



## 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> |
|-----------------|---|-----------------------|----------------------|--------------------|
| AC03279         | Mississinewa Lake - Miami SRA Beach                   | 7/3/2023              | 7/5/2023             | < 0.05             |
| AC03280         | Salamonie Lake - Lost Bridge West SRA Beach           | 7/3/2023              | 7/5/2023             | < 0.05             |
| AC03281         | Mississinewa Lake - Miami SRA Beach (Field Duplicate) | 7/3/2023              | 7/5/2023             | < 0.05             |
| AC03282         | Field Blank   | 7/3/2023              | 7/5/2023             | < 0.05             |
| AC03283         | Patoka Lake - Newton Stewart SRA                      | 7/5/2023              | 7/5/2023             | < 0.05             |

# Test Report (by Request)

**Test Information**

 Request: 7/5/2023 3:24:45 PM  
 Date: 7/5/2023

| Name/ID                   | Assay     | Absorbance                | Concentration      | Interpretation      | Note | Reference | Lot#     |
|---------------------------|-----------|---------------------------|--------------------|---------------------|------|-----------|----------|
| STX Std 0                 | SAXITOXIN | 1.358 Abs                 | 0.000 µg/L         | R^2=0.99980, 99.8%  |      |           | M22L2865 |
| STX Std 0                 | SAXITOXIN | 1.362 Abs [1.3600] {0.2 C | 0.000 µg/L [0.000] | R^2=0.99980, 100.1% |      |           | M22L2865 |
| STX Std 1                 | SAXITOXIN | 1.129 Abs                 | 0.019 µg/L         | R^2=0.99980, 83.0%  |      |           | M22L2865 |
| STX Std 1                 | SAXITOXIN | 1.111 Abs [1.1200] {1.1 C | 0.021 µg/L [0.020] | R^2=0.99980, 81.6%  |      |           | M22L2865 |
| STX Std 2                 | SAXITOXIN | 0.840 Abs                 | 0.048 µg/L         | R^2=0.99980, 61.7%  |      |           | M22L2865 |
| STX Std 2                 | SAXITOXIN | 0.812 Abs [0.8260] {2.4 C | 0.052 µg/L [0.050] | R^2=0.99980, 59.7%  |      |           | M22L2865 |
| STX Std 3                 | SAXITOXIN | 0.555 Abs                 | 0.101 µg/L         | R^2=0.99980, 40.8%  |      |           | M22L2865 |
| STX Std 3                 | SAXITOXIN | 0.545 Abs [0.5500] {1.3 C | 0.104 µg/L [0.103] | R^2=0.99980, 40.0%  |      |           | M22L2865 |
| STX Std 4                 | SAXITOXIN | 0.359 Abs                 | 0.192 µg/L         | R^2=0.99980, 26.3%  |      |           | M22L2865 |
| STX Std 4                 | SAXITOXIN | 0.359 Abs [0.3590] {0.0 C | 0.192 µg/L [0.192] | R^2=0.99980, 26.3%  |      |           | M22L2865 |
| STX Std 5                 | SAXITOXIN | 0.223 Abs                 | > 0.400 µg/L       | 16.397 %Abs         |      |           | M22L2865 |
| STX Std 5                 | SAXITOXIN | 0.217 Abs [0.2200] {1.9 C | > 0.400 µg/L       | 15.956 %Abs         |      |           | M22L2865 |
| STX Control (0.060-0.090) | SAXITOXIN | 0.724 Abs                 | 0.065 µg/L         | 53.235 %Abs         |      |           | M22L2865 |
| STX Control (0.060-0.090) | SAXITOXIN | 0.707 Abs [0.7155] {1.7 C | 0.067 µg/L [0.066] | 51.985 %Abs [52.6   |      |           | M22L2865 |

