



Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

| Sample # | Location | Date Collected | Date Analyzed | Conc. (ppb) |
|-----------------|---|-----------------------|----------------------|--------------------|
| AC19228 | Cecil M. Harden Lake - Raccoon Lake SRA Beach | 8/7/2023 | 8/9/2023 | < 0.15 |
| AC19229 | Cagles Mill Lake - Lieber SRA Beach | 8/7/2023 | 8/9/2023 | < 0.15 |
| AC19230 | Monroe Lake - Fairfax SRA Beach | 8/7/2023 | 8/9/2023 | < 0.15 |
| AC19231 | Monroe Lake - Paynetown SRA Beach | 8/7/2023 | 8/9/2023 | < 0.15 |
| AC19232 | Starve Hollow SRA - Starve Hollow Lake Beach | 8/7/2023 | 8/9/2023 | < 0.15 |
| AC19333 | Whitewater Memorial SP - Whitewater Lake Beach | 8/8/2023 | 8/9/2023 | < 0.15 |
| AC19234 | Brookville Lake - Quakertown SRA Beach | 8/8/2023 | 8/9/2023 | < 0.15 |
| AC19235 | Brookville Lake - Mounds SRA Beach | 8/8/2023 | 8/9/2023 | < 0.15 |
| AC19236 | Hardy Lake SRA - Hardy Lake SRA Beach | 8/8/2023 | 8/9/2023 | < 0.15 |
| AC19237 | Deam Lake SRA - Deam Lake Beach | 8/8/2023 | 8/9/2023 | < 0.15 |
| AC19238 | Monroe Lake - Paynetown SRA Beach (Field Duplicate) | 8/7/2023 | 8/9/2023 | < 0.15 |
| AC19239 | Field Blank | 8/7/2023 | 8/9/2023 | < 0.15 |
| AC19240 | Ft. Ben Harrison SP Dog Lake | 8/7/2023 | 8/9/2023 | < 0.15 |

Test Report (by Request)

Test Information

Request: 8/9/2023 6:38:56 PM
Date: 8/9/2023

| Name/ID | Assay | Absorbance | Concentration | Interpretation | Note | Reference | Lot# |
|-----------|--------------------|---------------------------|--------------------|--------------------|------|-----------|-----------|
| CYL Std 0 | CYLINDROSPERMOPSIN | 1.158 Abs | 0.000 µg/L | R^2=0.99833, 101.6 | | 0.000 | Kit:P23C0 |
| CYL Std 0 | CYLINDROSPERMOPSIN | 1.119 Abs [1.1385] {2.4 C | 0.004 µg/L [0.002] | R^2=0.99833, 98.24 | | 0.000 | Kit:P23C0 |
| CYL Std 1 | CYLINDROSPERMOPSIN | 0.921 Abs | 0.041 µg/L | R^2=0.99833, 80.86 | | 0.050 | Kit:P23C0 |
| CYL Std 1 | CYLINDROSPERMOPSIN | 0.881 Abs [0.9010] {3.1 C | 0.051 µg/L [0.046] | R^2=0.99833, 77.34 | | 0.050 | Kit:P23C0 |
| CYL Std 2 | CYLINDROSPERMOPSIN | 0.715 Abs | 0.103 µg/L | R^2=0.99833, 62.77 | | 0.100 | Kit:P23C0 |
| CYL Std 2 | CYLINDROSPERMOPSIN | 0.705 Abs [0.7100] {1.0 C | 0.106 µg/L [0.105] | R^2=0.99833, 61.85 | | 0.100 | Kit:P23C0 |
| CYL Std 3 | CYLINDROSPERMOPSIN | 0.466 Abs | 0.255 µg/L | R^2=0.99833, 40.91 | | 0.250 | Kit:P23C0 |
| CYL Std 3 | CYLINDROSPERMOPSIN | 0.441 Abs [0.4535] {3.9 C | 0.282 µg/L [0.269] | R^2=0.99833, 38.71 | | 0.250 | Kit:P23C0 |
| CYL Std 4 | CYLINDROSPERMOPSIN | 0.336 Abs | 0.442 µg/L | R^2=0.99833, 29.50 | | 0.500 | Kit:P23C0 |
| CYL Std 4 | CYLINDROSPERMOPSIN | 0.328 Abs [0.3320] {1.7 C | 0.459 µg/L [0.451] | R^2=0.99833, 28.75 | | 0.500 | Kit:P23C0 |
| CYL Std 5 | CYLINDROSPERMOPSIN | 0.215 Abs | 0.888 µg/L | R^2=0.99833, 18.87 | | 1.000 | Kit:P23C0 |
| CYL Std 5 | CYLINDROSPERMOPSIN | 0.201 Abs [0.2080] {4.8 C | 0.988 µg/L [0.938] | R^2=0.99833, 17.64 | | 1.000 | Kit:P23C0 |
| CYL Std 6 | CYLINDROSPERMOPSIN | 0.124 Abs | > 2.000 µg/L | 10.887 %Abs | | 2.000 | Kit:P23C0 |
| CYL Std 6 | CYLINDROSPERMOPSIN | 0.116 Abs [0.1200] {4.7 C | > 2.000 µg/L | 10.184 %Abs | | 2.000 | Kit:P23C0 |
| CYL QCS | CYLINDROSPERMOPSIN | 0.228 Abs | 0.810 µg/L | 20.018 %Abs | | | Kit:P23C0 |
| CYL QCS | CYLINDROSPERMOPSIN | 0.227 Abs [0.2275] {0.3 C | 0.815 µg/L [0.813] | 19.930 %Abs [19.9 | | | Kit:P23C0 |

