Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB52589	Raccoon Lake SRA	8/22/2022	8/25/2022	< 0.050
AB52590	Cagles Mill Lake Beach	8/22/2022	8/25/2022	< 0.050
AB52591	Paynetown SRA	8/22/2022	8/25/2022	< 0.050
AB52592	Fairfax SRA	8/22/2022	8/25/2022	< 0.050
AB52593	Starve Hollow SRA	8/22/2022	8/25/2022	< 0.050
AB52594	Whitewater Memorial SP	8/23/2022	8/25/2022	< 0.050
AB52595	Quakertown SRA	8/23/2022	8/25/2022	< 0.050
AB52596	Mounds SRA	8/23/2022	8/25/2022	< 0.050
AB52597	Hardy Lake SRA	8/23/2022	8/25/2022	< 0.050
AB52598	Cagles Mill Lake Beach (Field Duplicate)	8/22/2022	8/25/2022	< 0.050
AB52599	Field Blank	8/22/2022	8/25/2022	< 0.050
AB52600	Ft. Ben Harrison SP Dog Lake	8/23/2022	8/25/2022	< 0.050
AB52629	Kunkel Lake @ Oubache SP	8/23/2022	8/25/2022	1.45
AB52630	Lincoln State Park	8/22/2022	8/25/2022	0.92

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Test Report (by Request)

Test Information

Request: 8/25/2022 11:59:05 AM
Date: 8/25/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.188 Abs	0.001 µg/L	R^2=0.99880, 99.49			M22B127
STX Std 0	SAXITOXIN	1.201 Abs [1.1945] {0.8 C	0.000 µg/L [0.001]	R^2=0.99880, 100.5			M22B127
STX Std 1	SAXITOXIN	0.981 Abs	0.019 µg/L	R^2=0.99880, 82.16			M22B127
STX Std 1	SAXITOXIN	0.962 Abs [0.9715] {1.4 C	0.021 µg/L [0.020]	R^2=0.99880, 80.57			M22B127
STX Std 2	SAXITOXIN	0.754 Abs	0.046 µg/L	R^2=0.99880, 63.14			M22B127
STX Std 2	SAXITOXIN	0.726 Abs [0.7400] {2.7 C	0.051 µg/L [0.049]	R^2=0.99880, 60.80			M22B127
STX Std 3	SAXITOXIN	0.507 Abs	0.102 µg/L	R^2=0.99880, 42.46			M22B127
STX Std 3	SAXITOXIN	0.483 Abs [0.4950] {3.4 C	0.111 µg/L [0.106]	R^2=0.99880, 40.45			M22B127
STX Std 4	SAXITOXIN	0.366 Abs	0.178 µg/L	R^2=0.99880, 30.65			M22B127
STX Std 4	SAXITOXIN	0.353 Abs [0.3595] {2.6 C	0.189 µg/L [0.183]	R^2=0.99880, 29.56			M22B127
STX Std 5	SAXITOXIN	0.234 Abs	> 0.400 µg/L	19.598 %Abs			M22B127
STX Std 5	SAXITOXIN	0.223 Abs [0.2285] {3.4 C	> 0.400 µg/L	18.677 %Abs			M22B127
STX Control (0.060-0.090)	SAXITOXIN	0.636 Abs	0.067 µg/L	53.266 %Abs			M22B127
STX Control (0.060-0.090)	SAXITOXIN	0.609 Abs [0.6225] {3.1 C	0.073 µg/L [0.070]	51.005 %Abs [52.1			M22B127

Note

Signature David Jordan

David Jordan 8/25/2022

* 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 (6.4.1.1139/1085/1.00/0.95) 8/25/2022 12:44:43 PM

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Test Report (by Request)

