



Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

| Sample # | Location | Date Collected | Date Analyzed | Conc. (ppb) |
|----------|---|----------------|---------------|-------------|
| AC19241 | Pokagon SP - Main Beach | 8/14/2023 | 8/17/2023 | < 0.40 |
| AC19242 | Pokagon SP - Potawatomi Inn Beach | 8/14/2023 | 8/17/2023 | < 0.40 |
| AC19243 | Chain O'Lakes SP - Sand Lake Beach | 8/14/2023 | 8/17/2023 | < 0.40 |
| AC19244 | Ouabache SP - Kunkel Lake Beach | 8/14/2023 | 8/17/2023 | < 0.40 |
| AC19245 | Potato Creek SP - Worster Lake Beach | 8/15/2023 | 8/17/2023 | < 0.40 |
| AC19246 | Mississinewa Lake - Miami SRA Beach | 8/15/2023 | 8/17/2023 | < 0.40 |
| AC19247 | Salamonie Lake - Lost Bridge West SRA Beach | 8/15/2023 | 8/17/2023 | < 0.40 |
| AC19248 | Summit Lake SP - Summit Lake Beach | 8/15/2023 | 8/17/2023 | < 0.40 |
| AC19249 | Ouabache SP - Kunkel Lake Beach (Field Duplicate) | 8/14/2023 | 8/17/2023 | < 0.40 |
| AC19250 | Field Blank | 8/14/2023 | 8/17/2023 | < 0.40 |
| AC19251 | Ferdinand State Forest - Ferdinand Lake Beach | 8/14/2023 | 8/17/2023 | < 0.40 |
| AC19252 | Lincoln SP - Lake Lincoln Beach | 8/14/2023 | 8/17/2023 | < 0.40 |
| AC19253 | Patoka Lake - Newton Stewart SRA | 8/14/2023 | 8/17/2023 | < 0.40 |

Test Report (by Request)

Test Information

Request: 8/17/2023 2:38:09 PM
Date: 8/17/2023

| Name/ID | Assay | Absorbance | Concentration | Interpretation | Note | Reference | Lot# |
|-------------|----------|---------------------------|--------------------|--------------------|------|-----------|-----------|
| ATX Std 0 | ANATOXIN | 1.337 Abs | 0.000 µg/L | R^2=0.99925, 101.2 | | 0.000 | Kit:P23B0 |
| ATX Std 0 | ANATOXIN | 1.303 Abs [1.3200] {1.8 C | 0.012 µg/L [0.006] | R^2=0.99925, 98.71 | | 0.000 | Kit:P23B0 |
| ATX Std 1 | ANATOXIN | 1.117 Abs | 0.127 µg/L | R^2=0.99925, 84.62 | | 0.150 | Kit:P23B0 |
| ATX Std 1 | ANATOXIN | 1.080 Abs [1.0985] {2.4 C | 0.154 µg/L [0.141] | R^2=0.99925, 81.81 | | 0.150 | Kit:P23B0 |
| ATX Std 2 | ANATOXIN | 0.832 Abs | 0.393 µg/L | R^2=0.99925, 63.03 | | 0.400 | Kit:P23B0 |
| ATX Std 2 | ANATOXIN | 0.789 Abs [0.8105] {3.8 C | 0.449 µg/L [0.421] | R^2=0.99925, 59.77 | | 0.400 | Kit:P23B0 |
| ATX Std 3 | ANATOXIN | 0.537 Abs | 0.966 µg/L | R^2=0.99925, 40.68 | | 1.000 | Kit:P23B0 |
| ATX Std 3 | ANATOXIN | 0.517 Abs [0.5270] {2.7 C | 1.030 µg/L [0.998] | R^2=0.99925, 39.16 | | 1.000 | Kit:P23B0 |
| ATX Std 4 | ANATOXIN | 0.309 Abs | 2.231 µg/L | R^2=0.99925, 23.40 | | 2.500 | Kit:P23B0 |
| ATX Std 4 | ANATOXIN | 0.291 Abs [0.3000] {4.2 C | 2.426 µg/L [2.329] | R^2=0.99925, 22.04 | | 2.500 | Kit:P23B0 |
| ATX Std 5 | ANATOXIN | 0.165 Abs | > 5.000 µg/L | 12.500 %Abs | | 5.000 | Kit:P23B0 |
| ATX Std 5 | ANATOXIN | 0.159 Abs [0.1620] {2.6 C | > 5.000 µg/L | 12.045 %Abs | | 5.000 | Kit:P23B0 |
| ATX Control | ANATOXIN | 0.639 Abs | 0.707 µg/L | 48.409 %Abs | | | Kit:P23B0 |
| ATX Control | ANATOXIN | 0.625 Abs [0.6320] {1.6 C | 0.737 µg/L [0.722] | 47.348 %Abs [47.8 | | | Kit:P23B0 |

Note

Signature _____

Test Report (by Request)

