Microcystins ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB43415	Raccoon Lake SRA	7/13/2020	7/16/2020	< 0.30
AB43417	Cagles Mill Lake Beach	7/13/2020	7/16/2020	< 0.30
AB43418	Paynetown SRA	7/13/2020	7/16/2020	< 0.30
AB43419	Fairfax SRA	7/13/2020	7/16/2020	< 0.30
AB43420	Starve Hollow SRA	7/13/2020	7/16/2020	< 0.30
AB43421	Whitewater Memorial SP	7/14/2020	7/16/2020	< 0.30
AB43422	Quakertown SRA	7/14/2020	7/16/2020	< 0.30
AB43423	Mounds SRA	7/14/2020	7/16/2020	< 0.30
AB43424	Hardy Lake SRA	7/14/2020	7/16/2020	< 0.30
AB43416	Deam Lake SRA	7/14/2020	7/16/2020	< 0.30
AB43425	Whitewater Memorial SP (Field Duplicate)	7/14/2020	7/16/2020	< 0.30
AB43426	Field Blank	7/13/2020	7/16/2020	< 0.30
AB43427	Lincoln State Park	7/13/2020	7/16/2020	< 0.30
AB43428	Ferdinand State Forest Lake	7/13/2020	7/16/2020	< 0.30
AB43429	Patoka Lake	7/14/2020	7/16/2020	< 0.30

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Test Report (by Request)

Test Information

Request: 7/16/2020 12:31:28 PM
Date: 7/16/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
MCT Std 0	MICROCYSTINS ADDA 546	1.611 Abs	0.013 µg/L	R^2=0.99801, 99.322		19L2093
MCT Std 0	MICROCYSTINS ADDA 546	1.632 Abs [1.6215] {0.9 CV}	0.000 µg/L [0.007] {1	R^2=0.99801, 100.61		19L2093
MCT Std 1	MICROCYSTINS ADDA 546	1.406 Abs	0.145 µg/L	R^2=0.99801, 86.683		19L2093
MCT Std 1	MICROCYSTINS ADDA 546	1.415 Abs [1.4105] {0.5 CV}	0.139 µg/L [0.142] {3	R^2=0.99801, 87.238		19L2093
MCT Std 2	MICROCYSTINS ADDA 546	1.123 Abs	0.384 µg/L	R^2=0.99801, 69.236		19L2093
MCT Std 2	MICROCYSTINS ADDA 546	1.080 Abs [1.1015] {2.8 CV}	0.431 µg/L [0.407] {8	R^2=0.99801, 66.584		19L2093
MCT Std 3	MICROCYSTINS ADDA 546	0.761 Abs	1.012 µg/L	R^2=0.99801, 46.917		19L2093
MCT Std 3	MICROCYSTINS ADDA 546	0.725 Abs [0.7430] {3.4 CV}	1.124 µg/L [1.068] {7	R^2=0.99801, 44.698		19L2093
MCT Std 4	MICROCYSTINS ADDA 546	0.599 Abs	1.700 µg/L	R^2=0.99801, 36.930		19L2093
MCT Std 4	MICROCYSTINS ADDA 546	0.589 Abs [0.5940] {1.2 CV}	1.765 µg/L [1.733] {2	R^2=0.99801, 36.313		19L2093
MCT Std 5	MICROCYSTINS ADDA 546	0.385 Abs	> 5.000 µg/L	23.736 %Abs		19L2093
MCT Std 5	MICROCYSTINS ADDA 546	0.380 Abs [0.3825] {0.9 CV}	> 5.000 µg/L	23.428 %Abs		19L2093
MCT 546 LRB 1	MICROCYSTINS ADDA 546	1.553 Abs	0.050 µg/L	95.746 %Abs		19L2093
MCT 546 LRB 1	MICROCYSTINS ADDA 546	1.514 Abs [1.5335] {1.8 CV}	0.074 µg/L [0.062] {2	93.342 %Abs [94.54		19L2093
MCT 546 Low-CV	MICROCYSTINS ADDA 546	1.251 Abs	0.262 µg/L	77.127 %Abs		19L2093
MCT 546 Low-CV	MICROCYSTINS ADDA 546	1.229 Abs [1.2400] {1.3 CV}	0.281 µg/L [0.271] {4	75.771 %Abs [76.44		19L2093
MCT 546 LFB 1	MICROCYSTINS ADDA 546	1.048 Abs	0.470 µg/L	64.612 %Abs		19L2093
MCT 546 LFB 1	MICROCYSTINS ADDA 546	1.041 Abs [1.0445] {0.5 CV}	0.479 µg/L [0.475] {1	64.180 %Abs [64.39		19L2093

