



## 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>
AC03253	Cecil M. Harden Lake - Raccoon Lake SRA Beach	6/26/2023	6/27/2023	< 0.30
AC03254	Starve Hollow SRA - Starve Hollow Lake Beach	6/26/2023	6/27/2023	< 0.30
AC03255	Hardy Lake SRA - Hardy Lake SRA Beach	6/26/2023	6/27/2023	< 0.30
AC03256	Whitewater Memorial SP - Whitewater Lake Beach	6/26/2023	6/27/2023	< 0.30
AC03257	Starve Hollow SRA - Starve Hollow Lake Beach (Field Duplicate)	6/26/2023	6/27/2023	< 0.30
AC03258	Field Blank	6/26/2023	6/27/2023	< 0.30

# Test Report (by Request)

**Test Information**

Request: 6/27/2023 3:12:06 PM  
Date: 6/27/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
MCT Std 0	MICROCYSTINS ADDA 54	1.142 Abs	0.000 µg/L	R^2=0.99700, 101.3			P23C058
MCT Std 0	MICROCYSTINS ADDA 54	1.112 Abs [1.1270] {1.9 C	0.019 µg/L [0.009]	R^2=0.99700, 98.6			P23C058
MCT Std 1	MICROCYSTINS ADDA 54	0.945 Abs	0.140 µg/L	R^2=0.99700, 83.8			P23C058
MCT Std 1	MICROCYSTINS ADDA 54	0.938 Abs [0.9415] {0.5 C	0.145 µg/L [0.142]	R^2=0.99700, 83.2			P23C058
MCT Std 2	MICROCYSTINS ADDA 54	0.693 Abs	0.388 µg/L	R^2=0.99700, 61.4			P23C058
MCT Std 2	MICROCYSTINS ADDA 54	0.660 Abs [0.6765] {3.4 C	0.435 µg/L [0.412]	R^2=0.99700, 58.5			P23C058
MCT Std 3	MICROCYSTINS ADDA 54	0.433 Abs	1.011 µg/L	R^2=0.99700, 38.4			P23C058
MCT Std 3	MICROCYSTINS ADDA 54	0.408 Abs [0.4205] {4.2 C	1.133 µg/L [1.072]	R^2=0.99700, 36.2			P23C058
MCT Std 4	MICROCYSTINS ADDA 54	0.352 Abs	1.520 µg/L	R^2=0.99700, 31.2			P23C058
MCT Std 4	MICROCYSTINS ADDA 54	0.337 Abs [0.3445] {3.1 C	1.666 µg/L [1.593]	R^2=0.99700, 29.9			P23C058
MCT Std 5	MICROCYSTINS ADDA 54	0.214 Abs	> 5.000 µg/L	18.988 %Abs			P23C058
MCT Std 5	MICROCYSTINS ADDA 54	0.208 Abs [0.2110] {2.0 C	> 5.000 µg/L	18.456 %Abs			P23C058
MCT 546 LRB 1	MICROCYSTINS ADDA 54	1.077 Abs	0.045 µg/L	95.563 %Abs			P23C058
MCT 546 LRB 1	MICROCYSTINS ADDA 54	1.052 Abs [1.0645] {1.7 C	0.063 µg/L [0.054]	93.345 %Abs [94.4			P23C058
MCT 546 Low-CV	MICROCYSTINS ADDA 54	0.760 Abs	0.307 µg/L	67.436 %Abs			P23C058
MCT 546 Low-CV	MICROCYSTINS ADDA 54	0.694 Abs [0.7270] {6.4 C	0.387 µg/L [0.347]	61.579 %Abs [64.5			P23C058
MCT 546 LFB 1	MICROCYSTINS ADDA 54	0.639 Abs	0.467 µg/L	56.699 %Abs			P23C058
MCT 546 LFB 1	MICROCYSTINS ADDA 54	0.606 Abs [0.6225] {3.7 C	0.523 µg/L [0.495]	53.771 %Abs [55.2			P23C058

