



## Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC40789	Pokagon SP - Main Beach	7/15/2024	7/18/2024	< 0.10
AC40790	Pokagon SP - Potawatomi Inn Beach	7/15/2024	7/18/2024	< 0.10
AC40791	Chain O'Lakes SP - Sand Lake Beach	7/15/2024	7/18/2024	< 0.10
AC40792	Ouabache SP - Kunkel Lake Beach	7/15/2024	7/18/2024	< 0.10
AC40793	Potato Creek SP - Worster Lake Beach	7/16/2024	7/18/2024	< 0.10
AC40794	Mississinewa Lake - Miami SRA Beach	7/16/2024	7/18/2024	< 0.10
AC40795	Salamonie Lake - Lost Bridge West SRA Beach	7/16/2024	7/18/2024	< 0.10
AC40796	Summit Lake SP - Summit Lake Beach	7/16/2024	7/18/2024	< 0.10
AC40797	Potato Creek SP - Worster Lake Beach (Field Duplicate)	7/16/2024	7/18/2024	< 0.10
AC40798	Field Blank	7/16/2024	7/18/2024	< 0.10
AC40799	Ferdinand State Forest - Ferdinand Lake Beach	7/15/2024	7/18/2024	< 0.10
AC40800	Lincoln SP - Lake Lincoln Beach	7/15/2024	7/18/2024	0.17
AC40801	Patoka Lake - Newton Stewart SRA	7/15/2024	7/18/2024	< 0.10

# Test Report (by Request)

**Test Information**

Request: 7/18/2024 3:00:03 PM  
 Date: 7/18/2024 - 7/18/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
CYL Std 0	CYLINDROSPERMOPSIN	1.453 Abs	0.001 µg/L	R^2=0.99839, 99.5%		0.000	Kit:240520
CYL Std 0	CYLINDROSPERMOPSIN	1.465 Abs [1.4590] {0.6 C	0.000 µg/L [0.001]	R^2=0.99839, 100.4%		0.000	Kit:240520
CYL Std 1	CYLINDROSPERMOPSIN	1.214 Abs	0.037 µg/L	R^2=0.99839, 83.2%		0.050	Kit:240520
CYL Std 1	CYLINDROSPERMOPSIN	1.141 Abs [1.1775] {4.4 C	0.053 µg/L [0.045]	R^2=0.99839, 78.2%		0.050	Kit:240520
CYL Std 2	CYLINDROSPERMOPSIN	0.950 Abs	0.114 µg/L	R^2=0.99839, 65.11%		0.100	Kit:240520
CYL Std 2	CYLINDROSPERMOPSIN	0.970 Abs [0.9600] {1.5 C	0.106 µg/L [0.110]	R^2=0.99839, 66.4%		0.100	Kit:240520
CYL Std 3	CYLINDROSPERMOPSIN	0.700 Abs	0.266 µg/L	R^2=0.99839, 47.97%		0.250	Kit:240520
CYL Std 3	CYLINDROSPERMOPSIN	0.724 Abs [0.7120] {2.4 C	0.245 µg/L [0.256]	R^2=0.99839, 49.6%		0.250	Kit:240520
CYL Std 4	CYLINDROSPERMOPSIN	0.526 Abs	0.491 µg/L	R^2=0.99839, 36.0%		0.500	Kit:240520
CYL Std 4	CYLINDROSPERMOPSIN	0.561 Abs [0.5435] {4.6 C	0.431 µg/L [0.461]	R^2=0.99839, 38.4%		0.500	Kit:240520
CYL Std 5	CYLINDROSPERMOPSIN	0.369 Abs	0.966 µg/L	R^2=0.99839, 25.2%		1.000	Kit:240520
CYL Std 5	CYLINDROSPERMOPSIN	0.341 Abs [0.3550] {5.6 C	1.117 µg/L [1.042]	R^2=0.99839, 23.3%		1.000	Kit:240520
CYL Std 6	CYLINDROSPERMOPSIN	0.252 Abs	1.966 µg/L	R^2=0.99839, 17.2%		2.000	Kit:240520
CYL Std 6	CYLINDROSPERMOPSIN	0.242 Abs [0.2470] {2.9 C	> 2.000 µg/L [1.96]	16.587 %Abs		2.000	Kit:240520
CYL QCS	CYLINDROSPERMOPSIN	0.411 Abs	0.790 µg/L	28.170 %Abs			Kit:240520
CYL QCS	CYLINDROSPERMOPSIN	0.467 Abs [0.4390] {9.0 C	0.620 µg/L [0.705]	32.008 %Abs [30.0			Kit:240520

