



Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB52058	Summit Lake State Park	7/19/2022	7/20/2022	< 0.15
AB52059	Kunkel Lake @ Oubache State Park	7/18/2022	7/20/2022	< 0.15
AB52060	Pokagon State Park	7/18/2022	7/20/2022	< 0.15
AB52061	Potawatomi Inn's Beach	7/18/2022	7/20/2022	< 0.15
AB52062	Chain O'Lakes SP	7/18/2022	7/20/2022	< 0.15
AB52063	Potato Creek State Park	7/19/2022	7/20/2022	< 0.15
AB52064	Lost Bridge West SRA	7/19/2022	7/20/2022	< 0.15
AB52065	Mississinewa Lake Miami SRA	7/19/2022	7/20/2022	< 0.15
AB52072	Summit Lake State Park (Field Dup)	7/19/2022	7/20/2022	< 0.15
AB52073	Field Blank	7/19/2022	7/20/2022	< 0.15
AB52074	Lincoln State Park	7/18/2022	7/20/2022	< 0.15
AB52075	Ferdinand State Forest Lake	7/18/2022	7/20/2022	< 0.15
AB52076	Patoka SRA Beach	7/18/2022	7/20/2022	< 0.15

Test Report (by Request)

Test Information

Request: 7/20/2022 1:36:24 PM
Date: 7/20/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
CYL Std 0	CYLINDROSPERMOPSIN	1.666 Abs	0.000 µg/L	R^2=0.99850, 102.0			M22A1121
CYL Std 0	CYLINDROSPERMOPSIN	1.601 Abs [1.6335] {2.8 C	0.003 µg/L [0.002]	R^2=0.99850, 98.04			M22A1121
CYL Std 1	CYLINDROSPERMOPSIN	1.380 Abs	0.043 µg/L	R^2=0.99850, 84.50			M22A1121
CYL Std 1	CYLINDROSPERMOPSIN	1.342 Abs [1.3610] {2.0 C	0.054 µg/L [0.049]	R^2=0.99850, 82.18			M22A1121
CYL Std 2	CYLINDROSPERMOPSIN	1.235 Abs	0.088 µg/L	R^2=0.99850, 75.62			M22A1121
CYL Std 2	CYLINDROSPERMOPSIN	1.185 Abs [1.2100] {2.9 C	0.107 µg/L [0.097]	R^2=0.99850, 72.56			M22A1121
CYL Std 3	CYLINDROSPERMOPSIN	0.914 Abs	0.264 µg/L	R^2=0.99850, 55.97			M22A1121
CYL Std 3	CYLINDROSPERMOPSIN	0.884 Abs [0.8990] {2.4 C	0.289 µg/L [0.276]	R^2=0.99850, 54.13			M22A1121
CYL Std 4	CYLINDROSPERMOPSIN	0.735 Abs	0.447 µg/L	R^2=0.99850, 45.00			M22A1121
CYL Std 4	CYLINDROSPERMOPSIN	0.719 Abs [0.7270] {1.6 C	0.468 µg/L [0.457]	R^2=0.99850, 44.02			M22A1121
CYL Std 5	CYLINDROSPERMOPSIN	0.470 Abs	0.996 µg/L	R^2=0.99850, 28.78			M22A1121
CYL Std 5	CYLINDROSPERMOPSIN	0.454 Abs [0.4620] {2.4 C	1.049 µg/L [1.023]	R^2=0.99850, 27.80			M22A1121
CYL Std 6	CYLINDROSPERMOPSIN	0.276 Abs	> 2.000 µg/L	16.901 %Abs			M22A1121
CYL Std 6	CYLINDROSPERMOPSIN	0.275 Abs [0.2755] {0.3 C	> 2.000 µg/L	16.840 %Abs			M22A1121
CYL QCS	CYLINDROSPERMOPSIN	0.533 Abs	0.816 µg/L	32.639 %Abs			M22A1121
CYL QCS	CYLINDROSPERMOPSIN	0.525 Abs [0.5290] {1.1 C	0.836 µg/L [0.826]	32.149 %Abs [32.3			M22A1121

