



Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB48118	Summit Lake - State Park	8/16/2021	8/18/2021	< 0.15
AB48119	Kunkel Beach @ Ouabache State Park	8/17/2021	8/18/2021	< 0.15
AB48120	Pokagon State Park	8/17/2021	8/18/2021	< 0.15
AB48121	Potawatomi Inn's Beach	8/17/2021	8/18/2021	< 0.15
AB48122	Chain O'Lakes SP	8/17/2021	8/18/2021	< 0.15
AB48123	Potato Creek State Park	8/17/2021	8/18/2021	< 0.15
AB48124	Lost Bridge West SRA	8/16/2021	8/18/2021	< 0.15
AB48125	Mississinewa Lake Miami SRA	8/16/2021	8/18/2021	< 0.15
AB48126	Summit Lake State Park (Field Dup)	8/16/2021	8/18/2021	< 0.15
AB48127	Field Blank	8/16/2021	8/18/2021	< 0.15
AB48131	Lincoln State Park	8/16/2021	8/18/2021	0.50
AB48132	Ferdinand State Forest Lake	8/16/2021	8/18/2021	< 0.15
AB48133	Patoka SRA Beach	8/16/2021	8/18/2021	< 0.15
AB48328	Ft. Ben Harrison SP Dog Lake - East	8/17/2021	8/18/2021	11.36

Test Report (by Request)

Test Information

Request: 8/18/2021 3:28:58 PM
Date: 8/18/2021

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
CYL Std 0	CYLINDROSPERMOPSIN	1.062 Abs	0.000 µg/L	R^2=0.99788, 101.2			M21B4676
CYL Std 0	CYLINDROSPERMOPSIN	1.036 Abs [1.0490] {1.8 C	0.004 µg/L [0.002]	R^2=0.99788, 98.76			M21B4676
CYL Std 1	CYLINDROSPERMOPSIN	0.909 Abs	0.041 µg/L	R^2=0.99788, 86.65			M21B4676
CYL Std 1	CYLINDROSPERMOPSIN	0.896 Abs [0.9025] {1.0 C	0.046 µg/L [0.043]	R^2=0.99788, 85.41			M21B4676
CYL Std 2	CYLINDROSPERMOPSIN	0.763 Abs	0.102 µg/L	R^2=0.99788, 72.73			M21B4676
CYL Std 2	CYLINDROSPERMOPSIN	0.752 Abs [0.7575] {1.0 C	0.107 µg/L [0.104]	R^2=0.99788, 71.68			M21B4676
CYL Std 3	CYLINDROSPERMOPSIN	0.556 Abs	0.251 µg/L	R^2=0.99788, 53.00			M21B4676
CYL Std 3	CYLINDROSPERMOPSIN	0.518 Abs [0.5370] {5.0 C	0.294 µg/L [0.272]	R^2=0.99788, 49.38			M21B4676
CYL Std 4	CYLINDROSPERMOPSIN	0.426 Abs	0.434 µg/L	R^2=0.99788, 40.61			M21B4676
CYL Std 4	CYLINDROSPERMOPSIN	0.402 Abs [0.4140] {4.1 C	0.484 µg/L [0.459]	R^2=0.99788, 38.32			M21B4676
CYL Std 5	CYLINDROSPERMOPSIN	0.272 Abs	0.949 µg/L	R^2=0.99788, 25.92			M21B4676
CYL Std 5	CYLINDROSPERMOPSIN	0.268 Abs [0.2700] {1.0 C	0.973 µg/L [0.961]	R^2=0.99788, 25.54			M21B4676
CYL Std 6	CYLINDROSPERMOPSIN	0.163 Abs	> 2.000 µg/L	15.539 %Abs			M21B4676
CYL Std 6	CYLINDROSPERMOPSIN	0.168 Abs [0.1655] {2.1 C	> 2.000 µg/L	16.015 %Abs			M21B4676
CYL QCS	CYLINDROSPERMOPSIN	0.324 Abs	0.707 µg/L	30.887 %Abs			M21B4676
CYL QCS	CYLINDROSPERMOPSIN	0.327 Abs [0.3255] {0.7 C	0.696 µg/L [0.701]	31.173 %Abs [31.0			M21B4676

