



Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC19241	Pokagon SP - Main Beach	8/14/2023	8/16/2023	< 0.15
AC19242	Pokagon SP - Potawatomi Inn Beach	8/14/2023	8/16/2023	< 0.15
AC19243	Chain O'Lakes SP - Sand Lake Beach	8/14/2023	8/16/2023	< 0.15
AC19244	Ouabache SP - Kunkel Lake Beach	8/14/2023	8/16/2023	< 0.15
AC19245	Potato Creek SP - Worster Lake Beach	8/15/2023	8/16/2023	< 0.15
AC19246	Mississinewa Lake - Miami SRA Beach	8/15/2023	8/16/2023	< 0.15
AC19247	Salamonie Lake - Lost Bridge West SRA Beach	8/15/2023	8/16/2023	< 0.15
AC19248	Summit Lake SP - Summit Lake Beach	8/15/2023	8/16/2023	< 0.15
AC19249	Ouabache SP - Kunkel Lake Beach (Field Duplicate)	8/14/2023	8/16/2023	< 0.15
AC19250	Field Blank	8/14/2023	8/16/2023	< 0.15
AC19251	Ferdinand State Forest - Ferdinand Lake Beach	8/14/2023	8/16/2023	< 0.15
AC19252	Lincoln SP - Lake Lincoln Beach	8/14/2023	8/16/2023	0.23
AC19253	Patoka Lake - Newton Stewart SRA	8/14/2023	8/16/2023	< 0.15

Test Report (by Request)

Test Information

Request: 8/16/2023 7:12:31 PM
Date: 8/16/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
CYL Std 0	CYLINDROSPERMOPSIN	0.732 Abs	0.002 µg/L	R ² =0.99853, 99.5%		0.000	Kit:P23C0
CYL Std 0	CYLINDROSPERMOPSIN	0.738 Abs [0.7350] {0.6 C	0.000 µg/L [0.001]	R ² =0.99853, 100.4%		0.000	Kit:P23C0
CYL Std 1	CYLINDROSPERMOPSIN	0.592 Abs	0.045 µg/L	R ² =0.99853, 80.5%		0.050	Kit:P23C0
CYL Std 1	CYLINDROSPERMOPSIN	0.582 Abs [0.5870] {1.2 C	0.049 µg/L [0.047]	R ² =0.99853, 79.1%		0.050	Kit:P23C0
CYL Std 2	CYLINDROSPERMOPSIN	0.462 Abs	0.100 µg/L	R ² =0.99853, 62.8%		0.100	Kit:P23C0
CYL Std 2	CYLINDROSPERMOPSIN	0.448 Abs [0.4550] {2.2 C	0.107 µg/L [0.104]	R ² =0.99853, 60.9%		0.100	Kit:P23C0
CYL Std 3	CYLINDROSPERMOPSIN	0.274 Abs	0.264 µg/L	R ² =0.99853, 37.2%		0.250	Kit:P23C0
CYL Std 3	CYLINDROSPERMOPSIN	0.272 Abs [0.2730] {0.5 C	0.267 µg/L [0.266]	R ² =0.99853, 37.0%		0.250	Kit:P23C0
CYL Std 4	CYLINDROSPERMOPSIN	0.197 Abs	0.435 µg/L	R ² =0.99853, 26.8%		0.500	Kit:P23C0
CYL Std 4	CYLINDROSPERMOPSIN	0.193 Abs [0.1950] {1.5 C	0.448 µg/L [0.442]	R ² =0.99853, 26.2%		0.500	Kit:P23C0
CYL Std 5	CYLINDROSPERMOPSIN	0.121 Abs	0.915 µg/L	R ² =0.99853, 16.4%		1.000	Kit:P23C0
CYL Std 5	CYLINDROSPERMOPSIN	0.113 Abs [0.1170] {4.8 C	1.027 µg/L [0.971]	R ² =0.99853, 15.3%		1.000	Kit:P23C0
CYL Std 6	CYLINDROSPERMOPSIN	0.074 Abs	> 2.000 µg/L	10.068 %Abs		2.000	Kit:P23C0
CYL Std 6	CYLINDROSPERMOPSIN	0.071 Abs [0.0725] {2.9 C	> 2.000 µg/L	9.660 %Abs		2.000	Kit:P23C0
CYL QCS	CYLINDROSPERMOPSIN	0.148 Abs	0.666 µg/L	20.136 %Abs			Kit:P23C0
CYL QCS	CYLINDROSPERMOPSIN	0.136 Abs [0.1420] {6.0 C	0.759 µg/L [0.713]	18.503 %Abs [19.3			Kit:P23C0

