Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB51522	Ft. Ben Harrison SP Dog Lake	6/6/2022	6/8/2022	< 0.05
AB51520	Ft. Ben Harrison SP Dog Lake (Field Duplicate)	6/6/2022	6/8/2022	< 0.05
AB51521	Field Blank	6/6/2022	6/8/2022	< 0.05
AB51523	Ferdinand State Forest Lake	6/6/2022	6/8/2022	< 0.05

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Test Report (by Request)

Test Information

Request: 6/8/2022 4:44:24 PM
Date: 6/8/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.422 Abs	0.000 µg/L	R^2=0.99831, 100.4			M21E518(
STX Std 0	SAXITOXIN	1.408 Abs [1.4150] {0.7 C	0.001 µg/L [0.001]	R^2=0.99831, 99.5(			M21E518(
STX Std 1	SAXITOXIN	1.151 Abs	0.018 µg/L	R^2=0.99831, 81.34			M21E518(
STX Std 1	SAXITOXIN	1.112 Abs [1.1315] {2.4 C	0.021 µg/L [0.019]	R^2=0.99831, 78.58			M21E518(
STX Std 2	SAXITOXIN	0.831 Abs	0.048 µg/L	R^2=0.99831, 58.72			M21E518(
STX Std 2	SAXITOXIN	0.813 Abs [0.8220] {1.5 C	0.051 µg/L [0.049]	R^2=0.99831, 57.45			M21E518(
STX Std 3	SAXITOXIN	0.543 Abs	0.105 µg/L	R^2=0.99831, 38.37			M21E518(
STX Std 3	SAXITOXIN	0.529 Abs [0.5360] {1.8 C	0.109 µg/L [0.107]	R^2=0.99831, 37.38			M21E518(
STX Std 4	SAXITOXIN	0.401 Abs	0.168 µg/L	R^2=0.99831, 28.33			M21E518(
STX Std 4	SAXITOXIN	0.381 Abs [0.3910] {3.6 C	0.182 µg/L [0.175]	R^2=0.99831, 26.92			M21E518(
STX Std 5	SAXITOXIN	0.236 Abs	> 0.400 µg/L	16.678 %Abs			M21E518(
STX Std 5	SAXITOXIN	0.216 Abs [0.2260] {6.3 C	> 0.400 µg/L	15.265 %Abs			M21E518(
STX Control (0.060-0.090)	SAXITOXIN	0.733 Abs	0.062 µg/L	51.802 %Abs			M21E518(
STX Control (0.060-0.090)	SAXITOXIN	0.712 Abs [0.7225] {2.1 C	0.066 µg/L [0.064]	50.318 %Abs [51.0			M21E518(

Note

Signature

Charles Hostetter 6/9/2022

* 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) 6/9/2022 7:49:49 AM

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Test Report (by Request)

Test Information

Request: 6/9/2022 7:44:29 AM
Date: 6/8/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.348 Abs	0.005 µg/L	Low, 95.265 %Abs		0.020 - 0.400	M21E518(
LRB	SAXITOXIN	1.338 Abs [1.3430] {0.5 C	0.006 µg/L [0.006]	Low, 94.558 %Abs		0.020 - 0.400	M21E518(
LFB (SAX)	SAXITOXIN	0.612 Abs	0.086 µg/L	43.251 %Abs		0.020 - 0.400	M21E518(
LFB (SAX)	SAXITOXIN	0.589 Abs [0.6005] {2.7 C	0.092 µg/L [0.089]	41.625 %Abs [42.4		0.020 - 0.400	M21E518(
AB51522	SAXITOXIN	1.332 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51522	SAXITOXIN	1.304 Abs [1.3180] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51522MS	SAXITOXIN	0.581 Abs	0.094 µg/L	41.060 %Abs		0.020 - 0.400	M21E518(
AB51522MS	SAXITOXIN	0.561 Abs [0.5710] {2.5 C	0.099 µg/L [0.096]	39.647 %Abs [40.3		0.020 - 0.400	M21E518(
AB51522MSD	SAXITOXIN	0.560 Abs	0.100 µg/L	39.576 %Abs		0.020 - 0.400	M21E518(
AB51522MSD	SAXITOXIN	0.539 Abs [0.5495] {2.7 C	0.106 µg/L [0.103]	38.092 %Abs [38.8		0.020 - 0.400	M21E518(
AB51520	SAXITOXIN	1.324 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51520	SAXITOXIN	1.281 Abs [1.3025] {2.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51521	SAXITOXIN	1.360 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51521	SAXITOXIN	1.360 Abs [1.3600] {0.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51523	SAXITOXIN	1.280 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21E518(
AB51523	SAXITOXIN	1.247 Abs [1.2635] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21E518(

