Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03737	Potato Creek SP - Worster Lake Beach	7/31/2023	8/3/2023	< 0.050
AC03738	Chain O'Lakes SP - Sand Lake Beach	7/31/2023	8/3/2023	< 0.050
AC03739	Mississinewa Lake - Miami SRA Beach	7/31/2023	8/3/2023	< 0.050
AC03740	Salamonie Lake - Lost Bridge West SRA Beach	7/31/2023	8/3/2023	< 0.050
AC03741	Mississinewa Lake - Miami SRA Beach (Field Duplicate)	7/31/2023	8/3/2023	< 0.050
AC03742	Field Blank	7/31/2023	8/3/2023	< 0.050
AC03743	Ferdinand State Forest - Ferdinand Lake Beach	7/31/2023	8/3/2023	< 0.050
AC03744	Patoka Lake - Newton Stewart SRA	7/31/2023	8/3/2023	< 0.050

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Test Report (by Request)

Test Information

Request: 8/3/2023 1:55:53 PM
Date: 8/3/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.368 Abs	0.000 µg/L	R^2=0.99988, 100.5		0.000	Kit:M22L2
STX Std 0	SAXITOXIN	1.353 Abs [1.3605] {0.8 C	0.001 µg/L [0.001]	R^2=0.99988, 99.41		0.000	Kit:M22L2
STX Std 1	SAXITOXIN	1.128 Abs	0.020 µg/L	R^2=0.99988, 82.88		0.020	Kit:M22L2
STX Std 1	SAXITOXIN	1.114 Abs [1.1210] {0.9 C	0.021 µg/L [0.021]	R^2=0.99988, 81.85		0.020	Kit:M22L2
STX Std 2	SAXITOXIN	0.841 Abs	0.049 µg/L	R^2=0.99988, 61.79		0.050	Kit:M22L2
STX Std 2	SAXITOXIN	0.834 Abs [0.8375] {0.6 C	0.050 µg/L [0.050]	R^2=0.99988, 61.27		0.050	Kit:M22L2
STX Std 3	SAXITOXIN	0.573 Abs	0.100 µg/L	R^2=0.99988, 42.10		0.100	Kit:M22L2
STX Std 3	SAXITOXIN	0.560 Abs [0.5665] {1.6 C	0.104 µg/L [0.102]	R^2=0.99988, 41.14		0.100	Kit:M22L2
STX Std 4	SAXITOXIN	0.373 Abs	0.192 µg/L	R^2=0.99988, 27.40		0.200	Kit:M22L2
STX Std 4	SAXITOXIN	0.367 Abs [0.3700] {1.1 C	0.197 µg/L [0.195]	R^2=0.99988, 26.96		0.200	Kit:M22L2
STX Std 5	SAXITOXIN	0.234 Abs	0.399 µg/L	R^2=0.99988, 17.19		0.400	Kit:M22L2
STX Std 5	SAXITOXIN	0.228 Abs [0.2310] {1.8 C	> 0.400 µg/L [0.39	16.752 %Abs		0.400	Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.738 Abs	0.065 µg/L	54.225 %Abs			Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.724 Abs [0.7310] {1.4 C	0.067 µg/L [0.066]	53.196 %Abs [53.7			Kit:M22L2

Note

Signature _____

Charles Hostetter 8/3/2023

* 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) 8/3/2023 2:44:35 PM

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Test Report (by Request)

Test Information

Request: 8/3/2023 1:56:43 PM
Date: 8/3/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.361 Abs	0.000 µg/L	Low, 100.000 %Abs		0.020 - 0.400	Kit:M22L2
LRB	SAXITOXIN	1.350 Abs [1.3555] {0.6 C	0.001 µg/L [0.001]	Low, 99.192 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.623 Abs	0.087 µg/L	45.775 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.602 Abs [0.6125] {2.4 C	0.093 µg/L [0.090]	44.232 %Abs [45.0		0.020 - 0.400	Kit:M22L2
AC03737	SAXITOXIN	1.220 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03737	SAXITOXIN	1.219 Abs [1.2195] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03737MS	SAXITOXIN	0.573 Abs	0.100 µg/L	42.101 %Abs		0.020 - 0.400	Kit:M22L2
AC03737MS	SAXITOXIN	0.554 Abs [0.5635] {2.4 C	0.106 µg/L [0.103]	40.705 %Abs [41.4		0.020 - 0.400	Kit:M22L2
AC03737MSD	SAXITOXIN	0.559 Abs	0.104 µg/L	41.073 %Abs		0.020 - 0.400	Kit:M22L2
AC03737MSD	SAXITOXIN	0.555 Abs [0.5570] {0.5 C	0.106 µg/L [0.105]	40.779 %Abs [40.9		0.020 - 0.400	Kit:M22L2
AC03738	SAXITOXIN	1.222 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03738	SAXITOXIN	1.203 Abs [1.2125] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03739	SAXITOXIN	1.305 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03739	SAXITOXIN	1.305 Abs [1.3050] {0.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03740	SAXITOXIN	1.065 Abs	0.027 µg/L	78.251 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03740	SAXITOXIN	1.055 Abs [1.0600] {0.7 C	0.029 µg/L [0.028]	77.517 %Abs [77.8	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03741	SAXITOXIN	1.309 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03741	SAXITOXIN	1.307 Abs [1.3080] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03742	SAXITOXIN	1.377 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03742	SAXITOXIN	1.369 Abs [1.3730] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03743	SAXITOXIN	1.154 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03743	SAXITOXIN	1.143 Abs [1.1485] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03744	SAXITOXIN	1.328 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC03744	SAXITOXIN	1.323 Abs [1.3255] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2

