Microcystins 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	< 0.30
AB43833	Deam Lake SRA	8/11/2020	8/12/2020	< 0.30
AB43834	Cagles Mill Lake Beach	8/10/2020	8/12/2020	< 0.30
AB43835	Paynetown SRA	8/10/2020	8/12/2020	< 0.30
AB43836	Fairfax SRA	8/10/2020	8/12/2020	< 0.30
AB43837	Starve Hollow SRA	8/10/2020	8/12/2020	< 0.30
AB43838	Whitewater Memorial SP	8/11/2020	8/12/2020	< 0.30
AB43839	Quakertown SRA	8/11/2020	8/12/2020	< 0.30
AB43840	Mounds SRA	8/11/2020	8/12/2020	< 0.30
AB43841	Hardy Lake SRA	8/11/2020	8/12/2020	< 0.30
AB43842	Fairfax SRA (Field Duplicate)	8/10/2020	8/12/2020	< 0.30
AB43843	Field Blank	8/10/2020	8/12/2020	< 0.30
AB43844	Lincoln State Park	8/10/2020	8/12/2020	< 0.30
AB43845	Ferdinand State Forest Lake	8/10/2020	8/12/2020	< 0.30
AB43846	Patoka Lake	8/10/2020	8/12/2020	< 0.30
AB43847	Ft. Harrison SP Dog Lake	8/11/2020	8/12/2020	< 0.30

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Test Report (by Request)

Test Information

Request: 8/12/2020 5:44:33 PM
Date: 8/12/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
MCT Std 0	MICROCYSTINS ADDA 546	1.359 Abs	0.000 µg/L	R^2=0.99730, 102.25		19L2093
MCT Std 0	MICROCYSTINS ADDA 546	1.300 Abs [1.3295] {3.1 CV}	0.033 µg/L [0.017] {1	R^2=0.99730, 97.818		19L2093
MCT Std 1	MICROCYSTINS ADDA 546	1.189 Abs	0.120 µg/L	R^2=0.99730, 89.466		19L2093
MCT Std 1	MICROCYSTINS ADDA 546	1.158 Abs [1.1735] {1.9 CV}	0.145 µg/L [0.132] {1	R^2=0.99730, 87.133		19L2093
MCT Std 2	MICROCYSTINS ADDA 546	0.906 Abs	0.404 µg/L	R^2=0.99730, 68.172		19L2093
MCT Std 2	MICROCYSTINS ADDA 546	0.870 Abs [0.8880] {2.9 CV}	0.454 µg/L [0.429] {8	R^2=0.99730, 65.463		19L2093
MCT Std 3	MICROCYSTINS ADDA 546	0.619 Abs	1.011 µg/L	R^2=0.99730, 46.576		19L2093
MCT Std 3	MICROCYSTINS ADDA 546	0.612 Abs [0.6155] {0.8 CV}	1.036 µg/L [1.023] {1	R^2=0.99730, 46.050		19L2093
MCT Std 4	MICROCYSTINS ADDA 546	0.485 Abs	1.698 µg/L	R^2=0.99730, 36.494		19L2093
MCT Std 4	MICROCYSTINS ADDA 546	0.475 Abs [0.4800] {1.5 CV}	1.777 µg/L [1.737] {3	R^2=0.99730, 35.741		19L2093
MCT Std 5	MICROCYSTINS ADDA 546	0.313 Abs	> 5.000 µg/L	23.552 %Abs		19L2093
MCT Std 5	MICROCYSTINS ADDA 546	0.298 Abs [0.3055] {3.5 CV}	> 5.000 µg/L	22.423 %Abs		19L2093
MCT 546 LRB 1	MICROCYSTINS ADDA 546	1.334 Abs	0.004 µg/L	100.376 %Abs		19L2093
MCT 546 LRB 1	MICROCYSTINS ADDA 546	1.289 Abs [1.3115] {2.4 CV}	0.042 µg/L [0.023] {1	96.990 %Abs [98.68		19L2093
MCT 546 Low-CV	MICROCYSTINS ADDA 546	0.976 Abs	0.319 µg/L	73.439 %Abs		19L2093
MCT 546 Low-CV	MICROCYSTINS ADDA 546	0.974 Abs [0.9750] {0.1 CV}	0.321 µg/L [0.320] {0	73.288 %Abs [73.36		19L2093
MCT 546 LFB 1	MICROCYSTINS ADDA 546	0.850 Abs	0.483 µg/L	63.958 %Abs		19L2093
MCT 546 LFB 1	MICROCYSTINS ADDA 546	0.870 Abs [0.8600] {1.6 CV}	0.454 µg/L [0.469] {4	65.463 %Abs [64.71		19L2093

