.93	1045.44	8	
	33	C	100	0	0		984.02	1006.24	9	
	34	D	80	0	2		1018.29	1035.06	7	
	35	E	80	0	2		1026.18	1042.35	7	
WTN	36	A	8	0	2	CW	1036.91	1053.18	8	
	37	B	9	0	1	CW	1025.98	1047.93	9	
	38	C	9 (8)	0	1	CW	1027.12	1043.86	8	
	39	D	10	0	0	CW	1006.40	1027.28	10	
	40	E	9 (8)	0	1	CW	1005.70	1028.10	8	

Comments: ① one pupae ② checked by KSL
② one midge Resigned 25-1031.91 31-1033.03

Reviewed by: WML Date Reviewed: Oct-12/18

CETIS Summary Report

Report Date: 18 Oct-18 10:54 (p 1 of 8)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Batch ID: 07-4744-8910	Test Type: Growth-Survival (10d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/32	Diluent: Reconstituted Water
Ending Date: 17 Sep-18	Species: Chironomus tentans	Brine:
Test Length: 10d 0h	Taxon: Insecta	Source: Aquatic Biosystems, CO Age: 3rd

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
Control Sedimen	18-0902-3464	07 Sep-18	07 Sep-18	n/a	Azimuth	
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)		
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
Control Sedimen	Sediment Sample	Azimuth	Control Sediment	
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1

CETIS Summary Report

 Report Date: 18 Oct-18 10:54 (p 2 of 8)
 Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	TPE - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	PDL passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	WAL - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	WTN passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	Control Sedimen passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	MAM passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	LK8 passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	INUG passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	PDL passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	Control Sedimen passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	WTN passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	TPE - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	MAM passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	LK8 passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	INUG passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8189	WAL - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8978	PDL passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8978	TPE - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8978	INUG passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8978	Control Sedimen passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8978	WTN passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8978	MAM passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8978	WAL - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.8978	LK8 passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	PDL passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	TPE - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	WAL - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	Control Sedimen passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	WTN passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	MAM passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	INUG passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	LK8 passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	LK8 passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	WTN passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	WAL - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	TPE - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	MAM passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	INUG passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	PDL passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	Control Sedimen passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	Control Sedimen passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	INUG passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	WTN passed 10d survival rate	1

CETIS Summary Report

Report Date: 18 Oct-18 10:54 (p 3 of 8)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	MAM passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	LK8 passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	TPE - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	WAL - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	PDL passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	PDL passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	TPE - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	WTN passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	LK8 passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	MAM passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	WAL - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	Control Sedimen passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.6357	INUG passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	INUG passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	Control Sedimen passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	PDL passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	LK8 passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	MAM passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	WTN passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	TPE - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	WAL - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	INUG passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	LK8 passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	Control Sedimen passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	PDL passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	WAL - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	MAM passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	TPE - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	0.5992	WTN passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
00-4244-0124	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1

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Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
04-7062-6830	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WAL - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	TPE - TOX passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	WTN passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	LK8 passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	INUG passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	MAM passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	Control Sedimen passed 10d survival rate	1
10-7290-4489	10d Survival Rate	Fisher Exact/Bonferroni-Holm Test	1.0000	PDL passed 10d survival rate	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	LK8 passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	WAL - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	TPE - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	Control Sedimen passed mean dry weight-	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	MAM passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	INUG passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	PDL passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	WTN passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7886	INUG passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7886	LK8 passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7886	TPE - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7886	Control Sedimen passed mean dry weight-	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7886	WAL - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7886	MAM passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7886	PDL passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.7886	WTN passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9088	LK8 passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9088	WAL - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9088	WTN passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9088	Control Sedimen passed mean dry weight-	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9088	MAM passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9088	INUG passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9088	TPE - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9088	PDL passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	LK8 passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	WAL - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	WTN passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	PDL passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	INUG passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	Control Sedimen passed mean dry weight-	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	TPE - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	MAM passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	WAL - TOX failed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	TPE - TOX failed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	Control Sedimen failed mean dry weight-m	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	WTN failed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	LK8 failed mean dry weight-mg	1

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Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	INUG failed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	MAM failed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.0013	PDL failed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8571	Control Sedimen passed mean dry weight-	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8571	WTN passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8571	TPE - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8571	LK8 passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8571	WAL - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8571	INUG passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8571	MAM passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.8571	PDL passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	7.1E-04	Control Sedimen failed mean dry weight-m	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	7.1E-04	WTN failed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	7.1E-04	MAM failed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	7.1E-04	LK8 failed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	7.1E-04	WAL - TOX failed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	7.1E-04	TPE - TOX failed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	7.1E-04	INUG failed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	7.1E-04	PDL failed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9584	WAL - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9584	LK8 passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9584	INUG passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9584	TPE - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9584	WTN passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9584	MAM passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9584	PDL passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9584	Control Sedimen passed mean dry weight-	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	TPE - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	PDL passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	MAM passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	LK8 passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	WAL - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	INUG passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	Control Sedimen passed mean dry weight-	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	WTN passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9292	MAM passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9292	WAL - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9292	Control Sedimen passed mean dry weight-	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9292	LK8 passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9292	INUG passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9292	WTN passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9292	PDL passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9292	TPE - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2684	Control Sedimen passed mean dry weight-	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2684	LK8 passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2684	TPE - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2684	WTN passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2684	PDL passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2684	INUG passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2684	MAM passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.2684	WAL - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9999	MAM passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9999	Control Sedimen passed mean dry weight-	1

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Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9999	PDL passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9999	WAL - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9999	WTN passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9999	LK8 passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9999	INUG passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9999	TPE - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1941	LK8 passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1941	INUG passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1941	TPE - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1941	WAL - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1941	WTN passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1941	PDL passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1941	Control Sedimen passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1941	MAM passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9679	WAL - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9679	INUG passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9679	PDL passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9679	TPE - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9679	Control Sedimen passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9679	LK8 passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9679	MAM passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9679	WTN passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	WTN passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	PDL passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	WAL - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	LK8 passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	MAM passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	Control Sedimen passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	TPE - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	1.0000	INUG passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9440	WTN passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9440	INUG passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9440	TPE - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9440	WAL - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9440	PDL passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9440	LK8 passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9440	Control Sedimen passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9440	MAM passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1688	PDL passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1688	INUG passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1688	WTN passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1688	WAL - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1688	LK8 passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1688	MAM passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1688	TPE - TOX passed mean dry weight-mg	1
13-6579-9678	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1688	Control Sedimen passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9997	INUG passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9997	PDL passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9997	Control Sedimen passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9997	WAL - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9997	MAM passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9997	TPE - TOX passed mean dry weight-mg	1
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9997	WTN passed mean dry weight-mg	1

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Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
16-1813-3956	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.9997	LK8 passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1159	INUG passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1159	PDL passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1159	TPE - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1159	WAL - TOX passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1159	LK8 passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1159	Control Sedimen passed mean dry weight-	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1159	WTN passed mean dry weight-mg	1
16-5854-8505	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	0.1159	MAM passed mean dry weight-mg	1

10d Survival Rate Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
Control Sedimen	N	5	0.9200	0.8161	1.0000	0.8000	1.0000	0.0374	0.0837	9.09%	0.00%
PDL		5	0.9400	0.8289	1.0000	0.8000	1.0000	0.0400	0.0894	9.52%	-2.17%
INUG	RS	5	0.9400	0.8720	1.0000	0.9000	1.0000	0.0245	0.0548	5.83%	-2.17%
TPE - TOX		5	0.9600	0.8489	1.0000	0.8000	1.0000	0.0400	0.0894	9.32%	-4.35%
WAL - TOX		5	0.8400	0.6517	1.0000	0.6000	1.0000	0.0678	0.1517	18.05%	8.70%
LK8		5	0.8600	0.6717	1.0000	0.6000	1.0000	0.0678	0.1517	17.63%	6.52%
MAM		5	0.8400	0.7289	0.9511	0.8000	1.0000	0.0400	0.0894	10.65%	8.70%
WTN		5	0.9000	0.8122	0.9878	0.8000	1.0000	0.0316	0.0707	7.86%	2.17%

Mean Dry Weight-mg Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
Control Sedimen	N	5	1.866	1.541	2.191	1.579	2.16	0.117	0.2616	14.02%	0.00%
PDL		5	2.32	2.145	2.494	2.188	2.492	0.06285	0.1405	6.06%	-24.31%
INUG	RS	5	2.346	2.24	2.451	2.255	2.477	0.03796	0.08488	3.62%	-25.70%
TPE - TOX		5	1.858	1.738	1.978	1.76	1.997	0.04333	0.09688	5.22%	0.46%
WAL - TOX		5	2.385	2.043	2.727	2.046	2.653	0.1231	0.2753	11.54%	-27.80%
LK8		5	2.152	1.942	2.362	1.978	2.332	0.07558	0.169	7.85%	-15.30%
MAM		5	2.397	2.089	2.705	2.064	2.746	0.1109	0.2479	10.34%	-28.43%
WTN		5	2.116	1.876	2.355	1.925	2.439	0.08627	0.1929	9.12%	-13.36%

10d Survival Rate Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	0.9000	0.9000	1.0000	1.0000	0.8000
PDL		0.9000	0.8000	1.0000	1.0000	1.0000
INUG	RS	1.0000	1.0000	0.9000	0.9000	0.9000
TPE - TOX		1.0000	0.8000	1.0000	1.0000	1.0000
WAL - TOX		0.9000	1.0000	0.9000	0.6000	0.8000
LK8		0.9000	0.9000	0.6000	1.0000	0.9000
MAM		0.8000	0.8000	1.0000	0.8000	0.8000
WTN		0.8000	0.9000	0.9000	1.0000	0.9000

Mean Dry Weight-mg Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	1.859	2.16	1.638	1.579	2.096
PDL		2.492	2.44	2.188	2.287	2.192
INUG	RS	2.255	2.29	2.364	2.477	2.344
TPE - TOX		1.852	1.76	1.777	1.903	1.997
WAL - TOX		2.143	2.605	2.046	2.48	2.653
LK8		2.013	2.111	2.326	2.332	1.978
MAM		2.746	2.064	2.469	2.396	2.31
WTN		2.034	2.439	2.092	2.088	1.925

CETIS Summary Report

Report Date: 18 Oct-18 10:54 (p 8 of 8)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

10d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	9/10	9/10	10/10	10/10	8/10
PDL		9/10	8/10	10/10	10/10	10/10
INUG	RS	10/10	10/10	9/10	9/10	9/10
TPE - TOX		10/10	8/10	10/10	10/10	10/10
WAL - TOX		9/10	10/10	9/10	6/10	8/10
LK8		9/10	9/10	6/10	10/10	9/10
MAM		8/10	8/10	10/10	8/10	8/10
WTN		8/10	9/10	9/10	10/10	9/10

CETIS Analytical Report

Report Date: 18 Oct-18 10:50 (p 1 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 10-7290-4489 Endpoint: 10d Survival Rate CETIS Version: CETISv1.9.4
Analyzed: 18 Oct-18 10:50 Analysis: STP 2xK Contingency Tables Status Level: 1

Batch ID: 07-4744-8910 Test Type: Growth-Survival (10d) Analyst: Karen Lee
Start Date: 07 Sep-18 Protocol: EC/EPS 1/RM/32 Diluent: Reconstituted Water
Ending Date: 17 Sep-18 Species: Chironomus tentans Brine:
Test Length: 10d 0h Taxon: Insecta Source: Aquatic Biosystems, CO Age: 3rd

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
Control Sedimen	18-0902-3464	07 Sep-18	07 Sep-18	n/a	Azimuth	
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)		
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
Control Sedimen	Sediment Sample	Azimuth	Control Sediment	
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Fisher Exact/Bonferroni-Holm Test

Sample I	vs	Sample II	Test Stat	P-Type	P-Value	Decision(α:5%)
Negative Control		PDL	0.7820	Exact	1.0000	Non-Significant Effect
		INUG	0.7820	Exact	1.0000	Non-Significant Effect
		TPE - TOX	0.8978	Exact	0.8978	Non-Significant Effect
		WAL - TOX	0.1783	Exact	1.0000	Non-Significant Effect
		LK8	0.2623	Exact	1.0000	Non-Significant Effect
		MAM	0.1783	Exact	1.0000	Non-Significant Effect
		WTN	0.5000	Exact	1.0000	Non-Significant Effect

Data Summary

Sample	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
Control Sedimen	N	46	4	50	0.92	0.08	-9.52%
PDL		47	3	50	0.94	0.06	-11.9%
INUG		47	3	50	0.94	0.06	-11.9%
TPE - TOX		48	2	50	0.96	0.04	-14.29%
WAL - TOX		42	8	50	0.84	0.16	0.0%
LK8		43	7	50	0.86	0.14	-2.38%
MAM		42	8	50	0.84	0.16	0.0%
WTN		45	5	50	0.9	0.1	-7.14%

10d Survival Rate Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	0.9000	0.9000	1.0000	1.0000	0.8000
PDL		0.9000	0.8000	1.0000	1.0000	1.0000
INUG		1.0000	1.0000	0.9000	0.9000	0.9000
TPE - TOX		1.0000	0.8000	1.0000	1.0000	1.0000
WAL - TOX		0.9000	1.0000	0.9000	0.6000	0.8000
LK8		0.9000	0.9000	0.6000	1.0000	0.9000
MAM		0.8000	0.8000	1.0000	0.8000	0.8000
WTN		0.8000	0.9000	0.9000	1.0000	0.9000

CETIS Analytical Report

Report Date: 18 Oct-18 10:50 (p 2 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 10-7290-4489
Analyzed: 18 Oct-18 10:50

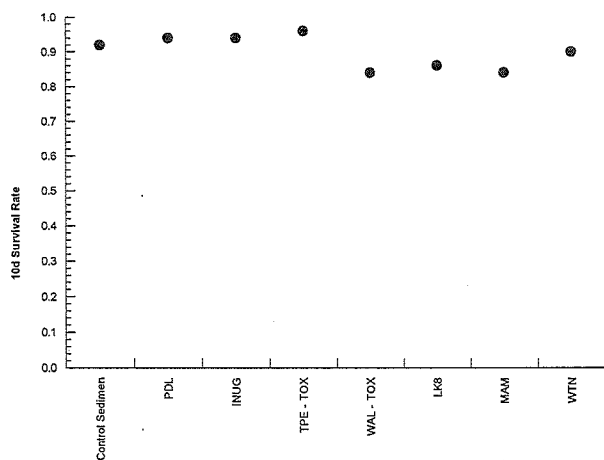
Endpoint: 10d Survival Rate
Analysis: STP 2xK Contingency Tables

