



## Microcystins 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	8/27/2019	8/27/2019	<0.30	
LFB 1	Lab Fortified Blank (Spike = 0.6 ppb)	8/27/2019	8/27/2019	0.54	90
AB40164	Miami SRA at Mississinewa Lake	8/26/2019	8/27/2019	16.36	
AB40165	Potato Creek SP	8/26/2019	8/27/2019	<0.30	
AB40165MS	Potato Creek SP MS (Spike = 0.6 ppb)	8/26/2019	8/27/2019	0.56	80
AB40165MSD	Potato Creek SP MSD (Spike = 0.6 ppb)	8/26/2019	8/27/2019	0.58	85
AB40166	Miami SRA at Mississinewa Lake	8/26/2019	8/27/2019	9.47	
AB40167	Field Blank	8/26/2019	8/27/2019	<0.30	
LRB 2	Lab Reagent Blank 2	8/27/2019	8/27/2019	<0.30	
LFB 2	Lab Fortified Blank 2 (Spike = 0.60 ppb)	8/27/2019	8/27/2019	0.47	78

## Assay Information

Assay Name: MICROCYSTINS ADDA 546

Version: 2

Temperature: Room Temperature

Last Modified By: Security disabled

Units: µg/L

Assay Description:

Assay Substances:

Controls:

MCT 546 LRB 1

MCT 546 Low-CV

MCT 546 LFB 1

Standards:

MCT Std 0, Concentration = 0.000, Minimum number to use: 2

MCT Std 1, Concentration = 0.150, Minimum number to use: 2

MCT Std 2, Concentration = 0.400, Minimum number to use: 2

MCT Std 3, Concentration = 1.000, Minimum number to use: 2

MCT Std 4, Concentration = 2.000, Minimum number to use: 2

MCT Std 5, Concentration = 5.000, 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: 8/13/2019 2:01:59 PM

Normal: 0.300 - 5.000

# of decimals: 3

Kit Lot Number: 19E9764

## Assay Calibration

Current Calibration Status: "

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Name	Absorbance	Concentration	Interpretation	Position	
<b>8/27/2019 12:51:13 PM</b>					
MCT Std 0	1.604 Abs		R <sup>2</sup> =0.99601, 108.746 %Abs	RK1:23->A01@2	
MCT Std 0	1.347 Abs [1.4755] {12.3 CV}		R <sup>2</sup> =0.99601, 91.322 %Abs	RK1:23->B01@2	
MCT Std 1	1.341 Abs		R <sup>2</sup> =0.99601, 90.915 %Abs	RK1:24->C01@2	
MCT Std 1	1.323 Abs [1.3320] {1.0 CV}		R <sup>2</sup> =0.99601, 89.695 %Abs	RK1:24->D01@2	
MCT Std 2	1.040 Abs		R <sup>2</sup> =0.99601, 70.508 %Abs	RK1:25->E01@2	
MCT Std 2	0.923 Abs [0.9815] {8.4 CV}		R <sup>2</sup> =0.99601, 62.576 %Abs	RK1:25->F01@3	
MCT Std 3	0.703 Abs		R <sup>2</sup> =0.99601, 47.661 %Abs	RK1:26->G01@3	
MCT Std 3	0.694 Abs [0.6985] {0.9 CV}		R <sup>2</sup> =0.99601, 47.051 %Abs	RK1:26->H01@3	
MCT Std 4	0.530 Abs		R <sup>2</sup> =0.99601, 35.932 %Abs	RK1:27->A02@2	
MCT Std 4	0.553 Abs [0.5415] {3.0 CV}		R <sup>2</sup> =0.99601, 37.492 %Abs	RK1:27->B02@2	
MCT Std 5	0.380 Abs		25.763 %Abs	RK1:28->C02@2	
MCT Std 5	0.368 Abs [0.3740] {2.3 CV}		24.949 %Abs	RK1:28->D02@2	
*****					
<b>8/27/2019 12:51:13 PM</b>					
MCT 546 LRB 1	1.526 Abs		103.458 %Abs	RK1:29->E02@2	
MCT 546 LRB 1	1.527 Abs [1.5265] {0.0 CV}		103.525 %Abs [103.492 %Abs]	RK1:29->F02@3	
MCT 546 Low-CV	1.088 Abs		73.763 %Abs	RK1:30->G02@3	
MCT 546 Low-CV	1.075 Abs [1.0815] {0.8 CV}		72.881 %Abs [73.322 %Abs]	RK1:30->H02@3	
MCT 546 LFB 1	0.926 Abs		62.780 %Abs	RK1:31->A03@2	
MCT 546 LFB 1	0.895 Abs [0.9105] {2.4 CV}		60.678 %Abs [61.729 %Abs]	RK1:31->B03@2	
*****					
<b>Statistic</b>					
MCT Std 0 [MEAN]	1.4755				
MCT Std 0 [SD]	0.1817				
MCT Std 0 [%CV]	12.3163				
MCT Std 1 [MEAN]	1.3320				
MCT Std 1 [SD]	0.0127				
MCT Std 1 [%CV]	0.9556				
MCT Std 1 [%DIFF]					
MCT Std 2 [MEAN]	0.9815				
MCT Std 2 [SD]	0.0827				
MCT Std 2 [%CV]	8.4291				
MCT Std 2 [%DIFF]					
MCT Std 3 [MEAN]	0.6985				
MCT Std 3 [SD]	0.0064				
MCT Std 3 [%CV]	0.9111				
MCT Std 3 [%DIFF]					
MCT Std 4 [MEAN]	0.5415				