Note

Signature 

David Jordan 7/20/2022

Test Report (by Request)

Test Information

Request: 7/20/2022 1:37:48 PM
Date: 7/20/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (CYL)	CYLINDROSPERMOPSIN	1.635 Abs	0.000 µg/L	Low, 100.122 %Abs		0.050 - 2.000	M22A1121
LRB (CYL)	CYLINDROSPERMOPSIN	1.572 Abs [1.6035] {2.8 C	0.006 µg/L [0.003]	Low, 96.265 %Abs		0.050 - 2.000	M22A1121
LFB (CYL)	CYLINDROSPERMOPSIN	0.611 Abs	0.643 µg/L	37.416 %Abs		0.050 - 2.000	M22A1121
LFB (CYL)	CYLINDROSPERMOPSIN	0.595 Abs [0.6030] {1.9 C	0.675 µg/L [0.659]	36.436 %Abs [36.9		0.050 - 2.000	M22A1121
AB52058	CYLINDROSPERMOPSIN	1.321 Abs	0.060 µg/L	80.894 %Abs		0.050 - 2.000	M22A1121
AB52058	CYLINDROSPERMOPSIN	1.288 Abs [1.3045] {1.8 C	0.070 µg/L [0.065]	78.873 %Abs [79.8		0.050 - 2.000	M22A1121
AB52059	CYLINDROSPERMOPSIN	1.446 Abs	0.028 µg/L	Low, 88.549 %Abs		0.050 - 2.000	M22A1121
AB52059	CYLINDROSPERMOPSIN	1.506 Abs [1.4760] {2.9 C	0.016 µg/L [0.022]	Low, 92.223 %Abs		0.050 - 2.000	M22A1121
AB52060	CYLINDROSPERMOPSIN	1.551 Abs	0.009 µg/L	Low, 94.979 %Abs		0.050 - 2.000	M22A1121
AB52060	CYLINDROSPERMOPSIN	1.491 Abs [1.5210] {2.8 C	0.019 µg/L [0.014]	Low, 91.304 %Abs		0.050 - 2.000	M22A1121
AB52061	CYLINDROSPERMOPSIN	1.458 Abs	0.025 µg/L	Low, 89.284 %Abs		0.050 - 2.000	M22A1121
AB52061	CYLINDROSPERMOPSIN	1.443 Abs [1.4505] {0.7 C	0.029 µg/L [0.027]	Low, 88.365 %Abs		0.050 - 2.000	M22A1121
AB52061MS	CYLINDROSPERMOPSIN	0.592 Abs	0.681 µg/L	36.252 %Abs		0.050 - 2.000	M22A1121
AB52061MS	CYLINDROSPERMOPSIN	0.585 Abs [0.5885] {0.8 C	0.696 µg/L [0.688]	35.824 %Abs [36.0		0.050 - 2.000	M22A1121
AB52061MSD	CYLINDROSPERMOPSIN	0.580 Abs	0.706 µg/L	35.517 %Abs		0.050 - 2.000	M22A1121
AB52061MSD	CYLINDROSPERMOPSIN	0.610 Abs [0.5950] {3.6 C	0.645 µg/L [0.675]	37.355 %Abs [36.4		0.050 - 2.000	M22A1121