CETIS Version: CETISv1.9.4
Status Level: 1

10d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	9/10	9/10	10/10	10/10	8/10
PDL		9/10	8/10	10/10	10/10	10/10
INUG		10/10	10/10	9/10	9/10	9/10
TPE - TOX		10/10	8/10	10/10	10/10	10/10
WAL - TOX		9/10	10/10	9/10	6/10	8/10
LK8		9/10	9/10	6/10	10/10	9/10
MAM		8/10	8/10	10/10	8/10	8/10
WTN		8/10	9/10	9/10	10/10	9/10

Graphics



CETIS Analytical Report

Report Date: 18 Oct-18 10:51 (p 1 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 04-7062-6830	Endpoint: 10d Survival Rate	CETIS Version: CETISv1.9.4
Analyzed: 18 Oct-18 10:51	Analysis: STP 2xK Contingency Tables	Status Level: 1
Batch ID: 07-4744-8910	Test Type: Growth-Survival (10d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/32	Diluent: Reconstituted Water
Ending Date: 17 Sep-18	Species: Chironomus tentans	Brine:
Test Length: 10d 0h	Taxon: Insecta	Source: Aquatic Biosystems, CO Age: 3rd

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)	Azimuth	
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Fisher Exact/Bonferroni-Holm Test

Sample I	vs	Sample II	Test Stat	P-Type	P-Value	Decision(α:5%)
Reference Sed		INUG	0.6611	Exact	1.0000	Non-Significant Effect
(PDL)		TPE - TOX	0.8189	Exact	0.8189	Non-Significant Effect
		WAL - TOX	0.0999	Exact	0.5992	Non-Significant Effect
		LK8	0.1589	Exact	0.6357	Non-Significant Effect
		MAM	0.0999	Exact	0.5992	Non-Significant Effect
		WTN	0.3575	Exact	1.0000	Non-Significant Effect

Data Summary

Sample	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
PDL	RS	47	3	50	0.94	0.06	-11.9%
INUG		47	3	50	0.94	0.06	-11.9%
TPE - TOX		48	2	50	0.96	0.04	-14.29%
WAL - TOX		42	8	50	0.84	0.16	0.0%
LK8		43	7	50	0.86	0.14	-2.38%
MAM		42	8	50	0.84	0.16	0.0%
WTN		45	5	50	0.9	0.1	-7.14%

10d Survival Rate Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	0.9000	0.8000	1.0000	1.0000	1.0000
INUG		1.0000	1.0000	0.9000	0.9000	0.9000
TPE - TOX		1.0000	0.8000	1.0000	1.0000	1.0000
WAL - TOX		0.9000	1.0000	0.9000	0.6000	0.8000
LK8		0.9000	0.9000	0.6000	1.0000	0.9000
MAM		0.8000	0.8000	1.0000	0.8000	0.8000
WTN		0.8000	0.9000	0.9000	1.0000	0.9000

CETIS Analytical Report

Report Date: 18 Oct-18 10:51 (p 2 of 2)
 Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

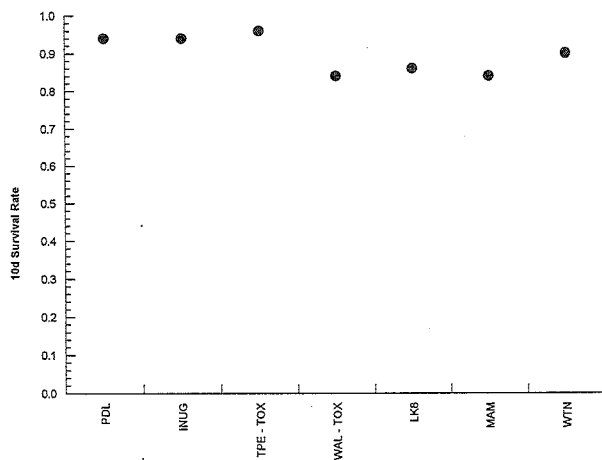
Analysis ID: 04-7062-6830 Endpoint: 10d Survival Rate
 Analyzed: 18 Oct-18 10:51 Analysis: STP 2xK Contingency Tables

CETIS Version: CETISv1.9.4
 Status Level: 1

10d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	9/10	8/10	10/10	10/10	10/10
INUG		10/10	10/10	9/10	9/10	9/10
TPE - TOX		10/10	8/10	10/10	10/10	10/10
WAL - TOX		9/10	10/10	9/10	6/10	8/10
LK8		9/10	9/10	6/10	10/10	9/10
MAM		8/10	8/10	10/10	8/10	8/10
WTN		8/10	9/10	9/10	10/10	9/10

Graphics



CETIS Analytical Report

Report Date: 18 Oct-18 10:54 (p 1 of 2)
 Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 00-4244-0124	Endpoint: 10d Survival Rate	CETIS Version: CETISv1.9.4
Analyzed: 18 Oct-18 10:54	Analysis: STP 2xK Contingency Tables	Status Level: 1
Batch ID: 07-4744-8910	Test Type: Growth-Survival (10d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/32	Diluent: Reconstituted Water
Ending Date: 17 Sep-18	Species: Chironomus tentans	Brine:
Test Length: 10d 0h	Taxon: Insecta	Source: Aquatic Biosystems, CO Age: 3rd

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)	Azimuth	
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Fisher Exact/Bonferroni-Holm Test

Sample I	vs	Sample II	Test Stat	P-Type	P-Value	Decision(α:5%)
Reference Sed		PDL	0.6611	Exact	1.0000	Non-Significant Effect
(INUG)		TPE - TOX	0.8189	Exact	0.8189	Non-Significant Effect
		WAL - TOX	0.0999	Exact	0.5992	Non-Significant Effect
		LK8	0.1589	Exact	0.6357	Non-Significant Effect
		MAM	0.0999	Exact	0.5992	Non-Significant Effect
		WTN	0.3575	Exact	1.0000	Non-Significant Effect

Data Summary

Sample	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
PDL		47	3	50	0.94	0.06	-11.9%
INUG	RS	47	3	50	0.94	0.06	-11.9%
TPE - TOX		48	2	50	0.96	0.04	-14.29%
WAL - TOX		42	8	50	0.84	0.16	0.0%
LK8		43	7	50	0.86	0.14	-2.38%
MAM		42	8	50	0.84	0.16	0.0%
WTN		45	5	50	0.9	0.1	-7.14%

10d Survival Rate Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL		0.9000	0.8000	1.0000	1.0000	1.0000
INUG	RS	1.0000	1.0000	0.9000	0.9000	0.9000
TPE - TOX		1.0000	0.8000	1.0000	1.0000	1.0000
WAL - TOX		0.9000	1.0000	0.9000	0.6000	0.8000
LK8		0.9000	0.9000	0.6000	1.0000	0.9000
MAM		0.8000	0.8000	1.0000	0.8000	0.8000
WTN		0.8000	0.9000	0.9000	1.0000	0.9000

Oct-18/18

CETIS Analytical Report

Report Date: 18 Oct-18 10:54 (p 2 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 00-4244-0124
Analyzed: 18 Oct-18 10:54

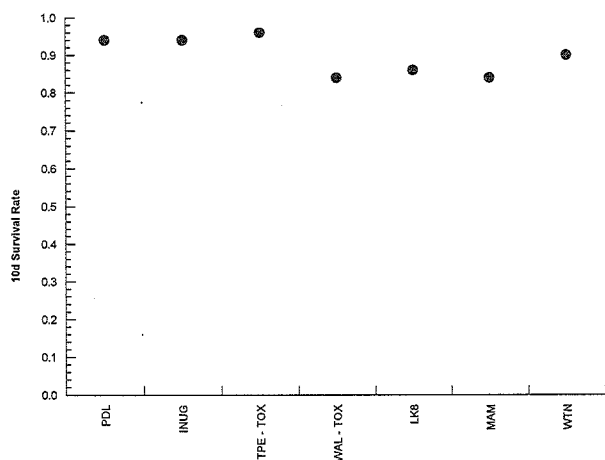
Endpoint: 10d Survival Rate
Analysis: STP 2xK Contingency Tables

CETIS Version: CETISv1.9.4
Status Level: 1

10d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL		9/10	8/10	10/10	10/10	10/10
INUG	RS	10/10	10/10	9/10	9/10	9/10
TPE - TOX		10/10	8/10	10/10	10/10	10/10
WAL - TOX		9/10	10/10	9/10	6/10	8/10
LK8		9/10	9/10	6/10	10/10	9/10
MAM		8/10	8/10	10/10	8/10	8/10
WTN		8/10	9/10	9/10	10/10	9/10

Graphics



CETIS Analytical Report

Report Date: 18 Sep-18 16:15 (p 1 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 16-1813-3956	Endpoint: Mean Dry Weight-mg	CETIS Version: CETISv1.9.4
Analyzed: 18 Sep-18 16:15	Analysis: Parametric-Control vs Treatments	Status Level: 1
Batch ID: 07-4744-8910	Test Type: Growth-Survival (10d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/32	Diluent: Reconstituted Water
Ending Date: 17 Sep-18	Species: Chironomus tentans	Brine:
Test Length: 10d 0h	Taxon: Insecta	Source: Aquatic Biosystems, CO Age: 3rd

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
Control Sedimen	18-0902-3464	07 Sep-18	07 Sep-18	n/a	Azimuth	
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)		
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
Control Sedimen	Sediment Sample	Azimuth	Control Sediment	
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	PDL passed mean dry weight-mg	16.25%
		INUG passed mean dry weight-mg	16.25%
		TPE - TOX passed mean dry weight-mg	16.25%
		WAL - TOX passed mean dry weight-mg	16.25%
		LK8 passed mean dry weight-mg	16.25%
		MAM passed mean dry weight-mg	16.25%
		WTN passed mean dry weight-mg	16.25%

Dunnett Multiple Comparison Test

Sample I	vs	Sample II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		PDL	-3.657	2.445	0.303	8	CDF	1.0000	Non-Significant Effect
		INUG	-3.866	2.445	0.303	8	CDF	1.0000	Non-Significant Effect
		TPE - TOX	0.06856	2.445	0.303	8	CDF	0.8571	Non-Significant Effect
		WAL - TOX	-4.182	2.445	0.303	8	CDF	1.0000	Non-Significant Effect
		LK8	-2.302	2.445	0.303	8	CDF	0.9999	Non-Significant Effect
		MAM	-4.277	2.445	0.303	8	CDF	1.0000	Non-Significant Effect
		WTN	-2.01	2.445	0.303	8	CDF	0.9997	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Control Trend	Mann-Kendall Trend Test			0.8151	Non-Significant Trend in Controls

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1.71701	0.245287	7	6.375	9.8E-05	Significant Effect
Error	1.23127	0.0384771	32			
Total	2.94828		39			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	8.639	18.48	0.2796	Equal Variances

CETIS Analytical Report

Report Date: 18 Sep-18 16:15 (p 2 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 16-1813-3956 Endpoint: Mean Dry Weight-mg CETIS Version: CETISv1.9.4
Analyzed: 18 Sep-18 16:15 Analysis: Parametric-Control vs Treatments Status Level: 1

Distribution Shapiro-Wilk W Normality Test 0.9805 0.9236 0.7075 Normal Distribution

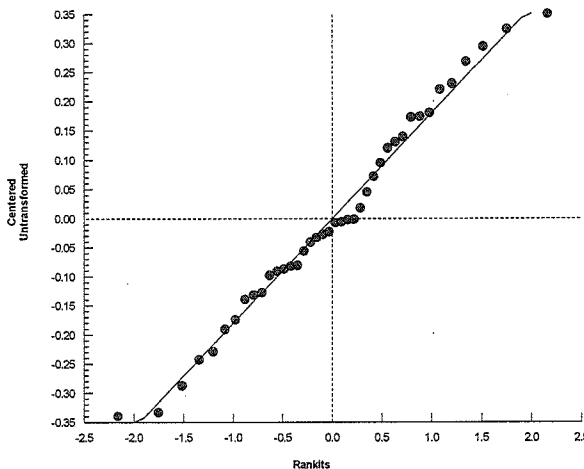
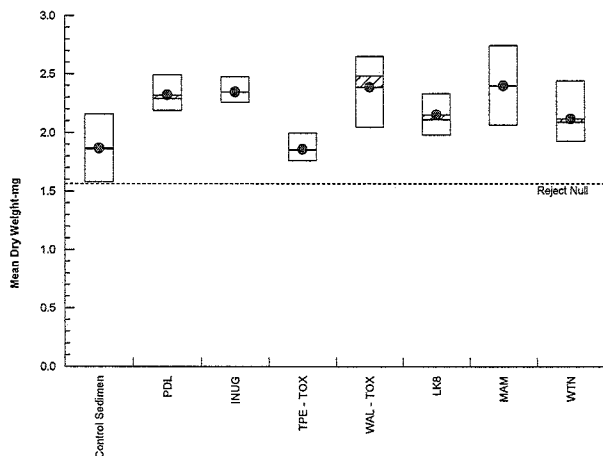
Mean Dry Weight-mg Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
Control Sedimen	N	5	1.866	1.541	2.191	1.859	1.579	2.16	0.117	14.02%	0.00%
PDL		5	2.32	2.145	2.494	2.287	2.188	2.492	0.06285	6.06%	-24.31%
INUG		5	2.346	2.24	2.451	2.344	2.255	2.477	0.03796	3.62%	-25.70%
TPE - TOX		5	1.858	1.738	1.978	1.852	1.76	1.997	0.04333	5.22%	0.46%
WAL - TOX		5	2.385	2.043	2.727	2.48	2.046	2.653	0.1231	11.54%	-27.80%
LK8		5	2.152	1.942	2.362	2.111	1.978	2.332	0.07558	7.85%	-15.30%
MAM		5	2.397	2.089	2.705	2.396	2.064	2.746	0.1109	10.34%	-28.43%
WTN		5	2.116	1.876	2.355	2.088	1.925	2.439	0.08627	9.12%	-13.36%

