



## 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>
AC00569	Summit Lake - State Park	5/23/2023	5/24/2023	< 0.050
AC00572	Kunkel Beach @ Oubache State Park	5/22/2023	5/24/2023	< 0.050
AC00573	Pokagon State Park	5/22/2023	5/24/2023	< 0.050
AC00574	Potawatomi Inn's Beach	5/22/2023	5/24/2023	< 0.050
AC00575	Chain O'Lakes SP	5/22/2023	5/24/2023	< 0.050
AC00576	Potato Creek State Park	5/23/2023	5/24/2023	< 0.050
AC00577	Lost Bridge West SRA	5/23/2023	5/24/2023	< 0.050
AC00578	Mississinewa Lake Miami SRA	5/23/2023	5/24/2023	< 0.050
AC00579	Lincoln State Park	5/22/2023	5/24/2023	< 0.050
AC00570	Ferdinand State Forest Lake	5/22/2023	5/24/2023	< 0.050
AC00571	Patoka SRA Beach	5/22/2023	5/24/2023	< 0.050
AC00582	Potato Creek State Park (Field Dup)	5/23/2023	5/24/2023	< 0.050
AC00583	Field Blank	5/23/2023	5/24/2023	< 0.050
AC02941	Ft. Ben Harrison SP Dog Lake	5/23/2023	5/24/2023	< 0.050

# Test Report (by Request)

**Test Information**

Request: 5/24/2023 12:53:49 PM  
 Date: 5/24/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.372 Abs	0.002 µg/L	R^2=0.99962, 99.27			M22L2865
STX Std 0	SAXITOXIN	1.392 Abs [1.3820] {1.0 C	0.000 µg/L [0.001]	R^2=0.99962, 100.7			M22L2865
STX Std 1	SAXITOXIN	1.173 Abs	0.018 µg/L	R^2=0.99962, 84.87			M22L2865
STX Std 1	SAXITOXIN	1.138 Abs [1.1555] {2.1 C	0.021 µg/L [0.019]	R^2=0.99962, 82.34			M22L2865
STX Std 2	SAXITOXIN	0.872 Abs	0.048 µg/L	R^2=0.99962, 63.05			M22L2865
STX Std 2	SAXITOXIN	0.841 Abs [0.8565] {2.6 C	0.052 µg/L [0.050]	R^2=0.99962, 60.85			M22L2865
STX Std 3	SAXITOXIN	0.582 Abs	0.099 µg/L	R^2=0.99962, 42.11			M22L2865
STX Std 3	SAXITOXIN	0.553 Abs [0.5675] {3.6 C	0.107 µg/L [0.103]	R^2=0.99962, 40.01			M22L2865
STX Std 4	SAXITOXIN	0.382 Abs	0.186 µg/L	R^2=0.99962, 27.64			M22L2865
STX Std 4	SAXITOXIN	0.374 Abs [0.3780] {1.5 C	0.192 µg/L [0.189]	R^2=0.99962, 27.06			M22L2865
STX Std 5	SAXITOXIN	0.238 Abs	> 0.400 µg/L	17.221 %Abs			M22L2865
STX Std 5	SAXITOXIN	0.230 Abs [0.2340] {2.4 C	> 0.400 µg/L	16.643 %Abs			M22L2865
STX Control (0.060-0.090)	SAXITOXIN	0.758 Abs	0.063 µg/L	54.848 %Abs			M22L2865
STX Control (0.060-0.090)	SAXITOXIN	0.734 Abs [0.7460] {2.3 C	0.067 µg/L [0.065]	53.111 %Abs [53.9			M22L2865