**Note**

Signature David Jordan

David Jordan 6/27/2023

\* 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) 6/27/2023 3:39:55 PM

# Test Report (by Request)

**Test Information**

Request: 6/27/2023 3:12:39 PM  
 Date: 6/27/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
AC03253	MICROCYSTINS ADDA 54	0.970 Abs	0.121 µg/L	Low, 86.069 %Abs		0.300 - 5.000	P23C058€
AC03253	MICROCYSTINS ADDA 54	0.968 Abs [0.9690] {0.1 C	0.123 µg/L [0.122]	Low, 85.892 %Abs		0.300 - 5.000	P23C058€
AC03254	MICROCYSTINS ADDA 54	1.048 Abs	0.066 µg/L	Low, 92.990 %Abs		0.300 - 5.000	P23C058€
AC03254	MICROCYSTINS ADDA 54	1.034 Abs [1.0410] {1.0 C	0.076 µg/L [0.071]	Low, 91.748 %Abs		0.300 - 5.000	P23C058€
AC03255	MICROCYSTINS ADDA 54	1.036 Abs	0.074 µg/L	Low, 91.925 %Abs		0.300 - 5.000	P23C058€
AC03255	MICROCYSTINS ADDA 54	0.967 Abs [1.0015] {4.9 C	0.124 µg/L [0.099]	Low, 85.803 %Abs		0.300 - 5.000	P23C058€
AC03255MS	MICROCYSTINS ADDA 54	0.628 Abs	0.485 µg/L	55.723 %Abs		0.300 - 5.000	P23C058€
AC03255MS	MICROCYSTINS ADDA 54	0.648 Abs [0.6380] {2.2 C	0.453 µg/L [0.469]	57.498 %Abs [56.6		0.300 - 5.000	P23C058€
AC03255MSD	MICROCYSTINS ADDA 54	0.649 Abs	0.451 µg/L	57.587 %Abs		0.300 - 5.000	P23C058€
AC03255MSD	MICROCYSTINS ADDA 54	0.624 Abs [0.6365] {2.8 C	0.492 µg/L [0.472]	55.368 %Abs [56.4		0.300 - 5.000	P23C058€
AC03256	MICROCYSTINS ADDA 54	1.025 Abs	0.082 µg/L	Low, 90.949 %Abs		0.300 - 5.000	P23C058€
AC03256	MICROCYSTINS ADDA 54	0.972 Abs [0.9985] {3.8 C	0.120 µg/L [0.101]	Low, 86.247 %Abs		0.300 - 5.000	P23C058€
AC03257	MICROCYSTINS ADDA 54	1.017 Abs	0.088 µg/L	Low, 90.240 %Abs		0.300 - 5.000	P23C058€
AC03257	MICROCYSTINS ADDA 54	0.974 Abs [0.9955] {3.1 C	0.118 µg/L [0.103]	Low, 86.424 %Abs		0.300 - 5.000	P23C058€
AC03258	MICROCYSTINS ADDA 54	1.216 Abs	0.000 µg/L	Low, 107.897 %Abs		0.300 - 5.000	P23C058€
AC03258	MICROCYSTINS ADDA 54	1.172 Abs [1.1940] {2.6 C	0.000 µg/L [0.000]	Low, 103.993 %Abs		0.300 - 5.000	P23C058€
LFB 2	MICROCYSTINS ADDA 54	0.681 Abs	0.405 µg/L	60.426 %Abs		0.300 - 5.000	P23C058€
LFB 2	MICROCYSTINS ADDA 54	0.656 Abs [0.6685] {2.6 C	0.441 µg/L [0.423]	58.208 %Abs [59.3		0.300 - 5.000	P23C058€
LRB 2	MICROCYSTINS ADDA 54	1.161 Abs	0.000 µg/L	Low, 103.017 %Abs		0.300 - 5.000	P23C058€
LRB 2	MICROCYSTINS ADDA 54	1.097 Abs [1.1290] {4.0 C	0.030 µg/L [0.015]	Low, 97.338 %Abs		0.300 - 5.000	P23C058€

**Note**

Signature *David Jordan*

David Jordan 6/27/2023

\* A - Abs > 3; IA - Initial Abs; DA - Delta Abs; SD - SD of Abs; LR - Linear Range; [...] - Mean result of duplicate tests

