Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03329	Pokagon SP - Main Beach	7/17/2023	7/20/2023	< 0.05
AC03330	Pokagon SP - Potawatomi Inn Beach	7/17/2023	7/20/2023	< 0.05
AC03331	Chain O'Lakes SP - Sand Lake Beach	7/17/2023	7/20/2023	< 0.05
AC03332	Ouabache SP - Kunkel Lake Beach	7/17/2023	7/20/2023	< 0.05
AC03333	Potato Creek SP - Worster Lake Beach	7/17/2023	7/20/2023	< 0.05
AC03334	Mississinewa Lake - Miami SRA Beach	7/18/2023	7/20/2023	< 0.05
AC03335	Salamonie Lake - Lost Bridge West SRA Beach	7/18/2023	7/20/2023	< 0.05
AC03336	Summit Lake SP - Summit Lake Beach	7/18/2023	7/20/2023	< 0.05
AC03337	Pokagon SP - Potawatomi Inn Beach (Field Duplicate)	7/17/2023	7/20/2023	< 0.05
AC03338	Field Blank	7/17/2023	7/20/2023	< 0.05
AC03339	Lincoln SP - Lake Lincoln Beach	7/17/2023	7/20/2023	< 0.05
AC03340	Ferdinand State Forest - Ferdinand Lake Beach	7/17/2023	7/20/2023	< 0.05
AC03341	Patoka Lake - Newton Stewart SRA	7/17/2023	7/20/2023	< 0.05

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Test Report (by Request)

Test Information

Request: 7/20/2023 1:43:19 PM
Date: 7/20/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.349 Abs	0.002 µg/L	R^2=0.99973, 99.0		0.000	Kit:M22L2
STX Std 0	SAXITOXIN	1.374 Abs [1.3615] {1.3 C	0.000 µg/L [0.001]	R^2=0.99973, 100.8		0.000	Kit:M22L2
STX Std 1	SAXITOXIN	1.137 Abs	0.019 µg/L	R^2=0.99973, 83.48		0.020	Kit:M22L2
STX Std 1	SAXITOXIN	1.120 Abs [1.1285] {1.1 C	0.021 µg/L [0.020]	R^2=0.99973, 82.23		0.020	Kit:M22L2
STX Std 2	SAXITOXIN	0.847 Abs	0.048 µg/L	R^2=0.99973, 62.18		0.050	Kit:M22L2
STX Std 2	SAXITOXIN	0.827 Abs [0.8370] {1.7 C	0.051 µg/L [0.050]	R^2=0.99973, 60.72		0.050	Kit:M22L2
STX Std 3	SAXITOXIN	0.570 Abs	0.100 µg/L	R^2=0.99973, 41.85		0.100	Kit:M22L2
STX Std 3	SAXITOXIN	0.549 Abs [0.5595] {2.7 C	0.106 µg/L [0.103]	R^2=0.99973, 40.30		0.100	Kit:M22L2
STX Std 4	SAXITOXIN	0.370 Abs	0.191 µg/L	R^2=0.99973, 27.16		0.200	Kit:M22L2
STX Std 4	SAXITOXIN	0.372 Abs [0.3710] {0.4 C	0.190 µg/L [0.191]	R^2=0.99973, 27.31		0.200	Kit:M22L2
STX Std 5	SAXITOXIN	0.232 Abs	> 0.400 µg/L	17.034 %Abs		0.400	Kit:M22L2
STX Std 5	SAXITOXIN	0.226 Abs [0.2290] {1.9 C	> 0.400 µg/L	16.593 %Abs		0.400	Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.741 Abs	0.064 µg/L	54.405 %Abs			Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.728 Abs [0.7345] {1.3 C	0.066 µg/L [0.065]	53.451 %Abs [53.9			Kit:M22L2

Note

Signature _____

Charles Hostetter 7/20/2023

* 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 (6.4.1.1171/1085/1.00/0.95) 7/20/2023 1:56:34 PM

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Test Report (by Request)

Test Information

Request: 7/20/2023 1:44:30 PM
Date: 7/20/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.367 Abs	0.000 µg/L	Low, 100.367 %Abs		0.020 - 0.400	Kit:M22L2
LRB	SAXITOXIN	1.352 Abs [1.3595] {0.8 C	0.002 µg/L [0.001]	Low, 99.266 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.591 Abs	0.094 µg/L	43.392 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.583 Abs [0.5870] {1.0 C	0.096 µg/L [0.095]	42.805 %Abs [43.0		0.020 - 0.400	Kit:M22L2
AC03329	SAXITOXIN	1.270 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03329	SAXITOXIN	1.274 Abs [1.2720] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03330	SAXITOXIN	1.281 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03330	SAXITOXIN	1.272 Abs [1.2765] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03331	SAXITOXIN	1.191 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03331	SAXITOXIN	1.167 Abs [1.1790] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03332	SAXITOXIN	0.926 Abs	0.043 µg/L	67.988 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03332	SAXITOXIN	0.911 Abs [0.9185] {1.2 C	0.045 µg/L [0.044]	66.887 %Abs [67.4	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03333	SAXITOXIN	1.257 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03333	SAXITOXIN	1.251 Abs [1.2540] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03334	SAXITOXIN	1.286 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03334	SAXITOXIN	1.303 Abs [1.2945] {0.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03334MS	SAXITOXIN	0.564 Abs	0.102 µg/L	41.410 %Abs		0.020 - 0.400	Kit:M22L2
AC03334MS	SAXITOXIN	0.552 Abs [0.5580] {1.5 C	0.105 µg/L [0.104]	40.529 %Abs [40.9		0.020 - 0.400	Kit:M22L2
AC03334MSD	SAXITOXIN	0.573 Abs	0.099 µg/L	42.070 %Abs		0.020 - 0.400	Kit:M22L2
AC03334MSD	SAXITOXIN	0.560 Abs [0.5665] {1.6 C	0.103 µg/L [0.101]	41.116 %Abs [41.5		0.020 - 0.400	Kit:M22L2
AC03335	SAXITOXIN	0.993 Abs	0.035 µg/L	72.907 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03335	SAXITOXIN	0.985 Abs [0.9890] {0.6 C	0.036 µg/L [0.036]	72.320 %Abs [72.6	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03336	SAXITOXIN	1.309 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03336	SAXITOXIN	1.314 Abs [1.3115] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03337	SAXITOXIN	1.277 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03337	SAXITOXIN	1.271 Abs [1.2740] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03338	SAXITOXIN	1.359 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03338	SAXITOXIN	1.381 Abs [1.3700] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03339	SAXITOXIN	1.152 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03339	SAXITOXIN	1.145 Abs [1.1485] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03340	SAXITOXIN	1.205 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03340	SAXITOXIN	1.193 Abs [1.1990] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03341	SAXITOXIN	1.175 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03341	SAXITOXIN	1.159 Abs [1.1670] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2