Note

Signature *David Jordan*

David Jordan 8/16/2023

Test Report (by Request)

Test Information

Request: 8/16/2023 7:13:55 PM
Date: 8/16/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (CYL)	CYLINDROSPERMOPSIN	0.722 Abs	0.005 µg/L	Low, 98.231 %Abs		0.050 - 2.000	Kit:P23C0
LRB (CYL)	CYLINDROSPERMOPSIN	0.690 Abs [0.7060] {3.2 C	0.015 µg/L [0.010]	Low, 93.878 %Abs		0.050 - 2.000	Kit:P23C0
LFB (CYL)	CYLINDROSPERMOPSIN	0.158 Abs	0.603 µg/L	21.497 %Abs		0.050 - 2.000	Kit:P23C0
LFB (CYL)	CYLINDROSPERMOPSIN	0.155 Abs [0.1565] {1.4 C	0.621 µg/L [0.612]	21.088 %Abs [21.2		0.050 - 2.000	Kit:P23C0
AC19241	CYLINDROSPERMOPSIN	0.667 Abs	0.022 µg/L	Low, 90.748 %Abs		0.050 - 2.000	Kit:P23C0
AC19241	CYLINDROSPERMOPSIN	0.666 Abs [0.6665] {0.1 C	0.022 µg/L [0.022]	Low, 90.612 %Abs		0.050 - 2.000	Kit:P23C0
AC19242	CYLINDROSPERMOPSIN	0.674 Abs	0.020 µg/L	Low, 91.701 %Abs		0.050 - 2.000	Kit:P23C0
AC19242	CYLINDROSPERMOPSIN	0.704 Abs [0.6890] {3.1 C	0.011 µg/L [0.016]	Low, 95.782 %Abs		0.050 - 2.000	Kit:P23C0
AC19242MS	CYLINDROSPERMOPSIN	0.186 Abs	0.473 µg/L	25.306 %Abs		0.050 - 2.000	Kit:P23C0
AC19242MS	CYLINDROSPERMOPSIN	0.186 Abs [0.1860] {0.0 C	0.473 µg/L [0.473]	25.306 %Abs [25.3		0.050 - 2.000	Kit:P23C0
AC19242MSD	CYLINDROSPERMOPSIN	0.179 Abs	0.501 µg/L	24.354 %Abs		0.050 - 2.000	Kit:P23C0
AC19242MSD	CYLINDROSPERMOPSIN	0.175 Abs [0.1770] {1.6 C	0.518 µg/L [0.510]	23.810 %Abs [24.0		0.050 - 2.000	Kit:P23C0
AC19243	CYLINDROSPERMOPSIN	0.697 Abs	0.013 µg/L	Low, 94.830 %Abs		0.050 - 2.000	Kit:P23C0
AC19243	CYLINDROSPERMOPSIN	0.699 Abs [0.6980] {0.2 C	0.012 µg/L [0.013]	Low, 95.102 %Abs		0.050 - 2.000	Kit:P23C0
AC19244	CYLINDROSPERMOPSIN	0.692 Abs	0.014 µg/L	Low, 94.150 %Abs		0.050 - 2.000	Kit:P23C0
AC19244	CYLINDROSPERMOPSIN	0.730 Abs [0.7110] {3.8 C	0.003 µg/L [0.009]	Low, 99.320 %Abs		0.050 - 2.000	Kit:P23C0