Mean Dry Weight-mg Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Control Sedimen	N	1.859	2.16	1.638	1.579	2.096
PDL		2.492	2.44	2.188	2.287	2.192
INUG		2.255	2.29	2.364	2.477	2.344
TPE - TOX		1.852	1.76	1.777	1.903	1.997
WAL - TOX		2.143	2.605	2.046	2.48	2.653
LK8		2.013	2.111	2.326	2.332	1.978
MAM		2.746	2.064	2.469	2.396	2.31
WTN		2.034	2.439	2.092	2.088	1.925

Graphics



CETIS Analytical Report

Report Date: 18 Sep-18 16:16 (p 1 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 13-6579-9678	Endpoint: Mean Dry Weight-mg	CETIS Version: CETISv1.9.4
Analyzed: 18 Sep-18 16:16	Analysis: Parametric-Control vs Treatments	Status Level: 1
Batch ID: 07-4744-8910	Test Type: Growth-Survival (10d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/32	Diluent: Reconstituted Water
Ending Date: 17 Sep-18	Species: Chironomus tentans	Brine:
Test Length: 10d 0h	Taxon: Insecta	Source: Aquatic Biosystems, CO Age: 3rd

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)	Azimuth	
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	INUG passed mean dry weight-mg	12.14%
		TPE - TOX failed mean dry weight-mg	12.14%
		WAL - TOX passed mean dry weight-mg	12.14%
		LK8 passed mean dry weight-mg	12.14%
		MAM passed mean dry weight-mg	12.14%
		WTN passed mean dry weight-mg	12.14%

Dunnett Multiple Comparison Test

Sample I	vs	Sample II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed (PDL)		INUG	-0.2218	2.407	0.282	8	CDF	0.9088	Non-Significant Effect
		TPE - TOX*	3.952	2.407	0.282	8	CDF	0.0013	Significant Effect
		WAL - TOX	-0.5578	2.407	0.282	8	CDF	0.9584	Non-Significant Effect
		LK8	1.437	2.407	0.282	8	CDF	0.2684	Non-Significant Effect
		MAM	-0.6582	2.407	0.282	8	CDF	0.9679	Non-Significant Effect
		WTN	1.747	2.407	0.282	8	CDF	0.1688	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Control Trend	Mann-Kendall Trend Test			0.2269	Non-Significant Trend in Controls

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1.15489	0.192481	6	5.629	6.2E-04	Significant Effect
Error	0.957427	0.0341938	28			
Total	2.11231		34			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	7.715	16.81	0.2598	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9825	0.9146	0.8371	Normal Distribution

CETIS Analytical Report

Report Date: 18 Sep-18 16:16 (p 2 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 13-6579-9678 Endpoint: Mean Dry Weight-mg
Analyzed: 18 Sep-18 16:16 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.9.4
Status Level: 1

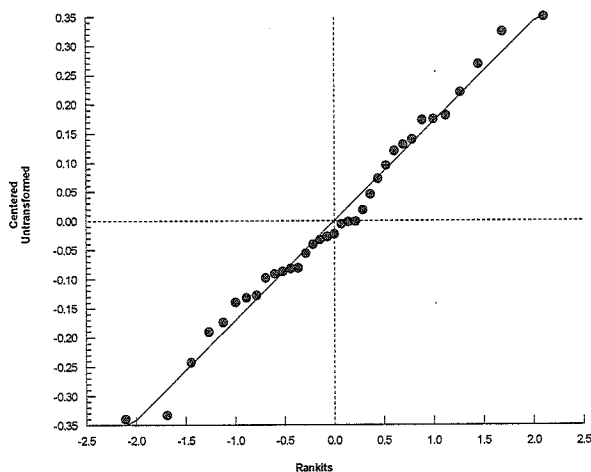
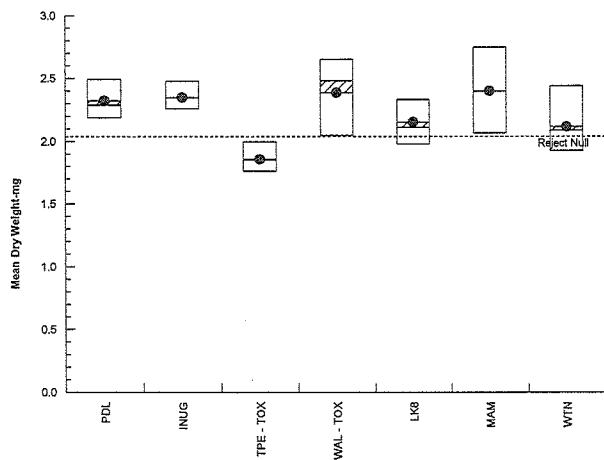
Mean Dry Weight-mg Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
PDL	RS	5	2.32	2.145	2.494	2.287	2.188	2.492	0.06285	6.06%	0.00%
INUG		5	2.346	2.24	2.451	2.344	2.255	2.477	0.03796	3.62%	-1.12%
TPE - TOX		5	1.858	1.738	1.978	1.852	1.76	1.997	0.04333	5.22%	19.92%
WAL - TOX		5	2.385	2.043	2.727	2.48	2.046	2.653	0.1231	11.54%	-2.81%
LK8		5	2.152	1.942	2.362	2.111	1.978	2.332	0.07558	7.85%	7.24%
MAM		5	2.397	2.089	2.705	2.396	2.064	2.746	0.1109	10.34%	-3.32%
WTN		5	2.116	1.876	2.355	2.088	1.925	2.439	0.08627	9.12%	8.81%

Mean Dry Weight-mg Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	2.492	2.44	2.188	2.287	2.192
INUG		2.255	2.29	2.364	2.477	2.344
TPE - TOX		1.852	1.76	1.777	1.903	1.997
WAL - TOX		2.143	2.605	2.046	2.48	2.653
LK8		2.013	2.111	2.326	2.332	1.978
MAM		2.746	2.064	2.469	2.396	2.31
WTN		2.034	2.439	2.092	2.088	1.925

Graphics



06-12/18

CETIS Analytical Report

 Report Date: 18 Sep-18 16:17 (p 1 of 2)
 Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 16-5854-8505	Endpoint: Mean Dry Weight-mg	CETIS Version: CETISv1.9.4
Analyzed: 18 Sep-18 16:16	Analysis: Parametric-Control vs Treatments	Status Level: 1
Batch ID: 07-4744-8910	Test Type: Growth-Survival (10d)	Analyst: Karen Lee
Start Date: 07 Sep-18	Protocol: EC/EPS 1/RM/32	Diluent: Reconstituted Water
Ending Date: 17 Sep-18	Species: Chironomus tentans	Brine:
Test Length: 10d 0h	Taxon: Insecta	Source: Aquatic Biosystems, CO Age: 3rd

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
PDL	07-5180-6523	14 Aug-18 12:00	30 Aug-18 09:30	23d 12h (18 °C)	Azimuth	
INUG	10-0423-6071	14 Aug-18 09:00	30 Aug-18 09:30	23d 15h (18 °C)		
TPE - TOX	08-8020-5994	10 Aug-18 09:00	30 Aug-18 09:30	27d 15h (18 °C)		
WAL - TOX	03-3406-1537	11 Aug-18 12:30	30 Aug-18 09:30	26d 11h (18 °C)		
LK8	18-6888-4228	17 Aug-18 11:00	30 Aug-18 09:30	20d 13h (18 °C)		
MAM	13-2378-6019	16 Aug-18 11:30	30 Aug-18 09:30	21d 13h (18 °C)		
WTN	09-8213-3999	18 Aug-18 10:00	30 Aug-18 09:30	19d 14h (18 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
PDL	Sediment Sample	Azimuth	PDL	
INUG	Sediment Sample	Azimuth	INUG	
TPE - TOX	Sediment Sample	Azimuth	TPE - TOX	
WAL - TOX	Sediment Sample	Azimuth	WAL - TOX	
LK8	Sediment Sample	Azimuth	LK8	
MAM	Sediment Sample	Azimuth	MAM	
WTN	Sediment Sample	Azimuth	WTN	

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	PDL passed mean dry weight-mg	12.00%
		TPE - TOX failed mean dry weight-mg	12.00%
		WAL - TOX passed mean dry weight-mg	12.00%
		LK8 passed mean dry weight-mg	12.00%
		MAM passed mean dry weight-mg	12.00%
		WTN passed mean dry weight-mg	12.00%

Dunnett Multiple Comparison Test

Sample I	vs	Sample II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed		PDL	0.2218	2.407	0.282	8	CDF	0.7886	Non-Significant Effect
(INUG)		TPE - TOX*	4.173	2.407	0.282	8	CDF	7.1E-04	Significant Effect
		WAL - TOX	-0.336	2.407	0.282	8	CDF	0.9292	Non-Significant Effect
		LK8	1.658	2.407	0.282	8	CDF	0.1941	Non-Significant Effect
		MAM	-0.4364	2.407	0.282	8	CDF	0.9440	Non-Significant Effect
		WTN	1.969	2.407	0.282	8	CDF	0.1159	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Control Trend	Mann-Kendall Trend Test			0.2269	Non-Significant Trend in Controls

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1.15489	0.192481	6	5.629	6.2E-04	Significant Effect
Error	0.957427	0.0341938	28			
Total	2.11231		34			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	7.715	16.81	0.2598	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9825	0.9146	0.8371	Normal Distribution

CETIS Analytical Report

Report Date: 18 Sep-18 16:17 (p 2 of 2)
Test Code/ID: 181440 / 16-9923-8432

Chironomus 10-d Survival and Growth Sediment Test

Nautilus Environmental

Analysis ID: 16-5854-8505
Analyzed: 18 Sep-18 16:16
Endpoint: Mean Dry Weight-mg
Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.9.4
Status Level: 1

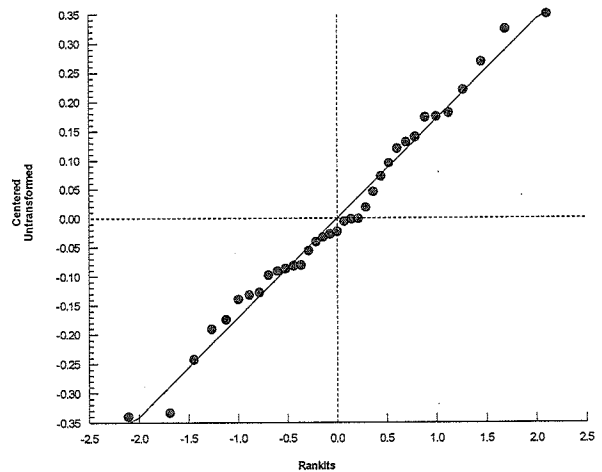
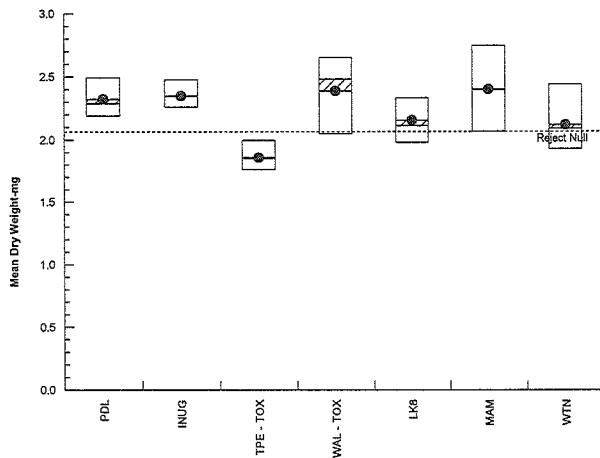
Mean Dry Weight-mg Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
PDL	RS	5	2.32	2.145	2.494	2.287	2.188	2.492	0.06285	6.06%	0.00%
INUG		5	2.346	2.24	2.451	2.344	2.255	2.477	0.03796	3.62%	-1.12%
TPE - TOX		5	1.858	1.738	1.978	1.852	1.76	1.997	0.04333	5.22%	19.92%
WAL - TOX		5	2.385	2.043	2.727	2.48	2.046	2.653	0.1231	11.54%	-2.81%
LK8		5	2.152	1.942	2.362	2.111	1.978	2.332	0.07558	7.85%	7.24%
MAM		5	2.397	2.089	2.705	2.396	2.064	2.746	0.1109	10.34%	-3.32%
WTN		5	2.116	1.876	2.355	2.088	1.925	2.439	0.08627	9.12%	8.81%

Mean Dry Weight-mg Detail

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
PDL	RS	2.492	2.44	2.188	2.287	2.192
INUG		2.255	2.29	2.364	2.477	2.344
TPE - TOX		1.852	1.76	1.777	1.903	1.997
WAL - TOX		2.143	2.605	2.046	2.48	2.653
LK8		2.013	2.111	2.326	2.332	1.978
MAM		2.746	2.064	2.469	2.396	2.31
WTN		2.034	2.439	2.092	2.088	1.925

Graphics



APPENDIX C – Analytical Chemistry



NAUTILUS ENVIRONMENTAL

ATTN: Karen Lee

8664 Commerce Court

Imperial Square Lake City

Burnaby BC V5A 4N7

Date Received: 14-SEP-18

Report Date: 21-SEP-18 14:19 (MT)

Version: FINAL

Client Phone: 604-420-8773

Certificate of Analysis

Lab Work Order #: L2164584

Project P.O. #: NOT SUBMITTED

Job Reference:

C of C Numbers:

Legal Site Desc:

Heather McKenzie
Account Manager

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ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Ammonia, Total (as N)	MS-B	L2164584-1, -2, -3, -5, -6, -7, -8
Qualifiers for Individual Parameters Listed:			
Qualifier	Description		
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.		

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
NH3-F-VA	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



TELE
Burnaby
8864 Comme
Burnaby, Briti
V5A 4N7
Phone 604.420

Chain of Custody

L2164584-COFC

Canada
SE

Phone 604.420.8773

Phone 403.253.7121

Date_____Page__of____

[illegible]

Additional costs may be required for sample disposal or storage. Payment net 30 unless otherwise contracted.

