



## Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB52176	Kunkel Lake @ Oubache State Park	8/1/2022	8/3/2022	0.35
AB52177	Pokagon State Park	8/1/2022	8/3/2022	< 0.050
AB52178	Potawatomi Inn's Beach	8/1/2022	8/3/2022	< 0.050
AB52179	Chain O'Lakes SP	8/1/2022	8/3/2022	0.069
AB52180	Potato Creek State Park	8/2/2022	8/3/2022	< 0.050
AB52181	Lost Bridge West SRA	8/2/2022	8/3/2022	< 0.050
AB52182	Mississinewa Lake Miami SRA	8/2/2022	8/3/2022	< 0.050
AB52183	Kunkel Lake @ Oubache State Park (Field Dup)	8/1/2022	8/3/2022	0.35
AB52184	Field Blank	8/1/2022	8/3/2022	< 0.050
AB52185	Patoka SRA Beach	8/1/2022	8/3/2022	< 0.050

## Test Information

Request: 8/3/2022 4:14:09 PM  
Date: 8/3/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.361 Abs	0.000 µg/L	R^2=0.99905, 100.4			M22B127
STX Std 0	SAXITOXIN	1.350 Abs [1.3555] {0.6 C	0.000 µg/L [0.000]	R^2=0.99905, 99.63			M22B127
STX Std 1	SAXITOXIN	1.002 Abs	0.020 µg/L	R^2=0.99905, 73.94			M22B127
STX Std 1	SAXITOXIN	0.975 Abs [0.9885] {1.9 C	0.022 µg/L [0.021]	R^2=0.99905, 71.95			M22B127
STX Std 2	SAXITOXIN	0.779 Abs	0.045 µg/L	R^2=0.99905, 57.45			M22B127
STX Std 2	SAXITOXIN	0.750 Abs [0.7645] {2.7 C	0.049 µg/L [0.047]	R^2=0.99905, 55.35			M22B127
STX Std 3	SAXITOXIN	0.521 Abs	0.106 µg/L	R^2=0.99905, 38.45			M22B127
STX Std 3	SAXITOXIN	0.518 Abs [0.5195] {0.4 C	0.107 µg/L [0.106]	R^2=0.99905, 38.22			M22B127
STX Std 4	SAXITOXIN	0.368 Abs	0.192 µg/L	R^2=0.99905, 27.15			M22B127
STX Std 4	SAXITOXIN	0.357 Abs [0.3625] {2.1 C	0.202 µg/L [0.197]	R^2=0.99905, 26.34			M22B127
STX Std 5	SAXITOXIN	0.231 Abs	0.390 µg/L	R^2=0.99905, 17.04			M22B127
STX Std 5	SAXITOXIN	0.224 Abs [0.2275] {2.2 C	> 0.400 µg/L [0.39	16.531 %Abs			M22B127
STX Control (0.060-0.090)	SAXITOXIN	0.650 Abs	0.068 µg/L	47.970 %Abs			M22B127
STX Control (0.060-0.090)	SAXITOXIN	0.627 Abs [0.6385] {2.5 C	0.074 µg/L [0.071]	46.273 %Abs [47.1			M22B127

