Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03013	Salamonie Lake - Lost Bridge West SRA Beach	6/5/2023	6/7/2023	< 0.050
AC03014	Salamonie Lake - Lost Bridge West SRA Beach (Field Duplicate)	6/5/2023	6/7/2023	< 0.050
AC03015	Field Blank	6/5/2023	6/7/2023	< 0.050
AC03016	Ferdinand State Forest - Ferdinand Lake Beach	6/5/2023	6/7/2023	< 0.050

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Test Report (by Request)

Test Information

Request: 6/7/2023 1:16:52 PM
Date: 6/7/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.448 Abs	0.000 µg/L	R^2=0.99956, 100.4			M22L286E
STX Std 0	SAXITOXIN	1.435 Abs [1.4415] {0.6 C	0.001 µg/L [0.001]	R^2=0.99956, 99.58			M22L286E
STX Std 1	SAXITOXIN	1.213 Abs	0.019 µg/L	R^2=0.99956, 84.17			M22L286E
STX Std 1	SAXITOXIN	1.189 Abs [1.2010] {1.4 C	0.021 µg/L [0.020]	R^2=0.99956, 82.51			M22L286E
STX Std 2	SAXITOXIN	0.899 Abs	0.049 µg/L	R^2=0.99956, 62.38			M22L286E
STX Std 2	SAXITOXIN	0.880 Abs [0.8895] {1.5 C	0.051 µg/L [0.050]	R^2=0.99956, 61.06			M22L286E
STX Std 3	SAXITOXIN	0.605 Abs	0.100 µg/L	R^2=0.99956, 41.98			M22L286E
STX Std 3	SAXITOXIN	0.582 Abs [0.5935] {2.7 C	0.106 µg/L [0.103]	R^2=0.99956, 40.38			M22L286E
STX Std 4	SAXITOXIN	0.404 Abs	0.184 µg/L	R^2=0.99956, 28.03			M22L286E
STX Std 4	SAXITOXIN	0.393 Abs [0.3985] {2.0 C	0.192 µg/L [0.188]	R^2=0.99956, 27.27			M22L286E
STX Std 5	SAXITOXIN	0.248 Abs	> 0.400 µg/L	17.210 %Abs			M22L286E
STX Std 5	SAXITOXIN	0.237 Abs [0.2425] {3.2 C	> 0.400 µg/L	16.447 %Abs			M22L286E
STX Control (0.060-0.090)	SAXITOXIN	0.781 Abs	0.065 µg/L	54.198 %Abs			M22L286E
STX Control (0.060-0.090)	SAXITOXIN	0.753 Abs [0.7670] {2.6 C	0.069 µg/L [0.067]	52.255 %Abs [53.2			M22L286E

Note

Signature _____

Charles Hostetter 6/7/2023

* 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) 6/7/2023 1:53:39 PM

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Test Report (by Request)