**Note**

Signature \_\_\_\_\_

Charles Hostetter 7/18/2024

\* 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) 7/18/2024 4:45:31 PM

# Test Report (by Request)

**Test Information**

Request: 7/18/2024 3:01:38 PM  
Date: 7/18/2024 - 7/18/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	CYLINDROSPERMOPSIN	1.464 Abs	0.000 µg/L	Low, 100.343 %Abs		0.050 - 2.000	Kit:24052(
LRB	CYLINDROSPERMOPSIN	1.483 Abs [1.4735] {0.9 C	0.000 µg/L [0.000]			0.050 - 2.000	Kit:24052(
LFB	CYLINDROSPERMOPSIN	0.564 Abs	0.427 µg/L	38.657 %Abs		0.050 - 2.000	Kit:24052(
LFB	CYLINDROSPERMOPSIN	0.556 Abs [0.5600] {1.0 C	0.439 µg/L [0.433]	38.108 %Abs [38.3		0.050 - 2.000	Kit:24052(
AC40789	CYLINDROSPERMOPSIN	1.463 Abs	0.000 µg/L	Low, 100.274 %Abs		0.050 - 2.000	Kit:24052(
AC40789	CYLINDROSPERMOPSIN	1.473 Abs [1.4680] {0.5 C	0.000 µg/L [0.000]			0.050 - 2.000	Kit:24052(
AC40790	CYLINDROSPERMOPSIN	1.570 Abs	0.000 µg/L	Low, 107.608 %Abs		0.050 - 2.000	Kit:24052(
AC40790	CYLINDROSPERMOPSIN	1.446 Abs [1.5080] {5.8 C	0.001 µg/L [0.001]			0.050 - 2.000	Kit:24052(
AC40791	CYLINDROSPERMOPSIN	1.457 Abs	0.000 µg/L	Low, 99.863 %Abs		0.050 - 2.000	Kit:24052(
AC40791	CYLINDROSPERMOPSIN	1.486 Abs [1.4715] {1.4 C	0.000 µg/L [0.000]			0.050 - 2.000	Kit:24052(
AC40792	CYLINDROSPERMOPSIN	1.427 Abs	0.003 µg/L	Low, 97.807 %Abs		0.050 - 2.000	Kit:24052(
AC40792	CYLINDROSPERMOPSIN	1.509 Abs [1.4680] {3.9 C	0.000 µg/L [0.002]			0.050 - 2.000	Kit:24052(
AC40793	CYLINDROSPERMOPSIN	1.381 Abs	0.009 µg/L	Low, 94.654 %Abs		0.050 - 2.000	Kit:24052(
AC40793	CYLINDROSPERMOPSIN	1.360 Abs [1.3705] {1.1 C	0.012 µg/L [0.011]			0.050 - 2.000	Kit:24052(
AC40794	CYLINDROSPERMOPSIN	1.450 Abs	0.001 µg/L	Low, 99.383 %Abs		0.050 - 2.000	Kit:24052(
AC40794	CYLINDROSPERMOPSIN	1.431 Abs [1.4405] {0.9 C	0.003 µg/L [0.002]			0.050 - 2.000	Kit:24052(
