



## Microcystins ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

<b>Sample #</b>	<b>Location</b>	<b>Date Collected</b>	<b>Date Analyzed</b>	<b>Conc. (ppb)</b>
AC03068	Cecil M. Harden Lake - Raccoon Lake SRA Beach	6/12/2023	6/14/2023	< 0.30
AC03069	Cagles Mill Lake - Lieber SRA Beach	6/12/2023	6/14/2023	< 0.30
AC03070	Monroe Lake - Paynetown SRA Beach	6/12/2023	6/14/2023	< 0.30
AC03071	Monroe Lake - Fairfax SRA Beach	6/12/2023	6/14/2023	< 0.30
AC03072	Starve Hollow SRA - Starve Hollow Lake Beach	6/12/2023	6/14/2023	< 0.30
AC03073	Whitewater Memorial SP - Whitewater Lake Beach	6/13/2023	6/14/2023	< 0.30
AC03074	Brookville Lake - Quakertown SRA Beach	6/13/2023	6/14/2023	< 0.30
AC03075	Brookville Lake - Mounds SRA Beach	6/13/2023	6/14/2023	< 0.30
AC03076	Hardy Lake SRA - Hardy Lake SRA Beach	6/13/2023	6/14/2023	< 0.30
AC03077	Deam Lake SRA - Deam Lake Beach	6/13/2023	6/14/2023	< 0.30
AC03078	Brookville Lake - Mounds SRA Beach (Field Duplicate)	6/13/2023	6/14/2023	< 0.30
AC03079	Field Blank	6/13/2023	6/14/2023	< 0.30
AC03080	Ft. Ben Harrison SP Dog Lake	6/13/2023	6/14/2023	< 0.30

# Test Report (by Request)

**Test Information**

Request: 6/14/2023 3:29:45 PM  
Date: 6/14/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
MCT Std 0	MICROCYSTINS ADDA 54	1.305 Abs	0.000 µg/L	R^2=0.99696, 100.5			P23C0589
MCT Std 0	MICROCYSTINS ADDA 54	1.282 Abs [1.2935] {1.3 C	0.015 µg/L [0.007]	R^2=0.99696, 99.14			P23C0589
MCT Std 1	MICROCYSTINS ADDA 54	1.089 Abs	0.142 µg/L	R^2=0.99696, 84.22			P23C0589
MCT Std 1	MICROCYSTINS ADDA 54	1.089 Abs [1.0890] {0.0 C	0.142 µg/L [0.142]	R^2=0.99696, 84.22			P23C0589
MCT Std 2	MICROCYSTINS ADDA 54	0.800 Abs	0.392 µg/L	R^2=0.99696, 61.87			P23C0589
MCT Std 2	MICROCYSTINS ADDA 54	0.773 Abs [0.7865] {2.4 C	0.425 µg/L [0.409]	R^2=0.99696, 59.78			P23C0589
MCT Std 3	MICROCYSTINS ADDA 54	0.491 Abs	1.045 µg/L	R^2=0.99696, 37.97			P23C0589
MCT Std 3	MICROCYSTINS ADDA 54	0.477 Abs [0.4840] {2.0 C	1.104 µg/L [1.074]	R^2=0.99696, 36.89			P23C0589
MCT Std 4	MICROCYSTINS ADDA 54	0.396 Abs	1.589 µg/L	R^2=0.99696, 30.62			P23C0589
MCT Std 4	MICROCYSTINS ADDA 54	0.395 Abs [0.3955] {0.2 C	1.597 µg/L [1.593]	R^2=0.99696, 30.54			P23C0589
MCT Std 5	MICROCYSTINS ADDA 54	0.244 Abs	> 5.000 µg/L	18.871 %Abs			P23C0589
MCT Std 5	MICROCYSTINS ADDA 54	0.236 Abs [0.2400] {2.4 C	> 5.000 µg/L	18.252 %Abs			P23C0589
MCT 546 LRB 1	MICROCYSTINS ADDA 54	1.226 Abs	0.054 µg/L	94.818 %Abs			P23C0589
MCT 546 LRB 1	MICROCYSTINS ADDA 54	1.223 Abs [1.2245] {0.2 C	0.056 µg/L [0.055]	94.586 %Abs [94.7			P23C0589
MCT 546 Low-CV	MICROCYSTINS ADDA 54	0.858 Abs	0.330 µg/L	66.357 %Abs			P23C0589
MCT 546 Low-CV	MICROCYSTINS ADDA 54	0.774 Abs [0.8160] {7.3 C	0.424 µg/L [0.377]	59.861 %Abs [63.1			P23C0589
MCT 546 LFB 1	MICROCYSTINS ADDA 54	0.729 Abs	0.484 µg/L	56.381 %Abs			P23C0589
MCT 546 LFB 1	MICROCYSTINS ADDA 54	0.711 Abs [0.7200] {1.8 C	0.510 µg/L [0.497]	54.988 %Abs [55.6			P23C0589