Test Information

Request: 6/7/2023 1:52:22 PM
Date: 6/7/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.418 Abs	0.003 µg/L	Low, 98.404 %Abs		0.020 - 0.400	M22L286E
LRB	SAXITOXIN	1.427 Abs [1.4225] {0.4 C	0.002 µg/L [0.003]	Low, 99.028 %Abs		0.020 - 0.400	M22L286E
LFB (SAX)	SAXITOXIN	0.666 Abs	0.086 µg/L	46.218 %Abs		0.020 - 0.400	M22L286E
LFB (SAX)	SAXITOXIN	0.651 Abs [0.6585] {1.6 C	0.089 µg/L [0.088]	45.177 %Abs [45.6		0.020 - 0.400	M22L286E
AC03013	SAXITOXIN	1.404 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03013	SAXITOXIN	1.398 Abs [1.4010] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03013MS	SAXITOXIN	0.641 Abs	0.091 µg/L	44.483 %Abs		0.020 - 0.400	M22L286E
AC03013MS	SAXITOXIN	0.607 Abs [0.6240] {3.9 C	0.100 µg/L [0.095]	42.124 %Abs [43.3		0.020 - 0.400	M22L286E
AC03013MSD	SAXITOXIN	0.622 Abs	0.096 µg/L	43.164 %Abs		0.020 - 0.400	M22L286E
AC03013MSD	SAXITOXIN	0.611 Abs [0.6165] {1.3 C	0.099 µg/L [0.097]	42.401 %Abs [42.7		0.020 - 0.400	M22L286E
AC03014	SAXITOXIN	1.403 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03014	SAXITOXIN	1.397 Abs [1.4000] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03015	SAXITOXIN	1.436 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03015	SAXITOXIN	1.440 Abs [1.4380] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03016	SAXITOXIN	1.370 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03016	SAXITOXIN	1.380 Abs [1.3750] {0.5 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) 6/7/2023 1:53:39 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
6/7/2023 1:16:52 PM				
STX Std 0	1.448 Abs	0.000 µg/L	R^2=0.99956, 100.486 %Abs	RK1:23->A01@2
STX Std 0	1.435 Abs [1.4415] {0.6 CV}	0.001 µg/L [0.001] {141.4 C\	R^2=0.99956, 99.584 %Abs	RK1:23->B01@2
STX Std 1	1.213 Abs	0.019 µg/L	R^2=0.99956, 84.178 %Abs	RK1:24->C01@2
STX Std 1	1.189 Abs [1.2010] {1.4 CV}	0.021 µg/L [0.020] {7.1 CV}	R^2=0.99956, 82.512 %Abs	RK1:24->D01@2
STX Std 2	0.899 Abs	0.049 µg/L	R^2=0.99956, 62.387 %Abs	RK1:25->E01@2
STX Std 2	0.880 Abs [0.8895] {1.5 CV}	0.051 µg/L [0.050] {2.8 CV}	R^2=0.99956, 61.069 %Abs	RK1:25->F01@3
STX Std 3	0.605 Abs	0.100 µg/L	R^2=0.99956, 41.985 %Abs	RK1:26->G01@3
STX Std 3	0.582 Abs [0.5935] {2.7 CV}	0.106 µg/L [0.103] {4.1 CV}	R^2=0.99956, 40.389 %Abs	RK1:26->H01@3
STX Std 4	0.404 Abs	0.184 µg/L	R^2=0.99956, 28.036 %Abs	RK1:27->A02@2
STX Std 4	0.393 Abs [0.3985] {2.0 CV}	0.192 µg/L [0.188] {3.0 CV}	R^2=0.99956, 27.273 %Abs	RK1:27->B02@2
STX Std 5	0.248 Abs	> 0.400 µg/L	17.210 %Abs	RK1:28->C02@2
STX Std 5	0.237 Abs [0.2425] {3.2 CV}	> 0.400 µg/L	16.447 %Abs	RK1:28->D02@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
6/7/2023 1:16:52 PM				
STX Control (0.060-0.090)	0.781 Abs	0.065 µg/L	54.198 %Abs	RK1:29->E02@2
STX Control (0.060-0.090)	0.753 Abs [0.7670] {2.6 CV}	0.069 µg/L [0.067] {4.2 CV}	52.255 %Abs [53.227 %Abs]	RK1:29->F02@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	1.4415	0.0005		
STX Std 0 [SD]	0.0092	0.0007		
STX Std 0 [%CV]	0.6377	141.4214		
STX Std 1 [MEAN]	1.2010	0.0200		
STX Std 1 [SD]	0.0170	0.0014		
STX Std 1 [%CV]	1.4130	7.0711		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.8895	0.0500		
STX Std 2 [SD]	0.0134	0.0014		
STX Std 2 [%CV]	1.5104	2.8284		
STX Std 2 [%DIFF]		-0.0000		
STX Std 3 [MEAN]	0.5935	0.1030		
STX Std 3 [SD]	0.0163	0.0042		
STX Std 3 [%CV]	2.7403	4.1191		
STX Std 3 [%DIFF]		3.0000		
STX Std 4 [MEAN]	0.3985	0.1880		
STX Std 4 [SD]	0.0078	0.0057		
STX Std 4 [%CV]	1.9519	3.0090		
STX Std 4 [%DIFF]		-6.0000		
STX Std 5 [MEAN]	0.2425			
STX Std 5 [SD]	0.0078			
STX Std 5 [%CV]	3.2075			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.7670	0.0670		
STX Control (0.060-0.090) [SD]	0.0198	0.0028		
STX Control (0.060-0.090) [%CV]	2.5814	4.2215		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.4422
B = 1.2738
C = 0.063539
D = 0.13645
R2 coef = 0.99956
50% = 0.075