



## Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

| <b>Sample #</b> | <b>Location</b>   | <b>Date Collected</b> | <b>Date Analyzed</b> | <b>Conc. (ppb)</b> |
|-----------------|---|-----------------------|----------------------|--------------------|
| AC41502         | Cecil M. Harden Lake - Raccoon Lake SRA Beach           | 8/19/2024             | 8/21/2024            | < 0.05             |
| AC41503         | Cagles Mill Lake - Lieber SRA Beach                     | 8/19/2024             | 8/21/2024            | < 0.05             |
| AC41504         | Monroe Lake - Fairfax SRA Beach                         | 8/19/2024             | 8/21/2024            | < 0.05             |
| AC41505         | Monroe Lake - Paynetown SRA Beach                       | 8/19/2024             | 8/21/2024            | < 0.05             |
| AC41506         | Starve Hollow SRA - Starve Hollow Lake Beach            | 8/19/2024             | 8/21/2024            | < 0.05             |
| AC41507         | Hardy Lake SRA - Hardy Lake SRA Beach                   | 8/20/2024             | 8/21/2024            | < 0.05             |
| AC41508         | Whitewater Memorial SP - Whitewater Lake Beach          | 8/20/2024             | 8/21/2024            | < 0.05             |
| AC41509         | Brookville Lake - Quakertown SRA Beach                  | 8/20/2024             | 8/21/2024            | < 0.05             |
| AC41510         | Brookville Lake - Mounds SRA Beach                      | 8/20/2024             | 8/21/2024            | < 0.05             |
| AC41511         | Hardy Lake SRA - Hardy Lake SRA Beach (Field Duplicate) | 8/20/2024             | 8/21/2024            | < 0.05             |
| AC41512         | Field Blank   | 8/20/2024             | 8/21/2024            | < 0.05             |
| AC41513         | Ft. Ben Harrison SP Dog Lake                            | 8/20/2024             | 8/21/2024            | < 0.05             |

# Test Report (by Request)

**Test Information**

Request: 8/21/2024 2:04:36 PM  
 Date: 8/21/2024

| Name/ID                   | Assay     | Absorbance                | Concentration      | Interpretation     | Note | Reference | Lot#      |
|---------------------------|-----------|---------------------------|--------------------|--------------------|------|-----------|-----------|
| STX Std 0                 | SAXITOXIN | 1.282 Abs                 | 0.000 µg/L         | R^2=0.99959, 100.2 |      | 0.000     | Kit:P24A3 |
| STX Std 0                 | SAXITOXIN | 1.275 Abs [1.2785] {0.4 C | 0.001 µg/L [0.001] | R^2=0.99959, 99.6  |      | 0.000     | Kit:P24A3 |
| STX Std 1                 | SAXITOXIN | 1.092 Abs                 | 0.020 µg/L         | R^2=0.99959, 85.37 |      | 0.020     | Kit:P24A3 |
| STX Std 1                 | SAXITOXIN | 1.083 Abs [1.0875] {0.6 C | 0.021 µg/L [0.021] | R^2=0.99959, 84.67 |      | 0.020     | Kit:P24A3 |
| STX Std 2                 | SAXITOXIN | 0.843 Abs                 | 0.048 µg/L         | R^2=0.99959, 65.91 |      | 0.050     | Kit:P24A3 |
| STX Std 2                 | SAXITOXIN | 0.830 Abs [0.8365] {1.1 C | 0.050 µg/L [0.049] | R^2=0.99959, 64.8  |      | 0.050     | Kit:P24A3 |
| STX Std 3                 | SAXITOXIN | 0.566 Abs                 | 0.100 µg/L         | R^2=0.99959, 44.2  |      | 0.100     | Kit:P24A3 |
| STX Std 3                 | SAXITOXIN | 0.539 Abs [0.5525] {3.5 C | 0.108 µg/L [0.104] | R^2=0.99959, 42.14 |      | 0.100     | Kit:P24A3 |
| STX Std 4                 | SAXITOXIN | 0.355 Abs                 | 0.191 µg/L         | R^2=0.99959, 27.7  |      | 0.200     | Kit:P24A3 |
| STX Std 4                 | SAXITOXIN | 0.350 Abs [0.3525] {1.0 C | 0.195 µg/L [0.193] | R^2=0.99959, 27.3  |      | 0.200     | Kit:P24A3 |
| STX Std 5                 | SAXITOXIN | 0.210 Abs                 | 0.390 µg/L         | R^2=0.99959, 16.4  |      | 0.400     | Kit:P24A3 |
| STX Std 5                 | SAXITOXIN | 0.196 Abs [0.2030] {4.9 C | > 0.400 µg/L [0.39 | 15.324 %Abs        |      | 0.400     | Kit:P24A3 |
| STX Control (0.060-0.090) | SAXITOXIN | 0.719 Abs                 | 0.067 µg/L         | 56.216 %Abs        |      |           | Kit:P24A3 |
| STX Control (0.060-0.090) | SAXITOXIN | 0.711 Abs [0.7150] {0.8 C | 0.068 µg/L [0.068] | 55.590 %Abs [55.9  |      |           | Kit:P24A3 |