**Note**

Signature \_\_\_\_\_

# Test Report (by Request)

**Test Information**

Request: 5/24/2023 12:55:10 PM  
Date: 5/24/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.366 Abs	0.002 µg/L	Low, 98.842 %Abs		0.020 - 0.400	M22L2865
LRB	SAXITOXIN	1.349 Abs [1.3575] {0.9 C	0.004 µg/L [0.003]	Low, 97.612 %Abs		0.020 - 0.400	M22L2865
LFB	SAXITOXIN	0.629 Abs	0.088 µg/L	45.514 %Abs		0.020 - 0.400	M22L2865
LFB	SAXITOXIN	0.624 Abs [0.6265] {0.6 C	0.089 µg/L [0.089]	45.152 %Abs [45.3		0.020 - 0.400	M22L2865
AC00569	SAXITOXIN	1.359 Abs	0.003 µg/L	Low, 98.336 %Abs		0.020 - 0.400	M22L2865
AC00569	SAXITOXIN	1.326 Abs [1.3425] {1.7 C	0.006 µg/L [0.004]	Low, 95.948 %Abs		0.020 - 0.400	M22L2865
AC00572	SAXITOXIN	1.230 Abs	0.014 µg/L	Low, 89.001 %Abs		0.020 - 0.400	M22L2865
AC00572	SAXITOXIN	1.186 Abs [1.2080] {2.6 C	0.017 µg/L [0.016]	Low, 85.818 %Abs		0.020 - 0.400	M22L2865
AC00573	SAXITOXIN	1.293 Abs	0.009 µg/L	Low, 93.560 %Abs		0.020 - 0.400	M22L2865
AC00573	SAXITOXIN	1.251 Abs [1.2720] {2.3 C	0.012 µg/L [0.010]	Low, 90.521 %Abs		0.020 - 0.400	M22L2865
AC00574	SAXITOXIN	1.320 Abs	0.007 µg/L	Low, 95.514 %Abs		0.020 - 0.400	M22L2865
AC00574	SAXITOXIN	1.358 Abs [1.3390] {2.0 C	0.003 µg/L [0.005]	Low, 98.263 %Abs		0.020 - 0.400	M22L2865
AC00575	SAXITOXIN	1.349 Abs	0.004 µg/L	Low, 97.612 %Abs		0.020 - 0.400	M22L2865
AC00575	SAXITOXIN	1.315 Abs [1.3320] {1.8 C	0.007 µg/L [0.006]	Low, 95.152 %Abs		0.020 - 0.400	M22L2865
AC00575MS	SAXITOXIN	0.636 Abs	0.086 µg/L	46.020 %Abs		0.020 - 0.400	M22L2865
AC00575MS	SAXITOXIN	0.595 Abs [0.6155] {4.7 C	0.096 µg/L [0.091]	43.054 %Abs [44.5		0.020 - 0.400	M22L2865
AC00575MSD	SAXITOXIN	0.593 Abs	0.096 µg/L	42.909 %Abs		0.020 - 0.400	M22L2865
AC00575MSD	SAXITOXIN	0.578 Abs [0.5855] {1.8 C	0.100 µg/L [0.098]	41.823 %Abs [42.3		0.020 - 0.400	M22L2865
AC00576	SAXITOXIN	1.323 Abs	0.006 µg/L	Low, 95.731 %Abs		0.020 - 0.400	M22L2865
AC00576	SAXITOXIN	1.355 Abs [1.3390] {1.7 C	0.003 µg/L [0.004]	Low, 98.046 %Abs		0.020 - 0.400	M22L2865
AC00577	SAXITOXIN	1.359 Abs	0.003 µg/L	Low, 98.336 %Abs		0.020 - 0.400	M22L2865
AC00577	SAXITOXIN	1.316 Abs [1.3375] {2.3 C	0.007 µg/L [0.005]	Low, 95.224 %Abs		0.020 - 0.400	M22L2865
AC00578	SAXITOXIN	1.351 Abs	0.004 µg/L	Low, 97.757 %Abs		0.020 - 0.400	M22L2865
AC00578	SAXITOXIN	1.289 Abs [1.3200] {3.3 C	0.009 µg/L [0.007]	Low, 93.271 %Abs		0.020 - 0.400	M22L2865
AC00579	SAXITOXIN	1.190 Abs	0.017 µg/L	Low, 86.107 %Abs		0.020 - 0.400	M22L2865
AC00579	SAXITOXIN	1.141 Abs [1.1655] {3.0 C	0.021 µg/L [0.019]	82.562 %Abs [Low,		0.020 - 0.400	M22L2865
AC00570	SAXITOXIN	1.344 Abs	0.004 µg/L	Low, 97.250 %Abs		0.020 - 0.400	M22L2865
AC00570	SAXITOXIN	1.359 Abs [1.3515] {0.8 C	0.003 µg/L [0.004]	Low, 98.336 %Abs		0.020 - 0.400	M22L2865
AC00571	SAXITOXIN	1.389 Abs	0.000 µg/L	Low, 100.507 %Abs		0.020 - 0.400	M22L2865
AC00571	SAXITOXIN	1.361 Abs [1.3750] {1.4 C	0.003 µg/L [0.002]	Low, 98.480 %Abs		0.020 - 0.400	M22L2865
AC00582	SAXITOXIN	1.310 Abs	0.007 µg/L	Low, 94.790 %Abs		0.020 - 0.400	M22L2865
AC00582	SAXITOXIN	1.299 Abs [1.3045] {0.6 C	0.008 µg/L [0.008]	Low, 93.994 %Abs		0.020 - 0.400	M22L2865
AC00583	SAXITOXIN	1.347 Abs	0.004 µg/L	Low, 97.467 %Abs		0.020 - 0.400	M22L2865
AC00583	SAXITOXIN	1.289 Abs [1.3180] {3.1 C	0.009 µg/L [0.007]	Low, 93.271 %Abs		0.020 - 0.400	M22L2865
AC02941	SAXITOXIN	1.300 Abs	0.008 µg/L	Low, 94.067 %Abs		0.020 - 0.400	M22L2865
AC02941	SAXITOXIN	1.309 Abs [1.3045] {0.5 C	0.008 µg/L [0.008]	Low, 94.718 %Abs		0.020 - 0.400	M22L2865