Note

Signature David Jordan

Date: 7/16/2020

* 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) 7/16/2020 12:45:32 PM

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Test Report (by Request)

Test Information

Request: 7/16/2020 12:32:51 PM
Date: 7/16/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
AB43415	MICROCYSTINS ADDA 546	1.390 Abs	0.156 µg/L	**LOW, 85.697 %ABS**	0.300 - 5.000	19L2093
AB43415	MICROCYSTINS ADDA 546	1.352 Abs [1.3710] {2.0 CV}	0.183 µg/L [0.169] {1	**LOW, 83.354 %ABS**	0.300 - 5.000	19L2093
AB43416	MICROCYSTINS ADDA 546	1.500 Abs	0.083 µg/L	**LOW, 92.478 %ABS**	0.300 - 5.000	19L2093
AB43416	MICROCYSTINS ADDA 546	1.502 Abs [1.5010] {0.1 CV}	0.082 µg/L [0.082] {0	**LOW, 92.602 %ABS**	0.300 - 5.000	19L2093
AB43417	MICROCYSTINS ADDA 546	1.466 Abs	0.105 µg/L	**LOW, 90.382 %ABS**	0.300 - 5.000	19L2093
AB43417	MICROCYSTINS ADDA 546	1.404 Abs [1.4350] {3.1 CV}	0.146 µg/L [0.125] {2	**LOW, 86.560 %ABS**	0.300 - 5.000	19L2093
AB43418	MICROCYSTINS ADDA 546	1.486 Abs	0.092 µg/L	**LOW, 91.615 %ABS**	0.300 - 5.000	19L2093
AB43418	MICROCYSTINS ADDA 546	1.497 Abs [1.4915] {0.5 CV}	0.085 µg/L [0.089] {5	**LOW, 92.293 %ABS**	0.300 - 5.000	19L2093
AB43418MS	MICROCYSTINS ADDA 546	1.413 Abs	0.140 µg/L	**LOW, 87.115 %ABS**	0.300 - 5.000	19L2093
AB43418MS	MICROCYSTINS ADDA 546	1.412 Abs [1.4125] {0.1 CV}	0.141 µg/L [0.141] {0	**LOW, 87.053 %ABS**	0.300 - 5.000	19L2093
AB43418MSD	MICROCYSTINS ADDA 546	1.434 Abs	0.126 µg/L	**LOW, 88.409 %ABS**	0.300 - 5.000	19L2093
AB43418MSD	MICROCYSTINS ADDA 546	1.414 Abs [1.4240] {1.0 CV}	0.139 µg/L [0.132] {6	**LOW, 87.176 %ABS**	0.300 - 5.000	19L2093
AB43419	MICROCYSTINS ADDA 546	1.395 Abs	0.152 µg/L	**LOW, 86.005 %ABS**	0.300 - 5.000	19L2093
AB43419	MICROCYSTINS ADDA 546	1.358 Abs [1.3765] {1.9 CV}	0.179 µg/L [0.166] {1	**LOW, 83.724 %ABS**	0.300 - 5.000	19L2093
AB43420	MICROCYSTINS ADDA 546	1.558 Abs	0.047 µg/L	**LOW, 96.054 %ABS**	0.300 - 5.000	19L2093
AB43420	MICROCYSTINS ADDA 546	1.526 Abs [1.5420] {1.5 CV}	0.067 µg/L [0.057] {2	**LOW, 94.081 %ABS**	0.300 - 5.000	19L2093
AB43421	MICROCYSTINS ADDA 546	1.430 Abs	0.129 µg/L	**LOW, 88.163 %ABS**	0.300 - 5.000	19L2093
AB43421	MICROCYSTINS ADDA 546	1.433 Abs [1.4315] {0.1 CV}	0.127 µg/L [0.128] {1	**LOW, 88.348 %ABS**	0.300 - 5.000	19L2093
