



## Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB43832	Raccoon Lake SRA	8/10/2020	8/12/2020	< 0.15
AB43833	Deam Lake SRA	8/11/2020	8/12/2020	< 0.15
AB43834	Cagles Mill Lake Beach	8/10/2020	8/12/2020	< 0.15
AB43835	Paynetown SRA	8/10/2020	8/12/2020	< 0.15
AB43836	Fairfax SRA	8/10/2020	8/12/2020	< 0.15
AB43837	Starve Hollow SRA	8/10/2020	8/12/2020	< 0.15
AB43838	Whitewater Memorial SP	8/11/2020	8/12/2020	< 0.15
AB43839	Quakertown SRA	8/11/2020	8/12/2020	< 0.15
AB43840	Mounds SRA	8/11/2020	8/12/2020	< 0.15
AB43841	Hardy Lake SRA	8/11/2020	8/12/2020	< 0.15
AB43842	Fairfax SRA (Field Duplicate)	8/10/2020	8/12/2020	< 0.15
AB43843	Field Blank	8/10/2020	8/12/2020	< 0.15
AB43844	Lincoln State Park	8/10/2020	8/12/2020	0.29
AB43845	Ferdinand State Forest Lake	8/10/2020	8/12/2020	< 0.15
AB43846	Patoka Lake	8/10/2020	8/12/2020	< 0.15
AB43847	Ft. Harrison SP Dog Lake	8/11/2020	8/12/2020	1.04

# Test Report (by Request)

**Test Information**

 Request: 8/12/2020 2:24:13 PM  
 Date: 8/12/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
CYL Std 0	CYLINDROSPERMOPSIN	0.991 Abs	0.000 µg/L	R^2=0.99665, 100.91		19L2079
CYL Std 0	CYLINDROSPERMOPSIN	0.973 Abs [0.9820] {1.3 CV}	0.001 µg/L [0.001] {1.3 CV}	R^2=0.99665, 99.084		19L2079
CYL Std 1	CYLINDROSPERMOPSIN	0.871 Abs	0.030 µg/L	R^2=0.99665, 88.697		19L2079
CYL Std 1	CYLINDROSPERMOPSIN	0.827 Abs [0.8490] {3.7 CV}	0.053 µg/L [0.041] {3.7 CV}	R^2=0.99665, 84.216		19L2079
CYL Std 2	CYLINDROSPERMOPSIN	0.749 Abs	0.111 µg/L	R^2=0.99665, 76.273		19L2079
CYL Std 2	CYLINDROSPERMOPSIN	0.734 Abs [0.7415] {1.4 CV}	0.125 µg/L [0.118] {1.4 CV}	R^2=0.99665, 74.745		19L2079
CYL Std 3	CYLINDROSPERMOPSIN	0.629 Abs	0.259 µg/L	R^2=0.99665, 64.053		19L2079
CYL Std 3	CYLINDROSPERMOPSIN	0.626 Abs [0.6275] {0.3 CV}	0.264 µg/L [0.262] {0.3 CV}	R^2=0.99665, 63.747		19L2079
CYL Std 4	CYLINDROSPERMOPSIN	0.541 Abs	0.433 µg/L	R^2=0.99665, 55.092		19L2079
CYL Std 4	CYLINDROSPERMOPSIN	0.531 Abs [0.5360] {1.3 CV}	0.457 µg/L [0.445] {1.3 CV}	R^2=0.99665, 54.073		19L2079
CYL Std 5	CYLINDROSPERMOPSIN	0.378 Abs	1.019 µg/L	R^2=0.99665, 38.493		19L2079
CYL Std 5	CYLINDROSPERMOPSIN	0.363 Abs [0.3705] {2.9 CV}	1.100 µg/L [1.059] {2.9 CV}	R^2=0.99665, 36.965		19L2079
CYL Std 6	CYLINDROSPERMOPSIN	0.250 Abs	1.979 µg/L	R^2=0.99665, 25.458		19L2079
CYL Std 6	CYLINDROSPERMOPSIN	0.251 Abs [0.2505] {0.3 CV}	1.969 µg/L [1.974] {0.3 CV}	R^2=0.99665, 25.560		19L2079
CYL QCS	CYLINDROSPERMOPSIN	0.444 Abs	0.726 µg/L	45.214 %Abs		19L2079
CYL QCS	CYLINDROSPERMOPSIN	0.445 Abs [0.4445] {0.2 CV}	0.722 µg/L [0.724] {0.2 CV}	45.316 %Abs [45.265]		19L2079

