Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC40223	Cecil M. Harden Lake - Raccoon Lake SRA Beach	5/28/2024	5/29/2024	< 0.05
AC40224	Whitewater Memorial SP - Whitewater Lake Beach	5/28/2024	5/29/2024	< 0.05
AC40225	Brookville Lake - Quakertown SRA Beach	5/28/2024	5/29/2024	< 0.05
AC40226	Whitewater Memorial SP - Whitewater Lake Beach (Field Duplicate)	5/28/2024	5/29/2024	< 0.05
AC40227	Field Blank	5/28/2024	5/29/2024	< 0.05
AC40228	Ferdinand State Forest - Ferdinand Lake Beach	5/28/2024	5/29/2024	< 0.05

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Test Report (by Request)

Test Information

Request: 5/29/2024 1:19:26 PM
Date: 5/29/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	0.986 Abs	0.000 µg/L	R^2=0.99994, 100.1		0.000	Kit:M22L2
STX Std 0	SAXITOXIN	0.984 Abs [0.9850] {0.1 C	0.001 µg/L [0.001]	R^2=0.99994, 99.89		0.000	Kit:M22L2
STX Std 1	SAXITOXIN	0.816 Abs	0.020 µg/L	R^2=0.99994, 82.84		0.020	Kit:M22L2
STX Std 1	SAXITOXIN	0.812 Abs [0.8140] {0.3 C	0.020 µg/L [0.020]	R^2=0.99994, 82.43		0.020	Kit:M22L2
STX Std 2	SAXITOXIN	0.591 Abs	0.050 µg/L	R^2=0.99994, 60.00		0.050	Kit:M22L2
STX Std 2	SAXITOXIN	0.585 Abs [0.5880] {0.7 C	0.051 µg/L [0.051]	R^2=0.99994, 59.39		0.050	Kit:M22L2
STX Std 3	SAXITOXIN	0.408 Abs	0.096 µg/L	R^2=0.99994, 41.42		0.100	Kit:M22L2
STX Std 3	SAXITOXIN	0.390 Abs [0.3990] {3.2 C	0.103 µg/L [0.100]	R^2=0.99994, 39.59		0.100	Kit:M22L2
STX Std 4	SAXITOXIN	0.248 Abs	0.200 µg/L	R^2=0.99994, 25.17		0.200	Kit:M22L2
STX Std 4	SAXITOXIN	0.251 Abs [0.2495] {0.9 C	0.196 µg/L [0.198]	R^2=0.99994, 25.48		0.200	Kit:M22L2
STX Std 5	SAXITOXIN	0.159 Abs	> 0.400 µg/L	16.142 %Abs		0.400	Kit:M22L2
STX Std 5	SAXITOXIN	0.160 Abs [0.1595] {0.4 C	> 0.400 µg/L	16.244 %Abs		0.400	Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.528 Abs	0.063 µg/L	53.604 %Abs			Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.527 Abs [0.5275] {0.1 C	0.063 µg/L [0.063]	53.503 %Abs [53.5			Kit:M22L2

Note

Signature David Jordan

David Jordan 5/29/2024

* 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 (6.4.1.1171/1085/1.00/0.95) 5/29/2024 1:57:08 PM

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Test Report (by Request)

Test Information

Request: 5/29/2024 1:20:20 PM
Date: 5/29/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.013 Abs	0.000 µg/L	Low, 102.843 %Abs		0.020 - 0.400	Kit:M22L2
LRB	SAXITOXIN	1.002 Abs [1.0075] {0.8 C	0.000 µg/L [0.000]	Low, 101.726 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.462 Abs	0.079 µg/L	46.904 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.461 Abs [0.4615] {0.2 C	0.079 µg/L [0.079]	46.802 %Abs [46.8		0.020 - 0.400	Kit:M22L2
AC40223	SAXITOXIN	0.978 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40223	SAXITOXIN	0.986 Abs [0.9820] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40223MS	SAXITOXIN	0.462 Abs	0.079 µg/L	46.904 %Abs		0.020 - 0.400	Kit:M22L2
AC40223MS	SAXITOXIN	0.453 Abs [0.4575] {1.4 C	0.081 µg/L [0.080]	45.990 %Abs [46.4		0.020 - 0.400	Kit:M22L2
AC40223MSD	SAXITOXIN	0.474 Abs	0.076 µg/L	48.122 %Abs		0.020 - 0.400	Kit:M22L2
AC40223MSD	SAXITOXIN	0.461 Abs [0.4675] {2.0 C	0.079 µg/L [0.078]	46.802 %Abs [47.4		0.020 - 0.400	Kit:M22L2
AC40224	SAXITOXIN	0.956 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40224	SAXITOXIN	0.958 Abs [0.9570] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40225	SAXITOXIN	0.966 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40225	SAXITOXIN	0.965 Abs [0.9655] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40226	SAXITOXIN	0.968 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40226	SAXITOXIN	0.968 Abs [0.9680] {0.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40227	SAXITOXIN	1.022 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40227	SAXITOXIN	1.028 Abs [1.0250] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40228	SAXITOXIN	0.950 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC40228	SAXITOXIN	0.961 Abs [0.9555] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2

