Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC39734	Pokagon SP - Main Beach	5/20/2024	5/22/2024	< 0.05
AC39735	Pokagon SP - Potawatomi Inn Beach	5/20/2024	5/22/2024	< 0.05
AC39736	Chain O'Lakes SP - Sand Lake Beach	5/20/2024	5/22/2024	< 0.05
AC39737	Ouabache SP - Kunkel Lake Beach	5/20/2024	5/22/2024	< 0.05
AC39738	Potato Creek SP - Worster Lake Beach	5/21/2024	5/22/2024	< 0.05
AC39739	Mississinewa Lake - Miami SRA Beach	5/21/2024	5/22/2024	< 0.05
AC39740	Salamonie Lake - Lost Bridge West SRA Beach	5/21/2024	5/22/2024	< 0.05
AC39741	Summit Lake SP - Summit Lake Beach	5/21/2024	5/22/2024	< 0.05
AC39742	Chain O'Lakes SP - Sand Lake Beach (Field Duplicate)	5/20/2024	5/22/2024	< 0.05
AC39743	Field Blank	5/20/2024	5/22/2024	< 0.05
AC39744	Lincoln SP - Lake Lincoln Beach	5/20/2024	5/22/2024	< 0.05
AC39745	Ferdinand State Forest - Ferdinand Lake Beach	5/20/2024	5/22/2024	< 0.05
AC39746	Patoka Lake - Newton Stewart SRA	5/20/2024	5/22/2024	< 0.05

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Test Report (by Request)

Test Information

Request: 5/22/2024 1:54:51 PM
Date: 5/22/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.004 Abs	0.000 µg/L	R^2=0.99961, 106.4		0.000	Kit:M22L2
STX Std 0	SAXITOXIN	0.882 Abs [0.9430] {9.1 C	0.012 µg/L [0.006]	R^2=0.99961, 93.53		0.000	Kit:M22L2
STX Std 1	SAXITOXIN	0.815 Abs	0.021 µg/L	R^2=0.99961, 86.42		0.020	Kit:M22L2
STX Std 1	SAXITOXIN	0.838 Abs [0.8265] {2.0 C	0.018 µg/L [0.020]	R^2=0.99961, 88.86		0.020	Kit:M22L2
STX Std 2	SAXITOXIN	0.617 Abs	0.051 µg/L	R^2=0.99961, 65.42		0.050	Kit:M22L2
STX Std 2	SAXITOXIN	0.606 Abs [0.6115] {1.3 C	0.053 µg/L [0.052]	R^2=0.99961, 64.26		0.050	Kit:M22L2
STX Std 3	SAXITOXIN	0.431 Abs	0.097 µg/L	R^2=0.99961, 45.70		0.100	Kit:M22L2
STX Std 3	SAXITOXIN	0.424 Abs [0.4275] {1.2 C	0.100 µg/L [0.099]	R^2=0.99961, 44.96		0.100	Kit:M22L2
STX Std 4	SAXITOXIN	0.268 Abs	0.195 µg/L	R^2=0.99961, 28.42		0.200	Kit:M22L2
STX Std 4	SAXITOXIN	0.261 Abs [0.2645] {1.9 C	0.202 µg/L [0.199]	R^2=0.99961, 27.67		0.200	Kit:M22L2
STX Std 5	SAXITOXIN	0.169 Abs	> 0.400 µg/L	17.922 %Abs		0.400	Kit:M22L2
STX Std 5	SAXITOXIN	0.170 Abs [0.1695] {0.4 C	> 0.400 µg/L	18.028 %Abs		0.400	Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.555 Abs	0.063 µg/L	58.855 %Abs			Kit:M22L2
STX Control (0.060-0.090)	SAXITOXIN	0.554 Abs [0.5545] {0.1 C	0.063 µg/L [0.063]	58.749 %Abs [58.8			Kit:M22L2

Note

Signature David Jordan

David Jordan 5/22/2024

* 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) 5/22/2024 2:00:05 PM

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Test Report (by Request)

Test Information

Request: 5/22/2024 1:56:04 PM
Date: 5/22/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.040 Abs	0.000 µg/L	Low, 110.286 %Abs		0.020 - 0.400	Kit:M22L2
LRB	SAXITOXIN	1.029 Abs [1.0345] {0.8 C	0.000 µg/L [0.000]	Low, 109.120 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.482 Abs	0.081 µg/L	51.113 %Abs		0.020 - 0.400	Kit:M22L2
LFB (SAX)	SAXITOXIN	0.471 Abs [0.4765] {1.6 C	0.084 µg/L [0.083]	49.947 %Abs [50.5		0.020 - 0.400	Kit:M22L2
AC39734	SAXITOXIN	0.955 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39734	SAXITOXIN	0.984 Abs [0.9695] {2.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39734MS	SAXITOXIN	0.473 Abs	0.084 µg/L	50.159 %Abs		0.020 - 0.400	Kit:M22L2
AC39734MS	SAXITOXIN	0.474 Abs [0.4735] {0.1 C	0.084 µg/L [0.084]	50.265 %Abs [50.2		0.020 - 0.400	Kit:M22L2
AC39734MSD	SAXITOXIN	0.476 Abs	0.083 µg/L	50.477 %Abs		0.020 - 0.400	Kit:M22L2
AC39734MSD	SAXITOXIN	0.478 Abs [0.4770] {0.3 C	0.082 µg/L [0.083]	50.689 %Abs [50.5		0.020 - 0.400	Kit:M22L2
AC39735	SAXITOXIN	1.000 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39735	SAXITOXIN	1.011 Abs [1.0055] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39736	SAXITOXIN	0.974 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39736	SAXITOXIN	0.967 Abs [0.9705] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39737	SAXITOXIN	0.949 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39737	SAXITOXIN	0.977 Abs [0.9630] {2.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39738	SAXITOXIN	0.997 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39738	SAXITOXIN	0.999 Abs [0.9980] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39739	SAXITOXIN	0.987 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39739	SAXITOXIN	0.999 Abs [0.9930] {0.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39740	SAXITOXIN	1.004 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39740	SAXITOXIN	1.022 Abs [1.0130] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39741	SAXITOXIN	1.017 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39741	SAXITOXIN	1.023 Abs [1.0200] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39742	SAXITOXIN	0.987 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39742	SAXITOXIN	0.985 Abs [0.9860] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39743	SAXITOXIN	1.039 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39743	SAXITOXIN	1.038 Abs [1.0385] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39744	SAXITOXIN	0.915 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39744	SAXITOXIN	0.925 Abs [0.9200] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39745	SAXITOXIN	0.992 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39745	SAXITOXIN	0.997 Abs [0.9945] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39746	SAXITOXIN	1.048 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2
AC39746	SAXITOXIN	1.038 Abs [1.0430] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.020 - 0.400	Kit:M22L2

