



Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

| Sample # | Location | Date Collected | Date Analyzed | Conc. (ppb) |
|-----------------|-------------------------------------|-----------------------|----------------------|--------------------|
| AB47949 | Summit Lake - State Park | 7/20/2021 | 7/21/2021 | < 0.15 |
| AB47950 | Kunkel Beach @ Ouabache State Park | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB47951 | Pokagon State Park | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB47952 | Potawatomi Inn's Beach | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB47953 | Chain O'Lakes SP | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB47954 | Potato Creek State Park | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB47955 | Lost Bridge West SRA | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB47956 | Mississinewa Lake Miami SRA | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB47957 | Lost Bridge West SRA (Field Dup) | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB47958 | Field Blank | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB48042 | Lincoln State Park | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB48043 | Ferdinand State Forest Lake | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB48044 | Patoka SRA Beach | 7/19/2021 | 7/21/2021 | < 0.15 |
| AB48045 | Ft. Ben Harrison SP Dog Lake - East | 7/20/2021 | 7/21/2021 | < 0.15 |

Test Report (by Request)

Test Information

 Request: 7/21/2021 1:18:38 PM
 Date: 7/21/2021 - 7/21/2021

| Name/ID | Assay | Absorbance | Concentration | Interpretation | Note | Reference | Lot# |
|-----------|--------------------|---------------------------|--------------------|--------------------------------|------|-----------|---------|
| CYL Std 0 | CYLINDROSPERMOPSIN | 0.930 Abs | 0.000 µg/L | R ² =0.95457, 98.41 | | | 20H3911 |
| CYL Std 0 | CYLINDROSPERMOPSIN | 0.960 Abs [0.9450] {2.2 C | 0.000 µg/L [0.000] | R ² =0.95457, 101.5 | | | 20H3911 |
| CYL Std 1 | CYLINDROSPERMOPSIN | 0.799 Abs | 0.023 µg/L | R ² =0.95457, 84.5 | | | 20H3911 |
| CYL Std 1 | CYLINDROSPERMOPSIN | 0.770 Abs [0.7845] {2.6 C | 0.035 µg/L [0.029] | R ² =0.95457, 81.4 | | | 20H3911 |
| CYL Std 2 | CYLINDROSPERMOPSIN | 0.663 Abs | 0.108 µg/L | R ² =0.95457, 70.1 | | | 20H3911 |
| CYL Std 2 | CYLINDROSPERMOPSIN | 0.645 Abs [0.6540] {1.9 C | 0.127 µg/L [0.118] | R ² =0.95457, 68.2 | | | 20H3911 |
| CYL Std 3 | CYLINDROSPERMOPSIN | 0.472 Abs | 0.460 µg/L | R ² =0.95457, 49.9 | | | 20H3911 |
| CYL Std 3 | CYLINDROSPERMOPSIN | 0.463 Abs [0.4675] {1.4 C | 0.488 µg/L [0.474] | R ² =0.95457, 48.9 | | | 20H3911 |
| CYL Std 4 | CYLINDROSPERMOPSIN | 0.556 Abs | 0.257 µg/L | R ² =0.95457, 58.8 | | | 20H3911 |
| CYL Std 4 | CYLINDROSPERMOPSIN | 0.515 Abs [0.5355] {5.4 C | 0.344 µg/L [0.301] | R ² =0.95457, 54.4 | | | 20H3911 |
| CYL Std 5 | CYLINDROSPERMOPSIN | 0.364 Abs | 0.919 µg/L | R ² =0.95457, 38.5 | | | 20H3911 |
| CYL Std 5 | CYLINDROSPERMOPSIN | 0.356 Abs [0.3600] {1.6 C | 0.966 µg/L [0.942] | R ² =0.95457, 37.6 | | | 20H3911 |
| CYL Std 6 | CYLINDROSPERMOPSIN | 0.220 Abs | > 2.000 µg/L | 23.280 %Abs | | | 20H3911 |
| CYL Std 6 | CYLINDROSPERMOPSIN | 0.224 Abs [0.2220] {1.3 C | > 2.000 µg/L | 23.704 %Abs | | | 20H3911 |
| CYL QCS | CYLINDROSPERMOPSIN | 0.435 Abs | 0.586 µg/L | 46.032 %Abs | | | 20H3911 |
| CYL QCS | CYLINDROSPERMOPSIN | 0.414 Abs [0.4245] {3.5 C | 0.671 µg/L [0.628] | 43.810 %Abs [44.9 | | | 20H3911 |