**Note**

Signature

Charles Hostetter 8/13/20

# Test Report (by Request)

**Test Information**

Request: 8/12/2020 2:35:07 PM  
Date: 8/12/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	CYLINDROSPERMOPSIN	0.950 Abs	0.004 µg/L	<b>LOW, 96.741 %ABS</b>	0.050 - 2.000	19L2079
LRB	CYLINDROSPERMOPSIN	0.938 Abs [0.9440] {0.9 CV}	0.007 µg/L [0.006] {3}	<b>LOW, 95.519 %ABS</b>	0.050 - 2.000	19L2079
LFB	CYLINDROSPERMOPSIN	0.483 Abs	0.592 µg/L	49.185 %Abs	0.050 - 2.000	19L2079
LFB	CYLINDROSPERMOPSIN	0.475 Abs [0.4790] {1.2 CV}	0.618 µg/L [0.605] {3}	48.371 %Abs [48.778]	0.050 - 2.000	19L2079
AB43832	CYLINDROSPERMOPSIN	0.886 Abs	0.023 µg/L	<b>LOW, 90.224 %ABS</b>	0.050 - 2.000	19L2079
AB43832	CYLINDROSPERMOPSIN	0.863 Abs [0.8745] {1.9 CV}	0.033 µg/L [0.028] {2}	<b>LOW, 87.882 %ABS</b>	0.050 - 2.000	19L2079
AB43833	CYLINDROSPERMOPSIN	0.892 Abs	0.021 µg/L	<b>LOW, 90.835 %ABS</b>	0.050 - 2.000	19L2079
AB43833	CYLINDROSPERMOPSIN	0.913 Abs [0.9025] {1.6 CV}	0.013 µg/L [0.017] {3}	<b>LOW, 92.974 %ABS</b>	0.050 - 2.000	19L2079
AB43834	CYLINDROSPERMOPSIN	0.939 Abs	0.006 µg/L	<b>LOW, 95.621 %ABS</b>	0.050 - 2.000	19L2079
AB43834	CYLINDROSPERMOPSIN	0.931 Abs [0.9350] {0.6 CV}	0.008 µg/L [0.007] {2}	<b>LOW, 94.807 %ABS</b>	0.050 - 2.000	19L2079
AB43835	CYLINDROSPERMOPSIN	0.885 Abs	0.024 µg/L	<b>LOW, 90.122 %ABS</b>	0.050 - 2.000	19L2079
AB43835	CYLINDROSPERMOPSIN	0.876 Abs [0.8805] {0.7 CV}	0.027 µg/L [0.025] {8}	<b>LOW, 89.206 %ABS</b>	0.050 - 2.000	19L2079
AB43836	CYLINDROSPERMOPSIN	0.867 Abs	0.031 µg/L	<b>LOW, 88.289 %ABS</b>	0.050 - 2.000	19L2079
AB43836	CYLINDROSPERMOPSIN	0.879 Abs [0.8730] {1.0 CV}	0.026 µg/L [0.029] {1}	<b>LOW, 89.511 %ABS</b>	0.050 - 2.000	19L2079
AB43837	CYLINDROSPERMOPSIN	0.871 Abs	0.030 µg/L	<b>LOW, 88.697 %ABS</b>	0.050 - 2.000	19L2079
AB43837	CYLINDROSPERMOPSIN	0.885 Abs [0.8780] {1.1 CV}	0.024 µg/L [0.027] {1}	<b>LOW, 90.122 %ABS</b>	0.050 - 2.000	19L2079
AB43837MS	CYLINDROSPERMOPSIN	0.498 Abs	0.547 µg/L	50.713 %Abs	0.050 - 2.000	19L2079
AB43837MS	CYLINDROSPERMOPSIN	0.486 Abs [0.4920] {1.7 CV}	0.583 µg/L [0.565] {4}	49.491 %Abs [50.102]	0.050 - 2.000	19L2079
AB43837MSD	CYLINDROSPERMOPSIN	0.478 Abs	0.608 µg/L	48.676 %Abs	0.050 - 2.000	19L2079
AB43837MSD	CYLINDROSPERMOPSIN	0.472 Abs [0.4750] {0.9 CV}	0.627 µg/L [0.617] {2}	48.065 %Abs [48.371]	0.050 - 2.000	19L2079
AB43838	CYLINDROSPERMOPSIN	0.864 Abs	0.033 µg/L	<b>LOW, 87.984 %ABS</b>	0.050 - 2.000	19L2079