Test Information

 Request: 8/17/2023 3:07:09 PM
 Date: 8/17/2023

| Name/ID | Assay | Absorbance | Concentration | Interpretation | Note | Reference | Lot# |
|------------|----------|---------------------------|--------------------|----------------------|-----------|---------------|-----------|
| LRB | ANATOXIN | 1.160 Abs | 0.098 µg/L | Low, 87.879 %Abs | | 0.150 - 5.000 | Kit:P23B0 |
| LRB | ANATOXIN | 1.160 Abs [1.1600] {0.0 C | 0.098 µg/L [0.098] | Low, 87.879 %Abs | | 0.150 - 5.000 | Kit:P23B0 |
| LFB (ANA) | ANATOXIN | 0.676 Abs | 0.632 µg/L | 51.212 %Abs | | 0.150 - 5.000 | Kit:P23B0 |
| LFB (ANA) | ANATOXIN | 0.647 Abs [0.6615] {3.1 C | 0.690 µg/L [0.661] | 49.015 %Abs [50.1 | | 0.150 - 5.000 | Kit:P23B0 |
| AC19241 | ANATOXIN | 1.247 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19241 | ANATOXIN | 1.200 Abs [1.2235] {2.7 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19242 | ANATOXIN | 1.181 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19242 | ANATOXIN | 1.178 Abs [1.1795] {0.2 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19242MS | ANATOXIN | 0.596 Abs | 0.805 µg/L | 45.152 %Abs | | 0.150 - 5.000 | Kit:P23B0 |
| AC19242MS | ANATOXIN | 0.590 Abs [0.5930] {0.7 C | 0.820 µg/L [0.813] | 44.697 %Abs [44.9 | | 0.150 - 5.000 | Kit:P23B0 |
| AC19242MSD | ANATOXIN | 0.673 Abs | 0.638 µg/L | 50.985 %Abs | | 0.150 - 5.000 | Kit:P23B0 |
| AC19242MSD | ANATOXIN | 0.640 Abs [0.6565] {3.6 C | 0.704 µg/L [0.671] | 48.485 %Abs [49.7 | | 0.150 - 5.000 | Kit:P23B0 |
| AC19243 | ANATOXIN | 1.251 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19243 | ANATOXIN | 1.223 Abs [1.2370] {1.6 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19244 | ANATOXIN | 1.053 Abs | 0.192 µg/L | 79.773 %Abs | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19244 | ANATOXIN | 1.047 Abs [1.0500] {0.4 C | 0.198 µg/L [0.195] | 79.318 %Abs [79.5 | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19245 | ANATOXIN | 1.010 Abs | 0.231 µg/L | 76.515 %Abs | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19245 | ANATOXIN | 0.989 Abs [0.9995] {1.5 C | 0.251 µg/L [0.241] | 74.924 %Abs [75.7 | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19246 | ANATOXIN | 1.261 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19246 | ANATOXIN | 1.222 Abs [1.2415] {2.2 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19247 | ANATOXIN | 1.222 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19247 | ANATOXIN | 1.203 Abs [1.2125] {1.1 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19248 | ANATOXIN | 1.199 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19248 | ANATOXIN | 1.185 Abs [1.1920] {0.8 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19249 | ANATOXIN | 1.048 Abs | 0.197 µg/L | 79.394 %Abs | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19249 | ANATOXIN | 1.026 Abs [1.0370] {1.5 C | 0.217 µg/L [0.207] | 77.727 %Abs [78.5 | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19250 | ANATOXIN | 1.301 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19250 | ANATOXIN | 1.289 Abs [1.2950] {0.7 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19251 | ANATOXIN | 1.241 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19251 | ANATOXIN | 1.227 Abs [1.2340] {0.8 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19252 | ANATOXIN | 1.209 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19252 | ANATOXIN | 1.198 Abs [1.2035] {0.6 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19253 | ANATOXIN | 1.182 Abs | < LOD | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |
| AC19253 | ANATOXIN | 1.170 Abs [1.1760] {0.7 C | < LOD [< LOD] | Low, Out Adjust Dilu | MDF=1.100 | 0.150 - 5.000 | Kit:P23B0 |

Note

Signature _____

Assay Information

Assay Name: ANATOXIN
 Version: 2
 Temperature: Room Temperature
 Last Modified By: Security disabled
 Units: µg/L
 Assay Description: PN 520060
 Assay Substances: Controls:

Assay Mode: 4-Parameter Logistic Weight by:None
 Well Type: Flat bottom
 Last Modified On: 7/25/2019 3:49:23 PM
 Normal: 0.150 - 5.000
 # of decimals: 3
 Kit Lot Number: Kit:P23B0244

