



Cylindrospermopsin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)	% Recovery
LRB 1	Lab Reagent Blank	8/21/2019	8/22/2019	<0.150	
LFB 1	Lab Fortified Blank (Spike = 0.60 ppb)	8/21/2019	8/22/2019	0.491	82
AB40163	Miami SRA at Mississinewa Lake	8/19/2019	8/22/2019	<0.150	
AB40162	Field Blank	8/19/2019	8/22/2019	<0.150	
AB40152	Raccoon Lake SRA	8/19/2019	8/22/2019	<0.150	
AB40157	Whitewater Memorial SP	8/20/2019	8/22/2019	<0.150	
AB40157MS	Whitewater Memorial SP MS (Spk. = 0.60 ppb)	8/20/2019	8/22/2019	0.554	92
AB40157MSD	Whitewater Memorial SP MSD (Spk. = 0.60 ppb)	8/20/2019	8/22/2019	0.578	96
AB40151	Quakertown SRA	8/20/2019	8/22/2019	<0.150	
AB40155	Mounds SRA	8/20/2019	8/22/2019	<0.150	
AB40156	Paynetown SRA	8/19/2019	8/22/2019	<0.150	
AB40153	Fairfax SRA	8/19/2019	8/22/2019	<0.150	
AB40154	Hardy Lake SRA	8/19/2019	8/22/2019	<0.150	
AB40158	Field Blank	8/20/2019	8/22/2019	<0.150	
AB40159	Mounds SRA Field Duplicate	8/20/2019	8/22/2019	<0.150	
LRB 2	Lab Reagent Blank 2	8/21/2019	8/22/2019	<0.150	
LFB 2	Lab Fortified Blank (Spike = 0.60 ppb)	8/21/2019	8/22/2019	0.614	102.3

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:
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 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: 19A8753

Assay Calibration

Current Calibration Status: "

"

Name	Absorbance	Concentration	Interpretation	Position
8/22/2019 2:18:54 PM				
CYL Std 0	0.900 Abs		R ² =0.99508, 110.294 %Abs	RK1:23->A01@2
CYL Std 0	0.731 Abs [0.8155] {14.7 CV}		R ² =0.99508, 89.583 %Abs	RK1:23->B01@2
CYL Std 1	0.815 Abs		R ² =0.99508, 99.877 %Abs	RK1:24->C01@2
CYL Std 1	0.804 Abs [0.8095] {1.0 CV}		R ² =0.99508, 98.529 %Abs	RK1:24->D01@2
CYL Std 2	0.724 Abs		R ² =0.99508, 88.725 %Abs	RK1:25->E01@2
CYL Std 2	0.713 Abs [0.7185] {1.1 CV}		R ² =0.99508, 87.377 %Abs	RK1:25->F01@3
CYL Std 3	0.526 Abs		R ² =0.99508, 64.461 %Abs	RK1:26->G01@3
CYL Std 3	0.490 Abs [0.5080] {5.0 CV}		R ² =0.99508, 60.049 %Abs	RK1:26->H01@3
CYL Std 4	0.370 Abs		R ² =0.99508, 45.343 %Abs	RK1:27->A02@2
CYL Std 4	0.373 Abs [0.3715] {0.6 CV}		R ² =0.99508, 45.711 %Abs	RK1:27->B02@2
CYL Std 5	0.269 Abs		R ² =0.99508, 32.966 %Abs	RK1:28->C02@2
CYL Std 5	0.260 Abs [0.2645] {2.4 CV}		R ² =0.99508, 31.863 %Abs	RK1:28->D02@2
CYL Std 6	0.178 Abs		21.814 %Abs	RK1:29->E02@2
CYL Std 6	0.162 Abs [0.1700] {6.7 CV}		19.853 %Abs	RK1:29->F02@3

8/22/2019 2:18:54 PM				
CYL QCS	0.290 Abs		35.539 %Abs	RK1:30->G02@3
CYL QCS	0.314 Abs [0.3020] {5.6 CV}		38.480 %Abs [37.010 %Abs]	RK1:30->H02@3

Statistic				
CYL Std 0 [MEAN]	0.8155			
CYL Std 0 [SD]	0.1195			
CYL Std 0 [%CV]	14.6537			
CYL Std 1 [MEAN]	0.8095			
CYL Std 1 [SD]	0.0078			
CYL Std 1 [%CV]	0.9609			
CYL Std 1 [%DIFF]				
CYL Std 2 [MEAN]	0.7185			
CYL Std 2 [SD]	0.0078			
CYL Std 2 [%CV]	1.0826			
CYL Std 2 [%DIFF]				
CYL Std 3 [MEAN]	0.5080			
CYL Std 3 [SD]	0.0255			
CYL Std 3 [%CV]	5.0110			
CYL Std 3 [%DIFF]				
CYL Std 4 [MEAN]	0.3715			
CYL Std 4 [SD]	0.0021			
CYL Std 4 [%CV]	0.5710			
CYL Std 4 [%DIFF]				

