



## Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

<b>Sample #</b>	<b>Location</b>	<b>Date Collected</b>	<b>Date Analyzed</b>	<b>Conc. (ppb)</b>
AC19228	Cecil M. Harden Lake - Raccoon Lake SRA Beach	8/7/2023	8/10/2023	< 0.050
AC19229	Cagles Mill Lake - Lieber SRA Beach	8/7/2023	8/10/2023	< 0.050
AC19230	Monroe Lake - Fairfax SRA Beach	8/7/2023	8/10/2023	< 0.050
AC19231	Monroe Lake - Paynetown SRA Beach	8/7/2023	8/10/2023	< 0.050
AC19232	Starve Hollow SRA - Starve Hollow Lake Beach	8/7/2023	8/10/2023	0.055
AC19333	Whitewater Memorial SP - Whitewater Lake Beach	8/8/2023	8/10/2023	< 0.050
AC19234	Brookville Lake - Quakertown SRA Beach	8/8/2023	8/10/2023	< 0.050
AC19235	Brookville Lake - Mounds SRA Beach	8/8/2023	8/10/2023	< 0.050
AC19236	Hardy Lake SRA - Hardy Lake SRA Beach	8/8/2023	8/10/2023	< 0.050
AC19237	Deam Lake SRA - Deam Lake Beach	8/8/2023	8/10/2023	< 0.050
AC19238	Monroe Lake - Paynetown SRA Beach (Field Duplicate)	8/7/2023	8/10/2023	< 0.050
AC19239	Field Blank	8/7/2023	8/10/2023	< 0.050
AC19240	Ft. Ben Harrison SP Dog Lake	8/7/2023	8/10/2023	< 0.050

# Test Report (by Request)

**Test Information**

Request: 8/10/2023 12:18:04 PM

Date: 8/10/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.312 Abs	0.000 µg/L	R^2=0.99982, 100.6		0.000	Kit:M22L2
STX Std 0	SAXITOXIN	1.293 Abs [1.3025] {1.0 C	0.002 µg/L [0.001]	R^2=0.99982, 99.23		0.000	Kit:M22L2
STX Std 1	SAXITOXIN	1.088 Abs	0.019 µg/L	R^2=0.99982, 83.50		0.020	Kit:M22L2
STX Std 1	SAXITOXIN	1.070 Abs [1.0790] {1.2 C	0.021 µg/L [0.020]	R^2=0.99982, 82.11		0.020	Kit:M22L2
STX Std 2	SAXITOXIN	0.806 Abs	0.049 µg/L	R^2=0.99982, 61.85		0.050	Kit:M22L2
STX Std 2	SAXITOXIN	0.794 Abs [0.8000] {1.1 C	0.050 µg/L [0.050]	R^2=0.99982, 60.93		0.050	Kit:M22L2
STX Std 3	SAXITOXIN	0.545 Abs	0.099 µg/L	R^2=0.99982, 41.82		0.100	Kit:M22L2
STX Std 3	SAXITOXIN	0.522 Abs [0.5335] {3.0 C	0.106 µg/L [0.103]	R^2=0.99982, 40.06		0.100	Kit:M22L2
STX Std 4	SAXITOXIN	0.357 Abs	0.186 µg/L	R^2=0.99982, 27.35		0.200	Kit:M22L2
STX Std 4	SAXITOXIN	0.341 Abs [0.3490] {3.2 C	0.199 µg/L [0.193]	R^2=0.99982, 26.17		0.200	Kit:M22L2
STX Std 5	SAXITOXIN	0.221 Abs	> 0.400 µg/L	16.961 %Abs		0.400	Kit:M22L2
STX Std 5	SAXITOXIN	0.215 Abs [0.2180] {1.9 C	> 0.400 µg/L	16.500 %Abs		0.400	Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.706 Abs	0.064 µg/L	54.183 %Abs			Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.677 Abs [0.6915] {3.0 C	0.069 µg/L [0.067]	51.957 %Abs [53.0			Kit:M22L2

**Note**

Signature \_\_\_\_\_

Charles Hostetter 8/11/2023

# Test Report (by Request)

**Test Information**

 Request: 8/10/2023 12:19:15 PM  
 Date: 8/10/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.317 Abs	0.000 µg/L	Low, 101.074 %Abs		0.020 - 0.400	Kit:M22L2
LRB	SAXITOXIN	1.293 Abs [1.3050] {1.3 C	0.002 µg/L [0.001]	Low, 99.233 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.612 Abs	0.082 µg/L	46.969 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.599 Abs [0.6055] {1.5 C	0.085 µg/L [0.084]	45.971 %Abs [46.4		0.020 - 0.400	Kit:M22L2
AC19228	SAXITOXIN	1.295 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19228	SAXITOXIN	1.287 Abs [1.2910] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19229	SAXITOXIN	1.014 Abs	0.029 µg/L	77.820 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19229	SAXITOXIN	1.000 Abs [1.0070] {1.0 C	0.030 µg/L [0.030]	76.746 %Abs [77.2	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19230	SAXITOXIN	1.269 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19230	SAXITOXIN	1.279 Abs [1.2740] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19231	SAXITOXIN	1.250 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19231	SAXITOXIN	1.226 Abs [1.2380] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19232	SAXITOXIN	0.809 Abs	0.053 µg/L	62.087 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19232	SAXITOXIN	0.792 Abs [0.8005] {1.5 C	0.056 µg/L [0.055]	60.783 %Abs [61.4	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19233	SAXITOXIN	1.236 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19233	SAXITOXIN	1.240 Abs [1.2380] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19234	SAXITOXIN	1.147 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19234	SAXITOXIN	1.139 Abs [1.1430] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19234MS	SAXITOXIN	0.555 Abs	0.096 µg/L	42.594 %Abs		0.020 - 0.400	Kit:M22L2
AC19234MS	SAXITOXIN	0.546 Abs [0.5505] {1.2 C	0.099 µg/L [0.098]	41.903 %Abs [42.2		0.020 - 0.400	Kit:M22L2
AC19234MSD	SAXITOXIN	0.557 Abs	0.096 µg/L	42.748 %Abs		0.020 - 0.400	Kit:M22L2
AC19234MSD	SAXITOXIN	0.548 Abs [0.5525] {1.2 C	0.098 µg/L [0.097]	42.057 %Abs [42.4		0.020 - 0.400	Kit:M22L2
AC19235	SAXITOXIN	1.040 Abs	0.026 µg/L	79.816 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19235	SAXITOXIN	1.046 Abs [1.0430] {0.4 C	0.025 µg/L [0.026]	80.276 %Abs [80.0	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19236	SAXITOXIN	1.039 Abs	0.026 µg/L	79.739 %Abs	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19236	SAXITOXIN	1.045 Abs [1.0420] {0.4 C	0.025 µg/L [0.026]	80.200 %Abs [79.9	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19237	SAXITOXIN	1.321 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19237	SAXITOXIN	1.289 Abs [1.3050] {1.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19238	SAXITOXIN	1.261 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19238	SAXITOXIN	1.250 Abs [1.2555] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19239	SAXITOXIN	1.304 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19239	SAXITOXIN	1.295 Abs [1.2995] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19240	SAXITOXIN	1.232 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC19240	SAXITOXIN	1.213 Abs [1.2225] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2