AB43838	CYLINDROSPERMOPSIN	0.851 Abs [0.8575] {1.1 CV}	0.039 µg/L [0.036] {1}	<b>LOW, 86.660 %ABS</b>	0.050 - 2.000	19L2079
AB43839	CYLINDROSPERMOPSIN	0.874 Abs	0.028 µg/L	<b>LOW, 89.002 %ABS</b>	0.050 - 2.000	19L2079
AB43839	CYLINDROSPERMOPSIN	0.885 Abs [0.8795] {0.9 CV}	0.024 µg/L [0.026] {1}	<b>LOW, 90.122 %ABS</b>	0.050 - 2.000	19L2079
AB43840	CYLINDROSPERMOPSIN	0.909 Abs	0.015 µg/L	<b>LOW, 92.566 %ABS</b>	0.050 - 2.000	19L2079
AB43840	CYLINDROSPERMOPSIN	0.875 Abs [0.8920] {2.7 CV}	0.028 µg/L [0.022] {4}	<b>LOW, 89.104 %ABS</b>	0.050 - 2.000	19L2079
AB43841	CYLINDROSPERMOPSIN	0.868 Abs	0.031 µg/L	<b>LOW, 88.391 %ABS</b>	0.050 - 2.000	19L2079
AB43841	CYLINDROSPERMOPSIN	0.854 Abs [0.8610] {1.1 CV}	0.038 µg/L [0.034] {1}	<b>LOW, 86.965 %ABS</b>	0.050 - 2.000	19L2079
AB43842	CYLINDROSPERMOPSIN	0.868 Abs	0.031 µg/L	<b>LOW, 88.391 %ABS</b>	0.050 - 2.000	19L2079
AB43842	CYLINDROSPERMOPSIN	0.867 Abs [0.8675] {0.1 CV}	0.031 µg/L [0.031] {0}	<b>LOW, 88.289 %ABS</b>	0.050 - 2.000	19L2079
AB43843	CYLINDROSPERMOPSIN	0.915 Abs	0.013 µg/L	<b>LOW, 93.177 %ABS</b>	0.050 - 2.000	19L2079
AB43843	CYLINDROSPERMOPSIN	0.925 Abs [0.9200] {0.8 CV}	0.010 µg/L [0.012] {1}	<b>LOW, 94.196 %ABS</b>	0.050 - 2.000	19L2079
AB43844	CYLINDROSPERMOPSIN	0.619 Abs	0.276 µg/L	63.035 %Abs	0.050 - 2.000	19L2079
AB43844	CYLINDROSPERMOPSIN	0.604 Abs [0.6115] {1.7 CV}	0.302 µg/L [0.289] {6}	61.507 %Abs [62.271]	0.050 - 2.000	19L2079
AB43845	CYLINDROSPERMOPSIN	0.848 Abs	0.041 µg/L	<b>LOW, 86.354 %ABS</b>	0.050 - 2.000	19L2079
AB43845	CYLINDROSPERMOPSIN	0.846 Abs [0.8470] {0.2 CV}	0.042 µg/L [0.042] {1}	<b>LOW, 86.151 %ABS</b>	0.050 - 2.000	19L2079
AB43846	CYLINDROSPERMOPSIN	0.832 Abs	0.050 µg/L	84.725 %Abs	0.050 - 2.000	19L2079
AB43846	CYLINDROSPERMOPSIN	0.832 Abs [0.8320] {0.0 CV}	0.050 µg/L [0.050] {0}	84.725 %Abs [84.725]	0.050 - 2.000	19L2079
AB43847	CYLINDROSPERMOPSIN	0.365 Abs	1.089 µg/L	37.169 %Abs	0.050 - 2.000	19L2079
AB43847	CYLINDROSPERMOPSIN	0.383 Abs [0.3740] {3.4 CV}	0.993 µg/L [1.041] {6}	39.002 %Abs [38.086]	0.050 - 2.000	19L2079
LFB 2	CYLINDROSPERMOPSIN	0.454 Abs	0.689 µg/L	46.232 %Abs	0.050 - 2.000	19L2079
LFB 2	CYLINDROSPERMOPSIN	0.440 Abs [0.4470] {2.2 CV}	0.741 µg/L [0.715] {5}	44.807 %Abs [45.519]	0.050 - 2.000	19L2079
LRB 2	CYLINDROSPERMOPSIN	0.847 Abs	0.041 µg/L	<b>LOW, 86.253 %ABS</b>	0.050 - 2.000	19L2079
LRB 2	CYLINDROSPERMOPSIN	0.883 Abs [0.8650] {2.9 CV}	0.024 µg/L [0.032] {3}	<b>LOW, 89.919 %ABS</b>	0.050 - 2.000	19L2079