Name	Absorbance	Concentration	Interpretation	Position	
MCT Std 4 [SD]	0.0163				
MCT Std 4 [%CV]	3.0034				
MCT Std 4 [%DIFF]					
MCT Std 5 [MEAN]	0.3740				
MCT Std 5 [SD]	0.0085				
MCT Std 5 [%CV]	2.2688				
MCT 546 LRB 1 [MEAN]	1.5265				
MCT 546 LRB 1 [SD]	0.0007				
MCT 546 LRB 1 [%CV]	0.0463				
MCT 546 Low-CV [MEAN]	1.0815				
MCT 546 Low-CV [SD]	0.0092				
MCT 546 Low-CV [%CV]	0.8500				
MCT 546 LFB 1 [MEAN]	0.9105				
MCT 546 LFB 1 [SD]	0.0219				
MCT 546 LFB 1 [%CV]	2.4075				

## Assay Curve

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

Weight: NONE

A = 1.4875

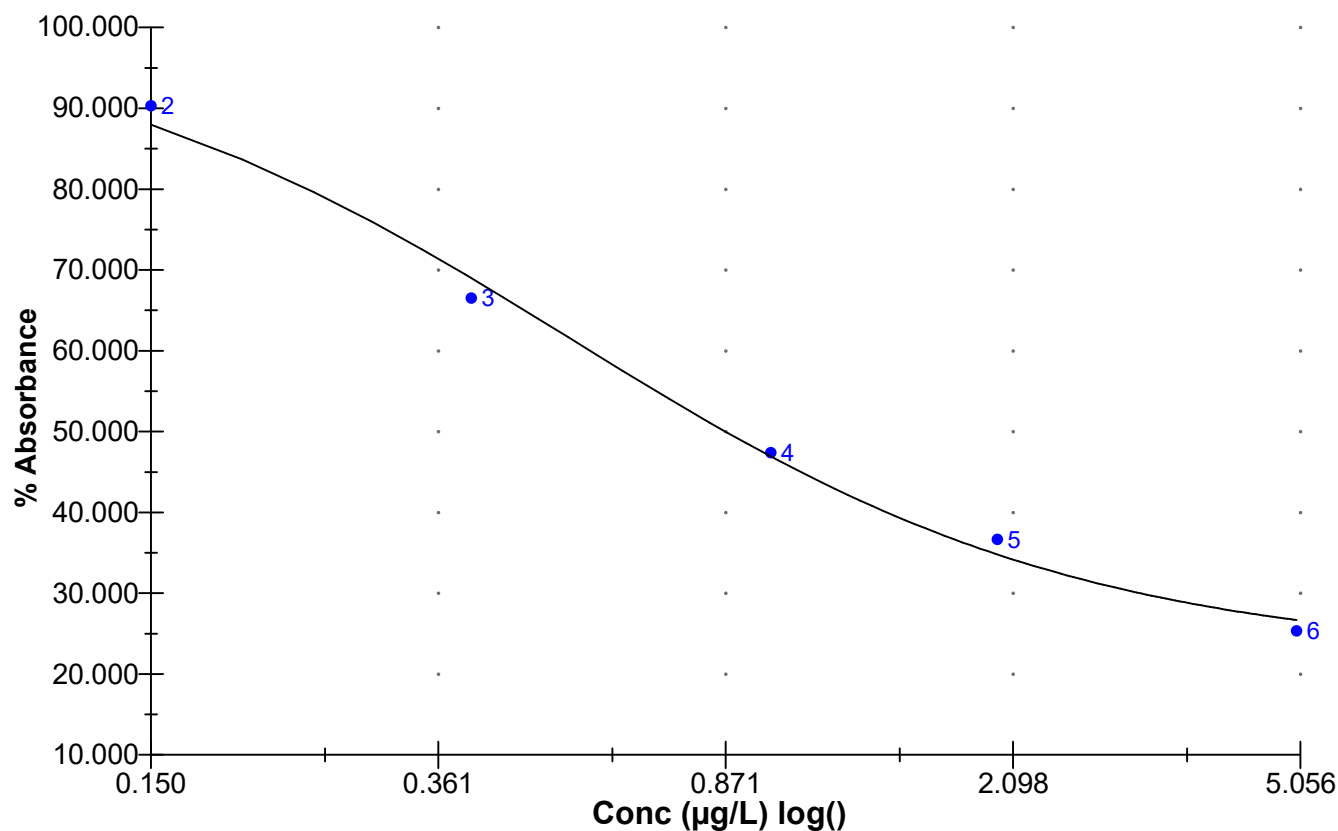
B = 1.2716

C = 0.54005

D = 0.32913

R2 coef = 0.99601

50% = 0.871



## Test Information

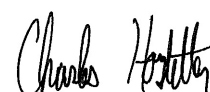
Request: 8/27/2019 12:51:13 PM  
Date: 8/27/2019 - 8/27/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
MCT Std 0	MICROCYSTINS ADDA 546	1.604 Abs	0.000 µg/L	R^2=0.99601, 108.74		19E9764
MCT Std 0	MICROCYSTINS ADDA 546	1.347 Abs [1.4755] {12.3 CV}	0.114 µg/L [0.057] {1}	R^2=0.99601, 91.322		19E9764
MCT Std 1	MICROCYSTINS ADDA 546	1.341 Abs	0.118 µg/L	R^2=0.99601, 90.915		19E9764
MCT Std 1	MICROCYSTINS ADDA 546	1.323 Abs [1.3320] {1.0 CV}	0.131 µg/L [0.124] {7}	R^2=0.99601, 89.695		19E9764