**Note**

Signature *David Jordan*

David Jordan 8/21/2024

# Test Report (by Request)

**Test Information**

Request: 8/21/2024 2:05:52 PM  
Date: 8/21/2024

| Name/ID    | Assay     | Absorbance                | Concentration      | Interpretation       | Note      | Reference     | Lot#      |
|------------|-----------|---------------------------|--------------------|----------------------|-----------|---------------|-----------|
| LRB        | SAXITOXIN | 1.294 Abs                 | 0.000 µg/L         | Low, 101.173 %Abs    |           | 0.020 - 0.400 | Kit:P24A3 |
| LRB        | SAXITOXIN | 1.260 Abs [1.2770] {1.9 C | 0.003 µg/L [0.002] | Low, 98.514 %Abs     |           | 0.020 - 0.400 | Kit:P24A3 |
| LFB (SAX)  | SAXITOXIN | 0.573 Abs                 | 0.098 µg/L         | 44.801 %Abs          |           | 0.020 - 0.400 | Kit:P24A3 |
| LFB (SAX)  | SAXITOXIN | 0.580 Abs [0.5765] {0.9 C | 0.096 µg/L [0.097] | 45.348 %Abs [45.0    |           | 0.020 - 0.400 | Kit:P24A3 |
| AC41502    | SAXITOXIN | 1.262 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41502    | SAXITOXIN | 1.201 Abs [1.2315] {3.5 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41503    | SAXITOXIN | 1.240 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41503    | SAXITOXIN | 1.264 Abs [1.2520] {1.4 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41504    | SAXITOXIN | 1.280 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41504    | SAXITOXIN | 1.258 Abs [1.2690] {1.2 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41505    | SAXITOXIN | 1.222 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41505    | SAXITOXIN | 1.216 Abs [1.2190] {0.3 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41506    | SAXITOXIN | 1.008 Abs                 | 0.032 µg/L         | 78.812 %Abs          | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41506    | SAXITOXIN | 1.004 Abs [1.0060] {0.3 C | 0.032 µg/L [0.032] | 78.499 %Abs [78.6    | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41507    | SAXITOXIN | 1.216 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41507    | SAXITOXIN | 1.242 Abs [1.2290] {1.5 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41508    | SAXITOXIN | 1.259 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41508    | SAXITOXIN | 1.215 Abs [1.2370] {2.5 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41508MS  | SAXITOXIN | 0.575 Abs                 | 0.098 µg/L         | 44.957 %Abs          |           | 0.020 - 0.400 | Kit:P24A3 |
| AC41508MS  | SAXITOXIN | 0.569 Abs [0.5720] {0.7 C | 0.099 µg/L [0.099] | 44.488 %Abs [44.7    |           | 0.020 - 0.400 | Kit:P24A3 |
| AC41508MSD | SAXITOXIN | 0.582 Abs                 | 0.096 µg/L         | 45.504 %Abs          |           | 0.020 - 0.400 | Kit:P24A3 |
| AC41508MSD | SAXITOXIN | 0.570 Abs [0.5760] {1.5 C | 0.099 µg/L [0.098] | 44.566 %Abs [45.0    |           | 0.020 - 0.400 | Kit:P24A3 |
| AC41509    | SAXITOXIN | 1.238 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41509    | SAXITOXIN | 1.271 Abs [1.2545] {1.9 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41510    | SAXITOXIN | 1.199 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41510    | SAXITOXIN | 1.261 Abs [1.2300] {3.6 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41511    | SAXITOXIN | 1.213 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41511    | SAXITOXIN | 1.212 Abs [1.2125] {0.1 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41512    | SAXITOXIN | 1.291 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41512    | SAXITOXIN | 1.289 Abs [1.2900] {0.1 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41513    | SAXITOXIN | 1.239 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |
| AC41513    | SAXITOXIN | 1.239 Abs [1.2390] {0.0 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 | 0.020 - 0.400 | Kit:P24A3 |

**Note**

Signature *David Jordan*

David Jordan 8/21/2024

\* 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) 8/21/2024 3:02:54 PM

**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: Kit:P24A3229

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: "

