Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03081	Pokagon SP - Main Beach	6/19/2023	6/22/2023	< 0.05
AC03082	Pokagon SP - Potawatomi Inn Beach	6/19/2023	6/22/2023	< 0.05
AC03083	Chain O'Lakes SP - Sand Lake Beach	6/19/2023	6/22/2023	< 0.05
AC03084	Ouabache SP - Kunkel Lake Beach	6/19/2023	6/22/2023	< 0.05
AC03085	Potato Creek SP - Worster Lake Beach	6/20/2023	6/22/2023	< 0.05
AC03086	Mississinewa Lake - Miami SRA Beach	6/20/2023	6/22/2023	< 0.05
AC03087	Salamonie Lake - Lost Bridge West SRA Beach	6/20/2023	6/22/2023	< 0.05
AC03088	Summit Lake SP - Summit Lake Beach	6/20/2023	6/22/2023	< 0.05
AC03089	Salamonie Lake - Lost Bridge West SRA Beach (Field Duplicate)	6/20/2023	6/22/2023	< 0.05
AC03090	Field Blank	6/20/2023	6/22/2023	< 0.05
AC03091	Lincoln SP - Lake Lincoln Beach	6/19/2023	6/22/2023	< 0.05
AC03092	Ferdinand State Forest - Ferdinand Lake Beach	6/19/2023	6/22/2023	< 0.05
AC03093	Patoka Lake - Newton Stewart SRA	6/19/2023	6/22/2023	< 0.05

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Test Report (by Request)

Test Information

Request: 6/22/2023 2:29:10 PM
Date: 6/22/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.433 Abs	0.000 µg/L	R^2=0.99956, 100.0			M22L286E
STX Std 0	SAXITOXIN	1.431 Abs [1.4320] {0.1 C	0.000 µg/L [0.000]	R^2=0.99956, 100.0			M22L286E
STX Std 1	SAXITOXIN	1.198 Abs	0.019 µg/L	R^2=0.99956, 83.6E			M22L286E
STX Std 1	SAXITOXIN	1.174 Abs [1.1860] {1.4 C	0.021 µg/L [0.020]	R^2=0.99956, 81.9E			M22L286E
STX Std 2	SAXITOXIN	0.914 Abs	0.046 µg/L	R^2=0.99956, 63.8Z			M22L286E
STX Std 2	SAXITOXIN	0.875 Abs [0.8945] {3.1 C	0.051 µg/L [0.049]	R^2=0.99956, 61.1C			M22L286E
STX Std 3	SAXITOXIN	0.612 Abs	0.098 µg/L	R^2=0.99956, 42.73			M22L286E
STX Std 3	SAXITOXIN	0.570 Abs [0.5910] {5.0 C	0.110 µg/L [0.104]	R^2=0.99956, 39.8C			M22L286E
STX Std 4	SAXITOXIN	0.401 Abs	0.185 µg/L	R^2=0.99956, 28.0C			M22L286E
STX Std 4	SAXITOXIN	0.383 Abs [0.3920] {3.2 C	0.198 µg/L [0.192]	R^2=0.99956, 26.74			M22L286E
STX Std 5	SAXITOXIN	0.247 Abs	0.395 µg/L	R^2=0.99956, 17.24			M22L286E
STX Std 5	SAXITOXIN	0.234 Abs [0.2405] {3.8 C	> 0.400 µg/L [0.39	16.341 %Abs			M22L286E
STX Control (0.060-0.090)	SAXITOXIN	0.776 Abs	0.065 µg/L	54.190 %Abs			M22L286E
STX Control (0.060-0.090)	SAXITOXIN	0.767 Abs [0.7715] {0.8 C	0.067 µg/L [0.066]	53.561 %Abs [53.8			M22L286E

Note

Signature

Charles Hostetter 6/22/2023

* 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 (6.4.1.1139/1085/1.00/0.95) 6/22/2023 2:32:07 PM

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Test Report (by Request)

Test Information

Request: 6/22/2023 2:30:19 PM
Date: 6/22/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.426 Abs	0.001 µg/L	Low, 99.581 %Abs		0.020 - 0.400	M22L286E
LRB	SAXITOXIN	1.430 Abs [1.4280] {0.2 C	0.000 µg/L [0.001]	Low, 99.860 %Abs		0.020 - 0.400	M22L286E
LFB (SAX)	SAXITOXIN	0.665 Abs	0.086 µg/L	46.439 %Abs		0.020 - 0.400	M22L286E
LFB (SAX)	SAXITOXIN	0.644 Abs [0.6545] {2.3 C	0.091 µg/L [0.089]	44.972 %Abs [45.7		0.020 - 0.400	M22L286E
AC03081	SAXITOXIN	1.362 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03081	SAXITOXIN	1.339 Abs [1.3505] {1.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03082	SAXITOXIN	1.347 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03082	SAXITOXIN	1.329 Abs [1.3380] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03082MS	SAXITOXIN	0.621 Abs	0.096 µg/L	43.366 %Abs		0.020 - 0.400	M22L286E
AC03082MS	SAXITOXIN	0.602 Abs [0.6115] {2.2 C	0.101 µg/L [0.098]	42.039 %Abs [42.7		0.020 - 0.400	M22L286E
AC03082MSD	SAXITOXIN	0.631 Abs	0.094 µg/L	44.064 %Abs		0.020 - 0.400	M22L286E
AC03082MSD	SAXITOXIN	0.606 Abs [0.6185] {2.9 C	0.100 µg/L [0.097]	42.318 %Abs [43.1		0.020 - 0.400	M22L286E
AC03083	SAXITOXIN	1.317 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03083	SAXITOXIN	1.292 Abs [1.3045] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03084	SAXITOXIN	1.101 Abs	0.030 µg/L	76.885 %Abs	MDF=1.100	0.020 - 0.400	M22L286E
AC03084	SAXITOXIN	1.098 Abs [1.0995] {0.2 C	0.031 µg/L [0.030]	76.676 %Abs [76.7	MDF=1.100	0.020 - 0.400	M22L286E
AC03085	SAXITOXIN	1.349 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03085	SAXITOXIN	1.364 Abs [1.3565] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03086	SAXITOXIN	1.418 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03086	SAXITOXIN	1.387 Abs [1.4025] {1.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03087	SAXITOXIN	1.389 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03087	SAXITOXIN	1.361 Abs [1.3750] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03088	SAXITOXIN	1.381 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03088	SAXITOXIN	1.391 Abs [1.3860] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03089	SAXITOXIN	1.372 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03089	SAXITOXIN	1.392 Abs [1.3820] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03090	SAXITOXIN	1.466 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03090	SAXITOXIN	1.456 Abs [1.4610] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03091	SAXITOXIN	1.251 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03091	SAXITOXIN	1.227 Abs [1.2390] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03092	SAXITOXIN	1.385 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03092	SAXITOXIN	1.383 Abs [1.3840] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03093	SAXITOXIN	1.434 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03093	SAXITOXIN	1.420 Abs [1.4270] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E