Note

Signature

Charles Hostetter 7/20/2023

* 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 (6.4.1.1171/1085/1.00/0.95) 7/20/2023 1:56:34 PM

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: Kit:M22L2865

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
7/20/2023 1:43:19 PM				
STX Std 0	1.349 Abs	0.002 µg/L	R^2=0.99973, 99.046 %Abs	RK1:30->A07@2
STX Std 0	1.374 Abs [1.3615] {1.3 CV}	0.000 µg/L [0.001] {141.4 C\	R^2=0.99973, 100.881 %Abs	RK1:30->B07@2
STX Std 1	1.137 Abs	0.019 µg/L	R^2=0.99973, 83.480 %Abs	RK1:31->C07@2
STX Std 1	1.120 Abs [1.1285] {1.1 CV}	0.021 µg/L [0.020] {7.1 CV}	R^2=0.99973, 82.232 %Abs	RK1:31->D07@2
STX Std 2	0.847 Abs	0.048 µg/L	R^2=0.99973, 62.188 %Abs	RK1:32->E07@2
STX Std 2	0.827 Abs [0.8370] {1.7 CV}	0.051 µg/L [0.050] {4.3 CV}	R^2=0.99973, 60.720 %Abs	RK1:32->F07@3
STX Std 3	0.570 Abs	0.100 µg/L	R^2=0.99973, 41.850 %Abs	RK1:33->G07@3
STX Std 3	0.549 Abs [0.5595] {2.7 CV}	0.106 µg/L [0.103] {4.1 CV}	R^2=0.99973, 40.308 %Abs	RK1:33->H07@3
STX Std 4	0.370 Abs	0.191 µg/L	R^2=0.99973, 27.166 %Abs	RK1:34->A08@2
STX Std 4	0.372 Abs [0.3710] {0.4 CV}	0.190 µg/L [0.191] {0.4 CV}	R^2=0.99973, 27.313 %Abs	RK1:34->B08@2
STX Std 5	0.232 Abs	> 0.400 µg/L	17.034 %Abs	RK1:35->C08@2
STX Std 5	0.226 Abs [0.2290] {1.9 CV}	> 0.400 µg/L	16.593 %Abs	RK1:35->D08@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
7/20/2023 1:43:19 PM				
STX Control (0.060-0.090)	0.741 Abs	0.064 µg/L	54.405 %Abs	RK1:36->E08@2
STX Control (0.060-0.090)	0.728 Abs [0.7345] {1.3 CV}	0.066 µg/L [0.065] {2.2 CV}	53.451 %Abs [53.928 %Abs]	RK1:36->F08@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	1.3615	0.0010		
STX Std 0 [SD]	0.0177	0.0014		
STX Std 0 [%CV]	1.2984	141.4214		
STX Std 1 [MEAN]	1.1285	0.0200		
STX Std 1 [SD]	0.0120	0.0014		
STX Std 1 [%CV]	1.0652	7.0711		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.8370	0.0495		
STX Std 2 [SD]	0.0141	0.0021		
STX Std 2 [%CV]	1.6896	4.2855		
STX Std 2 [%DIFF]		-1.0000		
STX Std 3 [MEAN]	0.5595	0.1030		
STX Std 3 [SD]	0.0148	0.0042		
STX Std 3 [%CV]	2.6540	4.1191		
STX Std 3 [%DIFF]		3.0000		
STX Std 4 [MEAN]	0.3710	0.1905		
STX Std 4 [SD]	0.0014	0.0007		
STX Std 4 [%CV]	0.3812	0.3712		
STX Std 4 [%DIFF]		-4.7500		
STX Std 5 [MEAN]	0.2290			
STX Std 5 [SD]	0.0042			
STX Std 5 [%CV]	1.8527			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.7345	0.0650		
STX Control (0.060-0.090) [SD]	0.0092	0.0014		
STX Control (0.060-0.090) [%CV]	1.2515	2.1757		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.3627
B = 1.2623
C = 0.063228
D = 0.12449
R2 coef = 0.99973
50% = 0.074