Note

Signature Charles Hostetter

Charles Hostetter 8/13/20

* 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 6:44:21 PM

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Test Report (by Request)

Test Information

Request: 8/12/2020 6:26:40 PM
Date: 8/12/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
AB43832	MICROCYSTINS ADDA 546	1.258 Abs	0.066 µg/L	**LOW, 94.658 %ABS**	0.300 - 5.000	19L2093
AB43832	MICROCYSTINS ADDA 546	1.171 Abs [1.2145] {5.1 CV}	0.134 µg/L [0.100] {4	**LOW, 88.111 %ABS**	0.300 - 5.000	19L2093
AB43833	MICROCYSTINS ADDA 546	1.265 Abs	0.060 µg/L	**LOW, 95.184 %ABS**	0.300 - 5.000	19L2093
AB43833	MICROCYSTINS ADDA 546	1.239 Abs [1.2520] {1.5 CV}	0.080 µg/L [0.070] {2	**LOW, 93.228 %ABS**	0.300 - 5.000	19L2093
AB43834	MICROCYSTINS ADDA 546	1.215 Abs	0.099 µg/L	**LOW, 91.422 %ABS**	0.300 - 5.000	19L2093
AB43834	MICROCYSTINS ADDA 546	1.268 Abs [1.2415] {3.0 CV}	0.058 µg/L [0.079] {3	**LOW, 95.410 %ABS**	0.300 - 5.000	19L2093
AB43835	MICROCYSTINS ADDA 546	1.264 Abs	0.061 µg/L	**LOW, 95.109 %ABS**	0.300 - 5.000	19L2093
AB43835	MICROCYSTINS ADDA 546	1.251 Abs [1.2575] {0.7 CV}	0.071 µg/L [0.066] {1	**LOW, 94.131 %ABS**	0.300 - 5.000	19L2093
AB43836	MICROCYSTINS ADDA 546	1.235 Abs	0.083 µg/L	**LOW, 92.927 %ABS**	0.300 - 5.000	19L2093
AB43836	MICROCYSTINS ADDA 546	1.196 Abs [1.2155] {2.3 CV}	0.114 µg/L [0.098] {2	**LOW, 89.992 %ABS**	0.300 - 5.000	19L2093
AB43837	MICROCYSTINS ADDA 546	1.257 Abs	0.067 µg/L	**LOW, 94.582 %ABS**	0.300 - 5.000	19L2093
AB43837	MICROCYSTINS ADDA 546	1.230 Abs [1.2435] {1.5 CV}	0.087 µg/L [0.077] {1	**LOW, 92.551 %ABS**	0.300 - 5.000	19L2093
AB43837MS	MICROCYSTINS ADDA 546	0.750 Abs	0.661 µg/L	56.433 %Abs	0.300 - 5.000	19L2093
AB43837MS	MICROCYSTINS ADDA 546	0.768 Abs [0.7590] {1.7 CV}	0.624 µg/L [0.643] {4	57.788 %Abs [57.111	0.300 - 5.000	19L2093
AB43837MSD	MICROCYSTINS ADDA 546	0.824 Abs	0.524 µg/L	62.002 %Abs	0.300 - 5.000	19L2093
AB43837MSD	MICROCYSTINS ADDA 546	0.813 Abs [0.8185] {1.0 CV}	0.543 µg/L [0.533] {2	61.174 %Abs [61.588	0.300 - 5.000	19L2093
AB43838	MICROCYSTINS ADDA 546	1.266 Abs	0.060 µg/L	**LOW, 95.260 %ABS**	0.300 - 5.000	19L2093
AB43838	MICROCYSTINS ADDA 546	1.233 Abs [1.2495] {1.9 CV}	0.085 µg/L [0.072] {2	**LOW, 92.777 %ABS**	0.300 - 5.000	19L2093
AB43839	MICROCYSTINS ADDA 546	1.161 Abs	0.142 µg/L	**LOW, 87.359 %ABS**	0.300 - 5.000	19L2093