Note

Signature

David Jordan

David Jordan 8/18/2021

Test Report (by Request)

Test Information

Request: 8/18/2021 3:30:17 PM
Date: 8/18/2021

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (CYL)	CYLINDROSPERMOPSIN	1.041 Abs	0.003 µg/L	Low, 99.237 %Abs		0.050 - 2.000	M21B467f
LRB (CYL)	CYLINDROSPERMOPSIN	1.013 Abs [1.0270] {1.9 C	0.010 µg/L [0.007]	Low, 96.568 %Abs		0.050 - 2.000	M21B467f
LFB (CYL)	CYLINDROSPERMOPSIN	0.395 Abs	0.499 µg/L	37.655 %Abs		0.050 - 2.000	M21B467f
LFB (CYL)	CYLINDROSPERMOPSIN	0.376 Abs [0.3855] {3.5 C	0.546 µg/L [0.523]	35.844 %Abs [36.7		0.050 - 2.000	M21B467f
AB48118	CYLINDROSPERMOPSIN	0.866 Abs	0.057 µg/L	82.555 %Abs		0.050 - 2.000	M21B467f
AB48118	CYLINDROSPERMOPSIN	0.857 Abs [0.8615] {0.7 C	0.060 µg/L [0.058]	81.697 %Abs [82.1		0.050 - 2.000	M21B467f
AB48119	CYLINDROSPERMOPSIN	1.007 Abs	0.012 µg/L	Low, 95.996 %Abs		0.050 - 2.000	M21B467f
AB48119	CYLINDROSPERMOPSIN	0.965 Abs [0.9860] {3.0 C	0.024 µg/L [0.018]	Low, 91.992 %Abs		0.050 - 2.000	M21B467f
AB48120	CYLINDROSPERMOPSIN	0.988 Abs	0.017 µg/L	Low, 94.185 %Abs		0.050 - 2.000	M21B467f
AB48120	CYLINDROSPERMOPSIN	0.965 Abs [0.9765] {1.7 C	0.024 µg/L [0.021]	Low, 91.992 %Abs		0.050 - 2.000	M21B467f
AB48121	CYLINDROSPERMOPSIN	0.903 Abs	0.043 µg/L	Low, 86.082 %Abs		0.050 - 2.000	M21B467f
AB48121	CYLINDROSPERMOPSIN	0.941 Abs [0.9220] {2.9 C	0.031 µg/L [0.037]	Low, 89.704 %Abs		0.050 - 2.000	M21B467f
AB48122	CYLINDROSPERMOPSIN	0.899 Abs	0.045 µg/L	Low, 85.701 %Abs		0.050 - 2.000	M21B467f
AB48122	CYLINDROSPERMOPSIN	0.946 Abs [0.9225] {3.6 C	0.029 µg/L [0.037]	Low, 90.181 %Abs		0.050 - 2.000	M21B467f
AB48123	CYLINDROSPERMOPSIN	0.974 Abs	0.021 µg/L	Low, 92.850 %Abs		0.050 - 2.000	M21B467f
AB48123	CYLINDROSPERMOPSIN	0.951 Abs [0.9625] {1.7 C	0.028 µg/L [0.025]	Low, 90.658 %Abs		0.050 - 2.000	M21B467f
AB48124	CYLINDROSPERMOPSIN	0.975 Abs	0.021 µg/L	Low, 92.946 %Abs		0.050 - 2.000	M21B467f
