



Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB43871	Summit Lake - State Park	8/17/2020	8/19/2020	< 0.15
AB43872	Kunkel Beach @ Ouabache SP	8/17/2020	8/19/2020	< 0.15
AB43873	Pokagon State Park	8/17/2020	8/19/2020	< 0.15
AB43874	Potawatomi Inn's Beach	8/17/2020	8/19/2020	< 0.15
AB43875	Chain O'Lakes SP	8/17/2020	8/19/2020	< 0.15
AB43876	Potato Creek State Park	8/17/2020	8/19/2020	< 0.15
AB43877	Lost Bridge West SRA	8/17/2020	8/19/2020	< 0.15
AB43878	Mississinewa Lake Miami SRA	8/17/2020	8/19/2020	< 0.15
AB43879	Summit Lake - State Park (Field Duplicate)	8/17/2020	8/19/2020	< 0.15
AB43880	Field Blank	8/17/2020	8/19/2020	< 0.15
AB43881	Ft. Harrison SP Dog Lake (10x dilution)	8/19/2020	8/19/2020	2.70

Test Report (by Request)

Test Information

 Request: 8/19/2020 1:16:47 PM
 Date: 8/19/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
CYL Std 0	CYLINDROSPERMOPSIN	1.003 Abs	0.001 µg/L	R^2=0.99576, 99.603		19L2079
CYL Std 0	CYLINDROSPERMOPSIN	1.012 Abs [1.0075] {0.6 CV}	0.000 µg/L [0.001] {1}	R^2=0.99576, 100.49		19L2079
CYL Std 1	CYLINDROSPERMOPSIN	0.909 Abs	0.027 µg/L	R^2=0.99576, 90.268		19L2079
CYL Std 1	CYLINDROSPERMOPSIN	0.863 Abs [0.8860] {3.7 CV}	0.050 µg/L [0.038] {4}	R^2=0.99576, 85.700		19L2079
CYL Std 2	CYLINDROSPERMOPSIN	0.776 Abs	0.112 µg/L	R^2=0.99576, 77.061		19L2079
CYL Std 2	CYLINDROSPERMOPSIN	0.765 Abs [0.7705] {1.0 CV}	0.121 µg/L [0.117] {5}	R^2=0.99576, 75.968		19L2079
CYL Std 3	CYLINDROSPERMOPSIN	0.641 Abs	0.274 µg/L	R^2=0.99576, 63.654		19L2079
CYL Std 3	CYLINDROSPERMOPSIN	0.636 Abs [0.6385] {0.6 CV}	0.282 µg/L [0.278] {2}	R^2=0.99576, 63.158		19L2079
CYL Std 4	CYLINDROSPERMOPSIN	0.551 Abs	0.451 µg/L	R^2=0.99576, 54.717		19L2079
CYL Std 4	CYLINDROSPERMOPSIN	0.557 Abs [0.5540] {0.8 CV}	0.436 µg/L [0.443] {2}	R^2=0.99576, 55.313		19L2079
CYL Std 5	CYLINDROSPERMOPSIN	0.406 Abs	0.952 µg/L	R^2=0.99576, 40.318		19L2079
CYL Std 5	CYLINDROSPERMOPSIN	0.380 Abs [0.3930] {4.7 CV}	1.088 µg/L [1.020] {9}	R^2=0.99576, 37.736		19L2079
CYL Std 6	CYLINDROSPERMOPSIN	0.262 Abs	> 2.000 µg/L	26.018 %Abs		19L2079
CYL Std 6	CYLINDROSPERMOPSIN	0.266 Abs [0.2640] {1.1 CV}	> 2.000 µg/L	26.415 %Abs		19L2079
CYL QCS	CYLINDROSPERMOPSIN	0.465 Abs	0.704 µg/L	46.177 %Abs		19L2079
CYL QCS	CYLINDROSPERMOPSIN	0.452 Abs [0.4585] {2.0 CV}	0.752 µg/L [0.728] {4}	44.886 %Abs [45.53]		19L2079

Note

Signature

Charles Hostetter 8/20/20

Test Report (by Request)