Note

Signature *David Jordan*

David Jordan 8/9/2023

* 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) 8/10/2023 8:44:08 AM

Test Report (by Request)

Test Information

 Request: 8/9/2023 6:40:24 PM
 Date: 8/9/2023

| Name/ID | Assay | Absorbance | Concentration | Interpretation | Note | Reference | Lot# |
|------------|--------------------|---------------------------|--------------------|-------------------|------|---------------|-----------|
| LRB (CYL) | CYLINDROSPERMOPSIN | 1.137 Abs | 0.001 µg/L | Low, 99.824 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| LRB (CYL) | CYLINDROSPERMOPSIN | 1.101 Abs [1.1190] {2.3 C | 0.007 µg/L [0.004] | Low, 96.664 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| LFB (CYL) | CYLINDROSPERMOPSIN | 0.284 Abs | 0.575 µg/L | 24.934 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| LFB (CYL) | CYLINDROSPERMOPSIN | 0.278 Abs [0.2810] {1.5 C | 0.595 µg/L [0.585] | 24.407 %Abs [24.6 | | 0.050 - 2.000 | Kit:P23C0 |
| AC19228 | CYLINDROSPERMOPSIN | 1.059 Abs | 0.014 µg/L | Low, 92.976 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19228 | CYLINDROSPERMOPSIN | 1.030 Abs [1.0445] {2.0 C | 0.019 µg/L [0.017] | Low, 90.430 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19229 | CYLINDROSPERMOPSIN | 1.042 Abs | 0.017 µg/L | Low, 91.484 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19229 | CYLINDROSPERMOPSIN | 1.061 Abs [1.0515] {1.3 C | 0.014 µg/L [0.016] | Low, 93.152 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19230 | CYLINDROSPERMOPSIN | 1.140 Abs | 0.001 µg/L | Low, 100.000 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19230 | CYLINDROSPERMOPSIN | 1.096 Abs [1.1180] {2.8 C | 0.008 µg/L [0.005] | Low, 96.225 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19231 | CYLINDROSPERMOPSIN | 1.066 Abs | 0.013 µg/L | Low, 93.591 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19231 | CYLINDROSPERMOPSIN | 1.046 Abs [1.0560] {1.3 C | 0.016 µg/L [0.015] | Low, 91.835 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19232 | CYLINDROSPERMOPSIN | 1.044 Abs | 0.017 µg/L | Low, 91.659 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19232 | CYLINDROSPERMOPSIN | 1.033 Abs [1.0385] {0.7 C | 0.019 µg/L [0.018] | Low, 90.694 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19233 | CYLINDROSPERMOPSIN | 1.051 Abs | 0.015 µg/L | Low, 92.274 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19233 | CYLINDROSPERMOPSIN | 1.064 Abs [1.0575] {0.9 C | 0.013 µg/L [0.014] | Low, 93.415 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19234 | CYLINDROSPERMOPSIN | 1.118 Abs | 0.004 µg/L | Low, 98.156 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19234 | CYLINDROSPERMOPSIN | 1.079 Abs [1.0985] {2.5 C | 0.010 µg/L [0.007] | Low, 94.732 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19234MS | CYLINDROSPERMOPSIN | 0.294 Abs | 0.545 µg/L | 25.812 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19234MS | CYLINDROSPERMOPSIN | 0.296 Abs [0.2950] {0.5 C | 0.539 µg/L [0.542] | 25.988 %Abs [25.9 | | 0.050 - 2.000 | Kit:P23C0 |
| AC19234MSD | CYLINDROSPERMOPSIN | 0.294 Abs | 0.545 µg/L | 25.812 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19234MSD | CYLINDROSPERMOPSIN | 0.293 Abs [0.2935] {0.2 C | 0.548 µg/L [0.547] | 25.724 %Abs [25.7 | | 0.050 - 2.000 | Kit:P23C0 |
| AC19235 | CYLINDROSPERMOPSIN | 1.045 Abs | 0.016 µg/L | Low, 91.747 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19235 | CYLINDROSPERMOPSIN | 1.065 Abs [1.0550] {1.3 C | 0.013 µg/L [0.015] | Low, 93.503 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19236 | CYLINDROSPERMOPSIN | 1.085 Abs | 0.009 µg/L | Low, 95.259 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19236 | CYLINDROSPERMOPSIN | 1.059 Abs [1.0720] {1.7 C | 0.014 µg/L [0.012] | Low, 92.976 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19237 | CYLINDROSPERMOPSIN | 0.983 Abs | 0.028 µg/L | Low, 86.304 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19237 | CYLINDROSPERMOPSIN | 0.978 Abs [0.9805] {0.4 C | 0.029 µg/L [0.029] | Low, 85.865 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19238 | CYLINDROSPERMOPSIN | 1.089 Abs | 0.009 µg/L | Low, 95.610 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19238 | CYLINDROSPERMOPSIN | 1.080 Abs [1.0845] {0.6 C | 0.010 µg/L [0.010] | Low, 94.820 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19239 | CYLINDROSPERMOPSIN | 1.086 Abs | 0.009 µg/L | Low, 95.347 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19239 | CYLINDROSPERMOPSIN | 1.067 Abs [1.0765] {1.2 C | 0.013 µg/L [0.011] | Low, 93.679 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19240 | CYLINDROSPERMOPSIN | 1.024 Abs | 0.020 µg/L | Low, 89.903 %Abs | | 0.050 - 2.000 | Kit:P23C0 |
| AC19240 | CYLINDROSPERMOPSIN | 0.986 Abs [1.0050] {2.7 C | 0.028 µg/L [0.024] | Low, 86.567 %Abs | | 0.050 - 2.000 | Kit:P23C0 |

