



Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03317	Cecil M. Harden Lake - Raccoon Lake SRA Beach	7/10/2023	7/12/2023	< 0.15
AC03318	Cagles Mill Lake - Lieber SRA Beach	7/10/2023	7/12/2023	< 0.15
AC03319	Monroe Lake - Paynetown SRA Beach	7/10/2023	7/12/2023	< 0.15
AC03320	Monroe Lake - Fairfax SRA Beach	7/10/2023	7/12/2023	< 0.15
AC03321	Starve Hollow SRA - Starve Hollow Lake Beach	7/10/2023	7/12/2023	< 0.15
AC03322	Whitewater Memorial SP - Whitewater Lake Beach	7/11/2023	7/12/2023	< 0.15
AC03323	Brookville Lake - Quakertown SRA Beach	7/11/2023	7/12/2023	< 0.15
AC03324	Brookville Lake - Mounds SRA Beach	7/11/2023	7/12/2023	< 0.15
AC03325	Hardy Lake SRA - Hardy Lake SRA Beach	7/11/2023	7/12/2023	< 0.15
AC03326	Deam Lake SRA - Deam Lake Beach	7/11/2023	7/12/2023	< 0.15
AC03327	Whitewater Memorial SP - Whitewater Lake Beach (Field Duplicate)	7/11/2023	7/12/2023	< 0.15
AC03328	Field Blank	7/11/2023	7/12/2023	< 0.15
AC03342	Ft. Ben Harrison SP Dog Lake	7/10/2023	7/12/2023	< 0.15

Test Report (by Request)

Test Information

Request: 7/12/2023 6:21:29 PM
Date: 7/12/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
CYL Std 0	CYLINDROSPERMOPSIN	1.279 Abs	0.001 µg/L	R^2=0.99802, 99.84			M22I2480
CYL Std 0	CYLINDROSPERMOPSIN	1.283 Abs [1.2810] {0.2 C	0.001 µg/L [0.001]	R^2=0.99802, 100.1			M22I2480
CYL Std 1	CYLINDROSPERMOPSIN	1.152 Abs	0.036 µg/L	R^2=0.99802, 89.93			M22I2480
CYL Std 1	CYLINDROSPERMOPSIN	1.117 Abs [1.1345] {2.2 C	0.047 µg/L [0.041]	R^2=0.99802, 87.15			M22I2480
CYL Std 2	CYLINDROSPERMOPSIN	0.971 Abs	0.109 µg/L	R^2=0.99802, 75.80			M22I2480
CYL Std 2	CYLINDROSPERMOPSIN	0.967 Abs [0.9690] {0.3 C	0.111 µg/L [0.110]	R^2=0.99802, 75.48			M22I2480
CYL Std 3	CYLINDROSPERMOPSIN	0.758 Abs	0.254 µg/L	R^2=0.99802, 59.17			M22I2480
CYL Std 3	CYLINDROSPERMOPSIN	0.737 Abs [0.7475] {2.0 C	0.274 µg/L [0.264]	R^2=0.99802, 57.53			M22I2480
CYL Std 4	CYLINDROSPERMOPSIN	0.623 Abs	0.411 µg/L	R^2=0.99802, 48.63			M22I2480
CYL Std 4	CYLINDROSPERMOPSIN	0.555 Abs [0.5890] {8.2 C	0.526 µg/L [0.469]	R^2=0.99802, 43.32			M22I2480
CYL Std 5	CYLINDROSPERMOPSIN	0.400 Abs	0.981 µg/L	R^2=0.99802, 31.22			M22I2480
CYL Std 5	CYLINDROSPERMOPSIN	0.387 Abs [0.3935] {2.3 C	1.040 µg/L [1.010]	R^2=0.99802, 30.21			M22I2480
CYL Std 6	CYLINDROSPERMOPSIN	0.261 Abs	> 2.000 µg/L	20.375 %Abs			M22I2480
CYL Std 6	CYLINDROSPERMOPSIN	0.262 Abs [0.2615] {0.3 C	> 2.000 µg/L	20.453 %Abs			M22I2480
CYL QCS	CYLINDROSPERMOPSIN	0.458 Abs	0.766 µg/L	35.753 %Abs			M22I2480
CYL QCS	CYLINDROSPERMOPSIN	0.444 Abs [0.4510] {2.2 C	0.811 µg/L [0.788]	34.660 %Abs [35.2			M22I2480