AB48124	CYLINDROSPERMOPSIN	0.953 Abs [0.9640] {1.6 C	0.027 µg/L [0.024]	Low, 90.848 %Abs		0.050 - 2.000	M21B467f
AB48124MS	CYLINDROSPERMOPSIN	0.338 Abs	0.658 µg/L	32.221 %Abs		0.050 - 2.000	M21B467f
AB48124MS	CYLINDROSPERMOPSIN	0.327 Abs [0.3325] {2.3 C	0.696 µg/L [0.677]	31.173 %Abs [31.6		0.050 - 2.000	M21B467f
AB48124MSD	CYLINDROSPERMOPSIN	0.343 Abs	0.641 µg/L	32.698 %Abs		0.050 - 2.000	M21B467f
AB48124MSD	CYLINDROSPERMOPSIN	0.342 Abs [0.3425] {0.2 C	0.644 µg/L [0.642]	32.602 %Abs [32.6		0.050 - 2.000	M21B467f
AB48125	CYLINDROSPERMOPSIN	0.924 Abs	0.036 µg/L	Low, 88.084 %Abs		0.050 - 2.000	M21B467f
AB48125	CYLINDROSPERMOPSIN	0.908 Abs [0.9160] {1.2 C	0.042 µg/L [0.039]	Low, 86.559 %Abs		0.050 - 2.000	M21B467f
AB48126	CYLINDROSPERMOPSIN	0.771 Abs	0.098 µg/L	73.499 %Abs		0.050 - 2.000	M21B467f
AB48126	CYLINDROSPERMOPSIN	0.749 Abs [0.7600] {2.0 C	0.109 µg/L [0.103]	71.401 %Abs [72.4		0.050 - 2.000	M21B467f
AB48127	CYLINDROSPERMOPSIN	0.851 Abs	0.063 µg/L	81.125 %Abs		0.050 - 2.000	M21B467f
AB48127	CYLINDROSPERMOPSIN	0.845 Abs [0.8480] {0.5 C	0.065 µg/L [0.064]	80.553 %Abs [80.8		0.050 - 2.000	M21B467f
AB48131	CYLINDROSPERMOPSIN	0.394 Abs	0.502 µg/L	37.560 %Abs		0.050 - 2.000	M21B467f
AB48131	CYLINDROSPERMOPSIN	0.395 Abs [0.3945] {0.2 C	0.499 µg/L [0.500]	37.655 %Abs [37.6		0.050 - 2.000	M21B467f
AB48132	CYLINDROSPERMOPSIN	0.853 Abs	0.062 µg/L	81.316 %Abs		0.050 - 2.000	M21B467f
AB48132	CYLINDROSPERMOPSIN	0.838 Abs [0.8455] {1.3 C	0.068 µg/L [0.065]	79.886 %Abs [80.6		0.050 - 2.000	M21B467f
AB48133	CYLINDROSPERMOPSIN	1.018 Abs	0.009 µg/L	Low, 97.045 %Abs		0.050 - 2.000	M21B467f
AB48133	CYLINDROSPERMOPSIN	1.017 Abs [1.0175] {0.1 C	0.009 µg/L [0.009]	Low, 96.949 %Abs		0.050 - 2.000	M21B467f
AB48328	CYLINDROSPERMOPSIN	0.252 Abs	1.078 µg/L	24.023 %Abs		0.050 - 2.000	M21B467f
AB48328	CYLINDROSPERMOPSIN	0.237 Abs [0.2445] {4.3 C	1.194 µg/L [1.136]	22.593 %Abs [23.3		0.050 - 2.000	M21B467f