Form 020; Version 1.2; Revised by CC 2016/10/06



NAUTILUS ENVIRONMENTAL

ATTN: Karen Lee

8664 Commerce Court

Imperial Square Lake City

Burnaby BC V5A 4N7

Date Received: 18-SEP-18

Report Date: 25-SEP-18 13:25 (MT)

Version: FINAL

Client Phone: 604-420-8773

Certificate of Analysis

Lab Work Order #: L2166097

Project P.O. #: NOT SUBMITTED

Job Reference:

C of C Numbers:

Legal Site Desc:

Heather McKenzie
Account Manager

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ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

		Sample ID	L2166097-1	L2166097-2	L2166097-3	L2166097-4	L2166097-5
		Description					
		Sampled Date	17-SEP-18	17-SEP-18	17-SEP-18	17-SEP-18	17-SEP-18
		Sampled Time					
		Client ID	CONTROL	PDL	INUG	TPE	WAL
Grouping	Analyte						
WATER							
Anions and Nutrients	Ammonia, Total (as N) (mg/L)		0.693	0.748	2.54	1.50	0.918

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L2166097-6 17-SEP-18 LK8	L2166097-7 17-SEP-18 MAM	L2166097-8 17-SEP-18 WTN		
Grouping	Analyte						
WATER							
Anions and Nutrients	Ammonia, Total (as N) (mg/L)		0.437	1.30	2.93		

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
NH3-F-VA	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

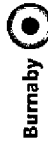
Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



TESTING LOCATION (Please Circle)



Burnaby
8664 Commerce Court
Burnaby, British Columbia, Canada
V5A 4N7
Phone 604.420.8773



Calgary
#4, 6125 12 Street SE
Calgary, Alberta, Canada
T2H 2K1
Phone 403.253.7121

Chain of Custody

Date _____ Page _____ of _____

Report to:				Invoice To:				Sample Collection By:		Sample Type: Grab ☐ OR Composite ☐		ANALYSES REQUIRED										Receipt Temperature (°C)							
Company Address City/Prov/PC Contact Phone Email				Nautilus Environmental Karen karen@nautilusenvironmental.ca				Company Address City/Prov/PC Contact Phone Email PO No.		Same																			
SAMPLE ID		DATE (DD/MM/YY)	TIME	MATRIX	# OF CONTAINERS AND VOLUME (e.g. 1 x 20 L)		COMMENTS																						
1 Control		17/09/18			1x125mL		Day 10																						
2 PDL																													
3 INUG																													
4 TPE																													
5 WAL																													
6 LK8																													
7 MAM																													
8 WTN																													
9																													
10																													
SPECIAL INSTRUCTIONS/COMMENTS (CLIENT)										SAMPLE RECEIPT DETAILS (LABORATORY)										SAMPLE DESCRIPTION AND COMMENTS (LABORATORY)									
Samples are preserved. Chironomid Day 10.										1. Total No. of Containers 2. Cooler 3. Good Condition? 4. Ice Present in Cooler? 5. Seal Present? 6. Initials Present on Seal?										Y / N Y / N Y / N									
RELINQUISHED BY (CLIENT)										RECEIVED BY (LABORATORY)																			
Karen Lee (Printed Name)										ALS, A2 (Signature)										Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling, or transport of the sample, application or interpretation of the test data or results in part or in whole.									
Nautilus (Company)										60 SEP 18 2018 (Date DD/MM/YY and Time)										11:28AM (Date DD/MM/YY and Time)									
Additional costs may be required for sample disposal or storage. Payment net 30 unless otherwise contracted.																													



NAUTILUS ENVIRONMENTAL

ATTN: Karen Lee

8664 Commerce Court

Imperial Square Lake City

Burnaby BC V5A 4N7

Date Received: 21-SEP-18

Report Date: 01-OCT-18 15:51 (MT)

Version: FINAL

Client Phone: 604-420-8773

Certificate of Analysis

Lab Work Order #: L2169066

Project P.O. #: NOT SUBMITTED

Job Reference:

C of C Numbers:

Legal Site Desc:

Heather McKenzie
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

	Sample ID Description Sampled Date Sampled Time Client ID	L2169066-1 Water 21-SEP-18 CONTROL	L2169066-2 Water 21-SEP-18 PDL	L2169066-3 Water 21-SEP-18 INUG	L2169066-4 Water 21-SEP-18 TPE	L2169066-5 Water 21-SEP-18 WAL
Grouping	Analyte					
WATER						
Anions and Nutrients	Ammonia, Total (as N) (mg/L)	1.06	3.24	3.31	1.77	0.0588

		Sample ID Description Sampled Date Sampled Time Client ID	L2169066-6 Water 21-SEP-18 LK8	L2169066-7 Water 21-SEP-18 MAM	L2169066-8 Water 21-SEP-18 WTN		
Grouping	Analyte						
WATER							
Anions and Nutrients	Ammonia, Total (as N) (mg/L)		2.32	2.65	3.02		

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
NH3-F-VA	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Chain of Custody

Burnaby 
8864 Commerce Court
Burnaby, British Columbia, Canada
V5A 4N7
Phone 604.420.8773

Calgary 
#4, 6125 12 Street SE
Calgary, Alberta, Canada
T2H 2K1
Phone 403.253.7121

Date Page of

[illegible]

APPENDIX D – Chain-of-Custody Forms

Burnaby
8664 Commerce Court
Burnaby, British Columbia, Canada
V5A 4N7
Phone 604.420.8773

Calgary
#4, 6125 12 Street SE
Calgary, Alberta, Canada
T2H 2K1
Phone 403.253.7121

Date 18/08/18 Page 1 of 1

Report to:				Invoice To:				Sample Collection By:		ANALYSES REQUIRED												Receipt Temperature (°C)
Company Address City/Prov/PC Contact Phone Email				Company Address City/Prov/PC Contact Phone Email PO No.				Sample Type: ☒ Grab ☐ OR ☐ Composite														
Eric Franz Consulting 218-2022 W Broadway Vancouver, BC Eric Franz 604-730-1220 efranz@ericonline.com				Azimuth 144 H. Aztec 181441 181441																		18.0
SAMPLE ID	DATE (DD/MM/YY)	TIME	MATRIX	# OF CONTAINERS AND VOLUME (e.g. 1 x 20 L)	COMMENTS																	
1 TPE-1 TOX	10/08/18	9:00		1 x 1 L																		
2 TPE-2 TOX	10/08/18																					
3 TPE-3 TOX	10/08/18																					
4 TPE-4 TOX	10/08/18																					
5 TPE-5 TOX	10/08/18																					
6 WAL-1 TOX	11/08/18	12:30		1 x 1 L																		
7 WAL-2 TOX	11/08/18																					
8 WAL-3 TOX	11/08/18																					
9 WAL-4 TOX	11/08/18																					
10 WAL-5 TOX	11/08/18																					

SPECIAL INSTRUCTIONS/COMMENTS (CLIENT)		SAMPLE RECEIPT DETAILS (LABORATORY)			SAMPLE DESCRIPTION AND COMMENTS (LABORATORY)		
Proceed with analysis as per quote (email from James on April 4, 2018). Each sample was collected as top 3-5cm of 2 or 3 grabs.		1. Total No. of Containers	42	4. Ice Present in Cooler?	☒ N		
		2. Courier	Purshor	5. Seal Present?	☒ N		
		3. Good Condition?	☒ N	6. Initials Present on Seal?	☒ N		
RECEIVED BY (LABORATORY) Eric Franz (Signature) Eric Franz (Printed Name)		RECEIVED BY (LABORATORY) Tyrone Hamilton (Signature) Tyrone Hamilton (Printed Name)					
RELINQUISHED BY (CLIENT) Eric Franz (Signature) Eric Franz (Printed Name)		RECEIVED BY (LABORATORY) Azimuth (Signature) Azimuth (Printed Name)					
Additional costs may be required for sample disposal or storage. Payment net 30 unless otherwise contracted.		Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling, or transport of the sample, application or interpretation of the test data or results in part or in whole.					



NAUTILUS

ENVIRONMENTAL

TESTING LOCATION (Please Circle)

☐ Burnaby
8664 Commerce Court
Burnaby, British Columbia, Canada
V5A 4N7
Phone 604.420.8773

☐ Calgary
#4, 6125 12 Street SE
Calgary, Alberta, Canada
T2H 2K1
Phone 403.253.7121

Chain of Custody

181490
181491

Date 2/1/15 Page 2 of 2

Report to:				Invoice To:				Sample Collection By:		Sample Type: ☐ Grab ☐ OR ☐ Composite		ANALYSES REQUIRED										Receipt Temperature (°C)							
Company Address City/Prov/PC Contact Phone Email				Company Address City/Prov/PC Contact Phone Email PO No.																									
SAMPLE ID		DATE (DD/MM/YY)	TIME	MATRIX	# OF CONTAINERS AND VOLUME (e.g. 1 x 20 L)		COMMENTS																						
PDL-1		14/08/18	1200	Sediment	1 x 1L														18.0										
PDL-2																													
PDL-3																													
PDL-4																													
PDL-5																													
INUG-1			900																										
INUG-2																													
INUG-3																													
INUG-4																													
INUG-5																													
SPECIAL INSTRUCTIONS/COMMENTS (CLIENT)										SAMPLE RECEIPT DETAILS (LABORATORY)										SAMPLE DESCRIPTION AND COMMENTS (LABORATORY)									
										1. Total No. of Containers		4. Ice Present in Cooler?		Y / N		PDL + INUG are reference sites													
										2. Courier		5. Seal Present?		Y / N															
										3. Good Condition?		6. Initials Present on Seal?		Y / N															
RELINQUISHED BY (CLIENT)										RECEIVED BY (LABORATORY)										Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling, or transport of the sample, application or interpretation of the test data or results in part or in whole.									
(Printed Name)					(Signature)					(Printed Name)					(Signature)														
(Company)					(Date DD/MM/YY and Time)					(Company)					(Date DD/MM/YY and Time)														
Additional costs may be required for sample disposal or storage. Payment net 30 unless otherwise contracted.																													



NAUTILUS ENVIRONMENTAL

TESTING LOCATION (Please Circle)

Burnaby
8664 Commerce Court
Burnaby, British Columbia, Canada
V5A 4N7
Phone 604.420.8773

Calgary
#4, 6125 12 Street SE
Calgary, Alberta, Canada
T2H 2K1
Phone 403.253.7121

Chain of Custody

Date 3/14/18 Page 3 of 3

Report to:

Company Azimuth
Address 218-2802 W Broadway
City/Prov/PC Vancouver, BC
Contact Eric France
Phone 604 736 1220
Email efrance@azimuthgroup.ca

Invoice To:

Company
Address
City/Prov/PC
Contact
Phone
Email
PO No.

Sample Collection By:

Sample Type: ☐ Grab ☐ OR ☐ Composite

SAMPLE ID	DATE (DD/MM/YY)	TIME	MATRIX	# OF CONTAINERS AND VOLUME (e.g. 1 x 20 L)	COMMENTS
1 LK8-1	17/08/18	1100	Sediment	1 x 1L	
2 LK8-2		1300			
3 LK8-3		1400			
4 LK8-4		1600			
5 LK8-5		1730			
6 MAN-1	16/08/18	1130		1 x 1L	
7 MAN-2					
8 MAN-3					
9 MAN-4					
10 MAN-5					

SPECIAL INSTRUCTIONS/COMMENTS (CLIENT)

SAMPLE RECEIPT DETAILS (LABORATORY)

1. Total No. of Containers		4. Ice Present in Cooler?	Y / N
2. Courier		5. Seal Present?	Y / N
3. Good Condition?	Y / N	6. Initials Present on Seal?	Y / N

RELINQUISHED BY (CLIENT)

RECEIVED BY (LABORATORY)

(Printed Name)	(Signature)	(Printed Name)	(Signature)
(Company)	(Date DD/MM/YY and Time)	(Company)	(Date DD/MM/YY and Time)

Additional costs may be required for sample disposal or storage. Payment net 30 unless otherwise contracted.

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling, or transport of the sample, application or interpretation of the test data or results in part or in whole.

