Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03068	Cecil M. Harden Lake - Raccoon Lake SRA Beach	6/12/2023	6/15/2023	< 0.050
AC03069	Cagles Mill Lake - Lieber SRA Beach	6/12/2023	6/15/2023	< 0.050
AC03070	Monroe Lake - Paynetown SRA Beach	6/12/2023	6/15/2023	< 0.050
AC03071	Monroe Lake - Fairfax SRA Beach	6/12/2023	6/15/2023	< 0.050
AC03072	Starve Hollow SRA - Starve Hollow Lake Beach	6/12/2023	6/15/2023	0.098
AC03073	Whitewater Memorial SP - Whitewater Lake Beach	6/13/2023	6/15/2023	< 0.050
AC03074	Brookville Lake - Quakertown SRA Beach	6/13/2023	6/15/2023	< 0.050
AC03075	Brookville Lake - Mounds SRA Beach	6/13/2023	6/15/2023	< 0.050
AC03076	Hardy Lake SRA - Hardy Lake SRA Beach	6/13/2023	6/15/2023	< 0.050
AC03077	Deam Lake SRA - Deam Lake Beach	6/13/2023	6/15/2023	< 0.050
AC03078	Brookville Lake - Mounds SRA Beach (Field Duplicate)	6/13/2023	6/15/2023	< 0.050
AC03079	Field Blank	6/13/2023	6/15/2023	< 0.050
AC03080	Ft. Ben Harrison SP Dog Lake	6/13/2023	6/15/2023	< 0.050

eurofins | Abraxis

Test Report (by Request)

Test Information

Request: 6/15/2023 2:04:08 PM
Date: 6/15/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
STX Std 0	SAXITOXIN	1.465 Abs	0.000 µg/L	R^2=0.99974, 101.4			M22L286E
STX Std 0	SAXITOXIN	1.423 Abs [1.4440] {2.1 C	0.002 µg/L [0.001]	R^2=0.99974, 98.54			M22L286E
STX Std 1	SAXITOXIN	1.198 Abs	0.019 µg/L	R^2=0.99974, 82.96			M22L286E
STX Std 1	SAXITOXIN	1.174 Abs [1.1860] {1.4 C	0.021 µg/L [0.020]	R^2=0.99974, 81.30			M22L286E
STX Std 2	SAXITOXIN	0.916 Abs	0.047 µg/L	R^2=0.99974, 63.43			M22L286E
STX Std 2	SAXITOXIN	0.885 Abs [0.9005] {2.4 C	0.051 µg/L [0.049]	R^2=0.99974, 61.28			M22L286E
STX Std 3	SAXITOXIN	0.621 Abs	0.100 µg/L	R^2=0.99974, 43.00			M22L286E
STX Std 3	SAXITOXIN	0.598 Abs [0.6095] {2.7 C	0.106 µg/L [0.103]	R^2=0.99974, 41.41			M22L286E
STX Std 4	SAXITOXIN	0.412 Abs	0.188 µg/L	R^2=0.99974, 28.53			M22L286E
STX Std 4	SAXITOXIN	0.393 Abs [0.4025] {3.3 C	0.201 µg/L [0.194]	R^2=0.99974, 27.21			M22L286E
STX Std 5	SAXITOXIN	0.255 Abs	0.394 µg/L	R^2=0.99974, 17.65			M22L286E
STX Std 5	SAXITOXIN	0.244 Abs [0.2495] {3.1 C	> 0.400 µg/L [0.39	16.898 %Abs			M22L286E
STX Control (0.060-0.090)	SAXITOXIN	0.795 Abs	0.064 µg/L	55.055 %Abs			M22L286E
STX Control (0.060-0.090)	SAXITOXIN	0.769 Abs [0.7820] {2.4 C	0.068 µg/L [0.066]	53.255 %Abs [54.1			M22L286E