Test Information

Request: 8/25/2022 12:00:42 PM
Date: 8/25/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (SAX)	SAXITOXIN	1.148 Abs	0.005 µg/L	Low, 96.147 %Abs		0.020 - 0.400	M22B127
LRB (SAX)	SAXITOXIN	1.153 Abs [1.1505] {0.3 C	0.004 µg/L [0.004]	Low, 96.566 %Abs		0.020 - 0.400	M22B127
LFB (SAX)	SAXITOXIN	0.574 Abs	0.082 µg/L	48.074 %Abs		0.020 - 0.400	M22B127
LFB (SAX)	SAXITOXIN	0.553 Abs [0.5635] {2.6 C	0.088 µg/L [0.085]	46.315 %Abs [47.1		0.020 - 0.400	M22B127
AB52589	SAXITOXIN	1.161 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52589	SAXITOXIN	1.136 Abs [1.1485] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52590	SAXITOXIN	1.043 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52590	SAXITOXIN	1.023 Abs [1.0330] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52591	SAXITOXIN	1.069 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52591	SAXITOXIN	1.074 Abs [1.0715] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52592	SAXITOXIN	1.099 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52592	SAXITOXIN	1.074 Abs [1.0865] {1.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52593	SAXITOXIN	0.779 Abs	0.047 µg/L	65.243 %Abs	MDF=1.100	0.020 - 0.400	M22B127
AB52593	SAXITOXIN	0.748 Abs [0.7635] {2.9 C	0.052 µg/L [0.049]	62.647 %Abs [63.9	MDF=1.100	0.020 - 0.400	M22B127
AB52594	SAXITOXIN	1.158 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52594	SAXITOXIN	1.131 Abs [1.1445] {1.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52594MS	SAXITOXIN	0.514 Abs	0.100 µg/L	43.049 %Abs		0.020 - 0.400	M22B127
AB52594MS	SAXITOXIN	0.517 Abs [0.5155] {0.4 C	0.099 µg/L [0.100]	43.300 %Abs [43.1		0.020 - 0.400	M22B127
AB52594MSD	SAXITOXIN	0.579 Abs	0.081 µg/L	48.492 %Abs		0.020 - 0.400	M22B127
AB52594MSD	SAXITOXIN	0.553 Abs [0.5660] {3.2 C	0.088 µg/L [0.084]	46.315 %Abs [47.4		0.020 - 0.400	M22B127
AB52595	SAXITOXIN	1.140 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52595	SAXITOXIN	1.117 Abs [1.1285] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52596	SAXITOXIN	1.099 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52596	SAXITOXIN	1.071 Abs [1.0850] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52597	SAXITOXIN	1.081 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52597	SAXITOXIN	1.079 Abs [1.0800] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52598	SAXITOXIN	1.061 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52598	SAXITOXIN	1.036 Abs [1.0485] {1.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52599	SAXITOXIN	1.189 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52599	SAXITOXIN	1.176 Abs [1.1825] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52600	SAXITOXIN	1.129 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52600	SAXITOXIN	1.111 Abs [1.1200] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22B127
AB52629	SAXITOXIN	0.091 Abs	> 0.400	High, Out Adjust Dil	MDF=1.100		M22B127
AB52629	SAXITOXIN	0.091 Abs [0.0910] {0.0 C	> 0.400 [> 0.400]	High, Out Adjust Dil	MDF=1.100		M22B127
AB52629-10X	SAXITOXIN	0.448 Abs	1.397 µg/L	High, 37.521 %Abs	MDF=11.000	0.020 - 0.400	M22B127
AB52629-10X	SAXITOXIN	0.438 Abs [0.4430] {1.6 C	1.452 µg/L [1.424]	High, 36.683 %Abs	MDF=11.000	0.020 - 0.400	M22B127
AB52630	SAXITOXIN	0.141 Abs	> 0.400	High, Out Adjust Dil	MDF=1.100		M22B127
AB52630	SAXITOXIN	0.121 Abs [0.1310] {10.8	> 0.400 [> 0.400]	High, Out Adjust Dil	MDF=1.100		M22B127
AB52630-10X	SAXITOXIN	0.588 Abs	0.858 µg/L	High, 49.246 %Abs	MDF=11.000	0.020 - 0.400	M22B127
AB52630-10X	SAXITOXIN	0.545 Abs [0.5665] {5.4 C	0.990 µg/L [0.924]	High, 45.645 %Abs	MDF=11.000	0.020 - 0.400	M22B127