**Note**

Signature David Jordan

David Jordan 6/14/2023

\* 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 (6.4.1.1139/1085/1.00/0.95) 6/15/2023 8:49:21 AM

# Test Report (by Request)

**Test Information**

 Request: 6/14/2023 3:30:52 PM  
 Date: 6/14/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
AC03068	MICROCYSTINS ADDA 54	1.129 Abs	0.116 µg/L	Low, 87.316 %Abs		0.300 - 5.000	P23C058€
AC03068	MICROCYSTINS ADDA 54	1.110 Abs [1.1195] {1.2 C	0.128 µg/L [0.122]	Low, 85.847 %Abs		0.300 - 5.000	P23C058€
AC03068MS	MICROCYSTINS ADDA 54	0.591 Abs	0.737 µg/L	45.708 %Abs		0.300 - 5.000	P23C058€
AC03068MS	MICROCYSTINS ADDA 54	0.575 Abs [0.5830] {1.9 C	0.777 µg/L [0.757]	44.470 %Abs [45.0		0.300 - 5.000	P23C058€
AC03068MSD	MICROCYSTINS ADDA 54	0.600 Abs	0.716 µg/L	46.404 %Abs		0.300 - 5.000	P23C058€
AC03068MSD	MICROCYSTINS ADDA 54	0.538 Abs [0.5690] {7.7 C	0.880 µg/L [0.798]	41.609 %Abs [44.0		0.300 - 5.000	P23C058€
AC03069	MICROCYSTINS ADDA 54	1.152 Abs	0.101 µg/L	Low, 89.095 %Abs		0.300 - 5.000	P23C058€
AC03069	MICROCYSTINS ADDA 54	1.169 Abs [1.1605] {1.0 C	0.090 µg/L [0.096]	Low, 90.410 %Abs		0.300 - 5.000	P23C058€
AC03070	MICROCYSTINS ADDA 54	1.230 Abs	0.051 µg/L	Low, 95.128 %Abs		0.300 - 5.000	P23C058€
AC03070	MICROCYSTINS ADDA 54	1.217 Abs [1.2235] {0.8 C	0.060 µg/L [0.056]	Low, 94.122 %Abs		0.300 - 5.000	P23C058€
AC03071	MICROCYSTINS ADDA 54	1.219 Abs	0.058 µg/L	Low, 94.277 %Abs		0.300 - 5.000	P23C058€
AC03071	MICROCYSTINS ADDA 54	1.218 Abs [1.2185] {0.1 C	0.059 µg/L [0.058]	Low, 94.200 %Abs		0.300 - 5.000	P23C058€
AC03072	MICROCYSTINS ADDA 54	1.183 Abs	0.081 µg/L	Low, 91.493 %Abs		0.300 - 5.000	P23C058€
AC03072	MICROCYSTINS ADDA 54	1.091 Abs [1.1370] {5.7 C	0.141 µg/L [0.111]	Low, 84.377 %Abs		0.300 - 5.000	P23C058€
AC03073	MICROCYSTINS ADDA 54	1.082 Abs	0.147 µg/L	Low, 83.681 %Abs		0.300 - 5.000	P23C058€
