



Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC37294	Potato Creek SP - Worster Lake Beach	8/28/2023	8/31/2023	< 0.050
AC37295	Mississinewa Lake - Miami SRA Beach	8/28/2023	8/31/2023	< 0.050
AC37296	Salamonie Lake - Lost Bridge West SRA Beach	8/28/2023	8/31/2023	< 0.050
AC37297	Ouabache SP - Kunkel Lake Beach	8/28/2023	8/31/2023	< 0.050
AC37298	Potato Creek SP - Worster Lake Beach (Field Duplicate)	8/28/2023	8/31/2023	< 0.050
AC37299	Field Blank	8/28/2023	8/31/2023	< 0.050
AC37300	Ferdinand State Forest - Ferdinand Lake Beach	8/28/2023	8/31/2023	0.057
AC37301	Patoka Lake - Newton Stewart SRA	8/28/2023	8/31/2023	< 0.050

Test Report (by Request)

Test Information

Request: 8/31/2023 11:13:17 AM
 Date: 8/31/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.306 Abs	0.001 µg/L	R^2=0.99951, 99.77		0.000	Kit:M22L2
STX Std 0	SAXITOXIN	1.312 Abs [1.3090] {0.3 C	0.000 µg/L [0.001]	R^2=0.99951, 100.2		0.000	Kit:M22L2
STX Std 1	SAXITOXIN	1.080 Abs	0.019 µg/L	R^2=0.99951, 82.50		0.020	Kit:M22L2
STX Std 1	SAXITOXIN	1.064 Abs [1.0720] {1.1 C	0.021 µg/L [0.020]	R^2=0.99951, 81.28		0.020	Kit:M22L2
STX Std 2	SAXITOXIN	0.802 Abs	0.048 µg/L	R^2=0.99951, 61.26		0.050	Kit:M22L2
STX Std 2	SAXITOXIN	0.778 Abs [0.7900] {2.1 C	0.051 µg/L [0.050]	R^2=0.99951, 59.43		0.050	Kit:M22L2
STX Std 3	SAXITOXIN	0.527 Abs	0.102 µg/L	R^2=0.99951, 40.26		0.100	Kit:M22L2
STX Std 3	SAXITOXIN	0.513 Abs [0.5200] {1.9 C	0.106 µg/L [0.104]	R^2=0.99951, 39.15		0.100	Kit:M22L2
STX Std 4	SAXITOXIN	0.351 Abs	0.187 µg/L	R^2=0.99951, 26.81		0.200	Kit:M22L2
STX Std 4	SAXITOXIN	0.349 Abs [0.3500] {0.4 C	0.188 µg/L [0.188]	R^2=0.99951, 26.66		0.200	Kit:M22L2
STX Std 5	SAXITOXIN	0.213 Abs	> 0.400 µg/L	16.272 %Abs		0.400	Kit:M22L2
STX Std 5	SAXITOXIN	0.211 Abs [0.2120] {0.7 C	> 0.400 µg/L	16.119 %Abs		0.400	Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.696 Abs	0.064 µg/L	53.170 %Abs			Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.675 Abs [0.6855] {2.2 C	0.067 µg/L [0.066]	51.566 %Abs [52.3			Kit:M22L2

Note

Signature

* A - Abs > 3; IA - Initial Abs; DA - Delta Abs; SD - SD of Abs; LR - Linear Range; [...] - Mean result of duplicate tests

Test Report (by Request)

Test Information

 Request: 8/31/2023 11:14:06 AM
 Date: 8/31/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.260 Abs	0.005 µg/L	Low, 96.257 %Abs		0.020 - 0.400	Kit:M22L2
LRB	SAXITOXIN	1.266 Abs [1.2630] {0.3 C	0.004 µg/L [0.005]	Low, 96.715 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.572 Abs	0.089 µg/L	43.697 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.563 Abs [0.5675] {1.1 C	0.092 µg/L [0.091]	43.010 %Abs [43.3		0.020 - 0.400	Kit:M22L2
AC37294	SAXITOXIN	1.169 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37294	SAXITOXIN	1.156 Abs [1.1625] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37295	SAXITOXIN	1.228 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37295	SAXITOXIN	1.211 Abs [1.2195] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37295MS	SAXITOXIN	0.523 Abs	0.103 µg/L	39.954 %Abs		0.020 - 0.400	Kit:M22L2
AC37295MS	SAXITOXIN	0.511 Abs [0.5170] {1.6 C	0.107 µg/L [0.105]	39.037 %Abs [39.4		0.020 - 0.400	Kit:M22L2
AC37295MSD	SAXITOXIN	0.542 Abs	0.097 µg/L	41.406 %Abs		0.020 - 0.400	Kit:M22L2
AC37295MSD	SAXITOXIN	0.540 Abs [0.5410] {0.3 C	0.098 µg/L [0.098]	41.253 %Abs [41.3		0.020 - 0.400	Kit:M22L2
AC37296	SAXITOXIN	1.141 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37296	SAXITOXIN	1.125 Abs [1.1330] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37297	SAXITOXIN	0.880 Abs	0.042 µg/L	67.227 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37297	SAXITOXIN	0.873 Abs [0.8765] {0.6 C	0.043 µg/L [0.043]	66.692 %Abs [66.9	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37298	SAXITOXIN	1.157 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37298	SAXITOXIN	1.150 Abs [1.1535] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37299	SAXITOXIN	1.284 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37299	SAXITOXIN	1.287 Abs [1.2855] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37300	SAXITOXIN	0.773 Abs	0.057 µg/L	59.053 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37300	SAXITOXIN	0.772 Abs [0.7725] {0.1 C	0.057 µg/L [0.057]	58.976 %Abs [59.0	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37301	SAXITOXIN	1.259 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC37301	SAXITOXIN	1.236 Abs [1.2475] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2

