Microcystins Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ug/L)	% Recovery
MCT 546 LRB 1	Lab Reagent Blank	6/10/2019	6/13/2019	< 0.30	
MCT 546 LFB 1	Lab Fortified Blank (True value = 0.600)	6/10/2019	6/13/2019	0.60	101
AB39109	Paynetown (Field Duplicate)	6/10/2019	6/13/2019	< 0.30	
AB39110	Field Blank	6/10/2019	6/13/2019	< 0.30	
AB39111	Raccoon Lake SRA	6/10/2019	6/13/2019	< 0.30	
AB39112	Paynetown SRA	6/10/2019	6/13/2019	< 0.30	
AB39113	Fairfax SRA	6/10/2019	6/13/2019	< 0.30	
AB39113MS	Fairfax (Matrix Spike, True Value = 0.60)	6/10/2019	6/13/2019	0.54	85
AB39113MSD	Fairfax (Matrix Spike Duplicate, True Value = 0.60)	6/10/2019	6/13/2019	0.74	117
AB39114	Starve Hollow SRA	6/10/2019	6/13/2019	< 0.30	
AB39115	Whitewater Memorial SP	6/11/2019	6/13/2019	< 0.30	
AB39116	Quakertown SRA	6/11/2019	6/13/2019	< 0.30	
AB39117	Mounds SRA	6/11/2019	6/13/2019	< 0.30	
AB39118	Hardy Lake SRA	6/11/2019	6/13/2019	< 0.30	
AB39119	Deam Lake SRA	6/11/2019	6/13/2019	< 0.30	
MCT 546 LFB 2	Lab Fortified Blank (True value = 0.600)	6/10/2019	6/13/2019	0.51	85
MCT 546 LRB 2	Lab Reagent Blank	6/10/2019	6/13/2019	< 0.30	

Test Report (by Request)