AB52062	CYLINDROSPERMOPSIN	1.536 Abs	0.011 µg/L	Low, 94.060 %Abs		0.050 - 2.000	M22A1121
AB52062	CYLINDROSPERMOPSIN	1.499 Abs [1.5175] {1.7 C	0.018 µg/L [0.014]	Low, 91.794 %Abs		0.050 - 2.000	M22A1121
AB52063	CYLINDROSPERMOPSIN	1.455 Abs	0.026 µg/L	Low, 89.100 %Abs		0.050 - 2.000	M22A1121
AB52063	CYLINDROSPERMOPSIN	1.412 Abs [1.4335] {2.1 C	0.036 µg/L [0.031]	Low, 86.467 %Abs		0.050 - 2.000	M22A1121
AB52064	CYLINDROSPERMOPSIN	1.463 Abs	0.024 µg/L	Low, 89.590 %Abs		0.050 - 2.000	M22A1121
AB52064	CYLINDROSPERMOPSIN	1.448 Abs [1.4555] {0.7 C	0.028 µg/L [0.026]	Low, 88.671 %Abs		0.050 - 2.000	M22A1121
AB52065	CYLINDROSPERMOPSIN	1.565 Abs	0.007 µg/L	Low, 95.836 %Abs		0.050 - 2.000	M22A1121
AB52065	CYLINDROSPERMOPSIN	1.565 Abs [1.5650] {0.0 C	0.007 µg/L [0.007]	Low, 95.836 %Abs		0.050 - 2.000	M22A1121
AB52072	CYLINDROSPERMOPSIN	1.378 Abs	0.044 µg/L	Low, 84.385 %Abs		0.050 - 2.000	M22A1121
AB52072	CYLINDROSPERMOPSIN	1.362 Abs [1.3700] {0.8 C	0.048 µg/L [0.046]	Low, 83.405 %Abs		0.050 - 2.000	M22A1121
AB52073	CYLINDROSPERMOPSIN	1.536 Abs	0.011 µg/L	Low, 94.060 %Abs		0.050 - 2.000	M22A1121
AB52073	CYLINDROSPERMOPSIN	1.505 Abs [1.5205] {1.4 C	0.017 µg/L [0.014]	Low, 92.162 %Abs		0.050 - 2.000	M22A1121
AB52074	CYLINDROSPERMOPSIN	1.095 Abs	0.148 µg/L	67.055 %Abs		0.050 - 2.000	M22A1121
AB52074	CYLINDROSPERMOPSIN	1.094 Abs [1.0945] {0.1 C	0.149 µg/L [0.148]	66.993 %Abs [67.0		0.050 - 2.000	M22A1121
AB52075	CYLINDROSPERMOPSIN	1.482 Abs	0.021 µg/L	Low, 90.753 %Abs		0.050 - 2.000	M22A1121
AB52075	CYLINDROSPERMOPSIN	1.502 Abs [1.4920] {0.9 C	0.017 µg/L [0.019]	Low, 91.978 %Abs		0.050 - 2.000	M22A1121
AB52076	CYLINDROSPERMOPSIN	1.453 Abs	0.026 µg/L	Low, 88.977 %Abs		0.050 - 2.000	M22A1121
AB52076	CYLINDROSPERMOPSIN	1.425 Abs [1.4390] {1.4 C	0.033 µg/L [0.030]	Low, 87.263 %Abs		0.050 - 2.000	M22A1121