Name	Absorbance	Concentration	Interpretation	Position
CYL Std 5 [MEAN]	0.2645			
CYL Std 5 [SD]	0.0064			
CYL Std 5 [%CV]	2.4060			
CYL Std 5 [%DIFF]				
CYL Std 6 [MEAN]	0.1700			
CYL Std 6 [SD]	0.0113			
CYL Std 6 [%CV]	6.6551			
CYL QCS [MEAN]	0.3020			
CYL QCS [SD]	0.0170			
CYL QCS [%CV]	5.6194			

Assay Curve

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

Weight: NONE

A = 0.83292

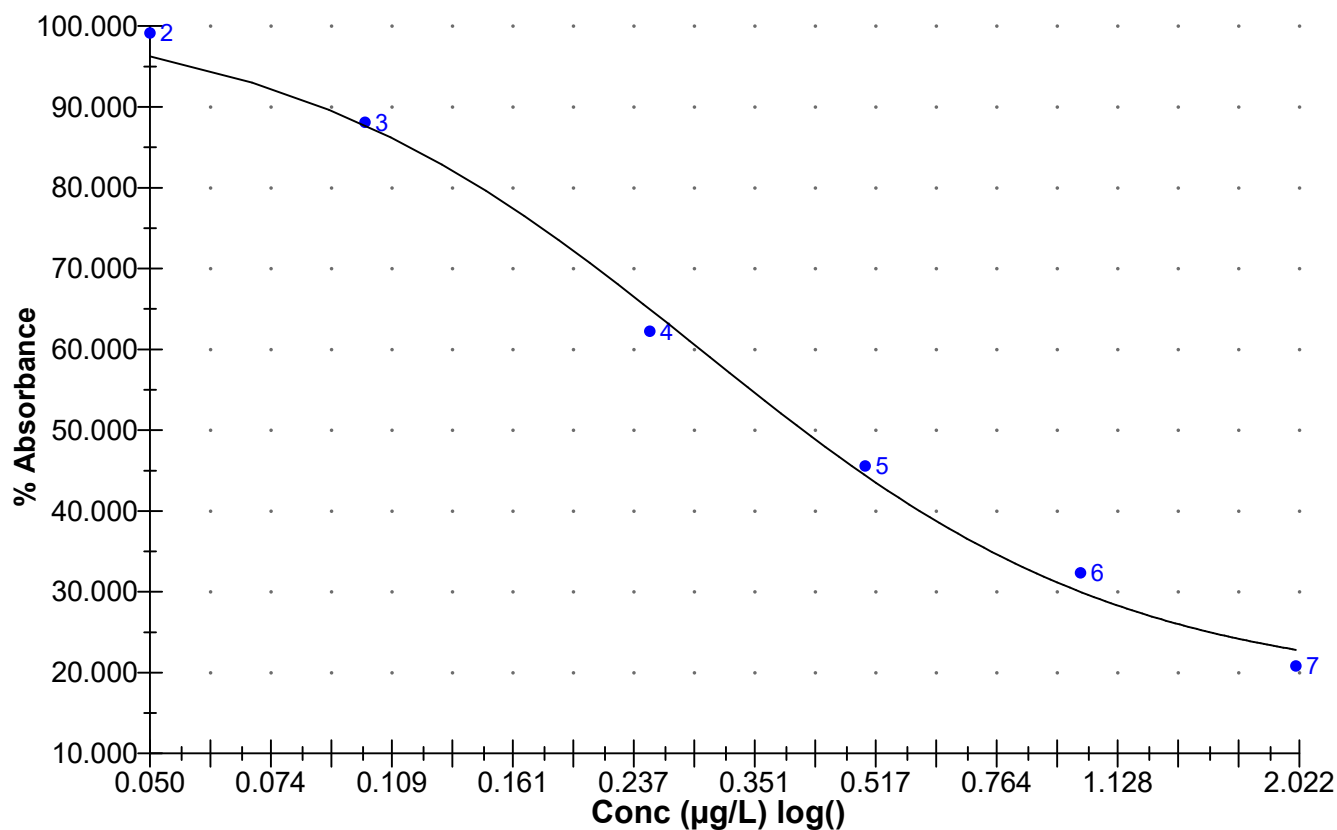
B = 1.4685

C = 0.29318

D = 0.14772

R2 coef = 0.99508

50% = 0.409



Test Information

Request: 8/22/2019 2:18:54 PM
Date: 8/22/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #	
CYL Std 0	CYLINDROSPERMOPSIN	0.900 Abs	0.000 µg/L	R^2=0.99508, 110.29		19A8753	
CYL Std 0	CYLINDROSPERMOPSIN	0.731 Abs [0.8155] {14.7 CV}	0.089 µg/L [0.045] {1	R^2=0.99508, 89.583		19A8753	
CYL Std 1	CYLINDROSPERMOPSIN	0.815 Abs	0.025 µg/L	R^2=0.99508, 99.877		19A8753	
CYL Std 1	CYLINDROSPERMOPSIN	0.804 Abs [0.8095] {1.0 CV}	0.035 µg/L [0.030] {2	R^2=0.99508, 98.529		19A8753	
CYL Std 2	CYLINDROSPERMOPSIN	0.724 Abs	0.094 µg/L	R^2=0.99508, 88.725		19A8753	