AC19245	CYLINDROSPERMOPSIN	0.767 Abs	0.000 µg/L	Low, 104.354 %Abs		0.050 - 2.000	Kit:P23C0
AC19245	CYLINDROSPERMOPSIN	0.735 Abs [0.7510] {3.0 C	0.001 µg/L [0.001]	Low, 100.000 %Abs		0.050 - 2.000	Kit:P23C0
AC19246	CYLINDROSPERMOPSIN	0.719 Abs	0.006 µg/L	Low, 97.823 %Abs		0.050 - 2.000	Kit:P23C0
AC19246	CYLINDROSPERMOPSIN	0.714 Abs [0.7165] {0.5 C	0.008 µg/L [0.007]	Low, 97.143 %Abs		0.050 - 2.000	Kit:P23C0
AC19247	CYLINDROSPERMOPSIN	0.732 Abs	0.002 µg/L	Low, 99.592 %Abs		0.050 - 2.000	Kit:P23C0
AC19247	CYLINDROSPERMOPSIN	0.734 Abs [0.7330] {0.2 C	0.002 µg/L [0.002]	Low, 99.864 %Abs		0.050 - 2.000	Kit:P23C0
AC19248	CYLINDROSPERMOPSIN	0.565 Abs	0.055 µg/L	76.871 %Abs		0.050 - 2.000	Kit:P23C0
AC19248	CYLINDROSPERMOPSIN	0.568 Abs [0.5665] {0.4 C	0.054 µg/L [0.055]	77.279 %Abs [77.0		0.050 - 2.000	Kit:P23C0
AC19249	CYLINDROSPERMOPSIN	0.753 Abs	0.000 µg/L	Low, 102.449 %Abs		0.050 - 2.000	Kit:P23C0
AC19249	CYLINDROSPERMOPSIN	0.733 Abs [0.7430] {1.9 C	0.002 µg/L [0.001]	Low, 99.728 %Abs		0.050 - 2.000	Kit:P23C0
AC19250	CYLINDROSPERMOPSIN	0.728 Abs	0.004 µg/L	Low, 99.048 %Abs		0.050 - 2.000	Kit:P23C0
AC19250	CYLINDROSPERMOPSIN	0.741 Abs [0.7345] {1.3 C	0.000 µg/L [0.002]	Low, 100.816 %Abs		0.050 - 2.000	Kit:P23C0
AC19251	CYLINDROSPERMOPSIN	0.769 Abs	0.000 µg/L	Low, 104.626 %Abs		0.050 - 2.000	Kit:P23C0
AC19251	CYLINDROSPERMOPSIN	0.757 Abs [0.7630] {1.1 C	0.000 µg/L [0.000]	Low, 102.993 %Abs		0.050 - 2.000	Kit:P23C0
AC19252	CYLINDROSPERMOPSIN	0.301 Abs	0.227 µg/L	40.952 %Abs		0.050 - 2.000	Kit:P23C0
AC19252	CYLINDROSPERMOPSIN	0.303 Abs [0.3020] {0.5 C	0.225 µg/L [0.226]	41.224 %Abs [41.0		0.050 - 2.000	Kit:P23C0
AC19253	CYLINDROSPERMOPSIN	0.859 Abs	0.000 µg/L	Low, 116.871 %Abs		0.050 - 2.000	Kit:P23C0
AC19253	CYLINDROSPERMOPSIN	0.807 Abs [0.8330] {4.4 C	0.000 µg/L [0.000]	Low, 109.796 %Abs		0.050 - 2.000	Kit:P23C0