AB43422	MICROCYSTINS ADDA 546	1.387 Abs	0.158 µg/L	**LOW, 85.512 %ABS**	0.300 - 5.000	19L2093
AB43422	MICROCYSTINS ADDA 546	1.416 Abs [1.4015] {1.5 CV}	0.138 µg/L [0.148] {9	**LOW, 87.300 %ABS**	0.300 - 5.000	19L2093
AB43423	MICROCYSTINS ADDA 546	1.313 Abs	0.212 µg/L	**LOW, 80.949 %ABS**	0.300 - 5.000	19L2093
AB43423	MICROCYSTINS ADDA 546	1.328 Abs [1.3205] {0.8 CV}	0.201 µg/L [0.206] {3	**LOW, 81.874 %ABS**	0.300 - 5.000	19L2093
AB43424	MICROCYSTINS ADDA 546	1.451 Abs	0.115 µg/L	**LOW, 89.457 %ABS**	0.300 - 5.000	19L2093
AB43424	MICROCYSTINS ADDA 546	1.423 Abs [1.4370] {1.4 CV}	0.133 µg/L [0.124] {1	**LOW, 87.731 %ABS**	0.300 - 5.000	19L2093
AB43425	MICROCYSTINS ADDA 546	1.436 Abs	0.125 µg/L	**LOW, 88.533 %ABS**	0.300 - 5.000	19L2093
AB43425	MICROCYSTINS ADDA 546	1.408 Abs [1.4220] {1.4 CV}	0.143 µg/L [0.134] {9	**LOW, 86.806 %ABS**	0.300 - 5.000	19L2093
AB43426	MICROCYSTINS ADDA 546	1.551 Abs	0.051 µg/L	**LOW, 95.623 %ABS**	0.300 - 5.000	19L2093
AB43426	MICROCYSTINS ADDA 546	1.498 Abs [1.5245] {2.5 CV}	0.085 µg/L [0.068] {3	**LOW, 92.355 %ABS**	0.300 - 5.000	19L2093
AB43427	MICROCYSTINS ADDA 546	1.417 Abs	0.137 µg/L	**LOW, 87.361 %ABS**	0.300 - 5.000	19L2093
AB43427	MICROCYSTINS ADDA 546	1.296 Abs [1.3565] {6.3 CV}	0.225 µg/L [0.181] {3	**LOW, 79.901 %ABS**	0.300 - 5.000	19L2093
AB43428	MICROCYSTINS ADDA 546	1.332 Abs	0.198 µg/L	**LOW, 82.121 %ABS**	0.300 - 5.000	19L2093
AB43428	MICROCYSTINS ADDA 546	1.289 Abs [1.3105] {2.3 CV}	0.231 µg/L [0.215] {1	**LOW, 79.470 %ABS**	0.300 - 5.000	19L2093
AB43429	MICROCYSTINS ADDA 546	1.464 Abs	0.106 µg/L	**LOW, 90.259 %ABS**	0.300 - 5.000	19L2093
AB43429	MICROCYSTINS ADDA 546	1.437 Abs [1.4505] {1.3 CV}	0.124 µg/L [0.115] {1	**LOW, 88.594 %ABS**	0.300 - 5.000	19L2093
LFB 2	MICROCYSTINS ADDA 546	1.003 Abs	0.529 µg/L	61.837 %Abs	0.300 - 5.000	19L2093
LFB 2	MICROCYSTINS ADDA 546	0.940 Abs [0.9715] {4.6 CV}	0.624 µg/L [0.576] {1	57.953 %Abs [59.89	0.300 - 5.000	19L2093
LRB 2	MICROCYSTINS ADDA 546	1.504 Abs	0.081 µg/L	**LOW, 92.725 %ABS**	0.300 - 5.000	19L2093
LRB 2	MICROCYSTINS ADDA 546	1.449 Abs [1.4765] {2.6 CV}	0.116 µg/L [0.098] {2	**LOW, 89.334 %ABS**	0.300 - 5.000	19L2093
QCS	MICROCYSTINS ADDA 546	1.039 Abs	0.481 µg/L	64.057 %Abs	0.300 - 5.000	19L2093
QCS	MICROCYSTINS ADDA 546	0.995 Abs [1.0170] {3.1 CV}	0.540 µg/L [0.511] {8	61.344 %Abs [62.70	0.300 - 5.000	19L2093