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 (6.4.1.1171/1085/1.00/0.95) 8/3/2023 2:44:35 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
8/3/2023 1:55:53 PM				
STX Std 0	1.368 Abs	0.000 µg/L	R^2=0.99988, 100.514 %Abs	RK1:30->A06@1
STX Std 0	1.353 Abs [1.3605] {0.8 CV}	0.001 µg/L [0.001] {141.4 C\	R^2=0.99988, 99.412 %Abs	RK1:30->B06@1
STX Std 1	1.128 Abs	0.020 µg/L	R^2=0.99988, 82.880 %Abs	RK1:31->C06@1
STX Std 1	1.114 Abs [1.1210] {0.9 CV}	0.021 µg/L [0.021] {3.4 CV}	R^2=0.99988, 81.852 %Abs	RK1:31->D06@1
STX Std 2	0.841 Abs	0.049 µg/L	R^2=0.99988, 61.793 %Abs	RK1:32->E06@1
STX Std 2	0.834 Abs [0.8375] {0.6 CV}	0.050 µg/L [0.050] {1.4 CV}	R^2=0.99988, 61.278 %Abs	RK1:32->F06@4
STX Std 3	0.573 Abs	0.100 µg/L	R^2=0.99988, 42.101 %Abs	RK1:33->G06@4
STX Std 3	0.560 Abs [0.5665] {1.6 CV}	0.104 µg/L [0.102] {2.8 CV}	R^2=0.99988, 41.146 %Abs	RK1:33->H06@4
STX Std 4	0.373 Abs	0.192 µg/L	R^2=0.99988, 27.406 %Abs	RK1:34->A07@2
STX Std 4	0.367 Abs [0.3700] {1.1 CV}	0.197 µg/L [0.195] {1.8 CV}	R^2=0.99988, 26.965 %Abs	RK1:34->B07@2
STX Std 5	0.234 Abs	0.399 µg/L	R^2=0.99988, 17.193 %Abs	RK1:35->C07@2
STX Std 5	0.228 Abs [0.2310] {1.8 CV}	> 0.400 µg/L [0.399]	16.752 %Abs	RK1:35->D07@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
8/3/2023 1:55:53 PM				
STX Control (0.060-0.090)	0.738 Abs	0.065 µg/L	54.225 %Abs	RK1:36->E07@2
STX Control (0.060-0.090)	0.724 Abs [0.7310] {1.4 CV}	0.067 µg/L [0.066] {2.1 CV}	53.196 %Abs [53.711 %Abs]	RK1:36->F07@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	1.3605	0.0005		
STX Std 0 [SD]	0.0106	0.0007		
STX Std 0 [%CV]	0.7796	141.4214		
STX Std 1 [MEAN]	1.1210	0.0205		
STX Std 1 [SD]	0.0099	0.0007		
STX Std 1 [%CV]	0.8831	3.4493		
STX Std 1 [%DIFF]		2.5000		
STX Std 2 [MEAN]	0.8375	0.0495		
STX Std 2 [SD]	0.0049	0.0007		
STX Std 2 [%CV]	0.5910	1.4285		
STX Std 2 [%DIFF]		-1.0000		
STX Std 3 [MEAN]	0.5665	0.1020		
STX Std 3 [SD]	0.0092	0.0028		
STX Std 3 [%CV]	1.6227	2.7730		
STX Std 3 [%DIFF]		2.0000		
STX Std 4 [MEAN]	0.3700	0.1945		
STX Std 4 [SD]	0.0042	0.0035		
STX Std 4 [%CV]	1.1467	1.8178		
STX Std 4 [%DIFF]		-2.7500		
STX Std 5 [MEAN]	0.2310			
STX Std 5 [SD]	0.0042			
STX Std 5 [%CV]	1.8366			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.7310	0.0660		
STX Control (0.060-0.090) [SD]	0.0099	0.0014		
STX Control (0.060-0.090) [%CV]	1.3542	2.1428		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.3611
B = 1.2260
C = 0.064631
D = 0.11314
R2 coef = 0.99988
50% = 0.075