MCT Std 2	MICROCYSTINS ADDA 546	1.040 Abs	0.375 µg/L	R^2=0.99601, 70.508		19E9764
MCT Std 2	MICROCYSTINS ADDA 546	0.923 Abs [0.9815] {8.4 CV}	0.519 µg/L [0.447] {2}	R^2=0.99601, 62.576		19E9764
MCT Std 3	MICROCYSTINS ADDA 546	0.703 Abs	0.967 µg/L	R^2=0.99601, 47.661		19E9764
MCT Std 3	MICROCYSTINS ADDA 546	0.694 Abs [0.6985] {0.9 CV}	0.995 µg/L [0.981] {2}	R^2=0.99601, 47.051		19E9764
MCT Std 4	MICROCYSTINS ADDA 546	0.530 Abs	1.844 µg/L	R^2=0.99601, 35.932		19E9764
MCT Std 4	MICROCYSTINS ADDA 546	0.553 Abs [0.5415] {3.0 CV}	1.661 µg/L [1.753] {7}	R^2=0.99601, 37.492		19E9764
MCT Std 5	MICROCYSTINS ADDA 546	0.380 Abs	> 5.000 µg/L	25.763 %Abs		19E9764
MCT Std 5	MICROCYSTINS ADDA 546	0.368 Abs [0.3740] {2.3 CV}	> 5.000 µg/L	24.949 %Abs		19E9764
MCT 546 LRB 1	MICROCYSTINS ADDA 546	1.526 Abs	0.000 µg/L	103.458 %Abs		19E9764
MCT 546 LRB 1	MICROCYSTINS ADDA 546	1.527 Abs [1.5265] {0.0 CV}	0.000 µg/L [0.000]	103.525 %Abs [103.4		19E9764
MCT 546 Low-CV	MICROCYSTINS ADDA 546	1.088 Abs	0.326 µg/L	73.763 %Abs		19E9764
MCT 546 Low-CV	MICROCYSTINS ADDA 546	1.075 Abs [1.0815] {0.8 CV}	0.339 µg/L [0.332] {2}	72.881 %Abs [73.322		19E9764
MCT 546 LFB 1	MICROCYSTINS ADDA 546	0.926 Abs	0.515 µg/L	62.780 %Abs		19E9764
MCT 546 LFB 1	MICROCYSTINS ADDA 546	0.895 Abs [0.9105] {2.4 CV}	0.560 µg/L [0.538] {5}	60.678 %Abs [61.725		19E9764