Test Information

Request: 8/19/2020 1:21:59 PM
Date: 8/19/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	CYLINDROSPERMOPSIN	0.974 Abs	0.006 µg/L	LOW, 96.723 %ABS	0.050 - 2.000	19L2079
LRB	CYLINDROSPERMOPSIN	0.995 Abs [0.9845] {1.5 CV}	0.002 µg/L [0.004] {7}	LOW, 98.808 %ABS	0.050 - 2.000	19L2079
LFB	CYLINDROSPERMOPSIN	0.527 Abs	0.511 µg/L	52.334 %Abs	0.050 - 2.000	19L2079
LFB	CYLINDROSPERMOPSIN	0.497 Abs [0.5120] {4.1 CV}	0.597 µg/L [0.554] {1}	49.355 %Abs [50.84]	0.050 - 2.000	19L2079
AB43871	CYLINDROSPERMOPSIN	0.872 Abs	0.045 µg/L	LOW, 86.594 %ABS	0.050 - 2.000	19L2079
AB43871	CYLINDROSPERMOPSIN	0.851 Abs [0.8615] {1.7 CV}	0.057 µg/L [0.051] {1}	84.508 %Abs [85.55]	0.050 - 2.000	19L2079
AB43871MS	CYLINDROSPERMOPSIN	0.516 Abs	0.541 µg/L	51.241 %Abs	0.050 - 2.000	19L2079
AB43871MS	CYLINDROSPERMOPSIN	0.510 Abs [0.5130] {0.8 CV}	0.559 µg/L [0.550] {2}	50.645 %Abs [50.94]	0.050 - 2.000	19L2079
AB43871MSD	CYLINDROSPERMOPSIN	0.539 Abs	0.480 µg/L	53.525 %Abs	0.050 - 2.000	19L2079
AB43871MSD	CYLINDROSPERMOPSIN	0.538 Abs [0.5385] {0.1 CV}	0.483 µg/L [0.481] {0}	53.426 %Abs [53.47]	0.050 - 2.000	19L2079
AB43872	CYLINDROSPERMOPSIN	0.917 Abs	0.024 µg/L	LOW, 91.063 %ABS	0.050 - 2.000	19L2079
AB43872	CYLINDROSPERMOPSIN	0.883 Abs [0.9000] {2.7 CV}	0.039 µg/L [0.032] {3}	LOW, 87.686 %ABS	0.050 - 2.000	19L2079
AB43873	CYLINDROSPERMOPSIN	0.869 Abs	0.046 µg/L	LOW, 86.296 %ABS	0.050 - 2.000	19L2079
AB43873	CYLINDROSPERMOPSIN	0.906 Abs [0.8875] {2.9 CV}	0.028 µg/L [0.037] {3}	LOW, 89.970 %ABS	0.050 - 2.000	19L2079
AB43874	CYLINDROSPERMOPSIN	0.928 Abs	0.019 µg/L	LOW, 92.155 %ABS	0.050 - 2.000	19L2079
AB43874	CYLINDROSPERMOPSIN	0.881 Abs [0.9045] {3.7 CV}	0.040 µg/L [0.030] {5}	LOW, 87.488 %ABS	0.050 - 2.000	19L2079
AB43875	CYLINDROSPERMOPSIN	0.955 Abs	0.011 µg/L	LOW, 94.836 %ABS	0.050 - 2.000	19L2079
AB43875	CYLINDROSPERMOPSIN	0.931 Abs [0.9430] {1.8 CV}	0.018 µg/L [0.014] {3}	LOW, 92.453 %ABS	0.050 - 2.000	19L2079
AB43876	CYLINDROSPERMOPSIN	0.895 Abs	0.033 µg/L	LOW, 88.878 %ABS	0.050 - 2.000	19L2079
AB43876	CYLINDROSPERMOPSIN	0.876 Abs [0.8855] {1.5 CV}	0.043 µg/L [0.038] {1}	LOW, 86.991 %ABS	0.050 - 2.000	19L2079
AB43877	CYLINDROSPERMOPSIN	0.885 Abs	0.038 µg/L	LOW, 87.885 %ABS	0.050 - 2.000	19L2079
AB43877	CYLINDROSPERMOPSIN	0.873 Abs [0.8790] {1.0 CV}	0.044 µg/L [0.041] {1}	LOW, 86.693 %ABS	0.050 - 2.000	19L2079
AB43878	CYLINDROSPERMOPSIN	0.892 Abs	0.035 µg/L	LOW, 88.580 %ABS	0.050 - 2.000	19L2079
AB43878	CYLINDROSPERMOPSIN	0.883 Abs [0.8875] {0.7 CV}	0.039 µg/L [0.037] {7}	LOW, 87.686 %ABS	0.050 - 2.000	19L2079
AB43879	CYLINDROSPERMOPSIN	0.928 Abs	0.019 µg/L	LOW, 92.155 %ABS	0.050 - 2.000	19L2079
AB43879	CYLINDROSPERMOPSIN	0.913 Abs [0.9205] {1.2 CV}	0.025 µg/L [0.022] {1}	LOW, 90.665 %ABS	0.050 - 2.000	19L2079
AB43880	CYLINDROSPERMOPSIN	0.912 Abs	0.026 µg/L	LOW, 90.566 %ABS	0.050 - 2.000	19L2079
AB43880	CYLINDROSPERMOPSIN	0.877 Abs [0.8945] {2.8 CV}	0.042 µg/L [0.034] {3}	LOW, 87.090 %ABS	0.050 - 2.000	19L2079
AB43881	CYLINDROSPERMOPSIN	0.221 Abs	> 2.000 µg/L	21.946 %Abs, Out(LF)	0.050 - 2.000	19L2079
AB43881	CYLINDROSPERMOPSIN	0.238 Abs [0.2295] {5.2 CV}	> 2.000 µg/L	23.635 %Abs, Out(LF)	0.050 - 2.000	19L2079
AB43881 10X	CYLINDROSPERMOPSIN	0.646 Abs	0.266 µg/L	64.151 %Abs	0.050 - 2.000	19L2079
AB43881 10X	CYLINDROSPERMOPSIN	0.641 Abs [0.6435] {0.5 CV}	0.274 µg/L [0.270] {2}	63.654 %Abs [63.90]	0.050 - 2.000	19L2079
LFB 2	CYLINDROSPERMOPSIN	0.468 Abs	0.693 µg/L	46.475 %Abs	0.050 - 2.000	19L2079
LFB 2	CYLINDROSPERMOPSIN	0.469 Abs [0.4685] {0.2 CV}	0.690 µg/L [0.692] {0}	46.574 %Abs [46.52]	0.050 - 2.000	19L2079
LRB 2	CYLINDROSPERMOPSIN	0.854 Abs	0.055 µg/L	84.806 %Abs	0.050 - 2.000	19L2079
LRB 2	CYLINDROSPERMOPSIN	0.856 Abs [0.8550] {0.2 CV}	0.054 µg/L [0.054] {1}	85.005 %Abs [84.90]	0.050 - 2.000	19L2079