ATX Control
 Standards:
 ATX Std 0, Concentration = 0.000, Minimum number to use: 2
 ATX Std 1, Concentration = 0.150, Minimum number to use: 2
 ATX Std 2, Concentration = 0.400, Minimum number to use: 2
 ATX Std 3, Concentration = 1.000, Minimum number to use: 2
 ATX Std 4, Concentration = 2.500, Minimum number to use: 2
 ATX Std 5, Concentration = 5.000, 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 |
|-----------------------------|-----------------------------|-------------------------------|---------------------------------------|---------------|
| 8/17/2023 2:38:09 PM | | | | |
| ATX Std 0 | 1.337 Abs | 0.000 µg/L | R ² =0.99925, 101.288 %Abs | RK1:23->A01@2 |
| ATX Std 0 | 1.303 Abs [1.3200] {1.8 CV} | 0.012 µg/L [0.006] {141.4 CV} | R ² =0.99925, 98.712 %Abs | RK1:23->B01@2 |
| ATX Std 1 | 1.117 Abs | 0.127 µg/L | R ² =0.99925, 84.621 %Abs | RK1:24->C01@2 |
| ATX Std 1 | 1.080 Abs [1.0985] {2.4 CV} | 0.154 µg/L [0.141] {13.6 CV} | R ² =0.99925, 81.818 %Abs | RK1:24->D01@2 |
| ATX Std 2 | 0.832 Abs | 0.393 µg/L | R ² =0.99925, 63.030 %Abs | RK1:25->E01@2 |
| ATX Std 2 | 0.789 Abs [0.8105] {3.8 CV} | 0.449 µg/L [0.421] {9.4 CV} | R ² =0.99925, 59.773 %Abs | RK1:25->F01@3 |
| ATX Std 3 | 0.537 Abs | 0.966 µg/L | R ² =0.99925, 40.682 %Abs | RK1:26->G01@3 |
| ATX Std 3 | 0.517 Abs [0.5270] {2.7 CV} | 1.030 µg/L [0.998] {4.5 CV} | R ² =0.99925, 39.167 %Abs | RK1:26->H01@3 |
| ATX Std 4 | 0.309 Abs | 2.231 µg/L | R ² =0.99925, 23.409 %Abs | RK1:27->A02@2 |
| ATX Std 4 | 0.291 Abs [0.3000] {4.2 CV} | 2.426 µg/L [2.329] {5.9 CV} | R ² =0.99925, 22.045 %Abs | RK1:27->B02@2 |
| ATX Std 5 | 0.165 Abs | > 5.000 µg/L | 12.500 %Abs | RK1:28->C02@2 |
| ATX Std 5 | 0.159 Abs [0.1620] {2.6 CV} | > 5.000 µg/L | 12.045 %Abs | RK1:28->D02@2 |
| ***** | | | | |
| 8/17/2023 2:38:09 PM | | | | |
| ATX Control | 0.639 Abs | 0.707 µg/L | 48.409 %Abs | RK1:29->E02@2 |
| ATX Control | 0.625 Abs [0.6320] {1.6 CV} | 0.737 µg/L [0.722] {2.9 CV} | 47.348 %Abs [47.879 %Abs] | RK1:29->F02@3 |
| ***** | | | | |
| Statistic | | | | |
| ATX Std 0 [MEAN] | 1.3200 | 0.0060 | | |
| ATX Std 0 [SD] | 0.0240 | 0.0085 | | |
| ATX Std 0 [%CV] | 1.8213 | 141.4214 | | |
| ATX Std 1 [MEAN] | 1.0985 | 0.1405 | | |
| ATX Std 1 [SD] | 0.0262 | 0.0191 | | |
| ATX Std 1 [%CV] | 2.3817 | 13.5885 | | |
| ATX Std 1 [%DIFF] | | -6.3333 | | |
| ATX Std 2 [MEAN] | 0.8105 | 0.4210 | | |
| ATX Std 2 [SD] | 0.0304 | 0.0396 | | |
| ATX Std 2 [%CV] | 3.7515 | 9.4057 | | |
| ATX Std 2 [%DIFF] | | 5.2500 | | |
| ATX Std 3 [MEAN] | 0.5270 | 0.9980 | | |
| ATX Std 3 [SD] | 0.0141 | 0.0453 | | |
| ATX Std 3 [%CV] | 2.6835 | 4.5345 | | |
| ATX Std 3 [%DIFF] | | -0.2000 | | |
| ATX Std 4 [MEAN] | 0.3000 | 2.3285 | | |
| ATX Std 4 [SD] | 0.0127 | 0.1379 | | |
| ATX Std 4 [%CV] | 4.2426 | 5.9217 | | |
| ATX Std 4 [%DIFF] | | -6.8600 | | |
| ATX Std 5 [MEAN] | 0.1620 | | | |
| ATX Std 5 [SD] | 0.0042 | | | |
| ATX Std 5 [%CV] | 2.6189 | | | |

| Name | Absorbance | Concentration | Interpretation | Position |
|--------------------|------------|---------------|----------------|----------|
| ATX Control [MEAN] | 0.6320 | 0.7220 | | |
| ATX Control [SD] | 0.0099 | 0.0212 | | |
| ATX Control [%CV] | 1.5664 | 2.9381 | | |

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.3239
 B = 1.0408
 C = 0.61970
 D = 0.041452
 R2 coef = 0.99925
 50% = 0.663