**Note**

Signature \_\_\_\_\_

# Test Report (by Request)

**Test Information**

Request: 7/5/2023 3:25:18 PM  
Date: 7/5/2023

| Name/ID    | Assay     | Absorbance                | Concentration      | Interpretation       | Note      | Reference     | Lot#     |
|------------|-----------|---------------------------|--------------------|----------------------|-----------|---------------|----------|
| LRB        | SAXITOXIN | 1.328 Abs                 | 0.003 µg/L         | Low, 97.647 %Abs     |           | 0.020 - 0.400 | M22L2865 |
| LRB        | SAXITOXIN | 1.320 Abs [1.3240] {0.4 C | 0.004 µg/L [0.004] | Low, 97.059 %Abs     |           | 0.020 - 0.400 | M22L2865 |
| LFB (SAX)  | SAXITOXIN | 0.685 Abs                 | 0.071 µg/L         | 50.368 %Abs          |           | 0.020 - 0.400 | M22L2865 |
| LFB (SAX)  | SAXITOXIN | 0.681 Abs [0.6830] {0.4 C | 0.072 µg/L [0.072] | 50.074 %Abs [50.2    |           | 0.020 - 0.400 | M22L2865 |
| AC03279    | SAXITOXIN | 1.309 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03279    | SAXITOXIN | 1.301 Abs [1.3050] {0.4 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03280    | SAXITOXIN | 1.186 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03280    | SAXITOXIN | 1.163 Abs [1.1745] {1.4 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03280MS  | SAXITOXIN | 0.650 Abs                 | 0.078 µg/L         | 47.794 %Abs          |           | 0.020 - 0.400 | M22L2865 |
| AC03280MS  | SAXITOXIN | 0.608 Abs [0.6290] {4.7 C | 0.087 µg/L [0.082] | 44.706 %Abs [46.2    |           | 0.020 - 0.400 | M22L2865 |
| AC03280MSD | SAXITOXIN | 0.659 Abs                 | 0.076 µg/L         | 48.456 %Abs          |           | 0.020 - 0.400 | M22L2865 |
| AC03280MSD | SAXITOXIN | 0.650 Abs [0.6545] {1.0 C | 0.078 µg/L [0.077] | 47.794 %Abs [48.1    |           | 0.020 - 0.400 | M22L2865 |
| AC03281    | SAXITOXIN | 1.303 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03281    | SAXITOXIN | 1.287 Abs [1.2950] {0.9 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03282    | SAXITOXIN | 1.339 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03282    | SAXITOXIN | 1.332 Abs [1.3355] {0.4 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03283    | SAXITOXIN | 1.308 Abs                 | < LOD              | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |
| AC03283    | SAXITOXIN | 1.288 Abs [1.2980] {1.1 C | < LOD [< LOD]      | Low, Out Adjust Dilu | MDF=1.100 |               | M22L2865 |

**Note**

Signature \_\_\_\_\_

\* 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) 7/5/2023 3:38:08 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: M22L2865