Note

Signature *David Jordan*

David Jordan 7/12/2023

* 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 (6.4.1.1139/1085/1.00/0.95) 7/13/2023 9:04:46 AM

Test Report (by Request)

Test Information

Request: 7/12/2023 6:22:51 PM
Date: 7/12/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (CYL)	CYLINDROSPERMOPSIN	1.311 Abs	0.000 µg/L	Low, 102.342 %Abs		0.050 - 2.000	M22I2480
LRB (CYL)	CYLINDROSPERMOPSIN	1.287 Abs [1.2990] {1.3 C	0.000 µg/L [0.000]	Low, 100.468 %Abs		0.050 - 2.000	M22I2480
LFB (CYL)	CYLINDROSPERMOPSIN	0.525 Abs	0.589 µg/L	40.984 %Abs		0.050 - 2.000	M22I2480
LFB (CYL)	CYLINDROSPERMOPSIN	0.522 Abs [0.5235] {0.4 C	0.596 µg/L [0.592]	40.749 %Abs [40.8		0.050 - 2.000	M22I2480
AC03317	CYLINDROSPERMOPSIN	1.157 Abs	0.034 µg/L	Low, 90.320 %Abs		0.050 - 2.000	M22I2480
AC03317	CYLINDROSPERMOPSIN	1.192 Abs [1.1745] {2.1 C	0.023 µg/L [0.029]	Low, 93.052 %Abs		0.050 - 2.000	M22I2480
AC03318	CYLINDROSPERMOPSIN	1.215 Abs	0.017 µg/L	Low, 94.848 %Abs		0.050 - 2.000	M22I2480
AC03318	CYLINDROSPERMOPSIN	1.213 Abs [1.2140] {0.1 C	0.017 µg/L [0.017]	Low, 94.692 %Abs		0.050 - 2.000	M22I2480
AC03319	CYLINDROSPERMOPSIN	1.331 Abs	0.000 µg/L	Low, 103.903 %Abs		0.050 - 2.000	M22I2480
AC03319	CYLINDROSPERMOPSIN	1.261 Abs [1.2960] {3.8 C	0.005 µg/L [0.003]	Low, 98.439 %Abs		0.050 - 2.000	M22I2480
AC03320	CYLINDROSPERMOPSIN	1.237 Abs	0.011 µg/L	Low, 96.565 %Abs		0.050 - 2.000	M22I2480
AC03320	CYLINDROSPERMOPSIN	1.221 Abs [1.2290] {0.9 C	0.015 µg/L [0.013]	Low, 95.316 %Abs		0.050 - 2.000	M22I2480
AC03321	CYLINDROSPERMOPSIN	1.189 Abs	0.024 µg/L	Low, 92.818 %Abs		0.050 - 2.000	M22I2480
AC03321	CYLINDROSPERMOPSIN	1.218 Abs [1.2035] {1.7 C	0.016 µg/L [0.020]	Low, 95.082 %Abs		0.050 - 2.000	M22I2480
AC03322	CYLINDROSPERMOPSIN	1.204 Abs	0.020 µg/L	Low, 93.989 %Abs		0.050 - 2.000	M22I2480
AC03322	CYLINDROSPERMOPSIN	1.235 Abs [1.2195] {1.8 C	0.012 µg/L [0.016]	Low, 96.409 %Abs		0.050 - 2.000	M22I2480