AB43839	MICROCYSTINS ADDA 546	1.114 Abs [1.1375] {2.9 CV}	0.182 µg/L [0.162] {1	**LOW, 83.822 %ABS**	0.300 - 5.000	19L2093
AB43840	MICROCYSTINS ADDA 546	1.148 Abs	0.153 µg/L	**LOW, 86.381 %ABS**	0.300 - 5.000	19L2093
AB43840	MICROCYSTINS ADDA 546	1.135 Abs [1.1415] {0.8 CV}	0.164 µg/L [0.159] {4	**LOW, 85.403 %ABS**	0.300 - 5.000	19L2093
AB43841	MICROCYSTINS ADDA 546	1.136 Abs	0.163 µg/L	**LOW, 85.478 %ABS**	0.300 - 5.000	19L2093
AB43841	MICROCYSTINS ADDA 546	1.186 Abs [1.1610] {3.0 CV}	0.122 µg/L [0.142] {2	**LOW, 89.240 %ABS**	0.300 - 5.000	19L2093
AB43842	MICROCYSTINS ADDA 546	1.259 Abs	0.065 µg/L	**LOW, 94.733 %ABS**	0.300 - 5.000	19L2093
AB43842	MICROCYSTINS ADDA 546	1.231 Abs [1.2450] {1.6 CV}	0.087 µg/L [0.076] {2	**LOW, 92.626 %ABS**	0.300 - 5.000	19L2093
AB43843	MICROCYSTINS ADDA 546	1.319 Abs	0.018 µg/L	**LOW, 99.248 %ABS**	0.300 - 5.000	19L2093
AB43843	MICROCYSTINS ADDA 546	1.306 Abs [1.3125] {0.7 CV}	0.028 µg/L [0.023] {3	**LOW, 98.269 %ABS**	0.300 - 5.000	19L2093
AB43844	MICROCYSTINS ADDA 546	1.239 Abs	0.080 µg/L	**LOW, 93.228 %ABS**	0.300 - 5.000	19L2093
AB43844	MICROCYSTINS ADDA 546	1.291 Abs [1.2650] {2.9 CV}	0.040 µg/L [0.060] {4	**LOW, 97.141 %ABS**	0.300 - 5.000	19L2093
AB43845	MICROCYSTINS ADDA 546	1.091 Abs	0.203 µg/L	**LOW, 82.092 %ABS**	0.300 - 5.000	19L2093
AB43845	MICROCYSTINS ADDA 546	1.108 Abs [1.0995] {1.1 CV}	0.187 µg/L [0.195] {5	**LOW, 83.371 %ABS**	0.300 - 5.000	19L2093
AB43846	MICROCYSTINS ADDA 546	1.297 Abs	0.035 µg/L	**LOW, 97.592 %ABS**	0.300 - 5.000	19L2093
AB43846	MICROCYSTINS ADDA 546	1.288 Abs [1.2925] {0.5 CV}	0.043 µg/L [0.039] {1	**LOW, 96.915 %ABS**	0.300 - 5.000	19L2093
AB43847	MICROCYSTINS ADDA 546	1.312 Abs	0.023 µg/L	**LOW, 98.721 %ABS**	0.300 - 5.000	19L2093
AB43847	MICROCYSTINS ADDA 546	1.291 Abs [1.3015] {1.1 CV}	0.040 µg/L [0.032] {3	**LOW, 97.141 %ABS**	0.300 - 5.000	19L2093
LFB 2	MICROCYSTINS ADDA 546	0.869 Abs	0.455 µg/L	65.388 %Abs	0.300 - 5.000	19L2093
LFB 2	MICROCYSTINS ADDA 546	0.826 Abs [0.8475] {3.6 CV}	0.521 µg/L [0.488] {9	62.152 %Abs [63.770	0.300 - 5.000	19L2093
LRB 2	MICROCYSTINS ADDA 546	1.352 Abs	0.000 µg/L	**LOW, 101.731 %ABS**	0.300 - 5.000	19L2093
LRB 2	MICROCYSTINS ADDA 546	1.312 Abs [1.3320] {2.1 CV}	0.023 µg/L [0.012] {1	**LOW, 98.721 %ABS**	0.300 - 5.000	19L2093