CYL Std 2	CYLINDROSPERMOPSIN	0.713 Abs [0.7185] {1.1 CV}	0.102 µg/L [0.098] {5	R^2=0.99508, 87.377		19A8753	
CYL Std 3	CYLINDROSPERMOPSIN	0.526 Abs	0.254 µg/L	R^2=0.99508, 64.461		19A8753	
CYL Std 3	CYLINDROSPERMOPSIN	0.490 Abs [0.5080] {5.0 CV}	0.294 µg/L [0.274] {1	R^2=0.99508, 60.049		19A8753	
CYL Std 4	CYLINDROSPERMOPSIN	0.370 Abs	0.483 µg/L	R^2=0.99508, 45.343		19A8753	
CYL Std 4	CYLINDROSPERMOPSIN	0.373 Abs [0.3715] {0.6 CV}	0.477 µg/L [0.480] {0	R^2=0.99508, 45.711		19A8753	
CYL Std 5	CYLINDROSPERMOPSIN	0.269 Abs	0.835 µg/L	R^2=0.99508, 32.966		19A8753	
CYL Std 5	CYLINDROSPERMOPSIN	0.260 Abs [0.2645] {2.4 CV}	0.889 µg/L [0.862] {4	R^2=0.99508, 31.863		19A8753	
CYL Std 6	CYLINDROSPERMOPSIN	0.178 Abs	> 2.000 µg/L	21.814 %Abs		19A8753	
CYL Std 6	CYLINDROSPERMOPSIN	0.162 Abs [0.1700] {6.7 CV}	> 2.000 µg/L	19.853 %Abs		19A8753	
CYL QCS	CYLINDROSPERMOPSIN	0.290 Abs	0.730 µg/L	35.539 %Abs		19A8753	
CYL QCS	CYLINDROSPERMOPSIN	0.314 Abs [0.3020] {5.6 CV}	0.636 µg/L [0.683] {9	38.480 %Abs [37.010		19A8753	

Test Report (by Request)