| Name                        | Absorbance                  | Concentration                 | Interpretation                        | Position      |
|-----------------------------|-----------------------------|-------------------------------|---------------------------------------|---------------|
| <b>8/21/2024 2:04:36 PM</b> |                             |                               |                                       |               |
| STX Std 0                   | 1.282 Abs                   | 0.000 µg/L                    | R <sup>2</sup> =0.99959, 100.235 %Abs | RK1:30->A07@2 |
| STX Std 0                   | 1.275 Abs [1.2785] {0.4 CV} | 0.001 µg/L [0.001] {141.4 CV} | R <sup>2</sup> =0.99959, 99.687 %Abs  | RK1:30->B07@2 |
| STX Std 1                   | 1.092 Abs                   | 0.020 µg/L                    | R <sup>2</sup> =0.99959, 85.379 %Abs  | RK1:31->C07@2 |
| STX Std 1                   | 1.083 Abs [1.0875] {0.6 CV} | 0.021 µg/L [0.021] {3.4 CV}   | R <sup>2</sup> =0.99959, 84.676 %Abs  | RK1:31->D07@2 |
| STX Std 2                   | 0.843 Abs                   | 0.048 µg/L                    | R <sup>2</sup> =0.99959, 65.911 %Abs  | RK1:32->E07@2 |
| STX Std 2                   | 0.830 Abs [0.8365] {1.1 CV} | 0.050 µg/L [0.049] {2.9 CV}   | R <sup>2</sup> =0.99959, 64.894 %Abs  | RK1:32->F07@3 |
| STX Std 3                   | 0.566 Abs                   | 0.100 µg/L                    | R <sup>2</sup> =0.99959, 44.253 %Abs  | RK1:33->G07@3 |
| STX Std 3                   | 0.539 Abs [0.5525] {3.5 CV} | 0.108 µg/L [0.104] {5.4 CV}   | R <sup>2</sup> =0.99959, 42.142 %Abs  | RK1:33->H07@3 |
| STX Std 4                   | 0.355 Abs                   | 0.191 µg/L                    | R <sup>2</sup> =0.99959, 27.756 %Abs  | RK1:34->A08@2 |
| STX Std 4                   | 0.350 Abs [0.3525] {1.0 CV} | 0.195 µg/L [0.193] {1.5 CV}   | R <sup>2</sup> =0.99959, 27.365 %Abs  | RK1:34->B08@2 |
| STX Std 5                   | 0.210 Abs                   | 0.390 µg/L                    | R <sup>2</sup> =0.99959, 16.419 %Abs  | RK1:35->C08@2 |
| STX Std 5                   | 0.196 Abs [0.2030] {4.9 CV} | > 0.400 µg/L [0.390]          | 15.324 %Abs                           | RK1:35->D08@2 |
| *****                       |                             |                               |                                       |               |
| <b>8/21/2024 2:04:36 PM</b> |                             |                               |                                       |               |
| STX Control (0.060-0.090)   | 0.719 Abs                   | 0.067 µg/L                    | 56.216 %Abs                           | RK1:36->E08@2 |
| STX Control (0.060-0.090)   | 0.711 Abs [0.7150] {0.8 CV} | 0.068 µg/L [0.068] {1.0 CV}   | 55.590 %Abs [55.903 %Abs]             | RK1:36->F08@3 |
| *****                       |                             |                               |                                       |               |
| <b>Statistic</b>            |                             |                               |                                       |               |
| STX Std 0 [MEAN]            | 1.2785                      | 0.0005                        |                                       |               |
| STX Std 0 [SD]              | 0.0049                      | 0.0007                        |                                       |               |
| STX Std 0 [%CV]             | 0.3872                      | 141.4214                      |                                       |               |
| STX Std 1 [MEAN]            | 1.0875                      | 0.0205                        |                                       |               |
| STX Std 1 [SD]              | 0.0064                      | 0.0007                        |                                       |               |
| STX Std 1 [%CV]             | 0.5852                      | 3.4493                        |                                       |               |
| STX Std 1 [%DIFF]           |                             | 2.5000                        |                                       |               |
| STX Std 2 [MEAN]            | 0.8365                      | 0.0490                        |                                       |               |
| STX Std 2 [SD]              | 0.0092                      | 0.0014                        |                                       |               |
| STX Std 2 [%CV]             | 1.0989                      | 2.8862                        |                                       |               |
| STX Std 2 [%DIFF]           |                             | -2.0000                       |                                       |               |
| STX Std 3 [MEAN]            | 0.5525                      | 0.1040                        |                                       |               |
| STX Std 3 [SD]              | 0.0191                      | 0.0057                        |                                       |               |
| STX Std 3 [%CV]             | 3.4555                      | 5.4393                        |                                       |               |
| STX Std 3 [%DIFF]           |                             | 4.0000                        |                                       |               |
| STX Std 4 [MEAN]            | 0.3525                      | 0.1930                        |                                       |               |
| STX Std 4 [SD]              | 0.0035                      | 0.0028                        |                                       |               |
| STX Std 4 [%CV]             | 1.0030                      | 1.4655                        |                                       |               |
| STX Std 4 [%DIFF]           |                             | -3.5000                       |                                       |               |
| STX Std 5 [MEAN]            | 0.2030                      |                               |                                       |               |
| STX Std 5 [SD]              | 0.0099                      |                               |                                       |               |
| STX Std 5 [%CV]             | 4.8766                      |                               |                                       |               |

| Name                             | Absorbance | Concentration | Interpretation | Position |
|----------------------------------|------------|---------------|----------------|----------|
| STX Control (0.060-0.090) [MEAN] | 0.7150     | 0.0675        |                |          |
| STX Control (0.060-0.090) [SD]   | 0.0057     | 0.0007        |                |          |
| STX Control (0.060-0.090) [%CV]  | 0.7912     | 1.0476        |                |          |

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.2784  
 B = 1.2921  
 C = 0.073547  
 D = 0.086312  
 R2 coef = 0.99959  
 50% = 0.082

