



## Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

<b>Sample #</b>	<b>Location</b>	<b>Date Collected</b>	<b>Date Analyzed</b>	<b>Conc. (ppb)</b>
AC37294	Potato Creek SP - Worster Lake Beach	8/28/2023	8/29/2023	< 0.15
AC37295	Mississinewa Lake - Miami SRA Beach	8/28/2023	8/29/2023	< 0.15
AC37296	Salamonie Lake - Lost Bridge West SRA Beach	8/28/2023	8/29/2023	< 0.15
AC37297	Ouabache SP - Kunkel Lake Beach	8/28/2023	8/29/2023	< 0.15
AC37298	Potato Creek SP - Worster Lake Beach (Field Duplicate)	8/28/2023	8/29/2023	< 0.15
AC37299	Field Blank	8/28/2023	8/29/2023	< 0.15
AC37300	Ferdinand State Forest - Ferdinand Lake Beach	8/28/2023	8/29/2023	< 0.15
AC37301	Patoka Lake - Newton Stewart SRA	8/28/2023	8/29/2023	< 0.15

# Test Report (by Request)

**Test Information**

Request: 8/29/2023 3:45:49 PM  
Date: 8/29/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
CYL Std 0	CYLINDROSPERMOPSIN	1.305 Abs	0.000 µg/L	R <sup>2</sup> =0.99822, 105.6		0.000	Kit:P23C0
CYL Std 0	CYLINDROSPERMOPSIN	1.165 Abs [1.2350] {8.0 C	0.016 µg/L [0.008]	R <sup>2</sup> =0.99822, 94.33		0.000	Kit:P23C0
CYL Std 1	CYLINDROSPERMOPSIN	1.031 Abs	0.046 µg/L	R <sup>2</sup> =0.99822, 83.48		0.050	Kit:P23C0
CYL Std 1	CYLINDROSPERMOPSIN	1.030 Abs [1.0305] {0.1 C	0.046 µg/L [0.046]	R <sup>2</sup> =0.99822, 83.48		0.050	Kit:P23C0
CYL Std 2	CYLINDROSPERMOPSIN	0.846 Abs	0.097 µg/L	R <sup>2</sup> =0.99822, 68.50		0.100	Kit:P23C0
CYL Std 2	CYLINDROSPERMOPSIN	0.809 Abs [0.8275] {3.2 C	0.110 µg/L [0.104]	R <sup>2</sup> =0.99822, 65.50		0.100	Kit:P23C0
CYL Std 3	CYLINDROSPERMOPSIN	0.525 Abs	0.269 µg/L	R <sup>2</sup> =0.99822, 42.51		0.250	Kit:P23C0
CYL Std 3	CYLINDROSPERMOPSIN	0.524 Abs [0.5245] {0.1 C	0.269 µg/L [0.269]	R <sup>2</sup> =0.99822, 42.42		0.250	Kit:P23C0
CYL Std 4	CYLINDROSPERMOPSIN	0.388 Abs	0.434 µg/L	R <sup>2</sup> =0.99822, 31.41		0.500	Kit:P23C0
CYL Std 4	CYLINDROSPERMOPSIN	0.369 Abs [0.3785] {3.5 C	0.468 µg/L [0.451]	R <sup>2</sup> =0.99822, 29.87		0.500	Kit:P23C0
CYL Std 5	CYLINDROSPERMOPSIN	0.230 Abs	0.943 µg/L	R <sup>2</sup> =0.99822, 18.62		1.000	Kit:P23C0
CYL Std 5	CYLINDROSPERMOPSIN	0.226 Abs [0.2280] {1.2 C	0.969 µg/L [0.956]	R <sup>2</sup> =0.99822, 18.30		1.000	Kit:P23C0
CYL Std 6	CYLINDROSPERMOPSIN	0.137 Abs	> 2.000 µg/L	11.093 %Abs		2.000	Kit:P23C0
CYL Std 6	CYLINDROSPERMOPSIN	0.129 Abs [0.1330] {4.3 C	> 2.000 µg/L	10.445 %Abs		2.000	Kit:P23C0
CYL QCS	CYLINDROSPERMOPSIN	0.248 Abs	0.842 µg/L	20.081 %Abs			Kit:P23C0
CYL QCS	CYLINDROSPERMOPSIN	0.248 Abs [0.2480] {0.0 C	0.842 µg/L [0.842]	20.081 %Abs [20.0			Kit:P23C0