Note

Signature

Charles Hostetter 7/22/2021

Test Report (by Request)

Test Information

 Request: 7/21/2021 1:19:59 PM
 Date: 7/21/2021 - 7/21/2021

| Name/ID | Assay | Absorbance | Concentration | Interpretation | Note | Reference | Lot# |
|------------|--------------------|---------------------------|--------------------|-------------------|------|---------------|---------|
| LRB | CYLINDROSPERMOPSIN | 1.271 Abs | 0.000 µg/L | Low, 134.497 %Abs | | 0.050 - 2.000 | 20H3911 |
| LRB | CYLINDROSPERMOPSIN | 1.188 Abs [1.2295] {4.8 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| LFB | CYLINDROSPERMOPSIN | 0.475 Abs | 0.451 µg/L | 50.265 %Abs | | 0.050 - 2.000 | 20H3911 |
| LFB | CYLINDROSPERMOPSIN | 0.464 Abs [0.4695] {1.7 C | 0.485 µg/L [0.468] | 49.101 %Abs [49.6 | | 0.050 - 2.000 | 20H3911 |
| AB47949 | CYLINDROSPERMOPSIN | 1.091 Abs | 0.000 µg/L | Low, 115.450 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47949 | CYLINDROSPERMOPSIN | 1.084 Abs [1.0875] {0.5 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47950 | CYLINDROSPERMOPSIN | 1.231 Abs | 0.000 µg/L | Low, 130.265 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47950 | CYLINDROSPERMOPSIN | 1.240 Abs [1.2355] {0.5 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47951 | CYLINDROSPERMOPSIN | 1.236 Abs | 0.000 µg/L | Low, 130.794 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47951 | CYLINDROSPERMOPSIN | 1.179 Abs [1.2075] {3.3 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47952 | CYLINDROSPERMOPSIN | 1.166 Abs | 0.000 µg/L | Low, 123.386 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47952 | CYLINDROSPERMOPSIN | 1.163 Abs [1.1645] {0.2 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47953 | CYLINDROSPERMOPSIN | 1.169 Abs | 0.000 µg/L | Low, 123.704 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47953 | CYLINDROSPERMOPSIN | 1.179 Abs [1.1740] {0.6 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47954 | CYLINDROSPERMOPSIN | 1.215 Abs | 0.000 µg/L | Low, 128.571 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47954 | CYLINDROSPERMOPSIN | 1.247 Abs [1.2310] {1.8 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47954MS | CYLINDROSPERMOPSIN | 0.493 Abs | 0.400 µg/L | 52.169 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47954MS | CYLINDROSPERMOPSIN | 0.476 Abs [0.4845] {2.5 C | 0.448 µg/L [0.424] | 50.370 %Abs [51.2 | | 0.050 - 2.000 | 20H3911 |
| AB47954MSD | CYLINDROSPERMOPSIN | 0.465 Abs | 0.482 µg/L | 49.206 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47954MSD | CYLINDROSPERMOPSIN | 0.481 Abs [0.4730] {2.4 C | 0.433 µg/L [0.457] | 50.899 %Abs [50.0 | | 0.050 - 2.000 | 20H3911 |
| AB47955 | CYLINDROSPERMOPSIN | 1.192 Abs | 0.000 µg/L | Low, 126.138 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47955 | CYLINDROSPERMOPSIN | 1.126 Abs [1.1590] {4.0 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47956 | CYLINDROSPERMOPSIN | 1.244 Abs | 0.000 µg/L | Low, 131.640 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47956 | CYLINDROSPERMOPSIN | 1.231 Abs [1.2375] {0.7 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47957 | CYLINDROSPERMOPSIN | 1.186 Abs | 0.000 µg/L | Low, 125.503 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47957 | CYLINDROSPERMOPSIN | 1.102 Abs [1.1440] {5.2 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB47958 | CYLINDROSPERMOPSIN | 1.147 Abs | 0.000 µg/L | Low, 121.376 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB47958 | CYLINDROSPERMOPSIN | 1.156 Abs [1.1515] {0.6 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB48042 | CYLINDROSPERMOPSIN | 1.035 Abs | 0.000 µg/L | Low, 109.524 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB48042 | CYLINDROSPERMOPSIN | 1.068 Abs [1.0515] {2.2 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB48043 | CYLINDROSPERMOPSIN | 1.211 Abs | 0.000 µg/L | Low, 128.148 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB48043 | CYLINDROSPERMOPSIN | 1.212 Abs [1.2115] {0.1 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB48044 | CYLINDROSPERMOPSIN | 1.195 Abs | 0.000 µg/L | Low, 126.455 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB48044 | CYLINDROSPERMOPSIN | 1.190 Abs [1.1925] {0.3 C | 0.000 µg/L [0.000] | | | 0.050 - 2.000 | 20H3911 |
| AB48045 | CYLINDROSPERMOPSIN | 0.879 Abs | 0.004 µg/L | Low, 93.016 %Abs | | 0.050 - 2.000 | 20H3911 |
| AB48045 | CYLINDROSPERMOPSIN | 0.905 Abs [0.8920] {2.1 C | 0.002 µg/L [0.003] | | | 0.050 - 2.000 | 20H3911 |