Test Information

Request: 6/13/2019 8:37:02 AM
Date: 6/13/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Referenc
MCT Std 0	MICROCYSTINS ADDA 546	1.328 Abs	0.010 µg/L	R^2=0.99835	0.000
MCT Std 0	MICROCYSTINS ADDA 546	1.343 Abs [1.3355] {0.8 CV}	0.000 µg/L [0.005] {141.	R^2=0.99835	0.000
MCT Std 1	MICROCYSTINS ADDA 546	1.127 Abs	0.147 µg/L	R^2=0.99835	0.150
MCT Std 1	MICROCYSTINS ADDA 546	1.158 Abs [1.1425] {1.9 CV}	0.124 µg/L [0.135] {12.0	R^2=0.99835	0.150
MCT Std 2	MICROCYSTINS ADDA 546	0.847 Abs	0.430 µg/L	R^2=0.99835	0.400
MCT Std 2	MICROCYSTINS ADDA 546	0.844 Abs [0.8455] {0.3 CV}	0.434 µg/L [0.432] {0.7	R^2=0.99835	0.400
MCT Std 3	MICROCYSTINS ADDA 546	0.592 Abs	0.986 µg/L	R^2=0.99835	1.000
MCT Std 3	MICROCYSTINS ADDA 546	0.594 Abs [0.5930] {0.2 CV}	0.979 µg/L [0.982] {0.5	R^2=0.99835	1.000
MCT Std 4	MICROCYSTINS ADDA 546	0.445 Abs	1.785 µg/L	R^2=0.99835	2.000
MCT Std 4	MICROCYSTINS ADDA 546	0.431 Abs [0.4380] {2.3 CV}	1.912 µg/L [1.849] {4.9	R^2=0.99835	2.000
MCT Std 5	MICROCYSTINS ADDA 546	0.282 Abs	> 5.000 µg/L		5.000
MCT Std 5	MICROCYSTINS ADDA 546	0.287 Abs [0.2845] {1.2 CV}	> 5.000 µg/L		5.000
MCT 546 LRB 1	MICROCYSTINS ADDA 546	1.250 Abs	0.061 µg/L		
MCT 546 LRB 1	MICROCYSTINS ADDA 546	1.262 Abs [1.2560] {0.7 CV}	0.053 µg/L [0.057] {9.9		
MCT 546 Low-CV	MICROCYSTINS ADDA 546	0.866 Abs	0.404 µg/L		
MCT 546 Low-CV	MICROCYSTINS ADDA 546	0.821 Abs [0.8435] {3.8 CV}	0.467 µg/L [0.436] {10.2		
MCT 546 LFB 1	MICROCYSTINS ADDA 546	0.732 Abs	0.619 µg/L		
MCT 546 LFB 1	MICROCYSTINS ADDA 546	0.748 Abs [0.7400] {1.5 CV}	0.589 µg/L [0.604] {3.5		
AB39109	MICROCYSTINS ADDA 546	1.268 Abs	0.049 µg/L	**LOW**	0.300 - 5
AB39109	MICROCYSTINS ADDA 546	1.303 Abs [1.2855] {1.9 CV}	0.027 µg/L [0.038] {40.9	**LOW [LOW]**	0.300 - 5
AB39110	MICROCYSTINS ADDA 546	1.287 Abs	0.037 µg/L	**LOW**	0.300 - 5
AB39110	MICROCYSTINS ADDA 546	1.300 Abs [1.2935] {0.7 CV}	0.029 µg/L [0.033] {17.1	**LOW [LOW]**	0.300 - 5
AB39111	MICROCYSTINS ADDA 546	1.124 Abs	0.149 µg/L	**LOW**	0.300 - 5
AB39111	MICROCYSTINS ADDA 546	1.065 Abs [1.0945] {3.8 CV}	0.196 µg/L [0.172] {19.3	**LOW [LOW]**	0.300 - 5
AB39112	MICROCYSTINS ADDA 546	1.295 Abs	0.032 µg/L	**LOW**	0.300 - 5
AB39112	MICROCYSTINS ADDA 546	1.322 Abs [1.3085] {1.5 CV}	0.014 µg/L [0.023] {55.3	**LOW [LOW]**	0.300 - 5
AB39113	MICROCYSTINS ADDA 546	1.275 Abs	0.045 µg/L	**LOW**	0.300 - 5
AB39113	MICROCYSTINS ADDA 546	1.308 Abs [1.2915] {1.8 CV}	0.024 µg/L [0.035] {43.0	**LOW [LOW]**	0.300 - 5
AB39113MS	MICROCYSTINS ADDA 546	0.764 Abs	0.559 µg/L		0.300 - 5
AB39113MS	MICROCYSTINS ADDA 546	0.781 Abs [0.7725] {1.6 CV}	0.530 µg/L [0.544] {3.8		0.300 - 5
AB39113MSD	MICROCYSTINS ADDA 546	0.705 Abs	0.675 µg/L		0.300 - 5
AB39113MSD	MICROCYSTINS ADDA 546	0.654 Abs [0.6795] {5.3 CV}	0.797 µg/L [0.736] {11.7		0.300 - 5
AB39114	MICROCYSTINS ADDA 546	1.264 Abs	0.052 µg/L	**LOW**	0.300 - 5
AB39114	MICROCYSTINS ADDA 546	1.319 Abs [1.2915] {3.0 CV}	0.016 µg/L [0.034] {74.9	**LOW [LOW]**	0.300 - 5
AB39115	MICROCYSTINS ADDA 546	1.224 Abs	0.078 µg/L	**LOW**	0.300 - 5
AB39115	MICROCYSTINS ADDA 546	1.276 Abs [1.2500] {2.9 CV}	0.044 µg/L [0.061] {39.4	**LOW [LOW]**	0.300 - 5
AB39116	MICROCYSTINS ADDA 546	1.256 Abs	0.057 µg/L	**LOW**	0.300 - 5
AB39116	MICROCYSTINS ADDA 546	1.273 Abs [1.2645] {1.0 CV}	0.046 µg/L [0.052] {15.1	**LOW [LOW]**	0.300 - 5
AB39117	MICROCYSTINS ADDA 546	1.194 Abs	0.098 µg/L	**LOW**	0.300 - 5
AB39117	MICROCYSTINS ADDA 546	1.122 Abs [1.1580] {4.4 CV}	0.150 µg/L [0.124] {29.7	**LOW [LOW]**	0.300 - 5
AB39118	MICROCYSTINS ADDA 546	1.213 Abs	0.085 µg/L	**LOW**	0.300 - 5
AB39118	MICROCYSTINS ADDA 546	1.248 Abs [1.2305] {2.0 CV}	0.062 µg/L [0.074] {22.1	**LOW [LOW]**	0.300 - 5
AB39119	MICROCYSTINS ADDA 546	1.281 Abs	0.041 µg/L	**LOW**	0.300 - 5
AB39119	MICROCYSTINS ADDA 546	1.348 Abs [1.3145] {3.6 CV}	0.000 µg/L [0.021] {141.	**LOW [LOW]**	0.300 - 5
MCT 546 LFB 2	MICROCYSTINS ADDA 546	0.775 Abs	0.540 µg/L		0.300 - 5
MCT 546 LFB 2	MICROCYSTINS ADDA 546	0.817 Abs [0.7960] {3.7 CV}	0.473 µg/L [0.507] {9.4		0.300 - 5
MCT LRB 2	MICROCYSTINS ADDA 546	1.289 Abs	0.036 µg/L	**LOW**	0.300 - 5
MCT LRB 2	MICROCYSTINS ADDA 546	1.322 Abs [1.3055] {1.8 CV}	0.014 µg/L [0.025] {62.2	**LOW [LOW]**	0.300 - 5

* 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 (6.4.1.943/1085/1.00/0.95) 6/13/2019 1:27:08 PM

Test Report (by Request)

Note

Signature David Jordan
Date: 6/13/2019

* 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 (6.4.1.943/1085/1.00/0.95) 6/13/2019 1:27:08 PM

MICROCYSTINS ADDA 546 - Assay Calibration Report

Assay Information

Assay Name: MICROCYSTINS ADDA 546
Version: 1
Temperature: Room Temperature
Last Modified By: Security disabled
Units: µg/L
Assay Description:
Assay Substances:

Assay Mode: 4-Parameter Logistic Weight by:None
Well Type: Flat bottom
Last Modified On: 5/9/2019 11:43:40 AM
Normal: 0.300 - 5.000
# of decimals: 3

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: 7 days 0 hours
Axis Mode: Y = Abs, X = Log(Conc)

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
6/13/2019 8:37:02 AM				
MCT Std 0	1.328 Abs	0.010 µg/L	R^2=0.99835	RK1:23->A01@2
MCT Std 0	1.343 Abs [1.3355] {0.8 CV}	0.000 µg/L [0.005] {141.4 C\	R^2=0.99835	RK1:23->B01@2
MCT Std 1	1.127 Abs	0.147 µg/L	R^2=0.99835	RK1:24->C01@2
MCT Std 1	1.158 Abs [1.1425] {1.9 CV}	0.124 µg/L [0.135] {12.0 CV}	R^2=0.99835	RK1:24->D01@2
MCT Std 2	0.847 Abs	0.430 µg/L	R^2=0.99835	RK1:25->E01@2
MCT Std 2	0.844 Abs [0.8455] {0.3 CV}	0.434 µg/L [0.432] {0.7 CV}	R^2=0.99835	RK1:25->F01@3
MCT Std 3	0.592 Abs	0.986 µg/L	R^2=0.99835	RK1:26->G01@3
MCT Std 3	0.594 Abs [0.5930] {0.2 CV}	0.979 µg/L [0.982] {0.5 CV}	R^2=0.99835	RK1:26->H01@3
MCT Std 4	0.445 Abs	1.785 µg/L	R^2=0.99835	RK1:27->A02@2
MCT Std 4	0.431 Abs [0.4380] {2.3 CV}	1.912 µg/L [1.849] {4.9 CV}	R^2=0.99835	RK1:27->B02@2
MCT Std 5	0.282 Abs	> 5.000 µg/L		RK1:28->C02@2
MCT Std 5	0.287 Abs [0.2845] {1.2 CV}	> 5.000 µg/L		RK1:28->D02@2
++++++++++++++++++++++++++++++++++	++++++++++++++++++++++	++++++++++++++++++++++	++++++++++++++++++++++	++++++++++++++++++++++
6/13/2019 8:37:02 AM				
MCT 546 LRB 1	1.250 Abs	0.061 µg/L		RK1:29->E02@2
MCT 546 LRB 1	1.262 Abs [1.2560] {0.7 CV}	0.053 µg/L [0.057] {9.9 CV}		RK1:29->F02@3
MCT 546 Low-CV	0.866 Abs	0.404 µg/L		RK1:30->G02@3
MCT 546 Low-CV	0.821 Abs [0.8435] {3.8 CV}	0.467 µg/L [0.436] {10.2 CV}		RK1:30->H02@3
MCT 546 LFB 1	0.732 Abs	0.619 µg/L		RK1:31->A03@2
MCT 546 LFB 1	0.748 Abs [0.7400] {1.5 CV}	0.589 µg/L [0.604] {3.5 CV}		RK1:31->B03@2
**********	**********	**********	**********	**********
Statistic				
MCT Std 0 [MEAN]	1.3355	0.0050		
MCT Std 0 [SD]	0.0106	0.0071		
MCT Std 0 [%CV]	0.7942	141.4214		
MCT Std 1 [MEAN]	1.1425	0.1355		
MCT Std 1 [SD]	0.0219	0.0163		
MCT Std 1 [%CV]	1.9186	12.0026		
MCT Std 1 [%DIFF]		-9.6667		
MCT Std 2 [MEAN]	0.8455	0.4320		
MCT Std 2 [SD]	0.0021	0.0028		
MCT Std 2 [%CV]	0.2509	0.6547		
MCT Std 2 [%DIFF]		8.0000		
MCT Std 3 [MEAN]	0.5930	0.9825		
MCT Std 3 [SD]	0.0014	0.0049		
MCT Std 3 [%CV]	0.2385	0.5038		
MCT Std 3 [%DIFF]		-1.7500		
MCT Std 4 [MEAN]	0.4380	1.8485		

MICROCYSTINS ADDA 546 - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
MCT Std 4 [SD]	0.0099	0.0898		
MCT Std 4 [%CV]	2.2602	4.8581		
MCT Std 4 [%DIFF]		-7.5750		
MCT Std 5 [MEAN]	0.2845			
MCT Std 5 [SD]	0.0035			
MCT Std 5 [%CV]	1.2427			
MCT 546 LRB 1 [MEAN]	1.2560	0.0570		
MCT 546 LRB 1 [SD]	0.0085	0.0057		
MCT 546 LRB 1 [%CV]	0.6756	9.9243		
MCT 546 Low-CV [MEAN]	0.8435	0.4355		
MCT 546 Low-CV [SD]	0.0318	0.0445		
MCT 546 Low-CV [%CV]	3.7724	10.2291		
MCT 546 LFB 1 [MEAN]	0.7400	0.6040		
MCT 546 LFB 1 [SD]	0.0113	0.0212		
MCT 546 LFB 1 [%CV]	1.5289	3.5121		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.3418
B = 1.1149
C = 0.54171
D = 0.20727
R2 coef = 0.99828