Note

Signature David Jordan

David Jordan 5/29/2024

* 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 (6.4.1.1171/1085/1.00/0.95) 5/29/2024 1:57:08 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: Kit:M22L2865

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
5/29/2024 1:19:26 PM				
STX Std 0	0.986 Abs	0.000 µg/L	R^2=0.99994, 100.102 %Abs	RK1:30->A06@1
STX Std 0	0.984 Abs [0.9850] {0.1 CV}	0.001 µg/L [0.001] {141.4 C\	R^2=0.99994, 99.898 %Abs	RK1:30->B06@1
STX Std 1	0.816 Abs	0.020 µg/L	R^2=0.99994, 82.843 %Abs	RK1:31->C06@1
STX Std 1	0.812 Abs [0.8140] {0.3 CV}	0.020 µg/L [0.020] {0.0 CV}	R^2=0.99994, 82.437 %Abs	RK1:31->D06@1
STX Std 2	0.591 Abs	0.050 µg/L	R^2=0.99994, 60.000 %Abs	RK1:32->E06@1
STX Std 2	0.585 Abs [0.5880] {0.7 CV}	0.051 µg/L [0.051] {1.4 CV}	R^2=0.99994, 59.391 %Abs	RK1:32->F06@4
STX Std 3	0.408 Abs	0.096 µg/L	R^2=0.99994, 41.421 %Abs	RK1:33->G06@4
STX Std 3	0.390 Abs [0.3990] {3.2 CV}	0.103 µg/L [0.100] {5.0 CV}	R^2=0.99994, 39.594 %Abs	RK1:33->H06@4
STX Std 4	0.248 Abs	0.200 µg/L	R^2=0.99994, 25.178 %Abs	RK1:34->A07@2
STX Std 4	0.251 Abs [0.2495] {0.9 CV}	0.196 µg/L [0.198] {1.4 CV}	R^2=0.99994, 25.482 %Abs	RK1:34->B07@2
STX Std 5	0.159 Abs	> 0.400 µg/L	16.142 %Abs	RK1:35->C07@2
STX Std 5	0.160 Abs [0.1595] {0.4 CV}	> 0.400 µg/L	16.244 %Abs	RK1:35->D07@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
5/29/2024 1:19:26 PM				
STX Control (0.060-0.090)	0.528 Abs	0.063 µg/L	53.604 %Abs	RK1:36->E07@2
STX Control (0.060-0.090)	0.527 Abs [0.5275] {0.1 CV}	0.063 µg/L [0.063] {0.0 CV}	53.503 %Abs [53.553 %Abs]	RK1:36->F07@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	0.9850	0.0005		
STX Std 0 [SD]	0.0014	0.0007		
STX Std 0 [%CV]	0.1436	141.4214		
STX Std 1 [MEAN]	0.8140	0.0200		
STX Std 1 [SD]	0.0028	0.0000		
STX Std 1 [%CV]	0.3475	0.0000		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.5880	0.0505		
STX Std 2 [SD]	0.0042	0.0007		
STX Std 2 [%CV]	0.7215	1.4002		
STX Std 2 [%DIFF]		1.0000		
STX Std 3 [MEAN]	0.3990	0.0995		
STX Std 3 [SD]	0.0127	0.0049		
STX Std 3 [%CV]	3.1900	4.9746		
STX Std 3 [%DIFF]		-0.5000		
STX Std 4 [MEAN]	0.2495	0.1980		
STX Std 4 [SD]	0.0021	0.0028		
STX Std 4 [%CV]	0.8502	1.4285		
STX Std 4 [%DIFF]		-1.0000		
STX Std 5 [MEAN]	0.1595			
STX Std 5 [SD]	0.0007			
STX Std 5 [%CV]	0.4433			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.5275	0.0630		
STX Control (0.060-0.090) [SD]	0.0007	0.0000		
STX Control (0.060-0.090) [%CV]	0.1340	0.0000		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 0.98582
B = 1.2828
C = 0.060518
D = 0.088624
R2 coef = 0.99994
50% = 0.071