END OF REPORT

APPENDIX H
LIMNOLOGY DATA COLLECTED IN 2018

SampleID	Station	LocationName	Date	Month	Parameter (Temp, DO, Cond, etc.)	Units	Gear / Instrument	Zone	Easting	Northing	Total Depth at Location	Ice Thickness	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
SP-limno	SP	Second Portage Lake	15/01/2018	January	Temperature	C	AEM probes	14W	640481	7213614	16				0.6	1.06	1.31	1.42	1.47	1.55	1.6	1.63	1.67	1.7	1.73	1.75	1.78	1.8						
SP-limno	SP	Second Portage Lake	15/01/2018	January	Cond (uS)	uS/cm	AEM probes	14W	640481	7213614	16				47	43.5	42.7	41.7	41.5	41.7	41.5	41.2	41.4	41.5	41.5	41.5	41.5	41.5						
SP-limno	SP	Second Portage Lake	15/01/2018	January	DO (mg/L)	mg/L	AEM probes	14W	640481	7213614	16				16.35	15.2	14.86	14.5	14.46	14.2	14.06	13.85	13.71	13.59	13.36	13.22	13.1	13.08						
TPN-limno	TPN	Third Portage Lake - North Basin	15/01/2018	January	Temperature	C	AEM probes	14W	636622	7214618	7.75				0.43	0.62	0.85	0.95	1.02	1.06														
TPN-limno	TPN	Third Portage Lake - North Basin	15/01/2018	January	Cond (uS)	uS/cm	AEM probes	14W	636622	7214618	7.75				35.4	33.6	30.3	29.4	28.6	28.4														
TPN-limno	TPN	Third Portage Lake - North Basin	15/01/2018	January	DO (mg/L)	mg/L	AEM probes	14W	636622	7214618	7.75				17.77	17.42	17.18	16.82	16.24	15.7														
WAL-limno	WAL	Wally Lake	17/01/2018	January	Temperature	C	AEM probes	15W	361193	7222282	5				1.48	1.74	2.14	2.31																
WAL-limno	WAL	Wally Lake	17/01/2018	January	Cond (uS)	uS/cm	AEM probes	15W	361193	7222282	5				58	56.8	56.2	56																
WAL-limno	WAL	Wally Lake	17/01/2018	January	DO (mg/L)	mg/L	AEM probes	15W	361193	7222282	5				14.32	14.06	13.66	13.01																
TPE-limno	TPE	Third Portage Lake - East Basin	15/01/2018	January	Temperature	C	AEM probes	14W	639132	7211780	9.75				0.53	0.83	1.07	1.16	1.24	1.32	1.37	1.42												
TPE-limno	TPE	Third Portage Lake - East Basin	15/01/2018	January	Cond (uS)	uS/cm	AEM probes	14W	639132	7211780	9.75				38.5	36.3	33.7	33	32.8	33.1	33.4	33.3												
TPE-limno	TPE	Third Portage Lake - East Basin	15/01/2018	January	DO (mg/L)	mg/L	AEM probes	14W	639132	7211780	9.75				18.42	17.87	16.72	16.12	15.35	14.72	14.23	13.95												
SP-limno	SP	Second Portage Lake	05/02/2018	February	Temperature	C	AEM probes	14W	639987	7213809	5.5	1.6			0.95	1.15	1.28	1.47																
SP-limno	SP	Second Portage Lake	05/02/2018	February	Cond (uS)	uS/cm	AEM probes	14W	639987	7213809	5.5	1.6			44.6	43.4	42.8	41.6																
SP-limno	SP	Second Portage Lake	05/02/2018	February	DO (mg/L)	mg/L	AEM probes	14W	639987	7213809	5.5	1.6			16.46	16.42	16.4	16.57																
TPN-limno	TPN	Third Portage Lake - North Basin	05/02/2018	February	Temperature	C	AEM probes	14W	635393	7212840	10.5	1.6			0.56	0.79	0.9	0.94	1.04	1.13	1.16	1.19	1.24											
TPN-limno	TPN	Third Portage Lake - North Basin	05/02/2018	February	Cond (uS)	uS/cm	AEM probes	14W	635393	7212840	10.5	1.6			32.6	30.2	29.1	28.5	27.8	27.3	27.7	28.9	30.1											
TPN-limno	TPN	Third Portage Lake - North Basin	05/02/2018	February	DO (mg/L)	mg/L	AEM probes	14W	635393	7212840	10.5	1.6			15.25	14.9	14.71	14.66	14.72	14.85	15	15.05	15.19											
TPE-limno	TPE	Third Portage Lake - East Basin	05/02/2018	February	Temperature	C	AEM probes	14W	639130	7212559	11.75	1.6			0.5	0.96	1.14	1.27	1.35	1.42	1.47	1.52	1.56	1.61										
TPE-limno	TPE	Third Portage Lake - East Basin	05/02/2018	February	Cond (uS)	uS/cm	AEM probes	14W	639130	7212559	11.75	1.6			39.4	35.5	33.8	33	32.4	32.8	33.1	33	33.4	33.6										
TPE-limno	TPE	Third Portage Lake - East Basin	05/02/2018	February	DO (mg/L)	mg/L	AEM probes	14W	639130	7212559	11.75	1.6			14.95	14.61	14.32	14.16	14.05	14.07	14.18	14.41	14.85	15.18										
WAL-limno	WAL	Wally Lake	12/02/2018	February	Temperature	C	AEM probes	15W	360845	7222058	11.2	1.5			1.31	1.99	2.44	2.48	2.53	2.56	2.57	2.57	2.57											
WAL-limno	WAL	Wally Lake	12/02/2018	February	Cond (uS)	uS/cm	AEM probes	15W	360845	7222058	11.2	1.5			60.8	56.1	53.1	53.8	53.9	53.9	53.9	54.9	54.4	55.7										
WAL-limno	WAL	Wally Lake	12/02/2018	February	DO (mg/L)	mg/L	AEM probes	15W	360845	7222058	11.2	1.5			15.71	15.47	14.45	13.56	12.75	12.2	11.87	11.38	11.29	11.12										
TPN-limno	TPN	Third Portage Lake - North Basin	01/04/2018	April	Temperature	C	AEM probes	14W	637058	7213450	15	1.8			0.44	0.68	0.93	1.05	1.11	1.17	1.24	1.32	1.37		1.4	1.42	1.45							
TPN-limno	TPN	Third Portage Lake - North Basin	01/04/2018	April	Cond (uS)	uS/cm	AEM probes	14W	637058	7213450	15	1.8			37.4	32.1	30.1	29.1	28.5	28.3	28	28	28.4	28	28.3	28.7	28.3							
TPN-limno	TPN	Third Portage Lake - North Basin	01/04/2018	April	DO (mg/L)	mg/L	AEM probes	14W	637058	7213450	15	1.8			16.71	16.81	16.61	16.1	15.66	15.11	14.54	14.21	14.06	13.87	13.73	13.62	13.5							
TPE-limno	TPE	Third Portage Lake - East Basin	01/04/2018	April	Temperature	C	AEM probes	14W	638069	7211804	8.72	1.8			0.54	1.17	1.4	1.58	1.71	1.89	2.02													
TPE-limno	TPE	Third Portage Lake - East Basin	01/04/2018	April	Cond (uS)	uS/cm	AEM probes	14W	638069	7211804	8.72	1.8			37.1	34.7	33.8	34.9	34.2	34.7	35.9													
TPE-limno	TPE	Third Portage Lake - East Basin	01/04/2018	April	DO (mg/L)	mg/L	AEM probes	14W	638069	7211804	8.72	1.8			15.51	15.52	15.74	15.85	15.89	16.37	16.56													
SP-limno	SP	Second Portage Lake	01/04/2018	April	Temperature	C	AEM probes	14W	639597	7214259	8.3	1.8			0.54	1.31	1.72	1.81	1.87	1.95	2.3													
SP-limno	SP	Second Portage Lake	01/04/2018	April	Cond (uS)	uS/cm	AEM probes	14W	639597	7214259	8.3	1.8			53.9	48.9	46	45	45.7	46.5	47.3													
SP-limno	SP	Second Portage Lake	01/04/2018	April	DO (mg/L)	mg/L	AEM probes	14W	639597	7214259	8.3	1.8			16.41	16.02	15.98	15.83	15.78	15.76	15.65													
WAL-limno	WAL	Wally Lake	02/04/2018	April	Temperature	C	AEM probes	15W	361224	7221652	5.1	1.8			0.9	1.46	2.01	2.45																
WAL-limno	WAL	Wally Lake	02/04/2018	April	Cond (uS)	uS/cm	AEM probes	15W	361224	7221652	5.1	1.8			73.4	71.1	68.8	67.1																
WAL-limno	WAL	Wally Lake	02/04/2018	April	DO (mg/L)	mg/L	AEM probes	15W	361224	7221652	5.1	1.8			12.77	13.3	13.42	12.8																
TPS-59	TPS	Third Portage Lake - South Basin	13/05/2018	May	Temperature	C	AEM probes	14W	635189	7210235	14.5				0.12	0.65	1.22	1.35	1.42	1.45	1.47	1.5	1.52	1.52	1.54	1.54	1.56							
TPS-59	TPS	Third Portage Lake - South Basin	13/05/2018	May	Cond (uS)	uS/cm	AEM probes	14W	635189	7210235	14.5				41.1	35.6	30.6	29.8	29.3	28.5	29.7	29.9	29.7	29.8	29.8	30.9	31.4							
TPS-59	TPS	Third Portage Lake - South Basin	13/05/2018	May	DO (mg/L)	mg/L	AEM probes	14W	635189	7210235	14.5				17.58	17.86	17.37	16.56	15.98	15.12	14.77	14.5	14.28	14.05	13.89	13.84	13.95							
TPS-60	TPS	Third Portage Lake - South Basin	13/05/2018	May	Temperature	C	AEM probes	14W	633467	7208427	17				0.25	1.06	1.21	1.27	1.34	1.38	1.43	1.48	1.51	1.54	1.56	1.54	1.58	1.59	1.61					
TPS-60	TPS	Third Portage Lake - South Basin	13/05/2018	May	Cond (uS)	uS/cm	AEM probes	14W	633467	7208427	17				32.5	29.5	29.3	29.3	28.9	28	29.1	28.6	28.8	28.7	28.7	28.8	28.9	29.1	29					
TPS-60	TPS	Third Portage Lake - South Basin	13/05/2018	May	DO (mg/L)	mg/L	AEM probes	14W	633467	7208427	17				15.89	15.51	15.32	15.44	14.58	14.36	14.02	13.87	13.69	13.53	13.36	13.24	13.13	13.04	13.1					
TPE-110	TPE	Third Portage Lake - East Basin	16/05/2018	May	Temperature	C	AEM probes	14W	639160	7211237	11.4				0.35	0.84	1.45	1.68	1.8	1.87	1.95	2.01	2.08											
TPE-110	TPE	Third Portage Lake - East Basin	16/05/2018	May	Cond (uS)	uS/cm	AEM probes	14W	639160	7211237	11.4				44.3	40.9	37.1	35.7	37.3	37.8	38.1	38.3	38.9											
TPE-110	TPE	Third Portage Lake - East Basin	16/05/2018	May	DO (mg/L)	mg/L	AEM probes	14W	639160	7211237	11.4				15.29	15.69	15.32	14.86	14.02	13.7	13.62	13.6	13.56											
TPE-111	TPE	Third Portage Lake - East Basin	16/05/2018	May	Temperature	C	AEM probes	14W	639597	7210501	14.8				0.26	0.85	1.43	1.66	1.79	1.86	1.73	2.03	2.23	2.6	2.91	3.15	3.33							
TPE-111	TPE	Third Portage Lake - East Basin	16/05/2018	May	Cond (uS)	uS/cm	AEM probes	14W	639597	7210501	14.8				43.3	40.2	38.1	37.2	37.3	38.2	38.1	38.3	38	36.3	36.9	37	37.8							
TPE-111	TPE	Third Portage Lake - East Basin	16/05/2018	May	DO (mg/L)	mg/L	AEM probes	14W	639597	7210501	14.8				15.54	15.8	15.65	15.11	14.54	13.97	13.48	13.08	12.69	11.87										

SampleID	Station	LocationName	Date	Month	Parameter (Temp, DO, Cond, etc.)	Units	Gear / Instrument	Zone	Easting	Northing	Total Depth at Location	Ice Thickness	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
PDL-64	PDL	Pipedream Lake	20/05/2018	May	Temperature	C	AEM probes	14W	629998	7223578	14.7				0.17	0.79	1.09	1.19	1.24	1.31	1.36	1.42	1.46	1.53	1.6	1.68	1.81								
PDL-64	PDL	Pipedream Lake	20/05/2018	May	Cond (uS)	uS/cm	AEM probes	14W	629998	7223578	14.7				47.5	47.1	43.2	42.7	45.5	45.9	46.9	47.6	47.8	47.8	47.8										
PDL-64	PDL	Pipedream Lake	20/05/2018	May	DO (mg/L)	mg/L	AEM probes	14W	629998	7223578	14.7				16.46	16.49	15.95	16.4	14.78	14.56	14.37	14.33	14.41	14.38	14.31	14.21	13.97								
TPE-112	TPE	Third Portage Lake - East Basin	15/07/2018	July	Temperature	C	AEM probes	14W	639228	7210475	8		9.54	9.49	9.47	9.39	9.38	9.36	9.35	9.22															
TPE-112	TPE	Third Portage Lake - East Basin	15/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	639228	7210475	8		30.5	30.5	30.5	30.4	30.5	30.4	30.5	30.5															
TPE-112	TPE	Third Portage Lake - East Basin	15/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	639228	7210475	8		12.55	12.6	12.64	12.66	12.69	12.7	12.71	12.76															
TPE-113	TPE	Third Portage Lake - East Basin	15/07/2018	July	Temperature	C	AEM probes	14W	638650	7210713	7		9.57	9.55	9.54	9.45	9.4	9.42																	
TPE-113	TPE	Third Portage Lake - East Basin	15/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	638650	7210713	7		30.3	30.3	30.3	30.3	30.3	30.3																	
TPE-113	TPE	Third Portage Lake - East Basin	15/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	638650	7210713	7		12.63	12.64	12.65	12.68	12.71	12.71																	
BAP-55	BAP	Baker Akilahaarjuk Point	29/07/2018	July	Temperature	C	AEM probes	15W	362998	7131023	16	6.77	6.66	6.66	6.65	6.67	6.66	6.67	6.65	6.7	6.7	6.54	6.41	6.48	6.28	6.18	7.27								
BAP-55	BAP	Baker Akilahaarjuk Point	29/07/2018	July	Cond (uS)	uS/cm	AEM probes	15W	362998	7131023	16	38.7	38.6	38.6	38.6	38.5	38.5	38.3	38.2	38.1	38.1	38.2	38.8	38.7	39.2	40.4	43.4								
BAP-55	BAP	Baker Akilahaarjuk Point	29/07/2018	July	DO (mg/L)	mg/L	AEM probes	15W	362998	7131023	16	12.64	12.77	12.86	12.84	12.89	12.89	12.9	12.84	12.87	12.91	12.91	12.93	12.9	12.96	12.96	12.93								
BAP-56	BAP	Baker Akilahaarjuk Point	29/07/2018	July	Temperature	C	AEM probes	15W	363422	7131027	24	6.36	6.3	6.38	6.31	6.24	6.16	6.2	6.09	5.73	5.31	5.64	5.57	5.6	5.63	5.61	5.54								
BAP-56	BAP	Baker Akilahaarjuk Point	29/07/2018	July	Cond (uS)	uS/cm	AEM probes	15W	363422	7131027	24	41.3	41.5	41.4	41.5	41.9	42.1	42	42.6	44.9	44.1	45.5	45.7	45.2	49.9	49.9	52.9								
BAP-56	BAP	Baker Akilahaarjuk Point	29/07/2018	July	DO (mg/L)	mg/L	AEM probes	15W	363422	7131027	24	12.89	12.92	12.96	12.96	13.05	13.02	13.03	13.05	13.17	13.12	13.14	13.14	13.12	12.91	13.08	13.08								
BBD-55	BBD	Baker Barge Dock	29/07/2018	July	Temperature	C	AEM probes	14W	644090	7135338	14	4.34	4.38	4.47	4.45	4.37	4.38	3.83	3.45	3.07	2.93	2.86	2.85	2.75	2.46	2.33									
BBD-55	BBD	Baker Barge Dock	29/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	644090	7135338	14	218	211.2	205	201	193.4	210	256	242.8	299.5	320.5	324	329.2	340.6	375	390									
BBD-55	BBD	Baker Barge Dock	29/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	644090	7135338	14	12.51	12.46	12.42	12.42	12.43	12.49	12.54	12.55	12.62	12.38	12.32	12.3	12.32	12.35	12.2									
BBD-56	BBD	Baker Barge Dock	29/07/2018	July	Temperature	C	AEM probes	14W	694753	7135305	5.75	3.47	3.48	3.46	3.44	3.42	3.4																		
BBD-56	BBD	Baker Barge Dock	29/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	694753	7135305	5.75	282	282.4	281.9	288.9	279	281.1																		
BBD-56	BBD	Baker Barge Dock	29/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	694753	7135305	5.75	12.43	12.42	12.42	12.42	12.42	12.42																		
BPJ-55	BPJ	Baker Proposed Jetty	29/07/2018	July	Temperature	C	AEM probes	15W	356888	7134076	15	4.76	4.77	4.79	4.81	4.82	4.81	4.82	4.82	4.82	4.86	4.83	4.65	4.84	4.74	4.84									
BPJ-55	BPJ	Baker Proposed Jetty	29/07/2018	July	Cond (uS)	uS/cm	AEM probes	15W	356888	7134076	15	121.6	121.4	120	115.8	116.8	116.4	117.2	116.8	116.1	118.5	116.1	129.5	115.1	123.5	113.7									
BPJ-55	BPJ	Baker Proposed Jetty	29/07/2018	July	DO (mg/L)	mg/L	AEM probes	15W	356888	7134076	15	12.81	12.8	12.79	12.78	12.79	12.8	12.8	12.8	12.81	12.8	12.83	12.76	12.79	12.62										
BPJ-56	BPJ	Baker Proposed Jetty	29/07/2018	July	Temperature	C	AEM probes	15W	356416	7134099	15	5.33	5.35	5.3	5.22	5.35	5.33	5.25	5.29	5.27	5.5	5.03	5.05	4.77	4.42	3.96	3.65								
BPJ-56	BPJ	Baker Proposed Jetty	29/07/2018	July	Cond (uS)	uS/cm	AEM probes	15W	356416	7134099	15	94.2	91.9	93.4	97.9	92.6	95.9	93.4	103.3	106.1	105.2	108.1	107.9	130.1	148.2	178.1	222.5								
BPJ-56	BPJ	Baker Proposed Jetty	29/07/2018	July	DO (mg/L)	mg/L	AEM probes	15W	356416	7134099	15	12.75	12.76	12.76	12.78	12.76	12.77	12.78	12.83	12.78	12.83	12.81	12.79	12.9	12.71	12.71									
PDL-65	PDL	Pipedream Lake	20/07/2018	July	Temperature	C	AEM probes	14W	630080	7223586	13.3	7.34	7.29	7.26	7.17	7.12	7.08	7.06	7.05	7.07	7.08	7.07	7.03	7.02	7.01										
PDL-65	PDL	Pipedream Lake	20/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	630080	7223586	13.3	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7											
PDL-65	PDL	Pipedream Lake	20/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	630080	7223586	13.3	14.46	14.54	14.38	14.66	14.73	14.77	14.78	14.78	14.8	14.81	14.83	14.84	14.84	14.84										
PDL-66	PDL	Pipedream Lake	20/07/2018	July	Temperature	C	AEM probes	14W	632629	7223864	18	6.87	6.95	6.78	6.74	6.72	6.69	6.58	6.47	6.31	6.22	6.15	6.08	6.01	5.93	5.91	5.85	5.83	5.81	5.71					
PDL-66	PDL	Pipedream Lake	20/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	632629	7223864	18	22.8	22.8	22.8	22.8	22.8	22.7	22.7	22.8	22.8	22.8	22.8	22.8	22.8	22.9	22.9	22.9	22.8	22.8						
PDL-66	PDL	Pipedream Lake	20/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	632629	7223864	18	14.75	14.8	14.86	14.9	14.92	14.96	15	15.05	15.11	15.13	15.14	15.14	15.13	15.08	15.09	15.1	15.1	15.11	15.14					
INUG-100	INUG	Inuggugayualik Lake	19/07/2018	July	Temperature	C	AEM probes	14W	622910	7216941	7.3	8.57	8.52	8.46	8.48	8.44	8.44	8.28	8.24																
INUG-100	INUG	Inuggugayualik Lake	19/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	622910	7216941	7.3	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6																
INUG-100	INUG	Inuggugayualik Lake	19/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	622910	7216941	7.3	13.88	13.98	14.01	14.04	14.07	14.09	14.11	14.17																
INUG-101	INUG	Inuggugayualik Lake	19/07/2018	July	Temperature	C	AEM probes	14W	622970	7214584	7.6	8.68	8.63	8.63	8.49	8.51	8.47	8.43	8.45																
INUG-101	INUG	Inuggugayualik Lake	19/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	622970	7214584	7.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6																
INUG-101	INUG	Inuggugayualik Lake	19/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	622970	7214584	7.6	13.9	13.91	13.94	13.98	13.99	13.95	13.95	13.92																
SP-112	SP	Second Portage Lake	09/07/2018	July	Temperature	C	AEM probes	14W	640295	7213834	6.5		6.64	6.39	6.3	6.22	6.19	6.18																	
SP-112	SP	Second Portage Lake	09/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	640295	7213834	6.5		43.1	43.1	43.1	43.1	43.1	43																	
SP-112	SP	Second Portage Lake	09/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	640295	7213834	6.5		12.32	12.4	12.42	12.44	12.45	12.46																	
SP-113	SP	Second Portage Lake	09/07/2018	July	Temperature	C	AEM probes	14W	640605	7212810	8		7.9	6.96	6.62	6.61	6.57	6.58	6.57																
SP-113	SP	Second Portage Lake	09/07/2018	July	Cond (uS)	uS/cm	AEM probes	14W	640605	7212810	8		43.3	43	42.9	42.9	43	43	42.9																
SP-113	SP	Second Portage Lake	09/07/2018	July	DO (mg/L)	mg/L	AEM probes	14W	640605	7212810	8		12.29	12.4	12.45	12.47	12.49	12.49	12.5																
TPN-112	TPN	Third Portage Lake - North Basin	15/07/2018	July	Temperature	C	AEM probes	14W	636063	7213839	17		4.15	4.16	4.12	4.13	4.09	4.13	4.11	4.11	4.1	4.09	4.08	4.08	4.03	4.02	4.01								