**Note**

Signature

\* 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) 8/12/2020 6:48:21 PM

Charles Hostetter 8/13/20

**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
<b>8/12/2020 2:24:13 PM</b>				
CYL Std 0	0.991 Abs		R <sup>2</sup> =0.99665, 100.916 %Abs	RK1:23->A01@2
CYL Std 0	0.973 Abs [0.9820] {1.3 CV}		R <sup>2</sup> =0.99665, 99.084 %Abs	RK1:23->B01@2
CYL Std 1	0.871 Abs		R <sup>2</sup> =0.99665, 88.697 %Abs	RK1:24->C01@2
CYL Std 1	0.827 Abs [0.8490] {3.7 CV}		R <sup>2</sup> =0.99665, 84.216 %Abs	RK1:24->D01@2
CYL Std 2	0.749 Abs		R <sup>2</sup> =0.99665, 76.273 %Abs	RK1:25->E01@2
CYL Std 2	0.734 Abs [0.7415] {1.4 CV}		R <sup>2</sup> =0.99665, 74.745 %Abs	RK1:25->F01@3
CYL Std 3	0.629 Abs		R <sup>2</sup> =0.99665, 64.053 %Abs	RK1:26->G01@3
CYL Std 3	0.626 Abs [0.6275] {0.3 CV}		R <sup>2</sup> =0.99665, 63.747 %Abs	RK1:26->H01@3
CYL Std 4	0.541 Abs		R <sup>2</sup> =0.99665, 55.092 %Abs	RK1:27->A02@2
CYL Std 4	0.531 Abs [0.5360] {1.3 CV}		R <sup>2</sup> =0.99665, 54.073 %Abs	RK1:27->B02@2
CYL Std 5	0.378 Abs		R <sup>2</sup> =0.99665, 38.493 %Abs	RK1:28->C02@2
CYL Std 5	0.363 Abs [0.3705] {2.9 CV}		R <sup>2</sup> =0.99665, 36.965 %Abs	RK1:28->D02@2
CYL Std 6	0.250 Abs		R <sup>2</sup> =0.99665, 25.458 %Abs	RK1:29->E02@2
CYL Std 6	0.251 Abs [0.2505] {0.3 CV}		R <sup>2</sup> =0.99665, 25.560 %Abs	RK1:29->F02@3
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<b>8/12/2020 2:24:13 PM</b>				
CYL QCS	0.444 Abs		45.214 %Abs	RK1:30->G02@3
CYL QCS	0.445 Abs [0.4445] {0.2 CV}		45.316 %Abs [45.265 %Abs]	RK1:30->H02@3
*****				
<b>Statistic</b>				
CYL Std 0 [MEAN]	0.9820			
CYL Std 0 [SD]	0.0127			
CYL Std 0 [%CV]	1.2961			
CYL Std 1 [MEAN]	0.8490			
CYL Std 1 [SD]	0.0311			
CYL Std 1 [%CV]	3.6646			
CYL Std 1 [%DIFF]				
CYL Std 2 [MEAN]	0.7415			
CYL Std 2 [SD]	0.0106			
CYL Std 2 [%CV]	1.4304			
CYL Std 2 [%DIFF]				
CYL Std 3 [MEAN]	0.6275			
CYL Std 3 [SD]	0.0021			
CYL Std 3 [%CV]	0.3381			
CYL Std 3 [%DIFF]				
CYL Std 4 [MEAN]	0.5360			
CYL Std 4 [SD]	0.0071			
CYL Std 4 [%CV]	1.3192			
CYL Std 4 [%DIFF]				

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.3705			
CYL Std 5 [SD]	0.0106			
CYL Std 5 [%CV]	2.8628			
CYL Std 5 [%DIFF]				
CYL Std 6 [MEAN]	0.2505			
CYL Std 6 [SD]	0.0007			
CYL Std 6 [%CV]	0.2823			
CYL Std 6 [%DIFF]				
CYL QCS [MEAN]	0.4445			
CYL QCS [SD]	0.0007			
CYL QCS [%CV]	0.1591			

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 0.98376  
 B = 0.64143  
 C = 1.0389  
 D = -0.23526  
 R2 coef = 0.99665  
 50% = 0.567