Note

Signature David Jordan

David Jordan 8/25/2022

* 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 (6.4.1.1139/1085/1.00/0.95) 8/25/2022 12:44:43 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: M22B1271

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
8/25/2022 11:59:05 AM				
STX Std 0	1.188 Abs	0.001 µg/L	R^2=0.99880, 99.497 %Abs	RK1:23->A01@2
STX Std 0	1.201 Abs [1.1945] {0.8 CV}	0.000 µg/L [0.001] {141.4 C\	R^2=0.99880, 100.586 %Abs	RK1:23->B01@2
STX Std 1	0.981 Abs	0.019 µg/L	R^2=0.99880, 82.161 %Abs	RK1:24->C01@2
STX Std 1	0.962 Abs [0.9715] {1.4 CV}	0.021 µg/L [0.020] {7.1 CV}	R^2=0.99880, 80.570 %Abs	RK1:24->D01@2
STX Std 2	0.754 Abs	0.046 µg/L	R^2=0.99880, 63.149 %Abs	RK1:25->E01@2
STX Std 2	0.726 Abs [0.7400] {2.7 CV}	0.051 µg/L [0.049] {7.3 CV}	R^2=0.99880, 60.804 %Abs	RK1:25->F01@3
STX Std 3	0.507 Abs	0.102 µg/L	R^2=0.99880, 42.462 %Abs	RK1:26->G01@3
STX Std 3	0.483 Abs [0.4950] {3.4 CV}	0.111 µg/L [0.106] {6.0 CV}	R^2=0.99880, 40.452 %Abs	RK1:26->H01@3
STX Std 4	0.366 Abs	0.178 µg/L	R^2=0.99880, 30.653 %Abs	RK1:27->A02@2
STX Std 4	0.353 Abs [0.3595] {2.6 CV}	0.189 µg/L [0.183] {4.2 CV}	R^2=0.99880, 29.564 %Abs	RK1:27->B02@2
STX Std 5	0.234 Abs	> 0.400 µg/L	19.598 %Abs	RK1:28->C02@2
STX Std 5	0.223 Abs [0.2285] {3.4 CV}	> 0.400 µg/L	18.677 %Abs	RK1:28->D02@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
8/25/2022 11:59:05 AM				
STX Control (0.060-0.090)	0.636 Abs	0.067 µg/L	53.266 %Abs	RK1:29->E02@2
STX Control (0.060-0.090)	0.609 Abs [0.6225] {3.1 CV}	0.073 µg/L [0.070] {6.1 CV}	51.005 %Abs [52.136 %Abs]	RK1:29->F02@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	1.1945	0.0005		
STX Std 0 [SD]	0.0092	0.0007		
STX Std 0 [%CV]	0.7696	141.4214		
STX Std 1 [MEAN]	0.9715	0.0200		
STX Std 1 [SD]	0.0134	0.0014		
STX Std 1 [%CV]	1.3829	7.0711		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.7400	0.0485		
STX Std 2 [SD]	0.0198	0.0035		
STX Std 2 [%CV]	2.6755	7.2898		
STX Std 2 [%DIFF]		-3.0000		
STX Std 3 [MEAN]	0.4950	0.1065		
STX Std 3 [SD]	0.0170	0.0064		
STX Std 3 [%CV]	3.4284	5.9756		
STX Std 3 [%DIFF]		6.5000		
STX Std 4 [MEAN]	0.3595	0.1835		
STX Std 4 [SD]	0.0092	0.0078		
STX Std 4 [%CV]	2.5570	4.2388		
STX Std 4 [%DIFF]		-8.2500		
STX Std 5 [MEAN]	0.2285			
STX Std 5 [SD]	0.0078			
STX Std 5 [%CV]	3.4040			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.6225	0.0700		
STX Control (0.060-0.090) [SD]	0.0191	0.0042		
STX Control (0.060-0.090) [%CV]	3.0670	6.0609		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.1938
B = 1.1967
C = 0.061552
D = 0.13356
R2 coef = 0.99880
50% = 0.076