SampleID	Station	LocationName	Date	Month	Parameter (Temp, DO, Cond, etc.)	Units	Gear / Instrument	Zone	Easting	Northing	Total Depth at Location	Ice Thickness	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
WAL-88	WAL	Wally Lake	31/10/2018	November	Temperature	C	AEM probes	15W	360716	7222032	10.5			1.56	1.61	1.7	1.81	1.92	2	2.07	2.16	2.26	2.39										
WAL-88	WAL	Wally Lake	31/10/2018	November	Cond (uS)	uS/cm	AEM probes	15W	360716	7222032	10.5			41.3	41.2	41.3	41.4	41.8	42.3	42.4	42.4	42.9	43.1										
WAL-88	WAL	Wally Lake	31/10/2018	November	DO (mg/L)	mg/L	AEM probes	15W	360716	7222032	10.5			14.17	14.48	14.71	14.87	14.97	14.99	15	14.96	14.89	14.58										
PDL-71	PDL	Pipedream Lake	05/11/2018	November	Temperature	C	AEM probes	14W	632212	7224444	7			0.16	0.19	0.21	0.21	0.22	0.22														
PDL-71	PDL	Pipedream Lake	05/11/2018	November	Cond (uS)	uS/cm	AEM probes	14W	632212	7224444	7			25.5	23.7	23.6	23.5	23.6	27.6														
PDL-71	PDL	Pipedream Lake	05/11/2018	November	DO (mg/L)	mg/L	AEM probes	14W	632212	7224444	7																						
PDL-72	PDL	Pipedream Lake	05/11/2018	November	Temperature	C	AEM probes	14W	630285	7223179	7			0.05	0.19	0.25	0.26	0.29	0.36														
PDL-72	PDL	Pipedream Lake	05/11/2018	November	Cond (uS)	uS/cm	AEM probes	14W	630285	7223179	7			25	23.1	23.6	23.7	23.7	23.8														
PDL-72	PDL	Pipedream Lake	05/11/2018	November	DO (mg/L)	mg/L	AEM probes	14W	630285	7223179	7																						
INUG-106	INUG	Inuggugayualik Lake	25/11/2018	November	Temperature	C	AEM probes	14W	622975	7216890	7.5			0.4	1.21	1.57	1.72	1.85	1.96														
INUG-106	INUG	Inuggugayualik Lake	25/11/2018	November	Cond (uS)	uS/cm	AEM probes	14W	622975	7216890	7.5			28.7	20	17.1	17	16.9	17														
INUG-106	INUG	Inuggugayualik Lake	25/11/2018	November	DO (mg/L)	mg/L	AEM probes	14W	622975	7216890	7.5			16.9	17.17	16.6	15.89	15.2	14.83														
INUG-107	INUG	Inuggugayualik Lake	25/11/2018	November	Temperature	C	AEM probes	14W	622088	7215966	7			0.35	1.31	1.54	1.71	1.84	2														
INUG-107	INUG	Inuggugayualik Lake	25/11/2018	November	Cond (uS)	uS/cm	AEM probes	14W	622088	7215966	7			25.8	17	16.7	16.8	17.7	18.1														
INUG-107	INUG	Inuggugayualik Lake	25/11/2018	November	DO (mg/L)	mg/L	AEM probes	14W	622088	7215966	7			15.11	15.38	15.1	14.72	14.43	14.22														
SP-118	SP	Second Portage Lake	03/11/2018	November	Temperature	C	AEM probes	14W	639998	7213898	11			0.66	1.41	1.47	1.51	1.54	1.58	1.61	1.64	1.67	1.76										
SP-118	SP	Second Portage Lake	03/11/2018	November	Cond (uS)	uS/cm	AEM probes	14W	639998	7213898	11			34.7	39.6	39.7	39.7	39.7	39.8	39.9	40	40.1	41.2										
SP-118	SP	Second Portage Lake	03/11/2018	November	DO (mg/L)	mg/L	AEM probes	14W	639998	7213898	11			14.49	14.01	13.91	13.74	13.65	13.6	13.55	13.49	13.39	13.36										
SP-119	SP	Second Portage Lake	03/11/2018	November	Temperature	C	AEM probes	14W	640781	7213131	10			0.01	1.33	1.48	1.52	1.6	1.73	1.66	1.82	1.89											
SP-119	SP	Second Portage Lake	03/11/2018	November	Cond (uS)	uS/cm	AEM probes	14W	640781	7213131	10			33.2	39.8	40.1	40.1	40.8	40.4	40.2	41.4	41.1											
SP-119	SP	Second Portage Lake	03/11/2018	November	DO (mg/L)	mg/L	AEM probes	14W	640781	7213131	10			15.57	14.27	13.85	13.64	13.53	13.44	13.38	13.31	13.25											
TPN-118	TPN	Third Portage Lake - North Basin	03/11/2018	November	Temperature	C	AEM probes	14W	635249	7213098	8			0.42	0.42	0.41	0.46	0.51	0.57	0.67													
TPN-118	TPN	Third Portage Lake - North Basin	03/11/2018	November	Cond (uS)	uS/cm	AEM probes	14W	635249	7213098	8			27.1	26.7	26.8	26.7	26.7	26.8	26.5													
TPN-118	TPN	Third Portage Lake - North Basin	03/11/2018	November	DO (mg/L)	mg/L	AEM probes	14W	635249	7213098	8			13.24	13.23	13.27	13.29	13.29	13.29	13.26													
TPN-119	TPN	Third Portage Lake - North Basin	03/11/2018	November	Temperature	C	AEM probes	14W	636495	7214244	19.5			0.27	0.39	0.45	0.56	0.53	0.66	0.77	0.84	0.89	0.92	0.96	1	1.03	1.05	1.06	1.08	1.1	1.11	1.12	
TPN-119	TPN	Third Portage Lake - North Basin	03/11/2018	November	Cond (uS)	uS/cm	AEM probes	14W	636495	7214244	19.5			28.2	27.2	26.8	26.8	26.8	26.4	26.5	26.4	26.3	26.2	26.2	26.2	26.2	26.2	26.2	26.3	26.2	26.3	26.3	
TPN-119	TPN	Third Portage Lake - North Basin	03/11/2018	November	DO (mg/L)	mg/L	AEM probes	14W	636495	7214244	19.5			14.12	14.07	13.98	13.73	13.63	13.48	13.33	13.19	13.07	13.01	12.96	12.88	12.85	12.82	12.77	12.73	12.71	12.7	12.68	
TPE-limno	TPE	Third Portage Lake - East Basin	08/12/2018	December	Temperature	C	AEM probes	14W	639317	7211154	5			0.17	1.15	1.46	1.66																
TPE-limno	TPE	Third Portage Lake - East Basin	08/12/2018	December	Cond (uS)	uS/cm	AEM probes	14W	639317	7211154	5			48.6	39.1	35	33.4																
TPE-limno	TPE	Third Portage Lake - East Basin	08/12/2018	December	DO (mg/L)	mg/L	AEM probes	14W	639317	7211154	5			16.74	15.04	14.9	17.87																
SP-limno	SP	Second Portage Lake	09/12/2018	December	Temperature	C	AEM probes				6			0.36	1.02	1.47	1.65	1.75															
SP-limno	SP	Second Portage Lake	09/12/2018	December	Cond (uS)	uS/cm	AEM probes				6			51.8	47.1	45.6	44.7	45.1															
SP-limno	SP	Second Portage Lake	09/12/2018	December	DO (mg/L)	mg/L	AEM probes				6			18.26	18.57	17.93	17.37	16.64															
TPN-limno	TPN	Third Portage Lake - North Basin	09/12/2018	December	Temperature	C	AEM probes	14W	636723	7213300	15.5			0.12	0.44	0.52	0.6	0.7	0.77	0.83	0.88	0.93	0.97	1.01	1.06		1.1	1.15					
TPN-limno	TPN	Third Portage Lake - North Basin	09/12/2018	December	Cond (uS)	uS/cm	AEM probes	14W	636723	7213300	15.5			33.7	29.1	28.3	27.4	27.5	27.5	27.5	27.5	27.5	27.3	27.5	27.6	27.7	27.8						
TPN-limno	TPN	Third Portage Lake - North Basin	09/12/2018	December	DO (mg/L)	mg/L	AEM probes	14W	636723	7213300	15.5			17.75	17.54	16.58	16.14	15.75	15.32	15.07	14.85	14.67	14.57	14.48	14.36	14.34	14.31						
WAL-limno	WAL	Wally Lake	24/12/2018	December	Temperature	C	AEM probes	15W	360881	7221997	20			0.74	1.52	2.31	2.52	2.57	2.6	2.63	2.65	2.67	2.65	2.67	2.68	2.7	2.71	2.71	2.73	2.72	2.72	2.75	
WAL-limno	WAL	Wally Lake	24/12/2018	December	Cond (uS)	uS/cm	AEM probes	15W	360881	7221997	20			58.1	53.1	48.4	46.7	47	47.3	47.5	48.1	47.9	48.5	48.5	48.7	48.8	48.8	49.2	49.2	49.7	50	50	
WAL-limno	WAL	Wally Lake	24/12/2018	December	DO (mg/L)	mg/L	AEM probes	15W	360881	7221997	20			14.74	15.52	16.03	15.96	15.29	14.46	14.17	13.76	13.45	13.14	12.71	12.33	12.04	11.82	11.71	11.64	11.61	11.54	11.45	