Note

Signature _____

Charles Hostetter 6/15/23

* 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) 6/15/2023 3:01:49 PM

eurofins | Abraxis

Test Report (by Request)

Test Information

Request: 6/15/2023 2:05:17 PM
Date: 6/15/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	SAXITOXIN	1.449 Abs	0.000 µg/L	Low, 100.346 %Abs		0.020 - 0.400	M22L286E
LRB	SAXITOXIN	1.426 Abs [1.4375] {1.1 C	0.002 µg/L [0.001]	Low, 98.753 %Abs		0.020 - 0.400	M22L286E
LFB (SAX)	SAXITOXIN	0.682 Abs	0.085 µg/L	47.230 %Abs		0.020 - 0.400	M22L286E
LFB (SAX)	SAXITOXIN	0.663 Abs [0.6725] {2.0 C	0.089 µg/L [0.087]	45.914 %Abs [46.5		0.020 - 0.400	M22L286E
AC03068	SAXITOXIN	1.408 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03068	SAXITOXIN	1.395 Abs [1.4015] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03068MS	SAXITOXIN	0.664 Abs	0.089 µg/L	45.983 %Abs		0.020 - 0.400	M22L286E
AC03068MS	SAXITOXIN	0.638 Abs [0.6510] {2.8 C	0.095 µg/L [0.092]	44.183 %Abs [45.0		0.020 - 0.400	M22L286E
AC03068MSD	SAXITOXIN	0.636 Abs	0.096 µg/L	44.044 %Abs		0.020 - 0.400	M22L286E
AC03068MSD	SAXITOXIN	0.624 Abs [0.6300] {1.3 C	0.099 µg/L [0.097]	43.213 %Abs [43.6		0.020 - 0.400	M22L286E
AC03069	SAXITOXIN	1.042 Abs	0.036 µg/L	72.161 %Abs	MDF=1.100	0.020 - 0.400	M22L286E
AC03069	SAXITOXIN	1.016 Abs [1.0290] {1.8 C	0.040 µg/L [0.038]	70.360 %Abs [71.2	MDF=1.100	0.020 - 0.400	M22L286E
AC03070	SAXITOXIN	1.422 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03070	SAXITOXIN	1.410 Abs [1.4160] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03071	SAXITOXIN	1.423 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03071	SAXITOXIN	1.412 Abs [1.4175] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03072	SAXITOXIN	0.674 Abs	0.096 µg/L	46.676 %Abs	MDF=1.100	0.020 - 0.400	M22L286E
AC03072	SAXITOXIN	0.657 Abs [0.6655] {1.8 C	0.100 µg/L [0.098]	45.499 %Abs [46.0	MDF=1.100	0.020 - 0.400	M22L286E
AC03073	SAXITOXIN	1.397 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03073	SAXITOXIN	1.366 Abs [1.3815] {1.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03074	SAXITOXIN	1.372 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03074	SAXITOXIN	1.369 Abs [1.3705] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03075	SAXITOXIN	1.380 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03075	SAXITOXIN	1.380 Abs [1.3800] {0.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03076	SAXITOXIN	1.385 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03076	SAXITOXIN	1.396 Abs [1.3905] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03077	SAXITOXIN	1.433 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03077	SAXITOXIN	1.426 Abs [1.4295] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03078	SAXITOXIN	1.394 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03078	SAXITOXIN	1.394 Abs [1.3940] {0.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03079	SAXITOXIN	1.449 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03079	SAXITOXIN	1.454 Abs [1.4515] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03080	SAXITOXIN	1.382 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M22L286E
AC03080	SAXITOXIN	1.366 Abs [1.3740] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M22L286E

Note

Signature

Charles Hostetter 6/15/23

* 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) 6/15/2023 3:01:49 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: M22L2865

