Saxitoxin Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ug/L)	% Recovery
LRB	Lab Reagent Blank	8/14/2019	8/14/2019	< 0.050	
LFB	Lab Fortified Blank (True value = 0.10)	8/14/2019	8/14/2019	0.080	80
AB40034	Pokagon State Park Beach	8/12/2019	8/14/2019	< 0.050	
AB40034MS	Pokagon (Matrix Spike, True Value = 0.10)	8/12/2019	8/14/2019	0.081	69
AB40034MSD	Pokagon (Matrix Spike Duplicate, True Value = 0.10)	8/12/2019	8/14/2019	0.082	70
AB40035	Potawatomi Inn's Beach @ Pokagon SP	8/12/2019	8/14/2019	< 0.050	
AB40036	Chain O'Lakes SP	8/12/2019	8/14/2019	0.069	
AB40037	Kunkel Beach @ Ouabache State Park	8/12/2019	8/14/2019	< 0.050	
AB40038	Potato Creek State Park	8/13/2019	8/14/2019	< 0.050	
AB40039	Mississinewa Lake Miami SRA	8/13/2019	8/14/2019	< 0.050	
AB40040	Lost Bridge West SRA @ Salamonie Lake	8/13/2019	8/14/2019	< 0.050	
AB40041	Field Blank	8/13/2019	8/14/2019	< 0.050	
AB40042	Mississinewa Lake Miami SRA	8/13/2019	8/14/2019	< 0.050	

SAXITOXIN - Assay Calibration Report

Assay Information

Assay Name: SAXITOXIN
Version: 2
Temperature: Room Temperature
Last Modified By: Security disabled
Units: µg/L
Assay Description: PN. 52255B
Assay Substances: Controls:
STX Control (0.060-0.090)
Standards:
STX Std 0, Concentration = 0.000, Minimum number to use: 2
STX Std 1, Concentration = 0.020, Minimum number to use: 2
STX Std 2, Concentration = 0.050, Minimum number to use: 2
STX Std 3, Concentration = 0.100, Minimum number to use: 2
STX Std 4, Concentration = 0.200, Minimum number to use: 2
STX Std 5, Concentration = 0.400, Minimum number to use: 2
Curve valid interval: 1 days 0 hours
Axis Mode: Y = Abs, X = Log(Conc)

Assay Mode: 4-Parameter Logistic Weight by:None
Well Type: Flat bottom
Last Modified On: 7/25/2019 3:55:28 PM
Normal: 0.020 - 0.400
# of decimals: 3
Kit Lot Number: 19G0236