AC03073	MICROCYSTINS ADDA 54	1.072 Abs [1.0770] {0.7 C	0.154 µg/L [0.150]	Low, 82.908 %Abs		0.300 - 5.000	P23C058€
AC03074	MICROCYSTINS ADDA 54	1.133 Abs	0.113 µg/L	Low, 87.626 %Abs		0.300 - 5.000	P23C058€
AC03074	MICROCYSTINS ADDA 54	1.124 Abs [1.1285] {0.6 C	0.119 µg/L [0.116]	Low, 86.930 %Abs		0.300 - 5.000	P23C058€
AC03075	MICROCYSTINS ADDA 54	1.175 Abs	0.086 µg/L	Low, 90.874 %Abs		0.300 - 5.000	P23C058€
AC03075	MICROCYSTINS ADDA 54	1.188 Abs [1.1815] {0.8 C	0.078 µg/L [0.082]	Low, 91.879 %Abs		0.300 - 5.000	P23C058€
AC03076	MICROCYSTINS ADDA 54	1.099 Abs	0.136 µg/L	Low, 84.996 %Abs		0.300 - 5.000	P23C058€
AC03076	MICROCYSTINS ADDA 54	1.039 Abs [1.0690] {4.0 C	0.177 µg/L [0.157]	Low, 80.356 %Abs		0.300 - 5.000	P23C058€
AC03077	MICROCYSTINS ADDA 54	1.268 Abs	0.026 µg/L	Low, 98.067 %Abs		0.300 - 5.000	P23C058€
AC03077	MICROCYSTINS ADDA 54	1.260 Abs [1.2640] {0.4 C	0.031 µg/L [0.029]	Low, 97.448 %Abs		0.300 - 5.000	P23C058€
AC03078	MICROCYSTINS ADDA 54	1.192 Abs	0.075 µg/L	Low, 92.189 %Abs		0.300 - 5.000	P23C058€
AC03078	MICROCYSTINS ADDA 54	1.191 Abs [1.1915] {0.1 C	0.076 µg/L [0.075]	Low, 92.111 %Abs		0.300 - 5.000	P23C058€
AC03079	MICROCYSTINS ADDA 54	1.230 Abs	0.051 µg/L	Low, 95.128 %Abs		0.300 - 5.000	P23C058€
AC03079	MICROCYSTINS ADDA 54	1.245 Abs [1.2375] {0.9 C	0.041 µg/L [0.046]	Low, 96.288 %Abs		0.300 - 5.000	P23C058€
AC03080	MICROCYSTINS ADDA 54	1.182 Abs	0.082 µg/L	Low, 91.415 %Abs		0.300 - 5.000	P23C058€
AC03080	MICROCYSTINS ADDA 54	1.173 Abs [1.1775] {0.5 C	0.088 µg/L [0.085]	Low, 90.719 %Abs		0.300 - 5.000	P23C058€
LFB 2	MICROCYSTINS ADDA 54	0.724 Abs	0.491 µg/L	55.994 %Abs		0.300 - 5.000	P23C058€
LFB 2	MICROCYSTINS ADDA 54	0.691 Abs [0.7075] {3.3 C	0.541 µg/L [0.516]	53.442 %Abs [54.7		0.300 - 5.000	P23C058€
LRB 2	MICROCYSTINS ADDA 54	1.250 Abs	0.038 µg/L	Low, 96.674 %Abs		0.300 - 5.000	P23C058€
LRB 2	MICROCYSTINS ADDA 54	1.201 Abs [1.2255] {2.8 C	0.070 µg/L [0.054]	Low, 92.885 %Abs		0.300 - 5.000	P23C058€