Note

Signature 

David Jordan 7/20/2022

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:
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 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: M22A1121

Assay Calibration

Current Calibration Status: "

"

Name	Absorbance	Concentration	Interpretation	Position
7/20/2022 1:36:24 PM				
CYL Std 0	1.666 Abs	0.000 µg/L	R ² =0.99850, 102.021 %Abs	RK1:23->A01@2
CYL Std 0	1.601 Abs [1.6335] {2.8 CV}	0.003 µg/L [0.002] {141.4 CV}	R ² =0.99850, 98.040 %Abs	RK1:23->B01@2
CYL Std 1	1.380 Abs	0.043 µg/L	R ² =0.99850, 84.507 %Abs	RK1:24->C01@2
CYL Std 1	1.342 Abs [1.3610] {2.0 CV}	0.054 µg/L [0.049] {16.0 CV}	R ² =0.99850, 82.180 %Abs	RK1:24->D01@2
CYL Std 2	1.235 Abs	0.088 µg/L	R ² =0.99850, 75.628 %Abs	RK1:25->E01@2
CYL Std 2	1.185 Abs [1.2100] {2.9 CV}	0.107 µg/L [0.097] {13.8 CV}	R ² =0.99850, 72.566 %Abs	RK1:25->F01@3
CYL Std 3	0.914 Abs	0.264 µg/L	R ² =0.99850, 55.971 %Abs	RK1:26->G01@3
CYL Std 3	0.884 Abs [0.8990] {2.4 CV}	0.289 µg/L [0.276] {6.4 CV}	R ² =0.99850, 54.133 %Abs	RK1:26->H01@3
CYL Std 4	0.735 Abs	0.447 µg/L	R ² =0.99850, 45.009 %Abs	RK1:27->A02@2
CYL Std 4	0.719 Abs [0.7270] {1.6 CV}	0.468 µg/L [0.457] {3.2 CV}	R ² =0.99850, 44.029 %Abs	RK1:27->B02@2
CYL Std 5	0.470 Abs	0.996 µg/L	R ² =0.99850, 28.781 %Abs	RK1:28->C02@2
CYL Std 5	0.454 Abs [0.4620] {2.4 CV}	1.049 µg/L [1.023] {3.7 CV}	R ² =0.99850, 27.802 %Abs	RK1:28->D02@2
CYL Std 6	0.276 Abs	> 2.000 µg/L	16.901 %Abs	RK1:29->E02@2
CYL Std 6	0.275 Abs [0.2755] {0.3 CV}	> 2.000 µg/L	16.840 %Abs	RK1:29->F02@3

7/20/2022 1:36:24 PM				
CYL QCS	0.533 Abs	0.816 µg/L	32.639 %Abs	RK1:30->G02@3
CYL QCS	0.525 Abs [0.5290] {1.1 CV}	0.836 µg/L [0.826] {1.7 CV}	32.149 %Abs [32.394 %Abs]	RK1:30->H02@3

Statistic				
CYL Std 0 [MEAN]	1.6335	0.0015		
CYL Std 0 [SD]	0.0460	0.0021		
CYL Std 0 [%CV]	2.8137	141.4214		
CYL Std 1 [MEAN]	1.3610	0.0485		
CYL Std 1 [SD]	0.0269	0.0078		
CYL Std 1 [%CV]	1.9743	16.0375		
CYL Std 1 [%DIFF]		-3.0000		
CYL Std 2 [MEAN]	1.2100	0.0975		
CYL Std 2 [SD]	0.0354	0.0134		
CYL Std 2 [%CV]	2.9219	13.7795		
CYL Std 2 [%DIFF]		-2.5000		
CYL Std 3 [MEAN]	0.8990	0.2765		
CYL Std 3 [SD]	0.0212	0.0177		
CYL Std 3 [%CV]	2.3596	6.3934		
CYL Std 3 [%DIFF]		10.6000		
CYL Std 4 [MEAN]	0.7270	0.4575		
CYL Std 4 [SD]	0.0113	0.0148		
CYL Std 4 [%CV]	1.5562	3.2457		
CYL Std 4 [%DIFF]		-8.5000		

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.4620	1.0225		
CYL Std 5 [SD]	0.0113	0.0375		
CYL Std 5 [%CV]	2.4489	3.6652		
CYL Std 5 [%DIFF]		2.2500		
CYL Std 6 [MEAN]	0.2755			
CYL Std 6 [SD]	0.0007			
CYL Std 6 [%CV]	0.2567			
CYL QCS [MEAN]	0.5290	0.8260		
CYL QCS [SD]	0.0057	0.0141		
CYL QCS [%CV]	1.0694	1.7121		

Assay Curve

$$y = (A-D)/(1+(x/C)^B) + D$$

Weight: NONE

A = 1.6353

B = 0.77932

C = 0.42353

D = -0.12848

R2 coef = 0.99850

50% = 0.352

