Saxitoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)	% Recovery
LRB	Lab Reagent Blank	5/22/2019	5/22/2019	<0.05	
LFB	Lab Fortified Blank	5/22/2019	5/22/2019	0.073	73
AB38419	Potawatomi Inn's Beach	5/20/2019	5/22/2019	<0.05	
AB38420	Pokagon State Park	5/20/2019	5/22/2019	<0.05	
AB38420MS	Pokagon State Park (Matrix Spike)	5/20/2019	5/22/2019	0.091	91
AB38420MSD	Pokagon State Park (Matrix Spike Dup.)	5/20/2019	5/22/2019	0.080	80
AB34821	Chain O'Lakes SP	5/20/2019	5/22/2019	<0.05	
AB34822	Ouabache State Park	5/20/2019	5/22/2019	<0.05	
AB34823	Potato Creek State Park	5/21/2019	5/22/2019	<0.05	
AB34824	Mississinewa Lake Miami SRA	5/21/2019	5/22/2019	<0.05	
AB34825	Lost Bridge West SRA	5/21/2019	5/22/2019	<0.05	
AB34826	Mississinewa Lake Miami SRA (Field Dup.)	5/21/2019	5/22/2019	<0.05	
AB34827	Field Blank	5/21/2019	5/22/2019	<0.05	

Test Report (by Test)

Test Information

Test: SAXITOXIN
Date: 5/22/2019

Name/ID	Absorbance	Concentration	Interpretation	Reference
STX Std 0	0.945 Abs	0.002 µg/L	R^2=0.99960	0.000
STX Std 0	0.961 Abs [0.9530] {1.2 CV}	0.000 µg/L [0.001] {141.4 CV}	R^2=0.99960	0.000
STX Std 1	0.783 Abs	0.019 µg/L	R^2=0.99960	0.020
STX Std 1	0.765 Abs [0.7740] {1.6 CV}	0.021 µg/L [0.020] {7.1 CV}	R^2=0.99960	0.020
STX Std 2	0.551 Abs	0.048 µg/L	R^2=0.99960	0.050
STX Std 2	0.535 Abs [0.5430] {2.1 CV}	0.051 µg/L [0.049] {4.3 CV}	R^2=0.99960	0.050
STX Std 3	0.336 Abs	0.101 µg/L	R^2=0.99960	0.100
STX Std 3	0.326 Abs [0.3310] {2.1 CV}	0.105 µg/L [0.103] {2.7 CV}	R^2=0.99960	0.100
STX Std 4	0.205 Abs	0.186 µg/L	R^2=0.99960	0.200
STX Std 4	0.203 Abs [0.2040] {0.7 CV}	0.188 µg/L [0.187] {0.8 CV}	R^2=0.99960	0.200
STX Std 5	0.110 Abs	> 0.400 µg/L		0.400
STX Std 5	0.109 Abs [0.1095] {0.6 CV}	> 0.400 µg/L		0.400
STX Control (0.060-0.090)	0.433 Abs	0.072 µg/L		0.075 +- 0.01
STX Control (0.060-0.090)	0.408 Abs [0.4205] {4.2 CV}	0.078 µg/L [0.075] {5.7 CV}		0.075 +- 0.01
LRB	0.915 Abs	0.007 µg/L	**LOW**	0.020 - 0.400
LRB	0.908 Abs [0.9115] {0.5 CV}	0.007 µg/L [0.007] {0.0 CV}	**LOW**	0.020 - 0.400
LFB	0.420 Abs	0.075 µg/L		0.020 - 0.400
LFB	0.435 Abs [0.4275] {2.5 CV}	0.071 µg/L [0.073] {3.9 CV}		0.020 - 0.400
AB38419	0.874 Abs	0.011 µg/L	**LOW**	0.020 - 0.400
AB38419	0.867 Abs [0.8705] {0.6 CV}	0.012 µg/L [0.012] {6.1 CV}	**LOW**	0.020 - 0.400
AB38420	0.863 Abs	0.012 µg/L	**LOW**	0.020 - 0.400
AB38420	0.839 Abs [0.8510] {2.0 CV}	0.014 µg/L [0.013] {10.9 CV}	**LOW**	0.020 - 0.400
AB38420MS	0.363 Abs	0.092 µg/L		0.020 - 0.400
AB38420MS	0.364 Abs [0.3635] {0.2 CV}	0.091 µg/L [0.091] {0.8 CV}		0.020 - 0.400
AB38420MSD	0.401 Abs	0.080 µg/L		0.020 - 0.400
AB38420MSD	0.400 Abs [0.4005] {0.2 CV}	0.080 µg/L [0.080] {0.0 CV}		0.020 - 0.400
AB38421	0.852 Abs	0.013 µg/L	**LOW**	0.020 - 0.400
AB38421	0.850 Abs [0.8510] {0.2 CV}	0.013 µg/L [0.013] {0.0 CV}	**LOW**	0.020 - 0.400
AB38422	0.901 Abs	0.008 µg/L	**LOW**	0.020 - 0.400
AB38422	0.873 Abs [0.8870] {2.2 CV}	0.011 µg/L [0.010] {22.3 CV}	**LOW**	0.020 - 0.400
AB38423	0.845 Abs	0.014 µg/L	**LOW**	0.020 - 0.400
AB38423	0.822 Abs [0.8335] {2.0 CV}	0.016 µg/L [0.015] {9.4 CV}	**LOW**	0.020 - 0.400
AB38424	0.927 Abs	0.004 µg/L	**LOW**	0.020 - 0.400
AB38424	0.909 Abs [0.9180] {1.4 CV}	0.007 µg/L [0.006] {38.6 CV}	**LOW**	0.020 - 0.400
AB38425	0.896 Abs	0.009 µg/L	**LOW**	0.020 - 0.400
AB38425	0.881 Abs [0.8885] {1.2 CV}	0.010 µg/L [0.009] {7.4 CV}	**LOW**	0.020 - 0.400
AB38426	0.887 Abs	0.010 µg/L	**LOW**	0.020 - 0.400
AB38426	0.883 Abs [0.8850] {0.3 CV}	0.010 µg/L [0.010] {0.0 CV}	**LOW**	0.020 - 0.400
AB38427	0.893 Abs	0.009 µg/L	**LOW**	0.020 - 0.400
AB38427	0.895 Abs [0.8940] {0.2 CV}	0.009 µg/L [0.009] {0.0 CV}	**LOW**	0.020 - 0.400