## Note

Signature

*David Jordan*

David Jordan 8/3/2022

# Test Report (by Request)

## Test Information

Request: 8/3/2022 4:15:14 PM  
Date: 8/3/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.187 Abs	0.007 µg/L	Low, 87.601 %Abs		0.020 - 0.400	M22B127
LRB	SAXITOXIN	1.205 Abs [1.1960] {1.1 C	0.006 µg/L [0.007]	Low, 88.930 %Abs		0.020 - 0.400	M22B127
LFB (SAX)	SAXITOXIN	0.574 Abs	0.088 µg/L	42.362 %Abs		0.020 - 0.400	M22B127
LFB (SAX)	SAXITOXIN	0.566 Abs [0.5700] {1.0 C	0.091 µg/L [0.089]	41.771 %Abs [42.0		0.020 - 0.400	M22B127
AB52176	SAXITOXIN	0.274 Abs	0.333 µg/L	20.221 %Abs	MDF=1.100	0.020 - 0.400	M22B127
AB52176	SAXITOXIN	0.261 Abs [0.2675] {3.4 C	0.357 µg/L [0.345]	19.262 %Abs [19.7	MDF=1.100	0.020 - 0.400	M22B127
AB52177	SAXITOXIN	1.143 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52177	SAXITOXIN	1.115 Abs [1.1290] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52178	SAXITOXIN	1.145 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52178	SAXITOXIN	1.146 Abs [1.1455] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52179	SAXITOXIN	0.687 Abs	0.067 µg/L	50.701 %Abs	MDF=1.100	0.020 - 0.400	M22B127
AB52179	SAXITOXIN	0.666 Abs [0.6765] {2.2 C	0.071 µg/L [0.069]	49.151 %Abs [49.9	MDF=1.100	0.020 - 0.400	M22B127
AB52180	SAXITOXIN	0.845 Abs	0.040 µg/L	62.362 %Abs	MDF=1.100	0.020 - 0.400	M22B127
AB52180	SAXITOXIN	0.826 Abs [0.8355] {1.6 C	0.042 µg/L [0.041]	60.959 %Abs [61.6	MDF=1.100	0.020 - 0.400	M22B127
AB52180MS	SAXITOXIN	0.483 Abs	0.122 µg/L	35.646 %Abs		0.020 - 0.400	M22B127
AB52180MS	SAXITOXIN	0.462 Abs [0.4725] {3.1 C	0.132 µg/L [0.127]	34.096 %Abs [34.8		0.020 - 0.400	M22B127
AB52180MSD	SAXITOXIN	0.472 Abs	0.127 µg/L	34.834 %Abs		0.020 - 0.400	M22B127
AB52180MSD	SAXITOXIN	0.468 Abs [0.4700] {0.6 C	0.129 µg/L [0.128]	34.539 %Abs [34.6		0.020 - 0.400	M22B127
AB52181	SAXITOXIN	0.920 Abs	0.030 µg/L	67.897 %Abs	MDF=1.100	0.020 - 0.400	M22B127
AB52181	SAXITOXIN	0.897 Abs [0.9085] {1.8 C	0.033 µg/L [0.032]	66.199 %Abs [67.0	MDF=1.100	0.020 - 0.400	M22B127
AB52182	SAXITOXIN	1.082 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52182	SAXITOXIN	1.063 Abs [1.0725] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52183	SAXITOXIN	0.271 Abs	0.339 µg/L	20.000 %Abs	MDF=1.100	0.020 - 0.400	M22B127
AB52183	SAXITOXIN	0.257 Abs [0.2640] {3.7 C	0.366 µg/L [0.352]	18.967 %Abs [19.4	MDF=1.100	0.020 - 0.400	M22B127
AB52184	SAXITOXIN	1.253 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52184	SAXITOXIN	1.243 Abs [1.2480] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52185	SAXITOXIN	1.217 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52185	SAXITOXIN	1.202 Abs [1.2095] {0.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127

## Note

Signature 

David Jordan 8/3/2022

## 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: M22B1271

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: "

"