Note

AB48328 was analyzed with 10X dilution. The concentration was multiplied by 10 to get the final result.

Signature 

David Jordan 8/18/2021

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: M21B4676

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
8/18/2021 3:28:58 PM				
CYL Std 0	1.062 Abs	0.000 µg/L	R ² =0.99788, 101.239 %Abs	RK1:23->A01@2
CYL Std 0	1.036 Abs [1.0490] {1.8 CV}	0.004 µg/L [0.002] {141.4 CV}	R ² =0.99788, 98.761 %Abs	RK1:23->B01@2
CYL Std 1	0.909 Abs	0.041 µg/L	R ² =0.99788, 86.654 %Abs	RK1:24->C01@2
CYL Std 1	0.896 Abs [0.9025] {1.0 CV}	0.046 µg/L [0.043] {8.1 CV}	R ² =0.99788, 85.415 %Abs	RK1:24->D01@2
CYL Std 2	0.763 Abs	0.102 µg/L	R ² =0.99788, 72.736 %Abs	RK1:25->E01@2
CYL Std 2	0.752 Abs [0.7575] {1.0 CV}	0.107 µg/L [0.104] {3.4 CV}	R ² =0.99788, 71.687 %Abs	RK1:25->F01@3
CYL Std 3	0.556 Abs	0.251 µg/L	R ² =0.99788, 53.003 %Abs	RK1:26->G01@3
CYL Std 3	0.518 Abs [0.5370] {5.0 CV}	0.294 µg/L [0.272] {11.2 CV}	R ² =0.99788, 49.380 %Abs	RK1:26->H01@3
CYL Std 4	0.426 Abs	0.434 µg/L	R ² =0.99788, 40.610 %Abs	RK1:27->A02@2
CYL Std 4	0.402 Abs [0.4140] {4.1 CV}	0.484 µg/L [0.459] {7.7 CV}	R ² =0.99788, 38.322 %Abs	RK1:27->B02@2
CYL Std 5	0.272 Abs	0.949 µg/L	R ² =0.99788, 25.929 %Abs	RK1:28->C02@2
CYL Std 5	0.268 Abs [0.2700] {1.0 CV}	0.973 µg/L [0.961] {1.8 CV}	R ² =0.99788, 25.548 %Abs	RK1:28->D02@2
CYL Std 6	0.163 Abs	> 2.000 µg/L	15.539 %Abs	RK1:29->E02@2
CYL Std 6	0.168 Abs [0.1655] {2.1 CV}	> 2.000 µg/L	16.015 %Abs	RK1:29->F02@3

8/18/2021 3:28:58 PM				
CYL QCS	0.324 Abs	0.707 µg/L	30.887 %Abs	RK1:30->G02@3
CYL QCS	0.327 Abs [0.3255] {0.7 CV}	0.696 µg/L [0.701] {1.1 CV}	31.173 %Abs [31.030 %Abs]	RK1:30->H02@3

Statistic				
CYL Std 0 [MEAN]	1.0490	0.0020		
CYL Std 0 [SD]	0.0184	0.0028		
CYL Std 0 [%CV]	1.7526	141.4214		
CYL Std 1 [MEAN]	0.9025	0.0435		
CYL Std 1 [SD]	0.0092	0.0035		
CYL Std 1 [%CV]	1.0185	8.1277		
CYL Std 1 [%DIFF]		-13.0000		
CYL Std 2 [MEAN]	0.7575	0.1045		
CYL Std 2 [SD]	0.0078	0.0035		
CYL Std 2 [%CV]	1.0268	3.3833		
CYL Std 2 [%DIFF]		4.5000		
CYL Std 3 [MEAN]	0.5370	0.2725		
CYL Std 3 [SD]	0.0269	0.0304		
CYL Std 3 [%CV]	5.0037	11.1580		
CYL Std 3 [%DIFF]		9.0000		
CYL Std 4 [MEAN]	0.4140	0.4590		
CYL Std 4 [SD]	0.0170	0.0354		
CYL Std 4 [%CV]	4.0992	7.7027		
CYL Std 4 [%DIFF]		-8.2000		

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.2700	0.9610		
CYL Std 5 [SD]	0.0028	0.0170		
CYL Std 5 [%CV]	1.0476	1.7659		
CYL Std 5 [%DIFF]		-3.9000		
CYL Std 6 [MEAN]	0.1655			
CYL Std 6 [SD]	0.0035			
CYL Std 6 [%CV]	2.1363			
CYL QCS [MEAN]	0.3255	0.7015		
CYL QCS [SD]	0.0021	0.0078		
CYL QCS [%CV]	0.6517	1.1088		

Assay Curve

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

Weight: NONE

A = 1.0543

B = 0.98070

C = 0.24973

D = 0.060874

R2 coef = 0.99788

50% = 0.286