Note

Signature

Assay Information

Assay Name: CYLINDROSPERMOPSIN_
 Version: 2
 Temperature: Room Temperature
 Last Modified By: Security disabled
 Units: µg/L
 Assay Description: PN 522011
 Assay Substances: Controls:

Assay Mode: 4-Parameter Logistic Weight by:None
 Well Type: Flat bottom
 Last Modified On: 9/30/2020 10:05:41 AM
 Normal: 0.050 - 2.000
 # of decimals: 3
 Kit Lot Number: 20H3911

CYL QCS
 Standards:
 CYL Std 0, Concentration = 0.000, Minimum number to use: 2
 CYL Std 1, Concentration = 0.050, Minimum number to use: 2
 CYL Std 2, Concentration = 0.100, Minimum number to use: 2
 CYL Std 3, Concentration = 0.250, Minimum number to use: 2
 CYL Std 4, Concentration = 0.500, Minimum number to use: 2
 CYL Std 5, Concentration = 1.000, Minimum number to use: 2
 CYL Std 6, Concentration = 2.000, 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 |
|-----------------------------|-----------------------------|------------------------------|---------------------------------------|---------------|
| 7/21/2021 1:18:38 PM | | | | |
| CYL Std 0 | 0.930 Abs | 0.000 µg/L | R ² =0.95457, 98.413 %Abs | RK1:23->A01@2 |
| CYL Std 0 | 0.960 Abs [0.9450] {2.2 CV} | 0.000 µg/L [0.000] | R ² =0.95457, 101.587 %Abs | RK1:23->B01@2 |
| CYL Std 1 | 0.799 Abs | 0.023 µg/L | R ² =0.95457, 84.550 %Abs | RK1:24->C01@2 |
| CYL Std 1 | 0.770 Abs [0.7845] {2.6 CV} | 0.035 µg/L [0.029] {29.3 CV} | R ² =0.95457, 81.481 %Abs | RK1:24->D01@2 |
| CYL Std 2 | 0.663 Abs | 0.108 µg/L | R ² =0.95457, 70.159 %Abs | RK1:25->E01@2 |
| CYL Std 2 | 0.645 Abs [0.6540] {1.9 CV} | 0.127 µg/L [0.118] {11.4 CV} | R ² =0.95457, 68.254 %Abs | RK1:25->F01@3 |
| CYL Std 3 | 0.472 Abs | 0.460 µg/L | R ² =0.95457, 49.947 %Abs | RK1:26->G01@3 |
| CYL Std 3 | 0.463 Abs [0.4675] {1.4 CV} | 0.488 µg/L [0.474] {4.2 CV} | R ² =0.95457, 48.995 %Abs | RK1:26->H01@3 |
| CYL Std 4 | 0.556 Abs | 0.257 µg/L | R ² =0.95457, 58.836 %Abs | RK1:27->A02@2 |
| CYL Std 4 | 0.515 Abs [0.5355] {5.4 CV} | 0.344 µg/L [0.301] {20.5 CV} | R ² =0.95457, 54.497 %Abs | RK1:27->B02@2 |