Note

Signature

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* 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 (6.4.1.1139/1085/1.00/0.95) 6/22/2023 2:32:07 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: M22L2865

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
6/22/2023 2:29:10 PM				
STX Std 0	1.433 Abs	0.000 µg/L	R^2=0.99956, 100.000 %Abs	RK1:30->A07@2
STX Std 0	1.431 Abs [1.4320] {0.1 CV}	0.000 µg/L [0.000]	R^2=0.99956, 100.000 %Abs	RK1:30->B07@2
STX Std 1	1.198 Abs	0.019 µg/L	R^2=0.99956, 83.659 %Abs	RK1:31->C07@2
STX Std 1	1.174 Abs [1.1860] {1.4 CV}	0.021 µg/L [0.020] {7.1 CV}	R^2=0.99956, 81.983 %Abs	RK1:31->D07@2
STX Std 2	0.914 Abs	0.046 µg/L	R^2=0.99956, 63.827 %Abs	RK1:32->E07@2
STX Std 2	0.875 Abs [0.8945] {3.1 CV}	0.051 µg/L [0.049] {7.3 CV}	R^2=0.99956, 61.103 %Abs	RK1:32->F07@3
STX Std 3	0.612 Abs	0.098 µg/L	R^2=0.99956, 42.737 %Abs	RK1:33->G07@3
STX Std 3	0.570 Abs [0.5910] {5.0 CV}	0.110 µg/L [0.104] {8.2 CV}	R^2=0.99956, 39.804 %Abs	RK1:33->H07@3
STX Std 4	0.401 Abs	0.185 µg/L	R^2=0.99956, 28.003 %Abs	RK1:34->A08@2
STX Std 4	0.383 Abs [0.3920] {3.2 CV}	0.198 µg/L [0.192] {4.8 CV}	R^2=0.99956, 26.746 %Abs	RK1:34->B08@2
STX Std 5	0.247 Abs	0.395 µg/L	R^2=0.99956, 17.249 %Abs	RK1:35->C08@2
STX Std 5	0.234 Abs [0.2405] {3.8 CV}	> 0.400 µg/L [0.395]	16.341 %Abs	RK1:35->D08@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
6/22/2023 2:29:10 PM				
STX Control (0.060-0.090)	0.776 Abs	0.065 µg/L	54.190 %Abs	RK1:36->E08@2
STX Control (0.060-0.090)	0.767 Abs [0.7715] {0.8 CV}	0.067 µg/L [0.066] {2.1 CV}	53.561 %Abs [53.876 %Abs]	RK1:36->F08@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	1.4320	0.0000		
STX Std 0 [SD]	0.0014	0.0000		
STX Std 0 [%CV]	0.0988	0.0000		
STX Std 1 [MEAN]	1.1860	0.0200		
STX Std 1 [SD]	0.0170	0.0014		
STX Std 1 [%CV]	1.4309	7.0711		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.8945	0.0485		
STX Std 2 [SD]	0.0276	0.0035		
STX Std 2 [%CV]	3.0830	7.2898		
STX Std 2 [%DIFF]		-3.0000		
STX Std 3 [MEAN]	0.5910	0.1040		
STX Std 3 [SD]	0.0297	0.0085		
STX Std 3 [%CV]	5.0251	8.1589		
STX Std 3 [%DIFF]		4.0000		
STX Std 4 [MEAN]	0.3920	0.1915		
STX Std 4 [SD]	0.0127	0.0092		
STX Std 4 [%CV]	3.2469	4.8002		
STX Std 4 [%DIFF]		-4.2500		
STX Std 5 [MEAN]	0.2405			
STX Std 5 [SD]	0.0092			
STX Std 5 [%CV]	3.8222			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.7715	0.0660		
STX Control (0.060-0.090) [SD]	0.0064	0.0014		
STX Control (0.060-0.090) [%CV]	0.8249	2.1428		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.4314
B = 1.2570
C = 0.065085
D = 0.12404
R2 coef = 0.99956
50% = 0.076