Note

Signature Charles Hostetter

Charles Hostetter 8/13/20

* 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 6:44:21 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: " **"**

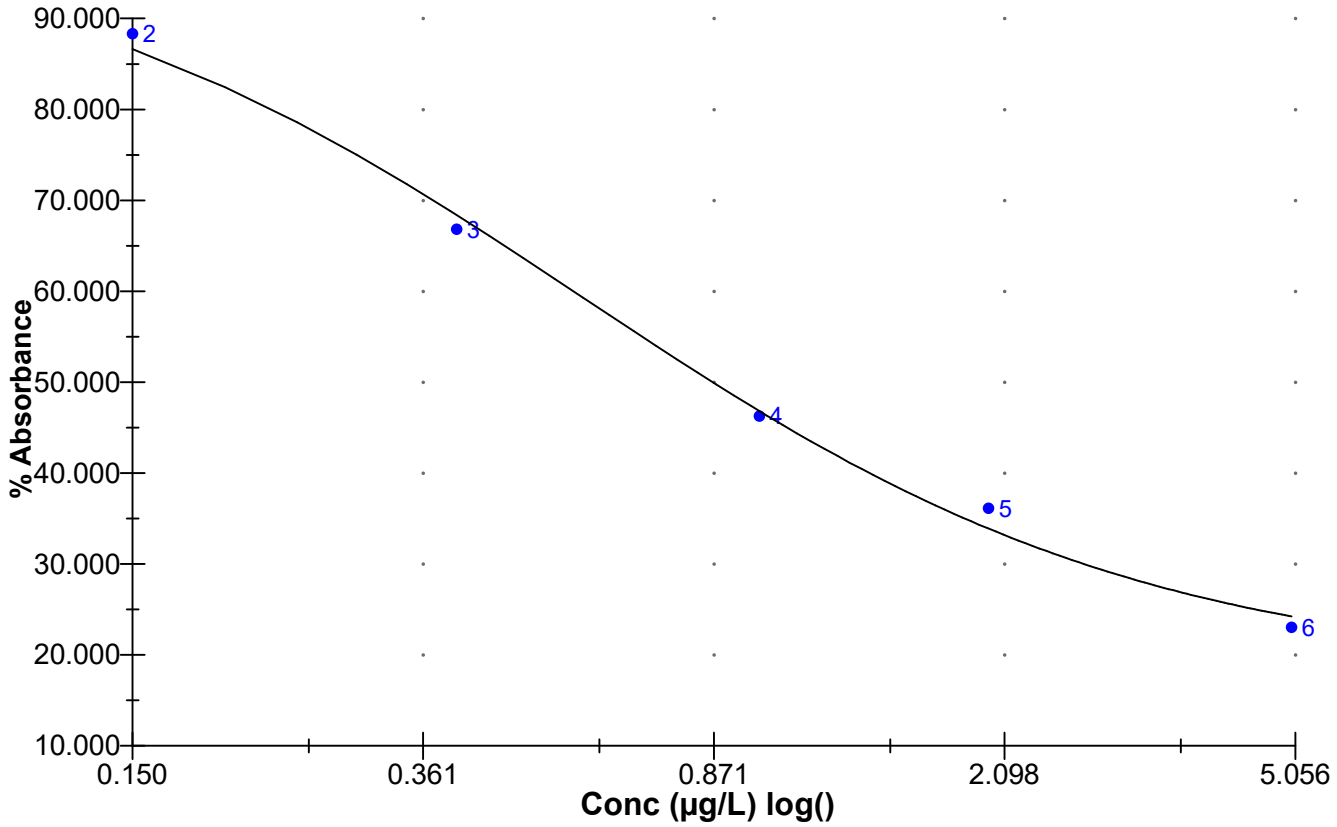
Name	Absorbance	Concentration	Interpretation	Position
8/12/2020 5:44:33 PM				
MCT Std 0	1.359 Abs		R^2=0.99730, 102.257 %Abs	RK1:23->A01@2
MCT Std 0	1.300 Abs [1.3295] {3.1 CV}		R^2=0.99730, 97.818 %Abs	RK1:23->B01@2
MCT Std 1	1.189 Abs		R^2=0.99730, 89.466 %Abs	RK1:24->C01@2
MCT Std 1	1.158 Abs [1.1735] {1.9 CV}		R^2=0.99730, 87.133 %Abs	RK1:24->D01@2
MCT Std 2	0.906 Abs		R^2=0.99730, 68.172 %Abs	RK1:25->E01@2
MCT Std 2	0.870 Abs [0.8880] {2.9 CV}		R^2=0.99730, 65.463 %Abs	RK1:25->F01@3
MCT Std 3	0.619 Abs		R^2=0.99730, 46.576 %Abs	RK1:26->G01@3
MCT Std 3	0.612 Abs [0.6155] {0.8 CV}		R^2=0.99730, 46.050 %Abs	RK1:26->H01@3
MCT Std 4	0.485 Abs		R^2=0.99730, 36.494 %Abs	RK1:27->A02@2
MCT Std 4	0.475 Abs [0.4800] {1.5 CV}		R^2=0.99730, 35.741 %Abs	RK1:27->B02@2
MCT Std 5	0.313 Abs		23.552 %Abs	RK1:28->C02@2
MCT Std 5	0.298 Abs [0.3055] {3.5 CV}		22.423 %Abs	RK1:28->D02@2
++++++++++++++++++++++++++++++++++	++++++++++++++++++++++++		++++++++++++++++++++++++	++++++++++++++++++++++++
8/12/2020 5:44:33 PM				
MCT 546 LRB 1	1.334 Abs		100.376 %Abs	RK1:29->E02@2
MCT 546 LRB 1	1.289 Abs [1.3115] {2.4 CV}		96.990 %Abs [98.683 %Abs]	RK1:29->F02@3
MCT 546 Low-CV	0.976 Abs		73.439 %Abs	RK1:30->G02@3
