



Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB51524	Raccoon Lake SRA	6/13/2022	6/16/2022	< 0.05
AB51526	Cagles Mill Lake Beach	6/13/2022	6/16/2022	0.12
AB51527	Paynetown SRA	6/13/2022	6/16/2022	< 0.05
AB51528	Fairfax SRA	6/13/2022	6/16/2022	< 0.05
AB51529	Starve Hollow SRA	6/13/2022	6/16/2022	0.19
AB51530	Whitewater Memorial SP	6/14/2022	6/16/2022	< 0.05
AB51531	Quakertown SRA	6/14/2022	6/16/2022	< 0.05
AB51532	Mounds SRA	6/14/2022	6/16/2022	< 0.05
AB51533	Hardy Lake SRA	6/14/2022	6/16/2022	< 0.05
AB51525	Deam Lake SRA	6/14/2022	6/16/2022	< 0.05
AB51534	Paynetown SRA (Field Duplicate)	6/13/2022	6/16/2022	< 0.05
AB51535	Field Blank	6/13/2022	6/16/2022	< 0.05

Test Information

Request: 6/16/2022 1:46:58 PM
Date: 6/16/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.269 Abs	0.000 µg/L	R ² =0.99864, 100.1			M21E5180
STX Std 0	SAXITOXIN	1.265 Abs [1.2670] {0.2 C	0.000 µg/L [0.000]	R ² =0.99864, 99.84			M21E5180
STX Std 1	SAXITOXIN	1.048 Abs	0.020 µg/L	R ² =0.99864, 82.71			M21E5180
STX Std 1	SAXITOXIN	1.053 Abs [1.0505] {0.3 C	0.020 µg/L [0.020]	R ² =0.99864, 83.11			M21E5180
STX Std 2	SAXITOXIN	0.796 Abs	0.047 µg/L	R ² =0.99864, 62.82			M21E5180
STX Std 2	SAXITOXIN	0.771 Abs [0.7835] {2.3 C	0.050 µg/L [0.049]	R ² =0.99864, 60.85			M21E5180
STX Std 3	SAXITOXIN	0.509 Abs	0.104 µg/L	R ² =0.99864, 40.17			M21E5180
STX Std 3	SAXITOXIN	0.494 Abs [0.5015] {2.1 C	0.109 µg/L [0.106]	R ² =0.99864, 38.95			M21E5180
STX Std 4	SAXITOXIN	0.362 Abs	0.175 µg/L	R ² =0.99864, 28.57			M21E5180
STX Std 4	SAXITOXIN	0.347 Abs [0.3545] {3.0 C	0.187 µg/L [0.181]	R ² =0.99864, 27.38			M21E5180
STX Std 5	SAXITOXIN	0.217 Abs	> 0.400 µg/L	17.127 %Abs			M21E5180
STX Std 5	SAXITOXIN	0.211 Abs [0.2140] {2.0 C	> 0.400 µg/L	16.654 %Abs			M21E5180
STX Control (0.060-0.090)	SAXITOXIN	0.702 Abs	0.061 µg/L	55.406 %Abs			M21E5180
STX Control (0.060-0.090)	SAXITOXIN	0.663 Abs [0.6825] {4.0 C	0.067 µg/L [0.064]	52.328 %Abs [53.8			M21E5180

Note

Signature

David Jordan

David Jordan 6/16/2022

Test Report (by Request)

Test Information

Request: 6/16/2022 1:48:05 PM
Date: 6/16/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.278 Abs	0.000 µg/L	Low, 100.868 %Abs		0.020 - 0.400	M21E518(
LRB	SAXITOXIN	1.250 Abs [1.2640] {1.6 C	0.002 µg/L [0.001]	Low, 98.658 %Abs		0.020 - 0.400	M21E518(
LFB (SAX)	SAXITOXIN	0.578 Abs	0.085 µg/L	45.620 %Abs		0.020 - 0.400	M21E518(
LFB (SAX)	SAXITOXIN	0.577 Abs [0.5775] {0.1 C	0.086 µg/L [0.086]	45.541 %Abs [45.5		0.020 - 0.400	M21E518(
AB51524	SAXITOXIN	1.244 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51524	SAXITOXIN	1.260 Abs [1.2520] {0.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51526	SAXITOXIN	0.519 Abs	0.111 µg/L	40.963 %Abs	MDF=1.100	0.020 - 0.400	M21E518(
AB51526	SAXITOXIN	0.495 Abs [0.5070] {3.3 C	0.120 µg/L [0.116]	39.069 %Abs [40.0	MDF=1.100	0.020 - 0.400	M21E518(
AB51527	SAXITOXIN	1.263 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51527	SAXITOXIN	1.232 Abs [1.2475] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51528	SAXITOXIN	1.254 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51528	SAXITOXIN	1.273 Abs [1.2635] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51529	SAXITOXIN	0.369 Abs	0.187 µg/L	29.124 %Abs	MDF=1.100	0.020 - 0.400	M21E518(
AB51529	SAXITOXIN	0.369 Abs [0.3690] {0.0 C	0.187 µg/L [0.187]	29.124 %Abs [29.1	MDF=1.100	0.020 - 0.400	M21E518(
AB51529MS	SAXITOXIN	0.277 Abs	0.268 µg/L	21.863 %Abs		0.020 - 0.400	M21E518(
AB51529MS	SAXITOXIN	0.279 Abs [0.2780] {0.5 C	0.265 µg/L [0.266]	22.021 %Abs [21.9		0.020 - 0.400	M21E518(
AB51529MSD	SAXITOXIN	0.274 Abs	0.273 µg/L	21.626 %Abs		0.020 - 0.400	M21E518(
AB51529MSD	SAXITOXIN	0.259 Abs [0.2665] {4.0 C	0.301 µg/L [0.287]	20.442 %Abs [21.0		0.020 - 0.400	M21E518(
AB51530	SAXITOXIN	1.234 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51530	SAXITOXIN	1.224 Abs [1.2290] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51531	SAXITOXIN	1.235 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51531	SAXITOXIN	1.236 Abs [1.2355] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51532	SAXITOXIN	1.236 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51532	SAXITOXIN	1.218 Abs [1.2270] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51533	SAXITOXIN	1.175 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51533	SAXITOXIN	1.146 Abs [1.1605] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51525	SAXITOXIN	1.283 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51525	SAXITOXIN	1.270 Abs [1.2765] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51534	SAXITOXIN	1.263 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51534	SAXITOXIN	1.267 Abs [1.2650] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51535	SAXITOXIN	1.276 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51535	SAXITOXIN	1.249 Abs [1.2625] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(