Assay Calibration

Current Calibration Status: " **"**

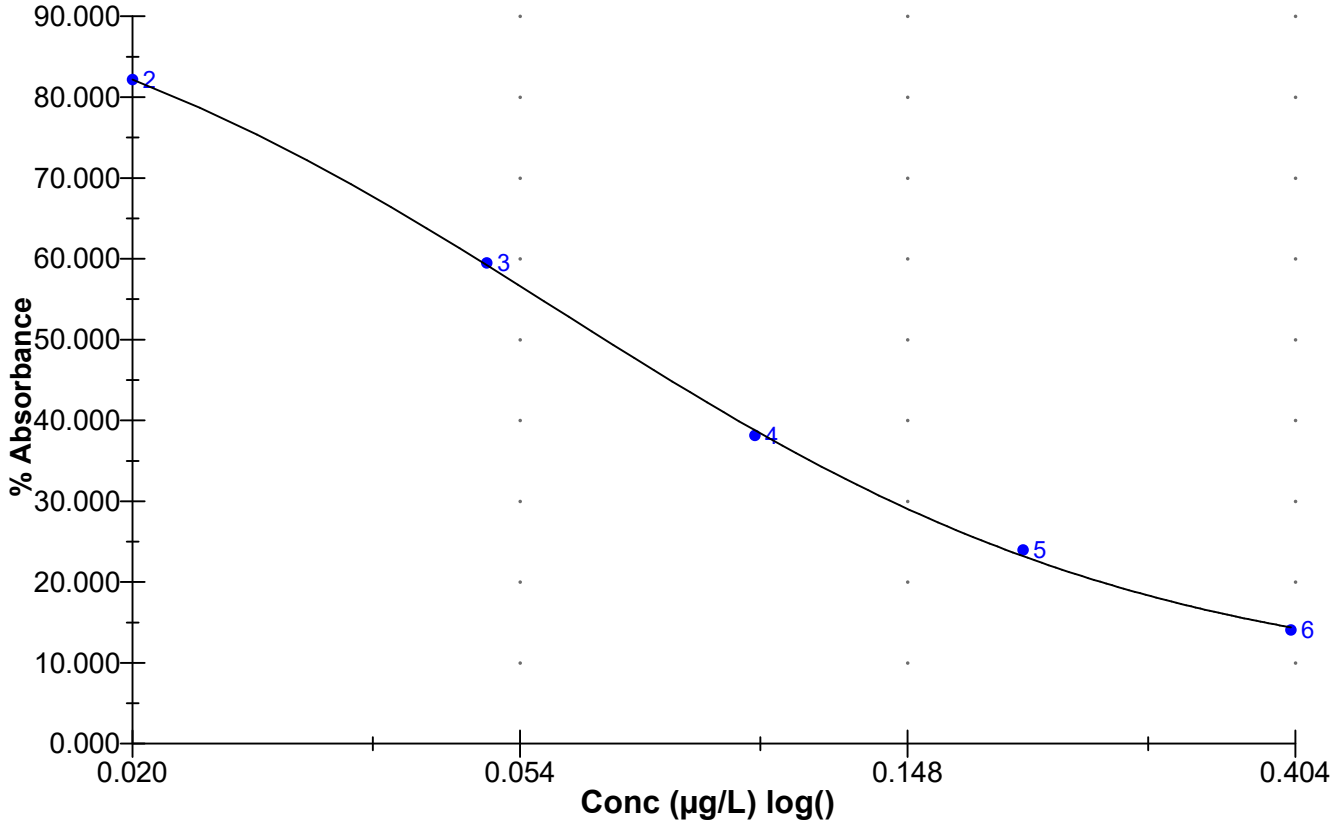
Name	Absorbance	Concentration	Interpretation	Position
8/14/2019 3:21:43 PM				
STX Std 0	1.694 Abs		R^2=0.99980, 100.954 %Abs	RK1:30->A01@2
STX Std 0	1.661 Abs [1.6775] {1.4 CV}		R^2=0.99980, 98.987 %Abs	RK1:30->B01@2
STX Std 1	1.396 Abs		R^2=0.99980, 83.194 %Abs	RK1:31->C01@2
STX Std 1	1.362 Abs [1.3790] {1.7 CV}		R^2=0.99980, 81.168 %Abs	RK1:31->D01@2
STX Std 2	1.018 Abs		R^2=0.99980, 60.667 %Abs	RK1:32->E01@2
STX Std 2	0.978 Abs [0.9980] {2.8 CV}		R^2=0.99980, 58.284 %Abs	RK1:32->F01@3
STX Std 3	0.649 Abs		R^2=0.99980, 38.677 %Abs	RK1:33->G01@3
STX Std 3	0.631 Abs [0.6400] {2.0 CV}		R^2=0.99980, 37.604 %Abs	RK1:33->H01@3
STX Std 4	0.406 Abs		R^2=0.99980, 24.195 %Abs	RK1:34->A02@2
STX Std 4	0.399 Abs [0.4025] {1.2 CV}		R^2=0.99980, 23.778 %Abs	RK1:34->B02@2
STX Std 5	0.240 Abs		14.303 %Abs	RK1:35->C02@2
STX Std 5	0.232 Abs [0.2360] {2.4 CV}		13.826 %Abs	RK1:35->D02@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++		++++++++++++++++++++++++	++++++++++++++++++++++++
8/14/2019 3:21:43 PM				
STX Control (0.060-0.090)	0.811 Abs		48.331 %Abs	RK1:36->E02@2
STX Control (0.060-0.090)	0.791 Abs [0.8010] {1.8 CV}		47.139 %Abs [47.735 %Abs]	RK1:36->F02@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	1.6775			
STX Std 0 [SD]	0.0233			
STX Std 0 [%CV]	1.3910			
STX Std 1 [MEAN]	1.3790			
STX Std 1 [SD]	0.0240			
STX Std 1 [%CV]	1.7434			
STX Std 1 [%DIFF]				
STX Std 2 [MEAN]	0.9980			
STX Std 2 [SD]	0.0283			
STX Std 2 [%CV]	2.8341			
STX Std 2 [%DIFF]				
STX Std 3 [MEAN]	0.6400			
STX Std 3 [SD]	0.0127			
STX Std 3 [%CV]	1.9887			
STX Std 3 [%DIFF]				
STX Std 4 [MEAN]	0.4025			
STX Std 4 [SD]	0.0049			
STX Std 4 [%CV]	1.2298			
STX Std 4 [%DIFF]				
STX Std 5 [MEAN]	0.2360			
STX Std 5 [SD]	0.0057			
STX Std 5 [%CV]	2.3970			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.8010			
STX Control (0.060-0.090) [SD]	0.0141			
STX Control (0.060-0.090) [%CV]	1.7656			