Note

Signature David Jordan

Date: 7/16/2020

* 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) 7/16/2020 12:45:32 PM

MICROCYSTINS ADDA 546 - Assay Calibration Report

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: 19L2093

Assay Calibration

Current Calibration Status: " **"**

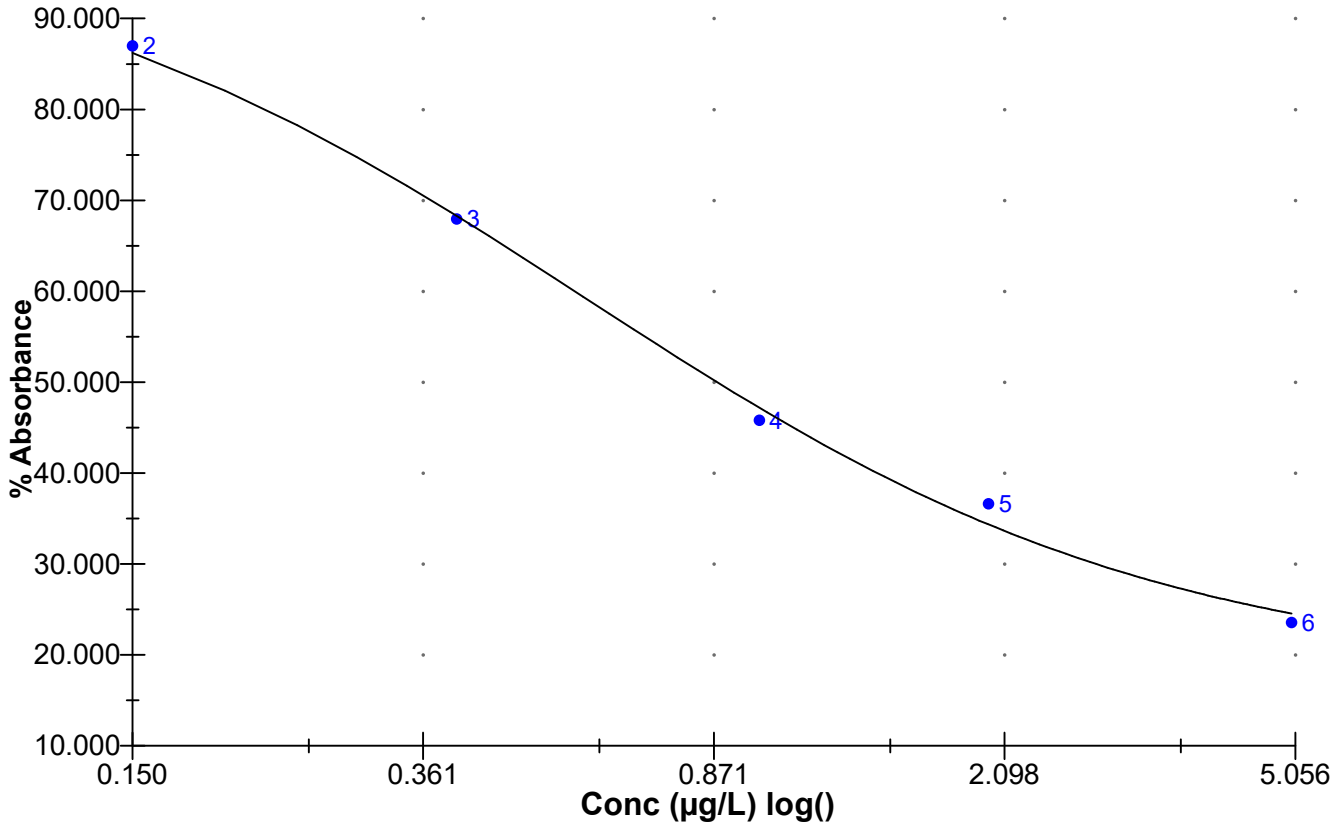
Name	Absorbance	Concentration	Interpretation	Position
7/16/2020 12:31:28 PM				
MCT Std 0	1.611 Abs		R^2=0.99801, 99.322 %Abs	RK1:23->A01@2
MCT Std 0	1.632 Abs [1.6215] {0.9 CV}		R^2=0.99801, 100.617 %Abs	RK1:23->B01@2
MCT Std 1	1.406 Abs		R^2=0.99801, 86.683 %Abs	RK1:24->C01@2
MCT Std 1	1.415 Abs [1.4105] {0.5 CV}		R^2=0.99801, 87.238 %Abs	RK1:24->D01@2
MCT Std 2	1.123 Abs		R^2=0.99801, 69.236 %Abs	RK1:25->E01@2
MCT Std 2	1.080 Abs [1.1015] {2.8 CV}		R^2=0.99801, 66.584 %Abs	RK1:25->F01@3
MCT Std 3	0.761 Abs		R^2=0.99801, 46.917 %Abs	RK1:26->G01@3
MCT Std 3	0.725 Abs [0.7430] {3.4 CV}		R^2=0.99801, 44.698 %Abs	RK1:26->H01@3
MCT Std 4	0.599 Abs		R^2=0.99801, 36.930 %Abs	RK1:27->A02@2
MCT Std 4	0.589 Abs [0.5940] {1.2 CV}		R^2=0.99801, 36.313 %Abs	RK1:27->B02@2
MCT Std 5	0.385 Abs		23.736 %Abs	RK1:28->C02@2
MCT Std 5	0.380 Abs [0.3825] {0.9 CV}		23.428 %Abs	RK1:28->D02@2
++++++++++++++++++++++++++++++++++	++++++++++++++++++++++		++++++++++++++++++++++	++++++++++++++++++++++
7/16/2020 12:31:28 PM				
MCT 546 LRB 1	1.553 Abs		95.746 %Abs	RK1:29->E02@2
MCT 546 LRB 1	1.514 Abs [1.5335] {1.8 CV}		93.342 %Abs [94.544 %Abs]	RK1:29->F02@3