AC40794MS	CYLINDROSPERMOPSIN	0.504 Abs	0.535 µg/L	34.544 %Abs		0.050 - 2.000	Kit:24052(
AC40794MS	CYLINDROSPERMOPSIN	0.519 Abs [0.5115] {2.1 C	0.505 µg/L [0.520]	35.572 %Abs [35.0		0.050 - 2.000	Kit:24052(
AC40794MSD	CYLINDROSPERMOPSIN	0.509 Abs	0.525 µg/L	34.887 %Abs		0.050 - 2.000	Kit:24052(
AC40794MSD	CYLINDROSPERMOPSIN	0.419 Abs [0.4640] {13.7	0.762 µg/L [0.644]	28.718 %Abs [31.8		0.050 - 2.000	Kit:24052(
AC40795	CYLINDROSPERMOPSIN	1.384 Abs	0.008 µg/L	Low, 94.859 %Abs		0.050 - 2.000	Kit:24052(
AC40795	CYLINDROSPERMOPSIN	1.351 Abs [1.3675] {1.7 C	0.013 µg/L [0.011]			0.050 - 2.000	Kit:24052(
AC40796	CYLINDROSPERMOPSIN	1.180 Abs	0.044 µg/L	Low, 80.877 %Abs		0.050 - 2.000	Kit:24052(
AC40796	CYLINDROSPERMOPSIN	1.168 Abs [1.1740] {0.7 C	0.047 µg/L [0.046]			0.050 - 2.000	Kit:24052(
AC40797	CYLINDROSPERMOPSIN	1.347 Abs	0.013 µg/L	Low, 92.324 %Abs		0.050 - 2.000	Kit:24052(
AC40797	CYLINDROSPERMOPSIN	1.375 Abs [1.3610] {1.5 C	0.010 µg/L [0.012]			0.050 - 2.000	Kit:24052(
AC40798	CYLINDROSPERMOPSIN	1.371 Abs	0.010 µg/L	Low, 93.968 %Abs		0.050 - 2.000	Kit:24052(
AC40798	CYLINDROSPERMOPSIN	1.389 Abs [1.3800] {0.9 C	0.008 µg/L [0.009]			0.050 - 2.000	Kit:24052(
AC40799	CYLINDROSPERMOPSIN	1.390 Abs	0.008 µg/L	Low, 95.271 %Abs		0.050 - 2.000	Kit:24052(
AC40799	CYLINDROSPERMOPSIN	1.413 Abs [1.4015] {1.2 C	0.005 µg/L [0.007]			0.050 - 2.000	Kit:24052(
AC40800	CYLINDROSPERMOPSIN	0.842 Abs	0.166 µg/L	57.711 %Abs		0.050 - 2.000	Kit:24052(
AC40800	CYLINDROSPERMOPSIN	0.834 Abs [0.8380] {0.7 C	0.170 µg/L [0.168]	57.162 %Abs [57.4		0.050 - 2.000	Kit:24052(
AC40801	CYLINDROSPERMOPSIN	1.406 Abs	0.006 µg/L	Low, 96.367 %Abs		0.050 - 2.000	Kit:24052(
AC40801	CYLINDROSPERMOPSIN	1.406 Abs [1.4060] {0.0 C	0.006 µg/L [0.006]			0.050 - 2.000	Kit:24052(