Note

Signature

Charles Hostetter 8/31/2023

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:

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

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 Calibration

Current Calibration Status: "

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Name	Absorbance	Concentration	Interpretation	Position
8/31/2023 11:13:17 AM				
STX Std 0	1.306 Abs	0.001 µg/L	R ² =0.99951, 99.771 %Abs	RK1:23->A01@2
STX Std 0	1.312 Abs [1.3090] {0.3 CV}	0.000 µg/L [0.001] {141.4 CV}	R ² =0.99951, 100.229 %Abs	RK1:23->B01@2
STX Std 1	1.080 Abs	0.019 µg/L	R ² =0.99951, 82.506 %Abs	RK1:24->C01@2
STX Std 1	1.064 Abs [1.0720] {1.1 CV}	0.021 µg/L [0.020] {7.1 CV}	R ² =0.99951, 81.283 %Abs	RK1:24->D01@2
STX Std 2	0.802 Abs	0.048 µg/L	R ² =0.99951, 61.268 %Abs	RK1:25->E01@2
STX Std 2	0.778 Abs [0.7900] {2.1 CV}	0.051 µg/L [0.050] {4.3 CV}	R ² =0.99951, 59.435 %Abs	RK1:25->F01@3
STX Std 3	0.527 Abs	0.102 µg/L	R ² =0.99951, 40.260 %Abs	RK1:26->G01@3
STX Std 3	0.513 Abs [0.5200] {1.9 CV}	0.106 µg/L [0.104] {2.7 CV}	R ² =0.99951, 39.190 %Abs	RK1:26->H01@3
STX Std 4	0.351 Abs	0.187 µg/L	R ² =0.99951, 26.814 %Abs	RK1:27->A02@2
STX Std 4	0.349 Abs [0.3500] {0.4 CV}	0.188 µg/L [0.188] {0.4 CV}	R ² =0.99951, 26.662 %Abs	RK1:27->B02@2
STX Std 5	0.213 Abs	> 0.400 µg/L	16.272 %Abs	RK1:28->C02@2
STX Std 5	0.211 Abs [0.2120] {0.7 CV}	> 0.400 µg/L	16.119 %Abs	RK1:28->D02@2

8/31/2023 11:13:17 AM				
STX Control (0.060-0.090)	0.696 Abs	0.064 µg/L	53.170 %Abs	RK1:29->E02@2
STX Control (0.060-0.090)	0.675 Abs [0.6855] {2.2 CV}	0.067 µg/L [0.066] {3.2 CV}	51.566 %Abs [52.368 %Abs]	RK1:29->F02@3

Statistic				
STX Std 0 [MEAN]	1.3090	0.0005		
STX Std 0 [SD]	0.0042	0.0007		
STX Std 0 [%CV]	0.3241	141.4214		
STX Std 1 [MEAN]	1.0720	0.0200		
STX Std 1 [SD]	0.0113	0.0014		
STX Std 1 [%CV]	1.0554	7.0711		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.7900	0.0495		
STX Std 2 [SD]	0.0170	0.0021		
STX Std 2 [%CV]	2.1482	4.2855		
STX Std 2 [%DIFF]		-1.0000		
STX Std 3 [MEAN]	0.5200	0.1040		
STX Std 3 [SD]	0.0099	0.0028		
STX Std 3 [%CV]	1.9037	2.7196		
STX Std 3 [%DIFF]		4.0000		
STX Std 4 [MEAN]	0.3500	0.1875		
STX Std 4 [SD]	0.0014	0.0007		
STX Std 4 [%CV]	0.4041	0.3771		
STX Std 4 [%DIFF]		-6.2500		
STX Std 5 [MEAN]	0.2120			
STX Std 5 [SD]	0.0014			
STX Std 5 [%CV]	0.6671			

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.6855	0.0655		
STX Control (0.060-0.090) [SD]	0.0148	0.0021		
STX Control (0.060-0.090) [%CV]	2.1662	3.2387		

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.3095
 B = 1.2507
 C = 0.060896
 D = 0.11490
 R2 coef = 0.99951
 50% = 0.071