Note

Signature

David Jordan

David Jordan 6/16/2022

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: M21E5180

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
6/16/2022 1:46:58 PM				
STX Std 0	1.269 Abs	0.000 µg/L	R ² =0.99864, 100.158 %Abs	RK1:30->A07@2
STX Std 0	1.265 Abs [1.2670] {0.2 CV}	0.000 µg/L [0.000]	R ² =0.99864, 99.842 %Abs	RK1:30->B07@2
STX Std 1	1.048 Abs	0.020 µg/L	R ² =0.99864, 82.715 %Abs	RK1:31->C07@2
STX Std 1	1.053 Abs [1.0505] {0.3 CV}	0.020 µg/L [0.020] {0.0 CV}	R ² =0.99864, 83.110 %Abs	RK1:31->D07@2
STX Std 2	0.796 Abs	0.047 µg/L	R ² =0.99864, 62.826 %Abs	RK1:32->E07@2
STX Std 2	0.771 Abs [0.7835] {2.3 CV}	0.050 µg/L [0.049] {4.4 CV}	R ² =0.99864, 60.852 %Abs	RK1:32->F07@3
STX Std 3	0.509 Abs	0.104 µg/L	R ² =0.99864, 40.174 %Abs	RK1:33->G07@3
STX Std 3	0.494 Abs [0.5015] {2.1 CV}	0.109 µg/L [0.106] {3.3 CV}	R ² =0.99864, 38.990 %Abs	RK1:33->H07@3
STX Std 4	0.362 Abs	0.175 µg/L	R ² =0.99864, 28.571 %Abs	RK1:34->A08@2
STX Std 4	0.347 Abs [0.3545] {3.0 CV}	0.187 µg/L [0.181] {4.7 CV}	R ² =0.99864, 27.388 %Abs	RK1:34->B08@2
STX Std 5	0.217 Abs	> 0.400 µg/L	17.127 %Abs	RK1:35->C08@2
STX Std 5	0.211 Abs [0.2140] {2.0 CV}	> 0.400 µg/L	16.654 %Abs	RK1:35->D08@2

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STX Control (0.060-0.090)	0.702 Abs	0.061 µg/L	55.406 %Abs	RK1:36->E08@2
STX Control (0.060-0.090)	0.663 Abs [0.6825] {4.0 CV}	0.067 µg/L [0.064] {6.6 CV}	52.328 %Abs [53.867 %Abs]	RK1:36->F08@3

Statistic				
STX Std 0 [MEAN]	1.2670	0.0000		
STX Std 0 [SD]	0.0028	0.0000		
STX Std 0 [%CV]	0.2232	0.0000		
STX Std 1 [MEAN]	1.0505	0.0200		
STX Std 1 [SD]	0.0035	0.0000		
STX Std 1 [%CV]	0.3366	0.0000		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.7835	0.0485		
STX Std 2 [SD]	0.0177	0.0021		
STX Std 2 [%CV]	2.2562	4.3739		
STX Std 2 [%DIFF]		-3.0000		
STX Std 3 [MEAN]	0.5015	0.1065		
STX Std 3 [SD]	0.0106	0.0035		
STX Std 3 [%CV]	2.1150	3.3197		
STX Std 3 [%DIFF]		6.5000		
STX Std 4 [MEAN]	0.3545	0.1810		
STX Std 4 [SD]	0.0106	0.0085		
STX Std 4 [%CV]	2.9920	4.6880		
STX Std 4 [%DIFF]		-9.5000		
STX Std 5 [MEAN]	0.2140			
STX Std 5 [SD]	0.0042			
STX Std 5 [%CV]	1.9825			

Name	Absorbance	Concentration	Interpretation	Position	
STX Control (0.060-0.090) [MEAN]	0.6825	0.0640			
STX Control (0.060-0.090) [SD]	0.0276	0.0042			
STX Control (0.060-0.090) [%CV]	4.0406	6.6291			

Assay Curve

$$y = (A-D)/(1+(x/C)^B) + D$$
 Weight: NONE
 A = 1.2670
 B = 1.3042
 C = 0.060975
 D = 0.13335
 R2 coef = 0.99864
 50% = 0.073