AC03323	CYLINDROSPERMOPSIN	1.310 Abs	0.000 µg/L	Low, 102.264 %Abs		0.050 - 2.000	M22I2480
AC03323	CYLINDROSPERMOPSIN	1.272 Abs [1.2910] {2.1 C	0.003 µg/L [0.002]	Low, 99.297 %Abs		0.050 - 2.000	M22I2480
AC03323MS	CYLINDROSPERMOPSIN	0.530 Abs	0.578 µg/L	41.374 %Abs		0.050 - 2.000	M22I2480
AC03323MS	CYLINDROSPERMOPSIN	0.525 Abs [0.5275] {0.7 C	0.589 µg/L [0.584]	40.984 %Abs [41.1		0.050 - 2.000	M22I2480
AC03323MSD	CYLINDROSPERMOPSIN	0.526 Abs	0.587 µg/L	41.062 %Abs		0.050 - 2.000	M22I2480
AC03323MSD	CYLINDROSPERMOPSIN	0.530 Abs [0.5280] {0.5 C	0.578 µg/L [0.582]	41.374 %Abs [41.2		0.050 - 2.000	M22I2480
AC03324	CYLINDROSPERMOPSIN	1.206 Abs	0.019 µg/L	Low, 94.145 %Abs		0.050 - 2.000	M22I2480
AC03324	CYLINDROSPERMOPSIN	1.214 Abs [1.2100] {0.5 C	0.017 µg/L [0.018]	Low, 94.770 %Abs		0.050 - 2.000	M22I2480
AC03325	CYLINDROSPERMOPSIN	1.282 Abs	0.001 µg/L	Low, 100.000 %Abs		0.050 - 2.000	M22I2480
AC03325	CYLINDROSPERMOPSIN	1.239 Abs [1.2605] {2.4 C	0.011 µg/L [0.006]	Low, 96.721 %Abs		0.050 - 2.000	M22I2480
AC03326	CYLINDROSPERMOPSIN	1.226 Abs	0.014 µg/L	Low, 95.706 %Abs		0.050 - 2.000	M22I2480
AC03326	CYLINDROSPERMOPSIN	1.226 Abs [1.2260] {0.0 C	0.014 µg/L [0.014]	Low, 95.706 %Abs		0.050 - 2.000	M22I2480
AC03327	CYLINDROSPERMOPSIN	1.257 Abs	0.006 µg/L	Low, 98.126 %Abs		0.050 - 2.000	M22I2480
AC03327	CYLINDROSPERMOPSIN	1.282 Abs [1.2695] {1.4 C	0.001 µg/L [0.004]	Low, 100.000 %Abs		0.050 - 2.000	M22I2480
AC03328	CYLINDROSPERMOPSIN	1.330 Abs	0.000 µg/L	Low, 103.825 %Abs		0.050 - 2.000	M22I2480
AC03328	CYLINDROSPERMOPSIN	1.227 Abs [1.2785] {5.7 C	0.014 µg/L [0.007]	Low, 95.785 %Abs		0.050 - 2.000	M22I2480
AC03342	CYLINDROSPERMOPSIN	1.172 Abs	0.029 µg/L	Low, 91.491 %Abs		0.050 - 2.000	M22I2480
AC03342	CYLINDROSPERMOPSIN	1.186 Abs [1.1790] {0.8 C	0.025 µg/L [0.027]	Low, 92.584 %Abs		0.050 - 2.000	M22I2480