Note

Signature David Jordan

David Jordan 5/22/2024

* 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) 5/22/2024 2:00:05 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
5/22/2024 1:54:51 PM				
STX Std 0	1.004 Abs	0.000 µg/L	R^2=0.99961, 106.469 %Abs	RK1:30->A07@2
STX Std 0	0.882 Abs [0.9430] {9.1 CV}	0.012 µg/L [0.006] {141.4 C\	R^2=0.99961, 93.531 %Abs	RK1:30->B07@2
STX Std 1	0.815 Abs	0.021 µg/L	R^2=0.99961, 86.426 %Abs	RK1:31->C07@2
STX Std 1	0.838 Abs [0.8265] {2.0 CV}	0.018 µg/L [0.020] {10.9 CV}	R^2=0.99961, 88.865 %Abs	RK1:31->D07@2
STX Std 2	0.617 Abs	0.051 µg/L	R^2=0.99961, 65.429 %Abs	RK1:32->E07@2
STX Std 2	0.606 Abs [0.6115] {1.3 CV}	0.053 µg/L [0.052] {2.7 CV}	R^2=0.99961, 64.263 %Abs	RK1:32->F07@3
STX Std 3	0.431 Abs	0.097 µg/L	R^2=0.99961, 45.705 %Abs	RK1:33->G07@3
STX Std 3	0.424 Abs [0.4275] {1.2 CV}	0.100 µg/L [0.099] {2.2 CV}	R^2=0.99961, 44.963 %Abs	RK1:33->H07@3
STX Std 4	0.268 Abs	0.195 µg/L	R^2=0.99961, 28.420 %Abs	RK1:34->A08@2
STX Std 4	0.261 Abs [0.2645] {1.9 CV}	0.202 µg/L [0.199] {2.5 CV}	R^2=0.99961, 27.678 %Abs	RK1:34->B08@2
STX Std 5	0.169 Abs	> 0.400 µg/L	17.922 %Abs	RK1:35->C08@2
STX Std 5	0.170 Abs [0.1695] {0.4 CV}	> 0.400 µg/L	18.028 %Abs	RK1:35->D08@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
5/22/2024 1:54:51 PM				
STX Control (0.060-0.090)	0.555 Abs	0.063 µg/L	58.855 %Abs	RK1:36->E08@2
STX Control (0.060-0.090)	0.554 Abs [0.5545] {0.1 CV}	0.063 µg/L [0.063] {0.0 CV}	58.749 %Abs [58.802 %Abs]	RK1:36->F08@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	0.9430	0.0060		
STX Std 0 [SD]	0.0863	0.0085		
STX Std 0 [%CV]	9.1481	141.4214		
STX Std 1 [MEAN]	0.8265	0.0195		
STX Std 1 [SD]	0.0163	0.0021		
STX Std 1 [%CV]	1.9678	10.8786		
STX Std 1 [%DIFF]		-2.5000		
STX Std 2 [MEAN]	0.6115	0.0520		
STX Std 2 [SD]	0.0078	0.0014		
STX Std 2 [%CV]	1.2720	2.7196		
STX Std 2 [%DIFF]		4.0000		
STX Std 3 [MEAN]	0.4275	0.0985		
STX Std 3 [SD]	0.0049	0.0021		
STX Std 3 [%CV]	1.1578	2.1536		
STX Std 3 [%DIFF]		-1.5000		
STX Std 4 [MEAN]	0.2645	0.1985		
STX Std 4 [SD]	0.0049	0.0049		
STX Std 4 [%CV]	1.8714	2.4936		
STX Std 4 [%DIFF]		-0.7500		
STX Std 5 [MEAN]	0.1695			
STX Std 5 [SD]	0.0007			
STX Std 5 [%CV]	0.4172			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.5545	0.0630		
STX Control (0.060-0.090) [SD]	0.0007	0.0000		
STX Control (0.060-0.090) [%CV]	0.1275	0.0000		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 0.94555
B = 1.3846
C = 0.070213
D = 0.10283
R2 coef = 0.99961
50% = 0.084