Note

Signature _____

Charles Hostetter 5/23/2019

* 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 (6.4.1.943/1085/1.00/0.95) 5/22/2019 3:12:38 PM

SAXITOXIN - Assay Calibration Report

Assay Information

Assay Name: SAXITOXIN
Version: 1
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: 7 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: 12/5/2017 3:33:23 PM
Normal: 0.020 - 0.400
# of decimals: 3

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
5/22/2019 12:54:44 PM				
STX Std 0	0.945 Abs	0.002 µg/L	R^2=0.99960	RK1:23->A01@2
STX Std 0	0.961 Abs [0.9530] {1.2 CV}	0.000 µg/L [0.001] {141.4 C\	R^2=0.99960	RK1:23->B01@2
STX Std 1	0.783 Abs	0.019 µg/L	R^2=0.99960	RK1:24->C01@2
STX Std 1	0.765 Abs [0.7740] {1.6 CV}	0.021 µg/L [0.020] {7.1 CV}	R^2=0.99960	RK1:24->D01@2
STX Std 2	0.551 Abs	0.048 µg/L	R^2=0.99960	RK1:25->E01@2
STX Std 2	0.535 Abs [0.5430] {2.1 CV}	0.051 µg/L [0.049] {4.3 CV}	R^2=0.99960	RK1:25->F01@3
STX Std 3	0.336 Abs	0.101 µg/L	R^2=0.99960	RK1:26->G01@3
STX Std 3	0.326 Abs [0.3310] {2.1 CV}	0.105 µg/L [0.103] {2.7 CV}	R^2=0.99960	RK1:26->H01@3
STX Std 4	0.205 Abs	0.186 µg/L	R^2=0.99960	RK1:27->A02@2
STX Std 4	0.203 Abs [0.2040] {0.7 CV}	0.188 µg/L [0.187] {0.8 CV}	R^2=0.99960	RK1:27->B02@2
STX Std 5	0.110 Abs	> 0.400 µg/L		RK1:28->C02@2
STX Std 5	0.109 Abs [0.1095] {0.6 CV}	> 0.400 µg/L		RK1:28->D02@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
5/22/2019 12:54:44 PM				
STX Control (0.060-0.090)	0.433 Abs	0.072 µg/L		RK1:29->E02@2
STX Control (0.060-0.090)	0.408 Abs [0.4205] {4.2 CV}	0.078 µg/L [0.075] {5.7 CV}		RK1:29->F02@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	0.9530	0.0010		
STX Std 0 [SD]	0.0113	0.0014		
STX Std 0 [%CV]	1.1872	141.4214		
STX Std 1 [MEAN]	0.7740	0.0200		
STX Std 1 [SD]	0.0127	0.0014		
STX Std 1 [%CV]	1.6444	7.0711		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.5430	0.0495		
STX Std 2 [SD]	0.0113	0.0021		
STX Std 2 [%CV]	2.0836	4.2855		
STX Std 2 [%DIFF]		-1.0000		
STX Std 3 [MEAN]	0.3310	0.1030		
STX Std 3 [SD]	0.0071	0.0028		
STX Std 3 [%CV]	2.1363	2.7460		
STX Std 3 [%DIFF]		3.0000		
STX Std 4 [MEAN]	0.2040	0.1870		
STX Std 4 [SD]	0.0014	0.0014		
STX Std 4 [%CV]	0.6932	0.7563		
STX Std 4 [%DIFF]		-6.5000		
STX Std 5 [MEAN]	0.1095			
STX Std 5 [SD]	0.0007			
STX Std 5 [%CV]	0.6458			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.4205	0.0750		
STX Control (0.060-0.090) [SD]	0.0177	0.0042		
STX Control (0.060-0.090) [%CV]	4.2040	5.6569		
STX Control (0.060-0.090) [%DIFF]		-0.0000		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 0.95330
B = 1.3393
C = 0.056446
D = 0.053946
R2 coef = 0.99961