Note

Signature *David Jordan*

David Jordan 7/12/2023

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: M22I2480

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
7/12/2023 6:21:29 PM				
CYL Std 0	1.279 Abs	0.001 µg/L	R ² =0.99802, 99.844 %Abs	RK1:23->A01@2
CYL Std 0	1.283 Abs [1.2810] {0.2 CV}	0.001 µg/L [0.001] {0.0 CV}	R ² =0.99802, 100.156 %Abs	RK1:23->B01@2
CYL Std 1	1.152 Abs	0.036 µg/L	R ² =0.99802, 89.930 %Abs	RK1:24->C01@2
CYL Std 1	1.117 Abs [1.1345] {2.2 CV}	0.047 µg/L [0.041] {18.7 CV}	R ² =0.99802, 87.198 %Abs	RK1:24->D01@2
CYL Std 2	0.971 Abs	0.109 µg/L	R ² =0.99802, 75.800 %Abs	RK1:25->E01@2
CYL Std 2	0.967 Abs [0.9690] {0.3 CV}	0.111 µg/L [0.110] {1.3 CV}	R ² =0.99802, 75.488 %Abs	RK1:25->F01@3
CYL Std 3	0.758 Abs	0.254 µg/L	R ² =0.99802, 59.173 %Abs	RK1:26->G01@3
CYL Std 3	0.737 Abs [0.7475] {2.0 CV}	0.274 µg/L [0.264] {5.4 CV}	R ² =0.99802, 57.533 %Abs	RK1:26->H01@3
CYL Std 4	0.623 Abs	0.411 µg/L	R ² =0.99802, 48.634 %Abs	RK1:27->A02@2
CYL Std 4	0.555 Abs [0.5890] {8.2 CV}	0.526 µg/L [0.469] {17.4 CV}	R ² =0.99802, 43.326 %Abs	RK1:27->B02@2
CYL Std 5	0.400 Abs	0.981 µg/L	R ² =0.99802, 31.226 %Abs	RK1:28->C02@2
CYL Std 5	0.387 Abs [0.3935] {2.3 CV}	1.040 µg/L [1.010] {4.1 CV}	R ² =0.99802, 30.211 %Abs	RK1:28->D02@2
CYL Std 6	0.261 Abs	> 2.000 µg/L	20.375 %Abs	RK1:29->E02@2
CYL Std 6	0.262 Abs [0.2615] {0.3 CV}	> 2.000 µg/L	20.453 %Abs	RK1:29->F02@3

7/12/2023 6:21:29 PM				
CYL QCS	0.458 Abs	0.766 µg/L	35.753 %Abs	RK1:30->G02@3
CYL QCS	0.444 Abs [0.4510] {2.2 CV}	0.811 µg/L [0.788] {4.0 CV}	34.660 %Abs [35.207 %Abs]	RK1:30->H02@3

Statistic				
CYL Std 0 [MEAN]	1.2810	0.0010		
CYL Std 0 [SD]	0.0028	0.0000		
CYL Std 0 [%CV]	0.2208	0.0000		
CYL Std 1 [MEAN]	1.1345	0.0415		
CYL Std 1 [SD]	0.0247	0.0078		
CYL Std 1 [%CV]	2.1815	18.7426		
CYL Std 1 [%DIFF]		-17.0000		
CYL Std 2 [MEAN]	0.9690	0.1100		
CYL Std 2 [SD]	0.0028	0.0014		
CYL Std 2 [%CV]	0.2919	1.2857		
CYL Std 2 [%DIFF]		10.0000		
CYL Std 3 [MEAN]	0.7475	0.2640		
CYL Std 3 [SD]	0.0148	0.0141		
CYL Std 3 [%CV]	1.9865	5.3569		
CYL Std 3 [%DIFF]		5.6000		
CYL Std 4 [MEAN]	0.5890	0.4685		
CYL Std 4 [SD]	0.0481	0.0813		
CYL Std 4 [%CV]	8.1635	17.3569		
CYL Std 4 [%DIFF]		-6.3000		

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.3935	1.0105		
CYL Std 5 [SD]	0.0092	0.0417		
CYL Std 5 [%CV]	2.3361	4.1286		
CYL Std 5 [%DIFF]		1.0500		
CYL Std 6 [MEAN]	0.2615			
CYL Std 6 [SD]	0.0007			
CYL Std 6 [%CV]	0.2704			
CYL QCS [MEAN]	0.4510	0.7885		
CYL QCS [SD]	0.0099	0.0318		
CYL QCS [%CV]	2.1950	4.0355		

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.2869
 B = 0.92455
 C = 0.33847
 D = 0.068345
 R2 coef = 0.99802
 50% = 0.386