**Note**

Signature

David Jordan 6/14/2023

**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: 9/30/2020 10:02:13 AM

Normal: 0.300 - 5.000

# of decimals: 3

Kit Lot Number: P23C0589

**Assay Calibration**

Current Calibration Status: "

"

Name	Absorbance	Concentration	Interpretation	Position
<b>6/14/2023 3:29:45 PM</b>				
MCT Std 0	1.305 Abs	0.000 µg/L	R <sup>2</sup> =0.99696, 100.928 %Abs	RK1:23->A01@2
MCT Std 0	1.282 Abs [1.2935] {1.3 CV}	0.015 µg/L [0.007] {141.4 CV}	R <sup>2</sup> =0.99696, 99.149 %Abs	RK1:23->B01@2
MCT Std 1	1.089 Abs	0.142 µg/L	R <sup>2</sup> =0.99696, 84.223 %Abs	RK1:24->C01@2
MCT Std 1	1.089 Abs [1.0890] {0.0 CV}	0.142 µg/L [0.142] {0.0 CV}	R <sup>2</sup> =0.99696, 84.223 %Abs	RK1:24->D01@2
MCT Std 2	0.800 Abs	0.392 µg/L	R <sup>2</sup> =0.99696, 61.872 %Abs	RK1:25->E01@2
MCT Std 2	0.773 Abs [0.7865] {2.4 CV}	0.425 µg/L [0.409] {5.7 CV}	R <sup>2</sup> =0.99696, 59.783 %Abs	RK1:25->F01@3
MCT Std 3	0.491 Abs	1.045 µg/L	R <sup>2</sup> =0.99696, 37.974 %Abs	RK1:26->G01@3
MCT Std 3	0.477 Abs [0.4840] {2.0 CV}	1.104 µg/L [1.074] {3.9 CV}	R <sup>2</sup> =0.99696, 36.891 %Abs	RK1:26->H01@3
MCT Std 4	0.396 Abs	1.589 µg/L	R <sup>2</sup> =0.99696, 30.626 %Abs	RK1:27->A02@2
MCT Std 4	0.395 Abs [0.3955] {0.2 CV}	1.597 µg/L [1.593] {0.4 CV}	R <sup>2</sup> =0.99696, 30.549 %Abs	RK1:27->B02@2
MCT Std 5	0.244 Abs	> 5.000 µg/L	18.871 %Abs	RK1:28->C02@2
MCT Std 5	0.236 Abs [0.2400] {2.4 CV}	> 5.000 µg/L	18.252 %Abs	RK1:28->D02@2
*****				
<b>6/14/2023 3:29:45 PM</b>				
MCT 546 LRB 1	1.226 Abs	0.054 µg/L	94.818 %Abs	RK1:29->E02@2
MCT 546 LRB 1	1.223 Abs [1.2245] {0.2 CV}	0.056 µg/L [0.055] {2.6 CV}	94.586 %Abs [94.702 %Abs]	RK1:29->F02@3
MCT 546 Low-CV	0.858 Abs	0.330 µg/L	66.357 %Abs	RK1:30->G02@3
MCT 546 Low-CV	0.774 Abs [0.8160] {7.3 CV}	0.424 µg/L [0.377] {17.6 CV}	59.861 %Abs [63.109 %Abs]	RK1:30->H02@3
MCT 546 LFB 1	0.729 Abs	0.484 µg/L	56.381 %Abs	RK1:31->A03@2
MCT 546 LFB 1	0.711 Abs [0.7200] {1.8 CV}	0.510 µg/L [0.497] {3.7 CV}	54.988 %Abs [55.684 %Abs]	RK1:31->B03@2
*****				
<b>Statistic</b>				
MCT Std 0 [MEAN]	1.2935	0.0075		
MCT Std 0 [SD]	0.0163	0.0106		
MCT Std 0 [%CV]	1.2573	141.4214		
MCT Std 1 [MEAN]	1.0890	0.1420		
MCT Std 1 [SD]	0.0000	0.0000		
MCT Std 1 [%CV]	0.0000	0.0000		
MCT Std 1 [%DIFF]		-5.3333		
MCT Std 2 [MEAN]	0.7865	0.4085		
MCT Std 2 [SD]	0.0191	0.0233		
MCT Std 2 [%CV]	2.4274	5.7122		
MCT Std 2 [%DIFF]		2.1250		
MCT Std 3 [MEAN]	0.4840	1.0745		
MCT Std 3 [SD]	0.0099	0.0417		
MCT Std 3 [%CV]	2.0454	3.8827		
MCT Std 3 [%DIFF]		7.4500		
MCT Std 4 [MEAN]	0.3955	1.5930		

Name	Absorbance	Concentration	Interpretation	Position
MCT Std 4 [SD]	0.0007	0.0057		
MCT Std 4 [%CV]	0.1788	0.3551		
MCT Std 4 [%DIFF]		-20.3500		
MCT Std 5 [MEAN]	0.2400			
MCT Std 5 [SD]	0.0057			
MCT Std 5 [%CV]	2.3570			
MCT 546 LRB 1 [MEAN]	1.2245	0.0550		
MCT 546 LRB 1 [SD]	0.0021	0.0014		
MCT 546 LRB 1 [%CV]	0.1732	2.5713		
MCT 546 Low-CV [MEAN]	0.8160	0.3770		
MCT 546 Low-CV [SD]	0.0594	0.0665		
MCT 546 Low-CV [%CV]	7.2790	17.6308		
MCT 546 LFB 1 [MEAN]	0.7200	0.4970		
MCT 546 LFB 1 [SD]	0.0127	0.0184		
MCT 546 LFB 1 [%CV]	1.7678	3.6991		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.2973  
 B = 1.2506  
 C = 0.44994  
 D = 0.20998  
 R2 coef = 0.99696  
 50% = 0.619