MCT 546 Low-CV	0.974 Abs [0.9750] {0.1 CV}		73.288 %Abs [73.363 %Abs]	RK1:30->H02@3
MCT 546 LFB 1	0.850 Abs		63.958 %Abs	RK1:31->A03@2
MCT 546 LFB 1	0.870 Abs [0.8600] {1.6 CV}		65.463 %Abs [64.710 %Abs]	RK1:31->B03@2
**********	**********	**********	**********	**********
Statistic				
MCT Std 0 [MEAN]	1.3295			
MCT Std 0 [SD]	0.0417			
MCT Std 0 [%CV]	3.1380			
MCT Std 1 [MEAN]	1.1735			
MCT Std 1 [SD]	0.0219			
MCT Std 1 [%CV]	1.8679			
MCT Std 1 [%DIFF]				
MCT Std 2 [MEAN]	0.8880			
MCT Std 2 [SD]	0.0255			
MCT Std 2 [%CV]	2.8667			
MCT Std 2 [%DIFF]				
MCT Std 3 [MEAN]	0.6155			
MCT Std 3 [SD]	0.0049			
MCT Std 3 [%CV]	0.8042			
MCT Std 3 [%DIFF]				
MCT Std 4 [MEAN]	0.4800			

MICROCYSTINS ADDA 546 - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
MCT Std 4 [SD]	0.0071			
MCT Std 4 [%CV]	1.4731			
MCT Std 4 [%DIFF]				
MCT Std 5 [MEAN]	0.3055			
MCT Std 5 [SD]	0.0106			
MCT Std 5 [%CV]	3.4719			
MCT 546 LRB 1 [MEAN]	1.3115			
MCT 546 LRB 1 [SD]	0.0318			
MCT 546 LRB 1 [%CV]	2.4262			
MCT 546 Low-CV [MEAN]	0.9750			
MCT 546 Low-CV [SD]	0.0014			
MCT 546 Low-CV [%CV]	0.1451			
MCT 546 LFB 1 [MEAN]	0.8600			
MCT 546 LFB 1 [SD]	0.0141			
MCT 546 LFB 1 [%CV]	1.6444			

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.3368
B = 1.1695
C = 0.58672
D = 0.23919
R2 coef = 0.99730
50% = 0.868



*Generated by software version (6.4.1.1073/1085/1.00/0.95) 8/12/2020 6:29:45 PM