| CYL Std 5 | 0.364 Abs | 0.919 µg/L | R ² =0.95457, 38.519 %Abs | RK1:28->C02@2 |
| CYL Std 5 | 0.356 Abs [0.3600] {1.6 CV} | 0.966 µg/L [0.942] {3.5 CV} | R ² =0.95457, 37.672 %Abs | RK1:28->D02@2 |
| CYL Std 6 | 0.220 Abs | > 2.000 µg/L | 23.280 %Abs | RK1:29->E02@2 |
| CYL Std 6 | 0.224 Abs [0.2220] {1.3 CV} | > 2.000 µg/L | 23.704 %Abs | RK1:29->F02@3 |
| ***** | | | | |
| 7/21/2021 1:18:38 PM | | | | |
| CYL QCS | 0.435 Abs | 0.586 µg/L | 46.032 %Abs | RK1:30->G02@3 |
| CYL QCS | 0.414 Abs [0.4245] {3.5 CV} | 0.671 µg/L [0.628] {9.6 CV} | 43.810 %Abs [44.921 %Abs] | RK1:30->H02@3 |
| ***** | | | | |
| Statistic | | | | |
| CYL Std 0 [MEAN] | 0.9450 | 0.0000 | | |
| CYL Std 0 [SD] | 0.0212 | 0.0000 | | |
| CYL Std 0 [%CV] | 2.2448 | 0.0000 | | |
| CYL Std 1 [MEAN] | 0.7845 | 0.0290 | | |
| CYL Std 1 [SD] | 0.0205 | 0.0085 | | |
| CYL Std 1 [%CV] | 2.6139 | 29.2596 | | |
| CYL Std 1 [%DIFF] | | -42.0000 | | |
| CYL Std 2 [MEAN] | 0.6540 | 0.1175 | | |
| CYL Std 2 [SD] | 0.0127 | 0.0134 | | |
| CYL Std 2 [%CV] | 1.9462 | 11.4341 | | |
| CYL Std 2 [%DIFF] | | 17.5000 | | |
| CYL Std 3 [MEAN] | 0.4675 | 0.4740 | | |
| CYL Std 3 [SD] | 0.0064 | 0.0198 | | |
| CYL Std 3 [%CV] | 1.3613 | 4.1770 | | |
| CYL Std 3 [%DIFF] | | 89.6000 | | |
| CYL Std 4 [MEAN] | 0.5355 | 0.3005 | | |
| CYL Std 4 [SD] | 0.0290 | 0.0615 | | |
| CYL Std 4 [%CV] | 5.4139 | 20.4720 | | |
| CYL Std 4 [%DIFF] | | -39.9000 | | |

| Name | Absorbance | Concentration | Interpretation | Position |
|-------------------|------------|---------------|----------------|----------|
| CYL Std 5 [MEAN] | 0.3600 | 0.9425 | | |
| CYL Std 5 [SD] | 0.0057 | 0.0332 | | |
| CYL Std 5 [%CV] | 1.5713 | 3.5262 | | |
| CYL Std 5 [%DIFF] | | -5.7500 | | |
| CYL Std 6 [MEAN] | 0.2220 | | | |
| CYL Std 6 [SD] | 0.0028 | | | |
| CYL Std 6 [%CV] | 1.2741 | | | |
| CYL QCS [MEAN] | 0.4245 | 0.6285 | | |
| CYL QCS [SD] | 0.0148 | 0.0601 | | |
| CYL QCS [%CV] | 3.4981 | 9.5631 | | |

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 0.94980
 B = 0.49642
 C = 1.3922
 D = -0.35591
 R2 coef = 0.95457
 50% = 0.459