Note

10X dilution factor was not added into software. Therefore the result for AB43881 10X is 2.70.

Signature 

Charles Hostetter 8/20/20

* 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 (6.4.1.1073/1085/1.00/0.95) 8/19/2020 8:24:45 PM

Assay Information

Assay Name: CYLINDROSPERMOP SIN
 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: 8/15/2019 12:26:24 PM
 Normal: 0.050 - 2.000
 # of decimals: 3
 Kit Lot Number: 19L2079

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
8/19/2020 1:16:47 PM				
CYL Std 0	1.003 Abs		R ² =0.99576, 99.603 %Abs	RK1:23->A01@2
CYL Std 0	1.012 Abs [1.0075] {0.6 CV}		R ² =0.99576, 100.497 %Abs	RK1:23->B01@2
CYL Std 1	0.909 Abs		R ² =0.99576, 90.268 %Abs	RK1:24->C01@2
CYL Std 1	0.863 Abs [0.8860] {3.7 CV}		R ² =0.99576, 85.700 %Abs	RK1:24->D01@2
CYL Std 2	0.776 Abs		R ² =0.99576, 77.061 %Abs	RK1:25->E01@2
CYL Std 2	0.765 Abs [0.7705] {1.0 CV}		R ² =0.99576, 75.968 %Abs	RK1:25->F01@3
CYL Std 3	0.641 Abs		R ² =0.99576, 63.654 %Abs	RK1:26->G01@3
CYL Std 3	0.636 Abs [0.6385] {0.6 CV}		R ² =0.99576, 63.158 %Abs	RK1:26->H01@3
CYL Std 4	0.551 Abs		R ² =0.99576, 54.717 %Abs	RK1:27->A02@2
CYL Std 4	0.557 Abs [0.5540] {0.8 CV}		R ² =0.99576, 55.313 %Abs	RK1:27->B02@2
CYL Std 5	0.406 Abs		R ² =0.99576, 40.318 %Abs	RK1:28->C02@2
CYL Std 5	0.380 Abs [0.3930] {4.7 CV}		R ² =0.99576, 37.736 %Abs	RK1:28->D02@2
CYL Std 6	0.262 Abs		26.018 %Abs	RK1:29->E02@2
CYL Std 6	0.266 Abs [0.2640] {1.1 CV}		26.415 %Abs	RK1:29->F02@3
+++++				
8/19/2020 1:16:47 PM				
CYL QCS	0.465 Abs		46.177 %Abs	RK1:30->G02@3
CYL QCS	0.452 Abs [0.4585] {2.0 CV}		44.886 %Abs [45.531 %Abs]	RK1:30->H02@3

Statistic				
CYL Std 0 [MEAN]	1.0075			
CYL Std 0 [SD]	0.0064			
CYL Std 0 [%CV]	0.6317			
CYL Std 1 [MEAN]	0.8860			
CYL Std 1 [SD]	0.0325			
CYL Std 1 [%CV]	3.6712			
CYL Std 1 [%DIFF]				
CYL Std 2 [MEAN]	0.7705			
CYL Std 2 [SD]	0.0078			
CYL Std 2 [%CV]	1.0095			
CYL Std 2 [%DIFF]				
CYL Std 3 [MEAN]	0.6385			
CYL Std 3 [SD]	0.0035			
CYL Std 3 [%CV]	0.5537			
CYL Std 3 [%DIFF]				
CYL Std 4 [MEAN]	0.5540			
CYL Std 4 [SD]	0.0042			
CYL Std 4 [%CV]	0.7658			
CYL Std 4 [%DIFF]				

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.3930			
CYL Std 5 [SD]	0.0184			
CYL Std 5 [%CV]	4.6781			
CYL Std 5 [%DIFF]				
CYL Std 6 [MEAN]	0.2640			
CYL Std 6 [SD]	0.0028			
CYL Std 6 [%CV]	1.0714			
CYL QCS [MEAN]	0.4585			
CYL QCS [SD]	0.0092			
CYL QCS [%CV]	2.0049			

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.0106
 B = 0.68603
 C = 0.80106
 D = -0.13110
 R2 coef = 0.99576
 50% = 0.578