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>7/5/2023 3:24:45 PM</b> |                             |                             |                                       |               |
| STX Std 0                  | 1.358 Abs                   | 0.000 µg/L                  | R <sup>2</sup> =0.99980, 99.853 %Abs  | RK1:30->A05@1 |
| STX Std 0                  | 1.362 Abs [1.3600] {0.2 CV} | 0.000 µg/L [0.000]          | R <sup>2</sup> =0.99980, 100.147 %Abs | RK1:30->B05@1 |
| STX Std 1                  | 1.129 Abs                   | 0.019 µg/L                  | R <sup>2</sup> =0.99980, 83.015 %Abs  | RK1:31->C05@1 |
| STX Std 1                  | 1.111 Abs [1.1200] {1.1 CV} | 0.021 µg/L [0.020] {7.1 CV} | R <sup>2</sup> =0.99980, 81.691 %Abs  | RK1:31->D05@1 |
| STX Std 2                  | 0.840 Abs                   | 0.048 µg/L                  | R <sup>2</sup> =0.99980, 61.765 %Abs  | RK1:32->E05@1 |
| STX Std 2                  | 0.812 Abs [0.8260] {2.4 CV} | 0.052 µg/L [0.050] {5.7 CV} | R <sup>2</sup> =0.99980, 59.706 %Abs  | RK1:32->F05@4 |
| STX Std 3                  | 0.555 Abs                   | 0.101 µg/L                  | R <sup>2</sup> =0.99980, 40.809 %Abs  | RK1:33->G05@4 |
| STX Std 3                  | 0.545 Abs [0.5500] {1.3 CV} | 0.104 µg/L [0.103] {2.1 CV} | R <sup>2</sup> =0.99980, 40.074 %Abs  | RK1:33->H05@4 |
| STX Std 4                  | 0.359 Abs                   | 0.192 µg/L                  | R <sup>2</sup> =0.99980, 26.397 %Abs  | RK1:34->A06@1 |
| STX Std 4                  | 0.359 Abs [0.3590] {0.0 CV} | 0.192 µg/L [0.192] {0.0 CV} | R <sup>2</sup> =0.99980, 26.397 %Abs  | RK1:34->B06@1 |
| STX Std 5                  | 0.223 Abs                   | > 0.400 µg/L                | 16.397 %Abs                           | RK1:35->C06@1 |
| STX Std 5                  | 0.217 Abs [0.2200] {1.9 CV} | > 0.400 µg/L                | 15.956 %Abs                           | RK1:35->D06@1 |
| *****                      |                             |                             |                                       |               |
| <b>7/5/2023 3:24:45 PM</b> |                             |                             |                                       |               |
| STX Control (0.060-0.090)  | 0.724 Abs                   | 0.065 µg/L                  | 53.235 %Abs                           | RK1:36->E06@1 |
| STX Control (0.060-0.090)  | 0.707 Abs [0.7155] {1.7 CV} | 0.067 µg/L [0.066] {2.1 CV} | 51.985 %Abs [52.610 %Abs]             | RK1:36->F06@4 |
| *****                      |                             |                             |                                       |               |
| <b>Statistic</b>           |                             |                             |                                       |               |
| STX Std 0 [MEAN]           | 1.3600                      | 0.0000                      |                                       |               |
| STX Std 0 [SD]             | 0.0028                      | 0.0000                      |                                       |               |
| STX Std 0 [%CV]            | 0.2080                      | 0.0000                      |                                       |               |
| STX Std 1 [MEAN]           | 1.1200                      | 0.0200                      |                                       |               |
| STX Std 1 [SD]             | 0.0127                      | 0.0014                      |                                       |               |
| STX Std 1 [%CV]            | 1.1364                      | 7.0711                      |                                       |               |
| STX Std 1 [%DIFF]          |                             | 0.0000                      |                                       |               |
| STX Std 2 [MEAN]           | 0.8260                      | 0.0500                      |                                       |               |
| STX Std 2 [SD]             | 0.0198                      | 0.0028                      |                                       |               |
| STX Std 2 [%CV]            | 2.3970                      | 5.6569                      |                                       |               |
| STX Std 2 [%DIFF]          |                             | -0.0000                     |                                       |               |
| STX Std 3 [MEAN]           | 0.5500                      | 0.1025                      |                                       |               |
| STX Std 3 [SD]             | 0.0071                      | 0.0021                      |                                       |               |
| STX Std 3 [%CV]            | 1.2856                      | 2.0696                      |                                       |               |
| STX Std 3 [%DIFF]          |                             | 2.5000                      |                                       |               |
| STX Std 4 [MEAN]           | 0.3590                      | 0.1920                      |                                       |               |
| STX Std 4 [SD]             | 0.0000                      | 0.0000                      |                                       |               |
| STX Std 4 [%CV]            | 0.0000                      | 0.0000                      |                                       |               |
| STX Std 4 [%DIFF]          |                             | -4.0000                     |                                       |               |
| STX Std 5 [MEAN]           | 0.2200                      |                             |                                       |               |
| STX Std 5 [SD]             | 0.0042                      |                             |                                       |               |
| STX Std 5 [%CV]            | 1.9285                      |                             |                                       |               |

| Name                             | Absorbance | Concentration | Interpretation | Position |
|----------------------------------|------------|---------------|----------------|----------|
| STX Control (0.060-0.090) [MEAN] | 0.7155     | 0.0660        |                |          |
| STX Control (0.060-0.090) [SD]   | 0.0120     | 0.0014        |                |          |
| STX Control (0.060-0.090) [%CV]  | 1.6801     | 2.1428        |                |          |

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.3605  
 B = 1.2547  
 C = 0.062427  
 D = 0.11408  
 R2 coef = 0.99980  
 50% = 0.072