**Note**

Signature *David Jordan*

David Jordan 8/29/2023

\* 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) 8/30/2023 8:08:28 AM

# Test Report (by Request)

**Test Information**

Request: 8/29/2023 4:18:44 PM  
Date: 8/29/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (CYL)	CYLINDROSPERMOPSIN	1.283 Abs	0.000 µg/L	Low, 103.887 %Abs		0.050 - 2.000	Kit:P23C0
LRB (CYL)	CYLINDROSPERMOPSIN	1.243 Abs [1.2630] {2.2 C	0.000 µg/L [0.000]	Low, 100.648 %Abs		0.050 - 2.000	Kit:P23C0
LFB (CYL)	CYLINDROSPERMOPSIN	0.323 Abs	0.570 µg/L	26.154 %Abs		0.050 - 2.000	Kit:P23C0
LFB (CYL)	CYLINDROSPERMOPSIN	0.319 Abs [0.3210] {0.9 C	0.581 µg/L [0.576]	25.830 %Abs [25.9		0.050 - 2.000	Kit:P23C0
AC37294	CYLINDROSPERMOPSIN	1.163 Abs	0.017 µg/L	Low, 94.170 %Abs		0.050 - 2.000	Kit:P23C0
AC37294	CYLINDROSPERMOPSIN	1.136 Abs [1.1495] {1.7 C	0.022 µg/L [0.020]	Low, 91.984 %Abs		0.050 - 2.000	Kit:P23C0
AC37295	CYLINDROSPERMOPSIN	1.135 Abs	0.022 µg/L	Low, 91.903 %Abs		0.050 - 2.000	Kit:P23C0
AC37295	CYLINDROSPERMOPSIN	1.158 Abs [1.1465] {1.4 C	0.018 µg/L [0.020]	Low, 93.765 %Abs		0.050 - 2.000	Kit:P23C0
AC37295MS	CYLINDROSPERMOPSIN	0.360 Abs	0.486 µg/L	29.150 %Abs		0.050 - 2.000	Kit:P23C0
AC37295MS	CYLINDROSPERMOPSIN	0.342 Abs [0.3510] {3.6 C	0.524 µg/L [0.505]	27.692 %Abs [28.4		0.050 - 2.000	Kit:P23C0
AC37295MSD	CYLINDROSPERMOPSIN	0.323 Abs	0.570 µg/L	26.154 %Abs		0.050 - 2.000	Kit:P23C0
AC37295MSD	CYLINDROSPERMOPSIN	0.317 Abs [0.3200] {1.3 C	0.586 µg/L [0.578]	25.668 %Abs [25.9		0.050 - 2.000	Kit:P23C0
AC37296	CYLINDROSPERMOPSIN	1.128 Abs	0.024 µg/L	Low, 91.336 %Abs		0.050 - 2.000	Kit:P23C0
AC37296	CYLINDROSPERMOPSIN	1.128 Abs [1.1280] {0.0 C	0.024 µg/L [0.024]	Low, 91.336 %Abs		0.050 - 2.000	Kit:P23C0
AC37297	CYLINDROSPERMOPSIN	1.136 Abs	0.022 µg/L	Low, 91.984 %Abs		0.050 - 2.000	Kit:P23C0
AC37297	CYLINDROSPERMOPSIN	1.139 Abs [1.1375] {0.2 C	0.022 µg/L [0.022]	Low, 92.227 %Abs		0.050 - 2.000	Kit:P23C0
AC37298	CYLINDROSPERMOPSIN	1.285 Abs	0.000 µg/L	Low, 104.049 %Abs		0.050 - 2.000	Kit:P23C0
AC37298	CYLINDROSPERMOPSIN	1.246 Abs [1.2655] {2.2 C	0.000 µg/L [0.000]	Low, 100.891 %Abs		0.050 - 2.000	Kit:P23C0
AC37299	CYLINDROSPERMOPSIN	1.190 Abs	0.011 µg/L	Low, 96.356 %Abs		0.050 - 2.000	Kit:P23C0
AC37299	CYLINDROSPERMOPSIN	1.201 Abs [1.1955] {0.7 C	0.009 µg/L [0.010]	Low, 97.247 %Abs		0.050 - 2.000	Kit:P23C0
AC37300	CYLINDROSPERMOPSIN	1.155 Abs	0.018 µg/L	Low, 93.522 %Abs		0.050 - 2.000	Kit:P23C0
AC37300	CYLINDROSPERMOPSIN	1.163 Abs [1.1590] {0.5 C	0.017 µg/L [0.018]	Low, 94.170 %Abs		0.050 - 2.000	Kit:P23C0
AC37301	CYLINDROSPERMOPSIN	1.143 Abs	0.021 µg/L	Low, 92.551 %Abs		0.050 - 2.000	Kit:P23C0
AC37301	CYLINDROSPERMOPSIN	1.170 Abs [1.1565] {1.7 C	0.015 µg/L [0.018]	Low, 94.737 %Abs		0.050 - 2.000	Kit:P23C0