**Note**

Signature \_\_\_\_\_

Charles Hostetter 7/19/2024

**Assay Information**

Assay Name: CYLINDROSPERMOPSIS\_  
 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:2405201466

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
<b>7/18/2024 3:00:03 PM</b>				
CYL Std 0	1.453 Abs	0.001 µg/L	R <sup>2</sup> =0.99839, 99.589 %Abs	RK1:23->A01@2
CYL Std 0	1.465 Abs [1.4590] {0.6 CV}	0.000 µg/L [0.001] {141.4 CV}	R <sup>2</sup> =0.99839, 100.411 %Abs	RK1:23->B01@2
CYL Std 1	1.214 Abs	0.037 µg/L	R <sup>2</sup> =0.99839, 83.208 %Abs	RK1:24->C01@2
CYL Std 1	1.141 Abs [1.1775] {4.4 CV}	0.053 µg/L [0.045] {25.1 CV}	R <sup>2</sup> =0.99839, 78.204 %Abs	RK1:24->D01@2
CYL Std 2	0.950 Abs	0.114 µg/L	R <sup>2</sup> =0.99839, 65.113 %Abs	RK1:25->E01@2
CYL Std 2	0.970 Abs [0.9600] {1.5 CV}	0.106 µg/L [0.110] {5.1 CV}	R <sup>2</sup> =0.99839, 66.484 %Abs	RK1:25->F01@3
CYL Std 3	0.700 Abs	0.266 µg/L	R <sup>2</sup> =0.99839, 47.978 %Abs	RK1:26->G01@3
CYL Std 3	0.724 Abs [0.7120] {2.4 CV}	0.245 µg/L [0.256] {5.8 CV}	R <sup>2</sup> =0.99839, 49.623 %Abs	RK1:26->H01@3
CYL Std 4	0.526 Abs	0.491 µg/L	R <sup>2</sup> =0.99839, 36.052 %Abs	RK1:27->A02@2
CYL Std 4	0.561 Abs [0.5435] {4.6 CV}	0.431 µg/L [0.461] {9.2 CV}	R <sup>2</sup> =0.99839, 38.451 %Abs	RK1:27->B02@2
CYL Std 5	0.369 Abs	0.966 µg/L	R <sup>2</sup> =0.99839, 25.291 %Abs	RK1:28->C02@2
CYL Std 5	0.341 Abs [0.3550] {5.6 CV}	1.117 µg/L [1.042] {10.3 CV}	R <sup>2</sup> =0.99839, 23.372 %Abs	RK1:28->D02@2
CYL Std 6	0.252 Abs	1.966 µg/L	R <sup>2</sup> =0.99839, 17.272 %Abs	RK1:29->E02@2
CYL Std 6	0.242 Abs [0.2470] {2.9 CV}	> 2.000 µg/L [1.966]	16.587 %Abs	RK1:29->F02@3
*****				
<b>7/18/2024 3:00:03 PM</b>				
CYL QCS	0.411 Abs	0.790 µg/L	28.170 %Abs	RK1:30->G02@3
CYL QCS	0.467 Abs [0.4390] {9.0 CV}	0.620 µg/L [0.705] {17.1 CV}	32.008 %Abs [30.089 %Abs]	RK1:30->H02@3
*****				
<b>Statistic</b>				
CYL Std 0 [MEAN]	1.4590	0.0005		
CYL Std 0 [SD]	0.0085	0.0007		
CYL Std 0 [%CV]	0.5816	141.4214		
CYL Std 1 [MEAN]	1.1775	0.0450		
CYL Std 1 [SD]	0.0516	0.0113		
CYL Std 1 [%CV]	4.3838	25.1416		
CYL Std 1 [%DIFF]		-10.0000		
CYL Std 2 [MEAN]	0.9600	0.1100		
CYL Std 2 [SD]	0.0141	0.0057		
CYL Std 2 [%CV]	1.4731	5.1426		
CYL Std 2 [%DIFF]		10.0000		
CYL Std 3 [MEAN]	0.7120	0.2555		
CYL Std 3 [SD]	0.0170	0.0148		
CYL Std 3 [%CV]	2.3835	5.8118		
CYL Std 3 [%DIFF]		2.2000		
CYL Std 4 [MEAN]	0.5435	0.4610		
CYL Std 4 [SD]	0.0247	0.0424		
CYL Std 4 [%CV]	4.5536	9.2031		
CYL Std 4 [%DIFF]		-7.8000		

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.3550	1.0415		
CYL Std 5 [SD]	0.0198	0.1068		
CYL Std 5 [%CV]	5.5772	10.2519		
CYL Std 5 [%DIFF]		4.1500		
CYL Std 6 [MEAN]	0.2470			
CYL Std 6 [SD]	0.0071			
CYL Std 6 [%CV]	2.8628			
CYL QCS [MEAN]	0.4390	0.7050		
CYL QCS [SD]	0.0396	0.1202		
CYL QCS [%CV]	9.0200	17.0508		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.4626  
 B = 0.86998  
 C = 0.20995  
 D = 0.079081  
 R2 coef = 0.99839  
 50% = 0.241