## Test Information

Request: 8/27/2019 12:57:28 PM  
Date: 8/27/2019 - 8/27/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	CYLINDROSPERMOPSIN	0.830 Abs	0.002 µg/L	<b>LOW, 98.927 %ABS</b>	0.050 - 2.000	19A8753
LRB	CYLINDROSPERMOPSIN	0.821 Abs [0.8255] {0.8 CV}	0.004 µg/L [0.003] {4}		0.050 - 2.000	19A8753
LFB	CYLINDROSPERMOPSIN	0.329 Abs	0.524 µg/L	39.213 %Abs	0.050 - 2.000	19A8753
LFB	CYLINDROSPERMOPSIN	0.314 Abs [0.3215] {3.3 CV}	0.574 µg/L [0.549] {6}	37.426 %Abs [38.315]	0.050 - 2.000	19A8753
AB40164	CYLINDROSPERMOPSIN	0.789 Abs	0.013 µg/L	<b>LOW, 94.041 %ABS</b>	0.050 - 2.000	19A8753
AB40164	CYLINDROSPERMOPSIN	0.786 Abs [0.7875] {0.3 CV}	0.013 µg/L [0.013] {0}		0.050 - 2.000	19A8753
AB40165	CYLINDROSPERMOPSIN	0.791 Abs	0.012 µg/L	<b>LOW, 94.279 %ABS</b>	0.050 - 2.000	19A8753
AB40165	CYLINDROSPERMOPSIN	0.799 Abs [0.7950] {0.7 CV}	0.010 µg/L [0.011] {1}		0.050 - 2.000	19A8753
AB40165MS	CYLINDROSPERMOPSIN	0.325 Abs	0.537 µg/L	38.737 %Abs	0.050 - 2.000	19A8753
AB40165MS	CYLINDROSPERMOPSIN	0.318 Abs [0.3215] {1.5 CV}	0.560 µg/L [0.549] {3}	37.902 %Abs [38.315]	0.050 - 2.000	19A8753
AB40165MSD	CYLINDROSPERMOPSIN	0.315 Abs	0.571 µg/L	37.545 %Abs	0.050 - 2.000	19A8753
AB40165MSD	CYLINDROSPERMOPSIN	0.309 Abs [0.3120] {1.4 CV}	0.592 µg/L [0.581] {2}	36.830 %Abs [37.187]	0.050 - 2.000	19A8753
AB40166	CYLINDROSPERMOPSIN	0.790 Abs	0.012 µg/L	<b>LOW, 94.160 %ABS</b>	0.050 - 2.000	19A8753
AB40166	CYLINDROSPERMOPSIN	0.786 Abs [0.7880] {0.4 CV}	0.013 µg/L [0.013] {5}		0.050 - 2.000	19A8753
AB40167	CYLINDROSPERMOPSIN	0.798 Abs	0.010 µg/L	<b>LOW, 95.113 %ABS</b>	0.050 - 2.000	19A8753
AB40167	CYLINDROSPERMOPSIN	0.819 Abs [0.8085] {1.8 CV}	0.004 µg/L [0.007] {6}		0.050 - 2.000	19A8753
AB40164	MICROCYSTINS ADDA 546	0.200 Abs	> 5.000 µg/L	13.559 %Abs, Out(LF)	0.300 - 5.000	19E9764
AB40164	MICROCYSTINS ADDA 546	0.184 Abs [0.1920] {5.9 CV}	> 5.000 µg/L	12.475 %Abs, Out(LF)	0.300 - 5.000	19E9764