Name	Absorbance	Concentration	Interpretation	Position
<b>8/3/2022 4:14:09 PM</b>				
STX Std 0	1.361 Abs	0.000 µg/L	R <sup>2</sup> =0.99905, 100.443 %Abs	RK1:30->A07@2
STX Std 0	1.350 Abs [1.3555] {0.6 CV}	0.000 µg/L [0.000]	R <sup>2</sup> =0.99905, 99.631 %Abs	RK1:30->B07@2
STX Std 1	1.002 Abs	0.020 µg/L	R <sup>2</sup> =0.99905, 73.948 %Abs	RK1:31->C07@2
STX Std 1	0.975 Abs [0.9885] {1.9 CV}	0.022 µg/L [0.021] {6.7 CV}	R <sup>2</sup> =0.99905, 71.956 %Abs	RK1:31->D07@2
STX Std 2	0.779 Abs	0.045 µg/L	R <sup>2</sup> =0.99905, 57.491 %Abs	RK1:32->E07@2
STX Std 2	0.750 Abs [0.7645] {2.7 CV}	0.049 µg/L [0.047] {6.0 CV}	R <sup>2</sup> =0.99905, 55.351 %Abs	RK1:32->F07@3
STX Std 3	0.521 Abs	0.106 µg/L	R <sup>2</sup> =0.99905, 38.450 %Abs	RK1:33->G07@3
STX Std 3	0.518 Abs [0.5195] {0.4 CV}	0.107 µg/L [0.106] {0.7 CV}	R <sup>2</sup> =0.99905, 38.229 %Abs	RK1:33->H07@3
STX Std 4	0.368 Abs	0.192 µg/L	R <sup>2</sup> =0.99905, 27.159 %Abs	RK1:34->A08@2
STX Std 4	0.357 Abs [0.3625] {2.1 CV}	0.202 µg/L [0.197] {3.6 CV}	R <sup>2</sup> =0.99905, 26.347 %Abs	RK1:34->B08@2
STX Std 5	0.231 Abs	0.390 µg/L	R <sup>2</sup> =0.99905, 17.048 %Abs	RK1:35->C08@2
STX Std 5	0.224 Abs [0.2275] {2.2 CV}	> 0.400 µg/L [0.390]	16.531 %Abs	RK1:35->D08@2
*****				
<b>8/3/2022 4:14:09 PM</b>				
STX Control (0.060-0.090)	0.650 Abs	0.068 µg/L	47.970 %Abs	RK1:36->E08@2
STX Control (0.060-0.090)	0.627 Abs [0.6385] {2.5 CV}	0.074 µg/L [0.071] {6.0 CV}	46.273 %Abs [47.122 %Abs]	RK1:36->F08@3
*****				
<b>Statistic</b>				
STX Std 0 [MEAN]	1.3555	0.0000		
STX Std 0 [SD]	0.0078	0.0000		
STX Std 0 [%CV]	0.5738	0.0000		
STX Std 1 [MEAN]	0.9885	0.0210		
STX Std 1 [SD]	0.0191	0.0014		
STX Std 1 [%CV]	1.9314	6.7344		
STX Std 1 [%DIFF]		5.0000		
STX Std 2 [MEAN]	0.7645	0.0470		
STX Std 2 [SD]	0.0205	0.0028		
STX Std 2 [%CV]	2.6823	6.0179		
STX Std 2 [%DIFF]		-6.0000		
STX Std 3 [MEAN]	0.5195	0.1065		
STX Std 3 [SD]	0.0021	0.0007		
STX Std 3 [%CV]	0.4083	0.6640		
STX Std 3 [%DIFF]		6.5000		
STX Std 4 [MEAN]	0.3625	0.1970		
STX Std 4 [SD]	0.0078	0.0071		
STX Std 4 [%CV]	2.1457	3.5894		
STX Std 4 [%DIFF]		-1.5000		
STX Std 5 [MEAN]	0.2275			
STX Std 5 [SD]	0.0049			
STX Std 5 [%CV]	2.1757			

Name	Absorbance	Concentration	Interpretation	Position	
STX Control (0.060-0.090) [MEAN]	0.6385	0.0710			
STX Control (0.060-0.090) [SD]	0.0163	0.0042			
STX Control (0.060-0.090) [%CV]	2.5471	5.9755			

Assay Curve

$$y = (A-D)/(1+(x/C)^B) + D$$
 Weight: NONE  
 A = 1.3539  
 B = 0.91155  
 C = 0.059772  
 D = 0.027728  
 R2 coef = 0.99905  
 50% = 0.062