Note

Signature

Charles Hostetter 6/9/2022

* 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) 6/9/2022 7:49:49 AM

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: M21E5180

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
6/8/2022 4:44:24 PM				
STX Std 0	1.422 Abs	0.000 µg/L	R^2=0.99831, 100.495 %Abs	RK1:23->A01@2
STX Std 0	1.408 Abs [1.4150] {0.7 CV}	0.001 µg/L [0.001] {141.4 C\	R^2=0.99831, 99.505 %Abs	RK1:23->B01@2
STX Std 1	1.151 Abs	0.018 µg/L	R^2=0.99831, 81.343 %Abs	RK1:24->C01@2
STX Std 1	1.112 Abs [1.1315] {2.4 CV}	0.021 µg/L [0.019] {10.9 CV}	R^2=0.99831, 78.587 %Abs	RK1:24->D01@2
STX Std 2	0.831 Abs	0.048 µg/L	R^2=0.99831, 58.728 %Abs	RK1:25->E01@2
STX Std 2	0.813 Abs [0.8220] {1.5 CV}	0.051 µg/L [0.049] {4.3 CV}	R^2=0.99831, 57.456 %Abs	RK1:25->F01@3
STX Std 3	0.543 Abs	0.105 µg/L	R^2=0.99831, 38.375 %Abs	RK1:26->G01@3
STX Std 3	0.529 Abs [0.5360] {1.8 CV}	0.109 µg/L [0.107] {2.6 CV}	R^2=0.99831, 37.385 %Abs	RK1:26->H01@3
STX Std 4	0.401 Abs	0.168 µg/L	R^2=0.99831, 28.339 %Abs	RK1:27->A02@2
STX Std 4	0.381 Abs [0.3910] {3.6 CV}	0.182 µg/L [0.175] {5.7 CV}	R^2=0.99831, 26.926 %Abs	RK1:27->B02@2
STX Std 5	0.236 Abs	> 0.400 µg/L	16.678 %Abs	RK1:28->C02@2
STX Std 5	0.216 Abs [0.2260] {6.3 CV}	> 0.400 µg/L	15.265 %Abs	RK1:28->D02@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
6/8/2022 4:44:24 PM				
STX Control (0.060-0.090)	0.733 Abs	0.062 µg/L	51.802 %Abs	RK1:29->E02@2
STX Control (0.060-0.090)	0.712 Abs [0.7225] {2.1 CV}	0.066 µg/L [0.064] {4.4 CV}	50.318 %Abs [51.060 %Abs]	RK1:29->F02@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	1.4150	0.0005		
STX Std 0 [SD]	0.0099	0.0007		
STX Std 0 [%CV]	0.6996	141.4214		
STX Std 1 [MEAN]	1.1315	0.0195		
STX Std 1 [SD]	0.0276	0.0021		
STX Std 1 [%CV]	2.4372	10.8786		
STX Std 1 [%DIFF]		-2.5000		
STX Std 2 [MEAN]	0.8220	0.0495		
STX Std 2 [SD]	0.0127	0.0021		
STX Std 2 [%CV]	1.5484	4.2855		
STX Std 2 [%DIFF]		-1.0000		
STX Std 3 [MEAN]	0.5360	0.1070		
STX Std 3 [SD]	0.0099	0.0028		
STX Std 3 [%CV]	1.8469	2.6434		
STX Std 3 [%DIFF]		7.0000		
STX Std 4 [MEAN]	0.3910	0.1750		
STX Std 4 [SD]	0.0141	0.0099		
STX Std 4 [%CV]	3.6169	5.6569		
STX Std 4 [%DIFF]		-12.5000		
STX Std 5 [MEAN]	0.2260			
STX Std 5 [SD]	0.0141			
STX Std 5 [%CV]	6.2576			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.7225	0.0640		
STX Control (0.060-0.090) [SD]	0.0148	0.0028		
STX Control (0.060-0.090) [%CV]	2.0553	4.4194		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.4165
B = 1.2043
C = 0.056150
D = 0.13031
R2 coef = 0.99831
50% = 0.067