Note

Signature *David Jordan*

David Jordan 8/16/2023

* 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 (6.4.1.1171/1085/1.00/0.95) 8/17/2023 9:21:37 AM

Assay Information

Assay Name: CYLINDROSPERMOPSPIN_
 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:P23C0657

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
8/16/2023 7:12:31 PM				
CYL Std 0	0.732 Abs	0.002 µg/L	R ² =0.99853, 99.592 %Abs	RK1:23->A01@2
CYL Std 0	0.738 Abs [0.7350] {0.6 CV}	0.000 µg/L [0.001] {141.4 CV}	R ² =0.99853, 100.408 %Abs	RK1:23->B01@2
CYL Std 1	0.592 Abs	0.045 µg/L	R ² =0.99853, 80.544 %Abs	RK1:24->C01@2
CYL Std 1	0.582 Abs [0.5870] {1.2 CV}	0.049 µg/L [0.047] {6.0 CV}	R ² =0.99853, 79.184 %Abs	RK1:24->D01@2
CYL Std 2	0.462 Abs	0.100 µg/L	R ² =0.99853, 62.857 %Abs	RK1:25->E01@2
CYL Std 2	0.448 Abs [0.4550] {2.2 CV}	0.107 µg/L [0.104] {4.8 CV}	R ² =0.99853, 60.952 %Abs	RK1:25->F01@3
CYL Std 3	0.274 Abs	0.264 µg/L	R ² =0.99853, 37.279 %Abs	RK1:26->G01@3
CYL Std 3	0.272 Abs [0.2730] {0.5 CV}	0.267 µg/L [0.266] {0.8 CV}	R ² =0.99853, 37.007 %Abs	RK1:26->H01@3
CYL Std 4	0.197 Abs	0.435 µg/L	R ² =0.99853, 26.803 %Abs	RK1:27->A02@2
CYL Std 4	0.193 Abs [0.1950] {1.5 CV}	0.448 µg/L [0.442] {2.1 CV}	R ² =0.99853, 26.259 %Abs	RK1:27->B02@2
CYL Std 5	0.121 Abs	0.915 µg/L	R ² =0.99853, 16.463 %Abs	RK1:28->C02@2
CYL Std 5	0.113 Abs [0.1170] {4.8 CV}	1.027 µg/L [0.971] {8.2 CV}	R ² =0.99853, 15.374 %Abs	RK1:28->D02@2
CYL Std 6	0.074 Abs	> 2.000 µg/L	10.068 %Abs	RK1:29->E02@2
CYL Std 6	0.071 Abs [0.0725] {2.9 CV}	> 2.000 µg/L	9.660 %Abs	RK1:29->F02@3

8/16/2023 7:12:31 PM				
CYL QCS	0.148 Abs	0.666 µg/L	20.136 %Abs	RK1:30->G02@3
CYL QCS	0.136 Abs [0.1420] {6.0 CV}	0.759 µg/L [0.713] {9.2 CV}	18.503 %Abs [19.320 %Abs]	RK1:30->H02@3

Statistic				
CYL Std 0 [MEAN]	0.7350	0.0010		
CYL Std 0 [SD]	0.0042	0.0014		
CYL Std 0 [%CV]	0.5772	141.4214		
CYL Std 1 [MEAN]	0.5870	0.0470		
CYL Std 1 [SD]	0.0071	0.0028		
CYL Std 1 [%CV]	1.2046	6.0179		
CYL Std 1 [%DIFF]		-6.0000		
CYL Std 2 [MEAN]	0.4550	0.1035		
CYL Std 2 [SD]	0.0099	0.0049		
CYL Std 2 [%CV]	2.1757	4.7824		
CYL Std 2 [%DIFF]		3.5000		
CYL Std 3 [MEAN]	0.2730	0.2655		
CYL Std 3 [SD]	0.0014	0.0021		
CYL Std 3 [%CV]	0.5180	0.7990		
CYL Std 3 [%DIFF]		6.2000		
CYL Std 4 [MEAN]	0.1950	0.4415		
CYL Std 4 [SD]	0.0028	0.0092		
CYL Std 4 [%CV]	1.4505	2.0821		
CYL Std 4 [%DIFF]		-11.7000		

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.1170	0.9710		
CYL Std 5 [SD]	0.0057	0.0792		
CYL Std 5 [%CV]	4.8349	8.1561		
CYL Std 5 [%DIFF]		-2.9000		
CYL Std 6 [MEAN]	0.0725			
CYL Std 6 [SD]	0.0021			
CYL Std 6 [%CV]	2.9260			
CYL QCS [MEAN]	0.1420	0.7125		
CYL QCS [SD]	0.0085	0.0658		
CYL QCS [%CV]	5.9755	9.2296		

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 0.73746
 B = 1.1562
 C = 0.14084
 D = 0.050177
 R2 coef = 0.99853
 50% = 0.161