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.6783
B = 1.3032
C = 0.060303
D = 0.11940
R2 coef = 0.99980
50% = 0.068



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Test Report (by Request)

Test Information

Request: 8/14/2019 3:21:43 PM
Date: 8/14/2019 - 8/16/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
STX Std 0	SAXITOXIN	1.694 Abs	0.000 µg/L	R^2=0.99980, 100.95		19G0236
STX Std 0	SAXITOXIN	1.661 Abs [1.6775] {1.4 CV}	0.002 µg/L [0.001] {1	R^2=0.99980, 98.987		19G0236
STX Std 1	SAXITOXIN	1.396 Abs	0.019 µg/L	R^2=0.99980, 83.194		19G0236
STX Std 1	SAXITOXIN	1.362 Abs [1.3790] {1.7 CV}	0.021 µg/L [0.020] {7	R^2=0.99980, 81.168		19G0236
STX Std 2	SAXITOXIN	1.018 Abs	0.048 µg/L	R^2=0.99980, 60.667		19G0236
STX Std 2	SAXITOXIN	0.978 Abs [0.9980] {2.8 CV}	0.052 µg/L [0.050] {5	R^2=0.99980, 58.284		19G0236
STX Std 3	SAXITOXIN	0.649 Abs	0.100 µg/L	R^2=0.99980, 38.677		19G0236
STX Std 3	SAXITOXIN	0.631 Abs [0.6400] {2.0 CV}	0.104 µg/L [0.102] {2	R^2=0.99980, 37.604		19G0236
STX Std 4	SAXITOXIN	0.406 Abs	0.189 µg/L	R^2=0.99980, 24.195		19G0236
STX Std 4	SAXITOXIN	0.399 Abs [0.4025] {1.2 CV}	0.194 µg/L [0.192] {1	R^2=0.99980, 23.778		19G0236
STX Std 5	SAXITOXIN	0.240 Abs	> 0.400 µg/L	14.303 %Abs		19G0236
STX Std 5	SAXITOXIN	0.232 Abs [0.2360] {2.4 CV}	> 0.400 µg/L	13.826 %Abs		19G0236
STX Control (0.060-0.090)	SAXITOXIN	0.811 Abs	0.072 µg/L	48.331 %Abs		19G0236
STX Control (0.060-0.090)	SAXITOXIN	0.791 Abs [0.8010] {1.8 CV}	0.075 µg/L [0.074] {2	47.139 %Abs [47.73		19G0236

* A - Abs > 3; IA - Initial Abs; DA - Delta Abs; SD - SD of Abs; LR - Linear Range; [...] - Mean result of duplicate tests
* Generated by software version (6.4.1.1065/1085/1.00/0.95) 8/16/2019 7:17:39 AM

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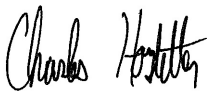
Test Report (by Request)