**Note**

Signature *David Jordan*

David Jordan 8/29/2023

\* 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) 8/30/2023 8:08:28 AM

**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: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
<b>8/29/2023 3:45:49 PM</b>				
CYL Std 0	1.305 Abs	0.000 µg/L	R <sup>2</sup> =0.99822, 105.668 %Abs	RK1:32->A07@2
CYL Std 0	1.165 Abs [1.2350] {8.0 CV}	0.016 µg/L [0.008] {141.4 CV}	R <sup>2</sup> =0.99822, 94.332 %Abs	RK1:32->B07@2
CYL Std 1	1.031 Abs	0.046 µg/L	R <sup>2</sup> =0.99822, 83.482 %Abs	RK1:33->C07@2
CYL Std 1	1.030 Abs [1.0305] {0.1 CV}	0.046 µg/L [0.046] {0.0 CV}	R <sup>2</sup> =0.99822, 83.401 %Abs	RK1:33->D07@2
CYL Std 2	0.846 Abs	0.097 µg/L	R <sup>2</sup> =0.99822, 68.502 %Abs	RK1:34->E07@2
CYL Std 2	0.809 Abs [0.8275] {3.2 CV}	0.110 µg/L [0.104] {8.9 CV}	R <sup>2</sup> =0.99822, 65.506 %Abs	RK1:34->F07@3
CYL Std 3	0.525 Abs	0.269 µg/L	R <sup>2</sup> =0.99822, 42.510 %Abs	RK1:35->G07@3
CYL Std 3	0.524 Abs [0.5245] {0.1 CV}	0.269 µg/L [0.269] {0.0 CV}	R <sup>2</sup> =0.99822, 42.429 %Abs	RK1:35->H07@3
CYL Std 4	0.388 Abs	0.434 µg/L	R <sup>2</sup> =0.99822, 31.417 %Abs	RK1:36->A08@2
CYL Std 4	0.369 Abs [0.3785] {3.5 CV}	0.468 µg/L [0.451] {5.3 CV}	R <sup>2</sup> =0.99822, 29.879 %Abs	RK1:36->B08@2
CYL Std 5	0.230 Abs	0.943 µg/L	R <sup>2</sup> =0.99822, 18.623 %Abs	RK1:37->C08@2
CYL Std 5	0.226 Abs [0.2280] {1.2 CV}	0.969 µg/L [0.956] {1.9 CV}	R <sup>2</sup> =0.99822, 18.300 %Abs	RK1:37->D08@2
CYL Std 6	0.137 Abs	> 2.000 µg/L	11.093 %Abs	RK1:38->E08@2
CYL Std 6	0.129 Abs [0.1330] {4.3 CV}	> 2.000 µg/L	10.445 %Abs	RK1:38->F08@3
+++++				
<b>8/29/2023 3:45:49 PM</b>				
CYL QCS	0.248 Abs	0.842 µg/L	20.081 %Abs	RK1:39->G08@3
CYL QCS	0.248 Abs [0.2480] {0.0 CV}	0.842 µg/L [0.842] {0.0 CV}	20.081 %Abs [20.081 %Abs]	RK1:39->H08@3
*****				
<b>Statistic</b>				
CYL Std 0 [MEAN]	1.2350	0.0080		
CYL Std 0 [SD]	0.0990	0.0113		
CYL Std 0 [%CV]	8.0158	141.4214		
CYL Std 1 [MEAN]	1.0305	0.0460		
CYL Std 1 [SD]	0.0007	0.0000		
CYL Std 1 [%CV]	0.0686	0.0000		
CYL Std 1 [%DIFF]		-8.0000		
CYL Std 2 [MEAN]	0.8275	0.1035		
CYL Std 2 [SD]	0.0262	0.0092		
CYL Std 2 [%CV]	3.1617	8.8815		
CYL Std 2 [%DIFF]		3.5000		
CYL Std 3 [MEAN]	0.5245	0.2690		
CYL Std 3 [SD]	0.0007	0.0000		
CYL Std 3 [%CV]	0.1348	0.0000		
CYL Std 3 [%DIFF]		7.6000		
CYL Std 4 [MEAN]	0.3785	0.4510		
CYL Std 4 [SD]	0.0134	0.0240		
CYL Std 4 [%CV]	3.5495	5.3307		
CYL Std 4 [%DIFF]		-9.8000		

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.2280	0.9560		
CYL Std 5 [SD]	0.0028	0.0184		
CYL Std 5 [%CV]	1.2405	1.9231		
CYL Std 5 [%DIFF]		-4.4000		
CYL Std 6 [MEAN]	0.1330			
CYL Std 6 [SD]	0.0057			
CYL Std 6 [%CV]	4.2533			
CYL QCS [MEAN]	0.2480	0.8420		
CYL QCS [SD]	0.0000	0.0000		
CYL QCS [%CV]	0.0000	0.0000		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.2407  
 B = 1.1147  
 C = 0.17791  
 D = 0.072594  
 R2 coef = 0.99822  
 50% = 0.201