SampleID	Station	LocationName	Date	Month	Parameter (Temp, DO, Cond, etc.)	Units	Gear / Instrument	Zone	Easting	Northing	Total Depth at Location	Ice Thickness	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
WTS-27	WTS	Whale Tail Lake - South Basin	30/05/2018	May	Temperature	C	Amaruq YSI	14W	607376	7253849	14.8	1.95	0.18	0.03	0.22	1.15	1.75	2.11	2.35	2.57	2.7	2.75	2.79	2.83	2.88	2.93	3.02							
WTS-27	WTS	Whale Tail Lake - South Basin	30/05/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	607376	7253849	14.8	1.95	55.2	53.9	52.5	48.8	47.4	46	45.1	44.4	43.6	44.5	45.2	45.7	46.3	46								
WTS-27	WTS	Whale Tail Lake - South Basin	30/05/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	607376	7253849	14.8	1.95	15.43	15.91	17.19	17.26	17.78	18.78	19.62	19.98	20.17	20.2	19.99	19.52	18.53	17.75	16.2							
WTS-28	WTS	Whale Tail Lake - South Basin	30/05/2018	May	Temperature	C	Amaruq YSI	14W	607385	7254484	13	2	0.03	0.01	0.38	1.31	1.8	2.15	2.37	2.53	2.67	2.75	2.93	3.08	3.36									
WTS-28	WTS	Whale Tail Lake - South Basin	30/05/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	607385	7254484	13	2	54.6	54.5	52.37	48.8	47.5	45.8	45.1	44.3	45.1	49	48.7	52.7	55.2									
WTS-28	WTS	Whale Tail Lake - South Basin	30/05/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	607385	7254484	13	2	14.74	15.31	15.96	16.4	16.53	16.86	16.75	16.06	14.98	13.89	13.05	10.07	8.81									
MAM-27	MAM	Mammoth Lake	01/06/2018	May	Temperature	C	Amaruq YSI	14W	604987	7254820	8	1.75	0	0	0.3	1.84	2.92	3.36	3.56	3.79														
MAM-27	MAM	Mammoth Lake	01/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	604987	7254820	8	1.75	69.9	69.1	68.6	63.9	61	60.6	61.6	59.2														
MAM-27	MAM	Mammoth Lake	01/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	604987	7254820	8	1.75	15.55	16.07	16.37	16.54	16.86	16.61	15.78	14.46														
MAM-28	MAM	Mammoth Lake	01/06/2018	May	Temperature	C	Amaruq YSI	14W	604058	7254491	16	2.05	0.05	0	0.32	1.49	2.33	2.82	2.98	3.05	3.1	3.12	3.15	3.18	3.24	3.34	3.4	3.53						
MAM-28	MAM	Mammoth Lake	01/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	604058	7254491	16	2.05	64.9	63.5	62.7	58.8	55.6	53.6	56.3	57.8	58.7	59.1	59.8	60.9	62.4	62.6	63.7	64.7						
MAM-28	MAM	Mammoth Lake	01/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	604058	7254491	16	2.05	16.74	16.87	17.48	17.85	17.88	17.09	16.28	15.54	14.62	14.06	13.63	13	12.05	10.65	9.67	8.09						
NEM-27	NEM	Nemo Lake	01/06/2018	May	Temperature	C	Amaruq YSI	14W	606408	7257020	10.5		0.02	0.05	0.12	1.61	2.19	2.3	2.36	2.42	2.43	2.47	2.5											
NEM-27	NEM	Nemo Lake	01/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	606408	7257020	10.5		38.1	37	36	35.3	35.8	36	37.5	38	40.2	42.1	44.5											
NEM-27	NEM	Nemo Lake	01/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	606408	7257020	10.5		17.88	17.76	18.01	17.89	18.06	17.88	17.44	17.25	17.06	16.74	16.18											
NEM-28	NEM	Nemo Lake	01/06/2018	May	Temperature	C	Amaruq YSI	14W	606982	7257823	12.4	2.15	0.12	0.03	0.16	1.62	2.41	2.55	2.56	2.62	2.68	2.73	2.87	2.99	3.05	3.09								
NEM-28	NEM	Nemo Lake	01/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	606982	7257823	12.4	2.15	37	36.2	36	32.2	30.1	29.6	29.6	29.4	29.6	30.5	30.8	30.7	30.7	30.9								
NEM-28	NEM	Nemo Lake	01/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	606982	7257823	12.4	2.15	15.89	17.12	18.28	18.61	18.53	18.47	18.42	18.03	17.62	17.45	17.41	17.35	17.18	16.9								
A20-21	A20	Lake A20	02/06/2018	May	Temperature	C	Amaruq YSI	14W	601841	7256995	5.8	2.15	0.1	0.02	0.04	1.04	1.88	2.39																
A20-21	A20	Lake A20	02/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	601841	7256995	5.8	2.15	22.6	21	20.5	19.3	17.4	15.9																
A20-21	A20	Lake A20	02/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	601841	7256995	5.8	2.15	17.3	18.27	18.38	18.8	19	19.14																
A20-22	A20	Lake A20	02/06/2018	May	Temperature	C	Amaruq YSI	14W	605222	7252786	6	2.1	0.16	0.01	0.14	2.09	3.47	4.02																
A20-22	A20	Lake A20	02/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	605222	7252786	6	2.1	30.4	30.1	29.7	27	24.3	24.7																
A20-22	A20	Lake A20	02/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	605222	7252786	6	2.1	16.35	16.49	17.34	17.46	17.58	17.14																
A76-21	A76	Lake A76	02/06/2018	May	Temperature	C	Amaruq YSI	14W	601785	7257005	5	1.9	0.04	0.01	0.07	1.29	1.95	2.31																
A76-21	A76	Lake A76	02/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	601785	7257005	5	1.9	51.3	50.7	50.9	48	46	52.6																
A76-21	A76	Lake A76	02/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	601785	7257005	5	1.9	17.68	17.99	18.33	18.6	18.58	17.2																
A76-22	A76	Lake A76	02/06/2018	May	Temperature	C	Amaruq YSI	14W	602154	7256796	9.2	1.95	0	0	0.46	1.1	1.91	2.26	2.47	2.6	2.72	2.79												
A76-22	A76	Lake A76	02/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	602154	7256796	9.2	1.95	50.7	49.5	47.9	46.3	44.2	43.5	43.3	43.6	43.9	45.7												
A76-22	A76	Lake A76	02/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	602154	7256796	9.2	1.95	16.94	17.52	17.9	17.61	17.47	17.04	16.57	15.64	14.83	13.72												
DS1-19	DS1	Lake DS1	03/06/2018	May	Temperature	C	Amaruq YSI	14W	597627	7260888	20	2.2	0.07	0.03	0.21	2.01	2.31	2.32	2.32	2.33	2.35	2.36	2.36	2.36	2.36	2.37	2.37	2.37	2.37	2.37	2.37	2.38	2.41	
DS1-19	DS1	Lake DS1	03/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	597627	7260888	20	2.2	27.5	26.2	25.7	23.9	23.8	24	23.9	23.4	23.2	22.8	23.1	22.9	22.9	22.9	23	23.1	23.2	23.4	23.4	23.2	22	
DS1-19	DS1	Lake DS1	03/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	597627	7260888	20	2.2	16.27	16.37	16.37	15.98	15.64	15.29	15.02	14.83	14.68	14.4	14.15	14.06	13.96	13.9	13.82	13.75	13.73	13.72	13.73	13.74	13.72	
DS1-20	DS1	Lake DS1	03/06/2018	May	Temperature	C	Amaruq YSI	14W	598020	7258260	8.1	2.25	0.15	0.02	0.07	1	1.7	2.09	2.24	2.35	2.45													
DS1-20	DS1	Lake DS1	03/06/2018	May	Cond (uS)	uS/cm	Amaruq YSI	14W	598020	7258260	8.1	2.25	40.6	38.9	38	38.1	38.9	39	38.1	37.5	37.4													
DS1-20	DS1	Lake DS1	03/06/2018	May	DO (mg/L)	mg/L	Amaruq YSI	14W	598020	7258260	8.1	2.25	15.8	16.23	16.52	17.16	17.71	18.72	18.88	18.49	17.79													
WTS-29	WTS	Whale Tail Lake - South Basin	08/07/2018	July	Temperature	C	Amaruq YSI	14W	607686	7254010	6.6		7.73	7.73	7.73	7.73	7.73	7.71																
WTS-29	WTS	Whale Tail Lake - South Basin	08/07/2018	July	Cond (uS)	uS/cm	Amaruq YSI	14W	607686	7254010	6.6		36.3	36.2	36.2	36.2	36.2	36.2																
WTS-29	WTS	Whale Tail Lake - South Basin	08/07/2018	July	DO (mg/L)	mg/L	Amaruq YSI	14W	607686	7254010	6.6		11.85	11.95	11.99	12.01	12.02	11.91																
WTS-30	WTS	Whale Tail Lake - South Basin	08/07/2018	July	Temperature	C	Amaruq YSI	14W	607169	7253575	9.8		7.76	7.76	7.74	7.73	7.75	7.74	7.68	7.69	7.21													
WTS-30	WTS	Whale Tail Lake - South Basin	08/07/2018	July	Cond (uS)	uS/cm	Amaruq YSI	14W	607169	7253575	9.8		35.4	35.3	35.3	35.5	35.4	35.3	35.5	35.5														
WTS-30	WTS	Whale Tail Lake - South Basin	08/07/2018	July	DO (mg/L)	mg/L	Amaruq YSI	14W	607169	7253575	9.8		11.94	11.93	11.94	11.96	11.96	11.96	11.98	11.98	11.98													
A20-23	A20	Lake A20	16/07/2018	July	Temperature	C	Amaruq YSI	14W	605251	7252790	5.6		12.99	12.93	12.9	11.98	11.72																	
A20-23	A20	Lake A20	16/07/2018	July	Cond (uS)	uS/cm	Amaruq YSI	14W	605251	7252790	5.6		12.6	12.6	12.6	12.6	12.8																	
A20-23	A20	Lake A20	16/07/2018	July	DO (mg/L)	mg/L	Amaruq YSI	14W	605251	7252790	5.6		10.53	10.58	10.65	10.87	11.05																	
A20-24	A20	Lake A20	16/07/2018	July	Temperature	C	Amaruq YSI	14W	604701	7252432	5.6		12.09	11.77	11.4	11.15	10.84																	
A20-24	A20	Lake A20	16/07/2018	July	Cond (uS)	uS/cm	Amaruq YSI	14W	604701	7252432	5.6		12.7	12.7	12.8	12.8	12.8																	
A20-24	A20	Lake A20	16/07/2018	July																														