Test Information

Request: 8/14/2019 3:23:35 PM
Date: 8/14/2019 - 8/16/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	SAXITOXIN	1.740 Abs	0.000 µg/L	**LOW, 103.695 %ABS**	0.020 - 0.400	19G0236
LRB	SAXITOXIN	1.725 Abs [1.7325] {0.6 CV}	0.000 µg/L [0.000]		0.020 - 0.400	19G0236
LFB	SAXITOXIN	0.772 Abs	0.078 µg/L	46.007 %Abs	0.020 - 0.400	19G0236
LFB	SAXITOXIN	0.752 Abs [0.7620] {1.9 CV}	0.081 µg/L [0.080] {2	44.815 %Abs [45.411	0.020 - 0.400	19G0236
AB40034	SAXITOXIN	1.540 Abs	0.011 µg/L	**LOW, 91.776 %ABS**	0.020 - 0.400	19G0236
AB40034	SAXITOXIN	1.521 Abs [1.5305] {0.9 CV}	0.012 µg/L [0.012] {6		0.020 - 0.400	19G0236
AB40034MS	SAXITOXIN	0.768 Abs	0.078 µg/L	45.769 %Abs	0.020 - 0.400	19G0236
AB40034MS	SAXITOXIN	0.735 Abs [0.7515] {3.1 CV}	0.084 µg/L [0.081] {5	43.802 %Abs [44.785	0.020 - 0.400	19G0236
AB40034MSD	SAXITOXIN	0.751 Abs	0.081 µg/L	44.756 %Abs	0.020 - 0.400	19G0236
AB40034MSD	SAXITOXIN	0.735 Abs [0.7430] {1.5 CV}	0.084 µg/L [0.082] {2	43.802 %Abs [44.279	0.020 - 0.400	19G0236
AB40035	SAXITOXIN	1.597 Abs	0.008 µg/L	**LOW, 95.173 %ABS**	0.020 - 0.400	19G0236
AB40035	SAXITOXIN	1.559 Abs [1.5780] {1.7 CV}	0.010 µg/L [0.009] {1		0.020 - 0.400	19G0236
AB40036	SAXITOXIN	0.881 Abs	0.068 µg/L	52.503 %Abs	0.020 - 0.400	19G0236
AB40036	SAXITOXIN	0.860 Abs [0.8705] {1.7 CV}	0.071 µg/L [0.069] {3	51.251 %Abs [51.877	0.020 - 0.400	19G0236
AB40037	SAXITOXIN	1.222 Abs	0.034 µg/L	72.825 %Abs	0.020 - 0.400	19G0236
AB40037	SAXITOXIN	1.228 Abs [1.2250] {0.3 CV}	0.033 µg/L [0.034] {2	73.182 %Abs [73.004	0.020 - 0.400	19G0236
AB40038	SAXITOXIN	1.237 Abs	0.033 µg/L	73.719 %Abs	0.020 - 0.400	19G0236
AB40038	SAXITOXIN	1.255 Abs [1.2460] {1.0 CV}	0.031 µg/L [0.032] {4	74.791 %Abs [74.258	0.020 - 0.400	19G0236
AB40039	SAXITOXIN	1.506 Abs	0.013 µg/L	**LOW, 89.750 %ABS**	0.020 - 0.400	19G0236
AB40039	SAXITOXIN	1.463 Abs [1.4845] {2.0 CV}	0.016 µg/L [0.015] {1		0.020 - 0.400	19G0236
AB40040	SAXITOXIN	1.532 Abs	0.012 µg/L	**LOW, 91.299 %ABS**	0.020 - 0.400	19G0236
AB40040	SAXITOXIN	1.515 Abs [1.5235] {0.8 CV}	0.013 µg/L [0.013] {5		0.020 - 0.400	19G0236
AB40041	SAXITOXIN	1.626 Abs	0.005 µg/L	**LOW, 96.901 %ABS**	0.020 - 0.400	19G0236
AB40041	SAXITOXIN	1.605 Abs [1.6155] {0.9 CV}	0.007 µg/L [0.006] {2		0.020 - 0.400	19G0236
AB40042	SAXITOXIN	1.478 Abs	0.015 µg/L	**LOW, 88.081 %ABS**	0.020 - 0.400	19G0236
AB40042	SAXITOXIN	1.459 Abs [1.4685] {0.9 CV}	0.016 µg/L [0.015] {4		0.020 - 0.400	19G0236



Charles Hostetter 8/16/2019

* A - Abs > 3; IA - Initial Abs; DA - Delta Abs; SD - SD of Abs; LR - Linear Range; [...] - Mean result of duplicate tests
* Generated by software version (6.4.1.1065/1085/1.00/0.95) 8/16/2019 7:17:39 AM