**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: 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>5/24/2023 12:53:49 PM</b>				
STX Std 0	1.372 Abs	0.002 µg/L	R <sup>2</sup> =0.99962, 99.276 %Abs	RK1:23->A01@2
STX Std 0	1.392 Abs [1.3820] {1.0 CV}	0.000 µg/L [0.001] {141.4 CV}	R <sup>2</sup> =0.99962, 100.724 %Abs	RK1:23->B01@2
STX Std 1	1.173 Abs	0.018 µg/L	R <sup>2</sup> =0.99962, 84.877 %Abs	RK1:24->C01@2
STX Std 1	1.138 Abs [1.1555] {2.1 CV}	0.021 µg/L [0.019] {10.9 CV}	R <sup>2</sup> =0.99962, 82.344 %Abs	RK1:24->D01@2
STX Std 2	0.872 Abs	0.048 µg/L	R <sup>2</sup> =0.99962, 63.097 %Abs	RK1:25->E01@2
STX Std 2	0.841 Abs [0.8565] {2.6 CV}	0.052 µg/L [0.050] {5.7 CV}	R <sup>2</sup> =0.99962, 60.854 %Abs	RK1:25->F01@3
STX Std 3	0.582 Abs	0.099 µg/L	R <sup>2</sup> =0.99962, 42.113 %Abs	RK1:26->G01@3
STX Std 3	0.553 Abs [0.5675] {3.6 CV}	0.107 µg/L [0.103] {5.5 CV}	R <sup>2</sup> =0.99962, 40.014 %Abs	RK1:26->H01@3
STX Std 4	0.382 Abs	0.186 µg/L	R <sup>2</sup> =0.99962, 27.641 %Abs	RK1:27->A02@2
STX Std 4	0.374 Abs [0.3780] {1.5 CV}	0.192 µg/L [0.189] {2.2 CV}	R <sup>2</sup> =0.99962, 27.062 %Abs	RK1:27->B02@2
STX Std 5	0.238 Abs	> 0.400 µg/L	17.221 %Abs	RK1:28->C02@2
STX Std 5	0.230 Abs [0.2340] {2.4 CV}	> 0.400 µg/L	16.643 %Abs	RK1:28->D02@2
*****				
<b>5/24/2023 12:53:49 PM</b>				
STX Control (0.060-0.090)	0.758 Abs	0.063 µg/L	54.848 %Abs	RK1:29->E02@2
STX Control (0.060-0.090)	0.734 Abs [0.7460] {2.3 CV}	0.067 µg/L [0.065] {4.4 CV}	53.111 %Abs [53.980 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
STX Std 0 [MEAN]	1.3820	0.0010		
STX Std 0 [SD]	0.0141	0.0014		
STX Std 0 [%CV]	1.0233	141.4214		
STX Std 1 [MEAN]	1.1555	0.0195		
STX Std 1 [SD]	0.0247	0.0021		
STX Std 1 [%CV]	2.1418	10.8786		
STX Std 1 [%DIFF]		-2.5000		
STX Std 2 [MEAN]	0.8565	0.0500		
STX Std 2 [SD]	0.0219	0.0028		
STX Std 2 [%CV]	2.5593	5.6569		
STX Std 2 [%DIFF]		-0.0000		
STX Std 3 [MEAN]	0.5675	0.1030		
STX Std 3 [SD]	0.0205	0.0057		
STX Std 3 [%CV]	3.6134	5.4921		
STX Std 3 [%DIFF]		3.0000		
STX Std 4 [MEAN]	0.3780	0.1890		
STX Std 4 [SD]	0.0057	0.0042		
STX Std 4 [%CV]	1.4965	2.2448		
STX Std 4 [%DIFF]		-5.5000		
STX Std 5 [MEAN]	0.2340			
STX Std 5 [SD]	0.0057			
STX Std 5 [%CV]	2.4175			

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.7460	0.0650		
STX Control (0.060-0.090) [SD]	0.0170	0.0028		
STX Control (0.060-0.090) [%CV]	2.2749	4.3514		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.3826  
 B = 1.3014  
 C = 0.063065  
 D = 0.13710  
 R2 coef = 0.99962  
 50% = 0.075