SampleID	Station	LocationName	Date	Month	Parameter (Temp, DO, Cond, etc.)	Units	Gear / Instrument	Zone	Easting	Northing	Total Depth at Location	Ice Thickness	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
MAM-32	MAM	Mammoth Lake	16/08/2018	August	Temperature	C	Amaruq YSI	14W	604110	7254500	9.2			10	10	10	10	10	10	10	10														
MAM-32	MAM	Mammoth Lake	16/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	604110	7254500	9.2			57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3														
MAM-32	MAM	Mammoth Lake	16/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	604110	7254500	9.2			10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6													
WTS-31	WTS	Whale Tail Lake - South Basin	16/08/2018	August	Temperature	C	Amaruq YSI	14W	607159	7253588	9.7			10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	9.8													
WTS-31	WTS	Whale Tail Lake - South Basin	16/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	607159	7253588	9.7			38.6	38.4	38.5	38.5	38.5	38.4	38.4	38.4	38.4	38												
WTS-31	WTS	Whale Tail Lake - South Basin	16/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	607159	7253588	9.7			10.4	10.4	10.4	10.3	10.3	10.3	10.2	10.2	10.1	10.1												
WTS-32	WTS	Whale Tail Lake - South Basin	16/08/2018	August	Temperature	C	Amaruq YSI	14W	607500	7254181	8.8			10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10													
WTS-32	WTS	Whale Tail Lake - South Basin	16/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	607500	7254181	8.8			38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7													
WTS-32	WTS	Whale Tail Lake - South Basin	16/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	607500	7254181	8.8			10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4													
A20-25	A20	Lake A20	17/08/2018	August	Temperature	C	Amaruq YSI	14W	605205	7252748	5.2		9.9	9.9	9.9	9.9	9.8	9.9																	
A20-25	A20	Lake A20	17/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	605205	7252748	5.2		13.4	13.4	13.4	13.4	13.4	13.4																	
A20-25	A20	Lake A20	17/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	605205	7252748	5.2		10.7	10.7	10.6	10.6	10.5	10.4																	
A20-26	A20	Lake A20	17/08/2018	August	Temperature	C	Amaruq YSI	14W	604703	7252487	6		10.1	10.1	10.1	10.1	10.1	10.1																	
A20-26	A20	Lake A20	17/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	604703	7252487	6		13.1	13.1	13.1	13.1	13.1	13.1																	
A20-26	A20	Lake A20	17/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	604703	7252487	6		10.62	10.62	10.62	10.62	10.63	10.63																	
LK8-01	LK8	Lake LK8	17/08/2018	August	Temperature	C	Amaruq YSI	14W	611374	7258520	6.8			10.39	10.38	10.39	10.36	10.35	10.37																
LK8-01	LK8	Lake LK8	17/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	611374	7258520	6.8			13.5	13.5	13.5	13.5	13.5	13.5																
LK8-01	LK8	Lake LK8	17/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	611374	7258520	6.8			10.78	10.78	10.79	10.8	10.81	10.82																
LK8-02	LK8	Lake LK8	17/08/2018	August	Temperature	C	Amaruq YSI	14W	610686	7258634	9.3			10.29	10.29	10.28	10.27	10.24	10.23	10.18	10.15	10.12													
LK8-02	LK8	Lake LK8	17/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	610686	7258634	9.3			13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5													
LK8-02	LK8	Lake LK8	17/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	610686	7258634	9.3			10.75	10.75	10.75	10.75	10.76	10.76	10.76	10.77	10.77													
NEM-31	NEM	Nemo Lake	17/08/2018	August	Temperature	C	Amaruq YSI	14W	606592	7257571	12			10.5	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.3			
NEM-31	NEM	Nemo Lake	17/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	606592	7257571	12			25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1			
NEM-31	NEM	Nemo Lake	17/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	606592	7257571	12			10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5			
NEM-32	NEM	Nemo Lake	17/08/2018	August	Temperature	C	Amaruq YSI	14W	606992	7257819	11			10.5	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3			
NEM-32	NEM	Nemo Lake	17/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	606992	7257819	11			25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1			
NEM-32	NEM	Nemo Lake	17/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	606992	7257819	11			10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.48	10.47	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46				
A76-25	A76	Lake A76	18/08/2018	August	Temperature	C	Amaruq YSI	14W	601938	7256930	6.7		10.6	10.6	10.6	10.6	10.6	10.6																	
A76-25	A76	Lake A76	18/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	601938	7256930	6.7		36	36	36	36	36	36																	
A76-25	A76	Lake A76	18/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	601938	7256930	6.7		10.5	10.5	10.5	10.5	10.5	10.5																	
A76-26	A76	Lake A76	18/08/2018	August	Temperature	C	Amaruq YSI	14W	602613	7057214	11		10.9	10.9	10.9	10.9	10.8	10.8	10.7	10.6	10.6	10.6	10.6												
A76-26	A76	Lake A76	18/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	602613	7057214	11		36.4	36.4	36.4	36.4	36.4	36.3	36.7	36.5	36.2	36.2	36.2												
A76-26	A76	Lake A76	18/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	602613	7057214	11		10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5												
DS1-23	DS1	Lake DS1	19/08/2018	August	Temperature	C	Amaruq YSI	14W	597539	7260761	16																								
DS1-23	DS1	Lake DS1	19/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	597539	7260761	16					17.1																			
DS1-23	DS1	Lake DS1	19/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	597539	7260761	16					10.96																			
DS1-24	DS1	Lake DS1	19/08/2018	August	Temperature	C	Amaruq YSI	14W	598017	7258261	8.1																								
DS1-24	DS1	Lake DS1	19/08/2018	August	Cond (uS)	uS/cm	Amaruq YSI	14W	598017	7258261	8.1					21.6																			
DS1-24	DS1	Lake DS1	19/08/2018	August	DO (mg/L)	mg/L	Amaruq YSI	14W	598017	7258261	8.1					10.45																			
MAM-33	MAM	Mammoth Lake	01/09/2018	September	Temperature	C	Amaruq YSI	14W	605076	7254879	7.9		8.23	8.22			8.21	8.22	8.22	8.22															
MAM-33	MAM	Mammoth Lake	01/09/2018	September	Cond (uS)	uS/cm	Amaruq YSI	14W	605076	7254879	7.9		63	63.5	63.6	63.5	63.6	63.5	63.5																
MAM-33	MAM	Mammoth Lake	01/09/2018	September	DO (mg/L)	mg/L	Amaruq YSI	14W	605076	7254879	7.9		11.5	11.58	11.59	11.6	11.6	11.6	11.61	11.61															
MAM-34	MAM	Mammoth Lake	01/09/2018	September	Temperature	C	Amaruq YSI	14W	604318	7254273	9		8.12	8.12	8.12	8.1	8.1	8.1	8.05	8.04															
MAM-34	MAM	Mammoth Lake	01/09/2018	September	Cond (uS)	uS/cm	Amaruq YSI	14W	604318	7254273	9		58.7	58.6	58.6	58.7	58.7	58.6	58.6	58.7															
MAM-34	MAM	Mammoth Lake	01/09/2018	September	DO (mg/L)	mg/L	Amaruq YSI	14W	604318	7254273	9		11.57	11.59	11.59	11.6	11.6	11.58	11.58	11.6															
WTS-33	WTS	Whale Tail Lake - South Basin	01/09/2018	September	Temperature	C	Amaruq YSI	14W	607274	7253485	9.46		8.13	8.11	8.15	8.11	8.1	8.02	7.91	7.85	7.72														
WTS-33	WTS	Whale Tail Lake - South Basin	01/09/2018	September	Cond (uS)	uS/cm	Amaruq YSI	14W	607274	7253485	9.46		37.9	37.9	37.9	37.8	37.8	37.8	37.9	37.9	37.9														
WTS-33	WTS	Whale Tail Lake - South Basin	01/09/2018	September	DO (mg/L)	mg/L	Amaruq YSI	14W	607274	7253485	9.46		11.45	11.48	11.48	11.48	11.47	11.49	11.49	11.4	11.37														
WTS-34	WTS	Whale Tail Lake - South Basin	01/09/2018	September	Temperature	C	Amaruq YSI	14W	607638	7254078	5.85		8.48	8.49	8.49	8.48	8.48																		

SampleID	Station	LocationName	Date	Month	Parameter (Temp, DO, Cond, etc.)	Units	Gear / Instrument	Zone	Easting	Northing	Total Depth at Location	Ice Thickness	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
LK1-04	LK1	Lake LK1	23/09/2018	September	Temperature	C	Amaruq YSI	14W	607906	7250092	12.3		1	1	0.99	0.99	0.99	1	1	0.99	0.99	0.98	1	1.06	1.06									
LK1-04	LK1	Lake LK1	23/09/2018	September	Cond (uS)	uS/cm	Amaruq YSI	14W	607906	7250092	12.3		15	15.1	15	15.1	15.1	15	15	15	15	15	15	15	15									
LK1-04	LK1	Lake LK1	23/09/2018	September	DO (mg/L)	mg/L	Amaruq YSI	14W	607906	7250092	12.3		13.81	13.82	13.83	13.83	13.82	13.81	13.82	13.83	13.82	13.82	13.82	13.82	13.81									
LK5-03	LK5	Lake LK5	23/09/2018	September	Temperature	C	Amaruq YSI	14W	612550	7251430	6.8		0	0	0	0	0	0	0															
LK5-03	LK5	Lake LK5	23/09/2018	September	Cond (uS)	uS/cm	Amaruq YSI	14W	612550	7251430	6.8		25.7	25.6	25.7	25.7	25.7	25.7	25.7															
LK5-03	LK5	Lake LK5	23/09/2018	September	DO (mg/L)	mg/L	Amaruq YSI	14W	612550	7251430	6.8		14.35	14.36	14.37	14.39	14.04	14.04	14.39															
LK5-04	LK5	Lake LK5	23/09/2018	September	Temperature	C	Amaruq YSI	14W	612829	7252001	7.9		0.43	0.44	0.44	0.43	0.41	0.43	0.45	0.5														
LK5-04	LK5	Lake LK5	23/09/2018	September	Cond (uS)	uS/cm	Amaruq YSI	14W	612829	7252001	7.9		25.6	25.6	25.6	25.5	25.5	25.6	25.6	25.6														
LK5-04	LK5	Lake LK5	23/09/2018	September	DO (mg/L)	mg/L	Amaruq YSI	14W	612829	7252001	7.9		14	14.1	14.12	14.14	14.15	14.15	14.14	14.13														
WTS-35	WTS	Whale Tail Lake - South Basin	31/10/2018	November	Temperature	C	Amaruq YSI	14W	607234	7253585	5.8		1.15	1.24	1.3	1.35	1.42																	
WTS-35	WTS	Whale Tail Lake - South Basin	31/10/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	607234	7253585	5.8		42.3	40.3	40	40.1	40.9																	
WTS-35	WTS	Whale Tail Lake - South Basin	31/10/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	607234	7253585	5.8		16.3	16.14	15.76	15.57	15.5																	
A20-30	A20	Lake A20	01/11/2018	November	Temperature	C	Amaruq YSI	14W	604387	7252619	19.5		1.26	1.49	1.51	1.59	1.58	1.61	1.69	1.67	1.69	1.73	1.73	1.77	1.79	1.83	1.86	1.89	1.9	1.93	1.97			
A20-30	A20	Lake A20	01/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	604387	7252619	19.5		16.4	15.4	15.4	15.6	15.6	15.6	15.7	15.7	15.7	15.8	15.8	15.8	15.9	15.9	15.9	16	16	16.1	16			
A20-30	A20	Lake A20	01/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	604387	7252619	19.5		15.67	15.87	15.79	15.7	15.57	15.47	15.35	15.28	15.17	15.07	14.95	14.86	14.72	14.59	14.48	14.39	14.25	14.19	14.19			
MAM-35	MAM	Mammoth Lake	01/11/2018	November	Temperature	C	Amaruq YSI	14W	605360	7255126	9.11		1.09	1.36	1.32	1.61	1.87	2	2.2	2.37														
MAM-35	MAM	Mammoth Lake	01/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	605360	7255126	9.11		97.2	96	125.7	132.4	140.1	146.1	152.1	155.2														
MAM-35	MAM	Mammoth Lake	01/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	605360	7255126	9.11		16.15	16.18	16.24	16.01	15.75	15.31	14.79	13.9														
MAM-36	MAM	Mammoth Lake	01/11/2018	November	Temperature	C	Amaruq YSI	14W	604263	7253890	7.43		0.87	1.4	1.58	1.8	2.27	2.69	2.99															
MAM-36	MAM	Mammoth Lake	01/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	604263	7253890	7.43		79.2	70.9	75.9	74	74.2	73	74.9															
MAM-36	MAM	Mammoth Lake	01/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	604263	7253890	7.43		15.65	15.59	15.59	15.55	15.46	15.24	14.81															
WTS-36	WTS	Whale Tail Lake - South Basin	01/11/2018	November	Temperature	C	Amaruq YSI	14W	607636	7254046	14.24		1.13	1.32	1.33	1.38	1.46	1.56	1.64	1.71	1.76	1.82	1.88	1.93	1.95	1.99								
WTS-36	WTS	Whale Tail Lake - South Basin	01/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	607636	7254046	14.24		43.9	41.2	40.9	41.1	40.8	40.7	40.8	40.8	40.7	40.9	41.1	41.1	41.2	41.2								
WTS-36	WTS	Whale Tail Lake - South Basin	01/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	607636	7254046	14.24		15.31	15.42	15.46	15.4	15.36	15.31	15.26	15.17	15.06	14.65	14.95	14.75	14.12	13.92								
NEM-35	NEM	Nemo Lake	03/11/2018	November	Temperature	C	Amaruq YSI	14W	606983	7257821	11.42		0.89	1.16	1.21	1.22	1.25	1.28	1.32	1.34	1.37	1.4	1.41											
NEM-35	NEM	Nemo Lake	03/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	606983	7257821	11.42		33.2	30.4	29.4	29.4	29.2	29.3	29.1	29.2	29.2	29.5	29.6											
NEM-35	NEM	Nemo Lake	03/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	606983	7257821	11.42		16.2	16.44	16.21	15.75	15.48	15.27	15.04	14.8	14.66	14.45	14.42											
NEM-36	NEM	Nemo Lake	03/11/2018	November	Temperature	C	Amaruq YSI	14W	606413	7257019	10.01		0.69	1.11	1.26	1.38	1.46	1.56	1.69	1.71	1.81													
NEM-36	NEM	Nemo Lake	03/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	606413	7257019	10.01		34	30.1	29.6	29.5	29.7	29.8	29.9	30	30.1													
NEM-36	NEM	Nemo Lake	03/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	606413	7257019	10.01		13.25	13.95	14.25	14.34	14.35	14.39	14.32	14.3	14.25													
LK1-05	LK1	Lake LK1	16/11/2018	November	Temperature	C	Amaruq YSI	14W	607548	7249662	9.57		0.2	1.1	1.49	1.61	1.82	1.9	2.11	2.26	2.38													
LK1-05	LK1	Lake LK1	16/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	607548	7249662	9.57		18.4	18	17.4	17.4	17.4	17.5	17.7	17.8	18													
LK1-05	LK1	Lake LK1	16/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	607548	7249662	9.57		15.64	14.75	14.32	14.35	14.28	14.24	14.13	14	13.3													
LK1-06	LK1	Lake LK1	16/11/2018	November	Temperature	C	Amaruq YSI	14W	607114	7249421	8.45		0.67	1.29	1.45	1.65	1.78	2.29	2.7	3.2														
LK1-06	LK1	Lake LK1	16/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	607114	7249421	8.45		22.1	17.7	17.2	17.2	17.7	17.7	18.2	18.7														
LK1-06	LK1	Lake LK1	16/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	607114	7249421	8.45		15.96	16.16	15.98	15.63	15.3	14.92	14.44	13.76														
LK5-05	LK5	Lake LK5	16/11/2018	November	Temperature	C	Amaruq YSI	14W	612537	7251457	6.25		0.51	1.23	1.8	2.81	3.49	3.78																
LK5-05	LK5	Lake LK5	16/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	612537	7251457	6.25		30.8	28.6	30.3	29.2	30.2	33.8																
LK5-05	LK5	Lake LK5	16/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	612537	7251457	6.25		16.09	15.75	15.46	15.01	14.74	14.23																
LK5-06	LK5	Lake LK5	16/11/2018	November	Temperature	C	Amaruq YSI	14W	612883	7252082	13		0.91	1.32	1.66	1.83	2.04	2.11	2.19	2.24	2.28	2.3	2.35	2.4										
LK5-06	LK5	Lake LK5	16/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	612883	7252082	13		33.4	30.7	29.4	29.4	29.3	29.8	30.5	30.1	30.2	30.3	30.5	30.6										
LK5-06	LK5	Lake LK5	16/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	612883	7252082	13		15.97	16.21	16.07	15.69	15.37	15.08	14.76	14.56	14.26	14.01	13.79	13.52										
A76-29	A76	Lake A76	25/11/2018	November	Temperature	C	Amaruq YSI	14W	601901	7256915	8.17		0.24	1.33	1.72	1.73	1.82	1.9	2.02	2.1														
A76-29	A76	Lake A76	25/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	601901	7256915	8.17		62.1	52.5	50.5	49.5	48.7	48.5	48.1	49.5														
A76-29	A76	Lake A76	25/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	601901	7256915	8.17		15.55	15.72	15.79	15.66	15.47	15.27	15.01	14.8														
A76-30	A76	Lake A76	25/11/2018	November	Temperature	C	Amaruq YSI	14W	602599	7257213	13.45		0.34	1.29	1.63	1.74	1.83	1.91	1.96	2.01	2.05	2.12	2.14	2.23	2.37									
A76-30	A76	Lake A76	25/11/2018	November	Cond (uS)	uS/cm	Amaruq YSI	14W	602599	7257213	13.45		61.5	54.4	51.1	49.7	48.6	48.5	48.9	49.4	49.7	50.5	54.6	54.7	62.4									
A76-30	A76	Lake A76	25/11/2018	November	DO (mg/L)	mg/L	Amaruq YSI	14W	602599	7257213	13.45																							