Note

 Signature *David Jordan*

David Jordan 8/9/2023

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: Kit:P23C0657

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 |
|----------------------------|-----------------------------|-------------------------------|---------------------------------------|---------------|
| 8/9/2023 6:38:56 PM | | | | |
| CYL Std 0 | 1.158 Abs | 0.000 µg/L | R ² =0.99833, 101.668 %Abs | RK1:23->A01@2 |
| CYL Std 0 | 1.119 Abs [1.1385] {2.4 CV} | 0.004 µg/L [0.002] {141.4 CV} | R ² =0.99833, 98.244 %Abs | RK1:23->B01@2 |
| CYL Std 1 | 0.921 Abs | 0.041 µg/L | R ² =0.99833, 80.860 %Abs | RK1:24->C01@2 |
| CYL Std 1 | 0.881 Abs [0.9010] {3.1 CV} | 0.051 µg/L [0.046] {15.4 CV} | R ² =0.99833, 77.349 %Abs | RK1:24->D01@2 |
| CYL Std 2 | 0.715 Abs | 0.103 µg/L | R ² =0.99833, 62.774 %Abs | RK1:25->E01@2 |
| CYL Std 2 | 0.705 Abs [0.7100] {1.0 CV} | 0.106 µg/L [0.105] {2.0 CV} | R ² =0.99833, 61.896 %Abs | RK1:25->F01@3 |
| CYL Std 3 | 0.466 Abs | 0.255 µg/L | R ² =0.99833, 40.913 %Abs | RK1:26->G01@3 |
| CYL Std 3 | 0.441 Abs [0.4535] {3.9 CV} | 0.282 µg/L [0.269] {7.1 CV} | R ² =0.99833, 38.718 %Abs | RK1:26->H01@3 |
| CYL Std 4 | 0.336 Abs | 0.442 µg/L | R ² =0.99833, 29.500 %Abs | RK1:27->A02@2 |
| CYL Std 4 | 0.328 Abs [0.3320] {1.7 CV} | 0.459 µg/L [0.451] {2.7 CV} | R ² =0.99833, 28.797 %Abs | RK1:27->B02@2 |
| CYL Std 5 | 0.215 Abs | 0.888 µg/L | R ² =0.99833, 18.876 %Abs | RK1:28->C02@2 |
| CYL Std 5 | 0.201 Abs [0.2080] {4.8 CV} | 0.988 µg/L [0.938] {7.5 CV} | R ² =0.99833, 17.647 %Abs | RK1:28->D02@2 |
| CYL Std 6 | 0.124 Abs | > 2.000 µg/L | 10.887 %Abs | RK1:29->E02@2 |
| CYL Std 6 | 0.116 Abs [0.1200] {4.7 CV} | > 2.000 µg/L | 10.184 %Abs | RK1:29->F02@3 |