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
6/15/2023 2:04:08 PM				
STX Std 0	1.465 Abs	0.000 µg/L	R^2=0.99974, 101.454 %Abs	RK1:30->A07@2
STX Std 0	1.423 Abs [1.4440] {2.1 CV}	0.002 µg/L [0.001] {141.4 C\	R^2=0.99974, 98.546 %Abs	RK1:30->B07@2
STX Std 1	1.198 Abs	0.019 µg/L	R^2=0.99974, 82.964 %Abs	RK1:31->C07@2
STX Std 1	1.174 Abs [1.1860] {1.4 CV}	0.021 µg/L [0.020] {7.1 CV}	R^2=0.99974, 81.302 %Abs	RK1:31->D07@2
STX Std 2	0.916 Abs	0.047 µg/L	R^2=0.99974, 63.435 %Abs	RK1:32->E07@2
STX Std 2	0.885 Abs [0.9005] {2.4 CV}	0.051 µg/L [0.049] {5.8 CV}	R^2=0.99974, 61.288 %Abs	RK1:32->F07@3
STX Std 3	0.621 Abs	0.100 µg/L	R^2=0.99974, 43.006 %Abs	RK1:33->G07@3
STX Std 3	0.598 Abs [0.6095] {2.7 CV}	0.106 µg/L [0.103] {4.1 CV}	R^2=0.99974, 41.413 %Abs	RK1:33->H07@3
STX Std 4	0.412 Abs	0.188 µg/L	R^2=0.99974, 28.532 %Abs	RK1:34->A08@2
STX Std 4	0.393 Abs [0.4025] {3.3 CV}	0.201 µg/L [0.194] {4.7 CV}	R^2=0.99974, 27.216 %Abs	RK1:34->B08@2
STX Std 5	0.255 Abs	0.394 µg/L	R^2=0.99974, 17.659 %Abs	RK1:35->C08@2
STX Std 5	0.244 Abs [0.2495] {3.1 CV}	> 0.400 µg/L [0.394]	16.898 %Abs	RK1:35->D08@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++	++++++++++++++++++++++++
6/15/2023 2:04:08 PM				
STX Control (0.060-0.090)	0.795 Abs	0.064 µg/L	55.055 %Abs	RK1:36->E08@2
STX Control (0.060-0.090)	0.769 Abs [0.7820] {2.4 CV}	0.068 µg/L [0.066] {4.3 CV}	53.255 %Abs [54.155 %Abs]	RK1:36->F08@3
**********	**********	**********	**********	**********
Statistic				
STX Std 0 [MEAN]	1.4440	0.0010		
STX Std 0 [SD]	0.0297	0.0014		
STX Std 0 [%CV]	2.0567	141.4214		
STX Std 1 [MEAN]	1.1860	0.0200		
STX Std 1 [SD]	0.0170	0.0014		
STX Std 1 [%CV]	1.4309	7.0711		
STX Std 1 [%DIFF]		0.0000		
STX Std 2 [MEAN]	0.9005	0.0490		
STX Std 2 [SD]	0.0219	0.0028		
STX Std 2 [%CV]	2.4342	5.7723		
STX Std 2 [%DIFF]		-2.0000		
STX Std 3 [MEAN]	0.6095	0.1030		
STX Std 3 [SD]	0.0163	0.0042		
STX Std 3 [%CV]	2.6683	4.1191		
STX Std 3 [%DIFF]		3.0000		
STX Std 4 [MEAN]	0.4025	0.1945		
STX Std 4 [SD]	0.0134	0.0092		
STX Std 4 [%CV]	3.3379	4.7262		
STX Std 4 [%DIFF]		-2.7500		
STX Std 5 [MEAN]	0.2495			
STX Std 5 [SD]	0.0078			
STX Std 5 [%CV]	3.1175			

SAXITOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.7820	0.0660		
STX Control (0.060-0.090) [SD]	0.0184	0.0028		
STX Control (0.060-0.090) [%CV]	2.3510	4.2855		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.4435
B = 1.1973
C = 0.066676
D = 0.11328
R2 coef = 0.99974
50% = 0.077