MCT 546 Low-CV	1.251 Abs		77.127 %Abs	RK1:30->G02@3
MCT 546 Low-CV	1.229 Abs [1.2400] {1.3 CV}		75.771 %Abs [76.449 %Abs]	RK1:30->H02@3
MCT 546 LFB 1	1.048 Abs		64.612 %Abs	RK1:31->A03@2
MCT 546 LFB 1	1.041 Abs [1.0445] {0.5 CV}		64.180 %Abs [64.396 %Abs]	RK1:31->B03@2
**********	**********	**********	**********	**********
Statistic				
MCT Std 0 [MEAN]	1.6215			
MCT Std 0 [SD]	0.0148			
MCT Std 0 [%CV]	0.9158			
MCT Std 1 [MEAN]	1.4105			
MCT Std 1 [SD]	0.0064			
MCT Std 1 [%CV]	0.4512			
MCT Std 1 [%DIFF]				
MCT Std 2 [MEAN]	1.1015			
MCT Std 2 [SD]	0.0304			
MCT Std 2 [%CV]	2.7604			
MCT Std 2 [%DIFF]				
MCT Std 3 [MEAN]	0.7430			
MCT Std 3 [SD]	0.0255			
MCT Std 3 [%CV]	3.4261			
MCT Std 3 [%DIFF]				
MCT Std 4 [MEAN]	0.5940			

MICROCYSTINS ADDA 546 - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
MCT Std 4 [SD]	0.0071			
MCT Std 4 [%CV]	1.1904			
MCT Std 4 [%DIFF]				
MCT Std 5 [MEAN]	0.3825			
MCT Std 5 [SD]	0.0035			
MCT Std 5 [%CV]	0.9243			
MCT 546 LRB 1 [MEAN]	1.5335			
MCT 546 LRB 1 [SD]	0.0276			
MCT 546 LRB 1 [%CV]	1.7983			
MCT 546 Low-CV [MEAN]	1.2400			
MCT 546 Low-CV [SD]	0.0156			
MCT 546 Low-CV [%CV]	1.2545			
MCT 546 LFB 1 [MEAN]	1.0445			
MCT 546 LFB 1 [SD]	0.0049			
MCT 546 LFB 1 [%CV]	0.4739			

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.6270
B = 1.1474
C = 0.59292
D = 0.29204
R2 coef = 0.99801
50% = 0.880



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