| ***** | | | | |
| 8/9/2023 6:38:56 PM | | | | |
| CYL QCS | 0.228 Abs | 0.810 µg/L | 20.018 %Abs | RK1:30->G02@3 |
| CYL QCS | 0.227 Abs [0.2275] {0.3 CV} | 0.815 µg/L [0.813] {0.4 CV} | 19.930 %Abs [19.974 %Abs] | RK1:30->H02@3 |
| ***** | | | | |
| Statistic | | | | |
| CYL Std 0 [MEAN] | 1.1385 | 0.0020 | | |
| CYL Std 0 [SD] | 0.0276 | 0.0028 | | |
| CYL Std 0 [%CV] | 2.4222 | 141.4214 | | |
| CYL Std 1 [MEAN] | 0.9010 | 0.0460 | | |
| CYL Std 1 [SD] | 0.0283 | 0.0071 | | |
| CYL Std 1 [%CV] | 3.1392 | 15.3719 | | |
| CYL Std 1 [%DIFF] | | -8.0000 | | |
| CYL Std 2 [MEAN] | 0.7100 | 0.1045 | | |
| CYL Std 2 [SD] | 0.0071 | 0.0021 | | |
| CYL Std 2 [%CV] | 0.9959 | 2.0300 | | |
| CYL Std 2 [%DIFF] | | 4.5000 | | |
| CYL Std 3 [MEAN] | 0.4535 | 0.2685 | | |
| CYL Std 3 [SD] | 0.0177 | 0.0191 | | |
| CYL Std 3 [%CV] | 3.8980 | 7.1106 | | |
| CYL Std 3 [%DIFF] | | 7.4000 | | |
| CYL Std 4 [MEAN] | 0.3320 | 0.4505 | | |
| CYL Std 4 [SD] | 0.0057 | 0.0120 | | |
| CYL Std 4 [%CV] | 1.7039 | 2.6683 | | |
| CYL Std 4 [%DIFF] | | -9.9000 | | |

| Name | Absorbance | Concentration | Interpretation | Position |
|-------------------|------------|---------------|----------------|----------|
| CYL Std 5 [MEAN] | 0.2080 | 0.9380 | | |
| CYL Std 5 [SD] | 0.0099 | 0.0707 | | |
| CYL Std 5 [%CV] | 4.7594 | 7.5384 | | |
| CYL Std 5 [%DIFF] | | -6.2000 | | |
| CYL Std 6 [MEAN] | 0.1200 | | | |
| CYL Std 6 [SD] | 0.0057 | | | |
| CYL Std 6 [%CV] | 4.7140 | | | |
| CYL QCS [MEAN] | 0.2275 | 0.8125 | | |
| CYL QCS [SD] | 0.0007 | 0.0035 | | |
| CYL QCS [%CV] | 0.3108 | 0.4351 | | |

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.1428
 B = 1.0262
 C = 0.15519
 D = 0.060066
 R2 coef = 0.99833
 50% = 0.174