AB40164 10X	MICROCYSTINS ADDA 546	0.559 Abs	16.190 µg/L	<b>HIGH, 37.898 %ABS</b>	0.300 - 5.000	19E9764
AB40164 10X	MICROCYSTINS ADDA 546	0.554 Abs [0.5565] {0.6 CV}	16.540 µg/L [16.365]		0.300 - 5.000	19E9764
AB40165	MICROCYSTINS ADDA 546	1.407 Abs	0.070 µg/L	<b>LOW, 95.390 %ABS</b>	0.300 - 5.000	19E9764
AB40165	MICROCYSTINS ADDA 546	1.391 Abs [1.3990] {0.8 CV}	0.082 µg/L [0.076] {1}		0.300 - 5.000	19E9764
AB40165MS	MICROCYSTINS ADDA 546	0.900 Abs	0.552 µg/L	61.017 %Abs	0.300 - 5.000	19E9764
AB40165MS	MICROCYSTINS ADDA 546	0.894 Abs [0.8970] {0.5 CV}	0.561 µg/L [0.556] {1}	60.610 %Abs [60.814]	0.300 - 5.000	19E9764
AB40165MSD	MICROCYSTINS ADDA 546	0.886 Abs	0.574 µg/L	60.068 %Abs	0.300 - 5.000	19E9764
AB40165MSD	MICROCYSTINS ADDA 546	0.873 Abs [0.8795] {1.0 CV}	0.594 µg/L [0.584] {2}	59.186 %Abs [59.627]	0.300 - 5.000	19E9764
AB40166	MICROCYSTINS ADDA 546	0.181 Abs	> 5.000 µg/L	12.271 %Abs, Out(LF)	0.300 - 5.000	19E9764
AB40166	MICROCYSTINS ADDA 546	0.177 Abs [0.1790] {1.6 CV}	> 5.000 µg/L	12.000 %Abs, Out(LF)	0.300 - 5.000	19E9764
AB40166 10X	MICROCYSTINS ADDA 546	0.720 Abs	9.180 µg/L	<b>HIGH, 48.814 %ABS</b>	0.300 - 5.000	19E9764
AB40166 10X	MICROCYSTINS ADDA 546	0.700 Abs [0.7100] {2.0 CV}	9.760 µg/L [9.470] {4}		0.300 - 5.000	19E9764
AB40167	MICROCYSTINS ADDA 546	1.522 Abs	0.000 µg/L	<b>LOW, 103.186 %ABS</b>	0.300 - 5.000	19E9764
AB40167	MICROCYSTINS ADDA 546	1.520 Abs [1.5210] {0.1 CV}	0.000 µg/L [0.000]		0.300 - 5.000	19E9764
LFB 2	MICROCYSTINS ADDA 546	0.972 Abs	0.454 µg/L	65.898 %Abs	0.300 - 5.000	19E9764
LFB 2	MICROCYSTINS ADDA 546	0.949 Abs [0.9605] {1.7 CV}	0.483 µg/L [0.469] {4}	64.339 %Abs [65.115]	0.300 - 5.000	19E9764
LRB 2	MICROCYSTINS ADDA 546	1.562 Abs	0.000 µg/L	<b>LOW, 105.898 %ABS</b>	0.300 - 5.000	19E9764
LRB 2	MICROCYSTINS ADDA 546	1.273 Abs [1.4175] {14.4 CV}	0.168 µg/L [0.084] {1}		0.300 - 5.000	19E9764



Charles Hostetter 8/27/2019