**Note**

Signature \_\_\_\_\_

**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
<b>8/10/2023 12:18:04 PM</b>				
STX Std 0	1.312 Abs	0.000 µg/L	R <sup>2</sup> =0.99982, 100.691 %Abs	RK1:30->A07@2
STX Std 0	1.293 Abs [1.3025] {1.0 CV}	0.002 µg/L [0.001] {141.4 CV}	R <sup>2</sup> =0.99982, 99.233 %Abs	RK1:30->B07@2
STX Std 1	1.088 Abs	0.019 µg/L	R <sup>2</sup> =0.99982, 83.500 %Abs	RK1:31->C07@2
STX Std 1	1.070 Abs [1.0790] {1.2 CV}	0.021 µg/L [0.020] {7.1 CV}	R <sup>2</sup> =0.99982, 82.118 %Abs	RK1:31->D07@2
STX Std 2	0.806 Abs	0.049 µg/L	R <sup>2</sup> =0.99982, 61.857 %Abs	RK1:32->E07@2
STX Std 2	0.794 Abs [0.8000] {1.1 CV}	0.050 µg/L [0.050] {1.4 CV}	R <sup>2</sup> =0.99982, 60.936 %Abs	RK1:32->F07@3
STX Std 3	0.545 Abs	0.099 µg/L	R <sup>2</sup> =0.99982, 41.827 %Abs	RK1:33->G07@3
STX Std 3	0.522 Abs [0.5335] {3.0 CV}	0.106 µg/L [0.103] {4.8 CV}	R <sup>2</sup> =0.99982, 40.061 %Abs	RK1:33->H07@3
STX Std 4	0.357 Abs	0.186 µg/L	R <sup>2</sup> =0.99982, 27.398 %Abs	RK1:34->A08@2
STX Std 4	0.341 Abs [0.3490] {3.2 CV}	0.199 µg/L [0.193] {4.8 CV}	R <sup>2</sup> =0.99982, 26.170 %Abs	RK1:34->B08@2
STX Std 5	0.221 Abs	> 0.400 µg/L	16.961 %Abs	RK1:35->C08@2
STX Std 5	0.215 Abs [0.2180] {1.9 CV}	> 0.400 µg/L	16.500 %Abs	RK1:35->D08@2
*****				
<b>8/10/2023 12:18:04 PM</b>				
STX Control (0.060-0.090)	0.706 Abs	0.064 µg/L	54.183 %Abs	RK1:36->E08@2
STX Control (0.060-0.090)	0.677 Abs [0.6915] {3.0 CV}	0.069 µg/L [0.067] {5.3 CV}	51.957 %Abs [53.070 %Abs]	RK1:36->F08@3
*****				
<b>Statistic</b>				
STX Std 0 [MEAN]	1.3025	0.0010		
STX Std 0 [SD]	0.0134	0.0014		
STX Std 0 [%CV]	1.0315	141.4214		
STX Std 1 [MEAN]	1.0790	0.0200		
STX Std 1 [SD]	0.0127	0.0014		
STX Std 1 [%CV]	1.1796	7.0711		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.8000	0.0495		
STX Std 2 [SD]	0.0085	0.0007		
STX Std 2 [%CV]	1.0607	1.4285		
STX Std 2 [%DIFF]		-1.0000		
STX Std 3 [MEAN]	0.5335	0.1025		
STX Std 3 [SD]	0.0163	0.0049		
STX Std 3 [%CV]	3.0484	4.8290		
STX Std 3 [%DIFF]		2.5000		
STX Std 4 [MEAN]	0.3490	0.1925		
STX Std 4 [SD]	0.0113	0.0092		
STX Std 4 [%CV]	3.2418	4.7753		
STX Std 4 [%DIFF]		-3.7500		
STX Std 5 [MEAN]	0.2180			
STX Std 5 [SD]	0.0042			
STX Std 5 [%CV]	1.9462			

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.6915	0.0665		
STX Control (0.060-0.090) [SD]	0.0205	0.0035		
STX Control (0.060-0.090) [%CV]	2.9655	5.3166		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.3032  
 B = 1.2690  
 C = 0.062983  
 D = 0.11814  
 R2 coef = 0.99982  
 50% = 0.074