Test Information

Request: 8/22/2019 2:23:09 PM
Date: 8/22/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LFB	CYLINDROSPERMOPSIN	0.368 Abs	0.488 µg/L	45.098 %Abs	0.050 - 2.000	19A8753
LFB	CYLINDROSPERMOPSIN	0.365 Abs [0.3665] {0.6 CV}	0.494 µg/L [0.491] {0.6 CV}	44.730 %Abs [44.914]	0.050 - 2.000	19A8753
AB40163	CYLINDROSPERMOPSIN	0.873 Abs	0.000 µg/L	LOW, 106.985 %ABS	0.050 - 2.000	19A8753
AB40163	CYLINDROSPERMOPSIN	0.856 Abs [0.8645] {1.4 CV}	0.000 µg/L [0.000]	LOW, 104.902 %ABS	0.050 - 2.000	19A8753
AB40162	CYLINDROSPERMOPSIN	0.890 Abs	0.000 µg/L	LOW, 109.069 %ABS	0.050 - 2.000	19A8753
AB40162	CYLINDROSPERMOPSIN	0.882 Abs [0.8860] {0.6 CV}	0.000 µg/L [0.000]	LOW, 108.088 %ABS	0.050 - 2.000	19A8753
AB40152	CYLINDROSPERMOPSIN	0.866 Abs	0.000 µg/L	LOW, 106.127 %ABS	0.050 - 2.000	19A8753
AB40152	CYLINDROSPERMOPSIN	0.887 Abs [0.8765] {1.7 CV}	0.000 µg/L [0.000]	LOW, 108.701 %ABS	0.050 - 2.000	19A8753
AB40157	CYLINDROSPERMOPSIN	0.840 Abs	0.000 µg/L	LOW, 102.941 %ABS	0.050 - 2.000	19A8753
AB40157	CYLINDROSPERMOPSIN	0.837 Abs [0.8385] {0.3 CV}	0.000 µg/L [0.000]	LOW, 102.574 %ABS	0.050 - 2.000	19A8753
AB40157MS	CYLINDROSPERMOPSIN	0.350 Abs	0.530 µg/L	42.892 %Abs	0.050 - 2.000	19A8753
AB40157MS	CYLINDROSPERMOPSIN	0.332 Abs [0.3410] {3.7 CV}	0.579 µg/L [0.554] {6.0 CV}	40.686 %Abs [41.785]	0.050 - 2.000	19A8753
AB40157MSD	CYLINDROSPERMOPSIN	0.336 Abs	0.568 µg/L	41.176 %Abs	0.050 - 2.000	19A8753
AB40157MSD	CYLINDROSPERMOPSIN	0.329 Abs [0.3325] {1.5 CV}	0.588 µg/L [0.578] {2.0 CV}	40.319 %Abs [40.748]	0.050 - 2.000	19A8753
AB40151	CYLINDROSPERMOPSIN	0.836 Abs	0.000 µg/L	LOW, 102.451 %ABS	0.050 - 2.000	19A8753
AB40151	CYLINDROSPERMOPSIN	0.840 Abs [0.8380] {0.3 CV}	0.000 µg/L [0.000]	LOW, 102.941 %ABS	0.050 - 2.000	19A8753
AB40155	CYLINDROSPERMOPSIN	0.837 Abs	0.000 µg/L	LOW, 102.574 %ABS	0.050 - 2.000	19A8753
AB40155	CYLINDROSPERMOPSIN	0.828 Abs [0.8325] {0.8 CV}	0.010 µg/L [0.005] {1.0 CV}	LOW, 101.471 %ABS	0.050 - 2.000	19A8753
AB40156	CYLINDROSPERMOPSIN	0.836 Abs	0.000 µg/L	LOW, 102.451 %ABS	0.050 - 2.000	19A8753
AB40156	CYLINDROSPERMOPSIN	0.830 Abs [0.8330] {0.5 CV}	0.007 µg/L [0.004] {1.0 CV}	LOW, 101.716 %ABS	0.050 - 2.000	19A8753
AB40153	CYLINDROSPERMOPSIN	0.824 Abs	0.015 µg/L	LOW, 100.980 %ABS	0.050 - 2.000	19A8753
AB40153	CYLINDROSPERMOPSIN	0.822 Abs [0.8230] {0.2 CV}	0.018 µg/L [0.017] {1.0 CV}	LOW, 100.735 %ABS	0.050 - 2.000	19A8753
AB40154	CYLINDROSPERMOPSIN	0.828 Abs	0.010 µg/L	LOW, 101.471 %ABS	0.050 - 2.000	19A8753
AB40154	CYLINDROSPERMOPSIN	0.828 Abs [0.8280] {0.0 CV}	0.010 µg/L [0.010] {0.0 CV}	LOW, 101.471 %ABS	0.050 - 2.000	19A8753
AB40158	CYLINDROSPERMOPSIN	0.825 Abs	0.014 µg/L	LOW, 101.103 %ABS	0.050 - 2.000	19A8753
AB40158	CYLINDROSPERMOPSIN	0.825 Abs [0.8250] {0.0 CV}	0.014 µg/L [0.014] {0.0 CV}	LOW, 101.103 %ABS	0.050 - 2.000	19A8753
AB40159	CYLINDROSPERMOPSIN	0.826 Abs	0.013 µg/L	LOW, 101.225 %ABS	0.050 - 2.000	19A8753
AB40159	CYLINDROSPERMOPSIN	0.813 Abs [0.8195] {1.1 CV}	0.027 µg/L [0.020] {4.0 CV}	LOW, 99.632 %ABS	0.050 - 2.000	19A8753
LRB 2	CYLINDROSPERMOPSIN	0.822 Abs	0.018 µg/L	LOW, 100.735 %ABS	0.050 - 2.000	19A8753
LRB 2	CYLINDROSPERMOPSIN	0.833 Abs [0.8275] {0.9 CV}	0.000 µg/L [0.009] {1.0 CV}	LOW, 102.083 %ABS	0.050 - 2.000	19A8753
LFB 2	CYLINDROSPERMOPSIN	0.320 Abs	0.616 µg/L	39.216 %Abs	0.050 - 2.000	19A8753
LFB 2	CYLINDROSPERMOPSIN	0.321 Abs [0.3205] {0.2 CV}	0.613 µg/L [0.614] {0.2 CV}	39.338 %Abs [39.277]	0.050 - 2.000	19A8753
LRB	CYLINDROSPERMOPSIN	0.808 Abs	0.031 µg/L	LOW, 99.020 %ABS	0.050 - 2.000	19A8753
LRB	CYLINDROSPERMOPSIN	0.777 Abs [0.7925] {2.8 CV}	0.056 µg/L [0.043] {4.0 CV}	95.221 %ABS [LOW]	0.050 - 2.000	19A8753

David Jordan
David Jordan 8/22/2019