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**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>6/27/2023 3:12:06 PM</b>				
MCT Std 0	1.142 Abs	0.000 µg/L	R <sup>2</sup> =0.99700, 101.331 %Abs	RK1:23->A01@2
MCT Std 0	1.112 Abs [1.1270] {1.9 CV}	0.019 µg/L [0.009] {141.4 CV}	R <sup>2</sup> =0.99700, 98.669 %Abs	RK1:23->B01@2
MCT Std 1	0.945 Abs	0.140 µg/L	R <sup>2</sup> =0.99700, 83.851 %Abs	RK1:24->C01@2
MCT Std 1	0.938 Abs [0.9415] {0.5 CV}	0.145 µg/L [0.142] {2.5 CV}	R <sup>2</sup> =0.99700, 83.230 %Abs	RK1:24->D01@2
MCT Std 2	0.693 Abs	0.388 µg/L	R <sup>2</sup> =0.99700, 61.491 %Abs	RK1:25->E01@2
MCT Std 2	0.660 Abs [0.6765] {3.4 CV}	0.435 µg/L [0.412] {8.1 CV}	R <sup>2</sup> =0.99700, 58.563 %Abs	RK1:25->F01@3
MCT Std 3	0.433 Abs	1.011 µg/L	R <sup>2</sup> =0.99700, 38.421 %Abs	RK1:26->G01@3
MCT Std 3	0.408 Abs [0.4205] {4.2 CV}	1.133 µg/L [1.072] {8.0 CV}	R <sup>2</sup> =0.99700, 36.202 %Abs	RK1:26->H01@3
MCT Std 4	0.352 Abs	1.520 µg/L	R <sup>2</sup> =0.99700, 31.233 %Abs	RK1:27->A02@2
MCT Std 4	0.337 Abs [0.3445] {3.1 CV}	1.666 µg/L [1.593] {6.5 CV}	R <sup>2</sup> =0.99700, 29.902 %Abs	RK1:27->B02@2
MCT Std 5	0.214 Abs	> 5.000 µg/L	18.988 %Abs	RK1:28->C02@2
MCT Std 5	0.208 Abs [0.2110] {2.0 CV}	> 5.000 µg/L	18.456 %Abs	RK1:28->D02@2
*****				
<b>6/27/2023 3:12:06 PM</b>				
MCT 546 LRB 1	1.077 Abs	0.045 µg/L	95.563 %Abs	RK1:29->E02@2
MCT 546 LRB 1	1.052 Abs [1.0645] {1.7 CV}	0.063 µg/L [0.054] {23.6 CV}	93.345 %Abs [94.454 %Abs]	RK1:29->F02@3
MCT 546 Low-CV	0.760 Abs	0.307 µg/L	67.436 %Abs	RK1:30->G02@3
MCT 546 Low-CV	0.694 Abs [0.7270] {6.4 CV}	0.387 µg/L [0.347] {16.3 CV}	61.579 %Abs [64.508 %Abs]	RK1:30->H02@3
MCT 546 LFB 1	0.639 Abs	0.467 µg/L	56.699 %Abs	RK1:31->A03@2
MCT 546 LFB 1	0.606 Abs [0.6225] {3.7 CV}	0.523 µg/L [0.495] {8.0 CV}	53.771 %Abs [55.235 %Abs]	RK1:31->B03@2
*****				
<b>Statistic</b>				
MCT Std 0 [MEAN]	1.1270	0.0095		
MCT Std 0 [SD]	0.0212	0.0134		
MCT Std 0 [%CV]	1.8823	141.4214		
MCT Std 1 [MEAN]	0.9415	0.1425		
MCT Std 1 [SD]	0.0049	0.0035		
MCT Std 1 [%CV]	0.5257	2.4811		
MCT Std 1 [%DIFF]		-5.0000		
MCT Std 2 [MEAN]	0.6765	0.4115		
MCT Std 2 [SD]	0.0233	0.0332		
MCT Std 2 [%CV]	3.4493	8.0763		
MCT Std 2 [%DIFF]		2.8750		
MCT Std 3 [MEAN]	0.4205	1.0720		
MCT Std 3 [SD]	0.0177	0.0863		
MCT Std 3 [%CV]	4.2040	8.0473		
MCT Std 3 [%DIFF]		7.2000		
MCT Std 4 [MEAN]	0.3445	1.5930		

Name	Absorbance	Concentration	Interpretation	Position
MCT Std 4 [SD]	0.0106	0.1032		
MCT Std 4 [%CV]	3.0788	6.4807		
MCT Std 4 [%DIFF]		-20.3500		
MCT Std 5 [MEAN]	0.2110			
MCT Std 5 [SD]	0.0042			
MCT Std 5 [%CV]	2.0107			
MCT 546 LRB 1 [MEAN]	1.0645	0.0540		
MCT 546 LRB 1 [SD]	0.0177	0.0127		
MCT 546 LRB 1 [%CV]	1.6607	23.5702		
MCT 546 Low-CV [MEAN]	0.7270	0.3470		
MCT 546 Low-CV [SD]	0.0467	0.0566		
MCT 546 Low-CV [%CV]	6.4194	16.3022		
MCT 546 LFB 1 [MEAN]	0.6225	0.4950		
MCT 546 LFB 1 [SD]	0.0233	0.0396		
MCT 546 LFB 1 [%CV]	3.7485	7.9996		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.1306  
 B = 1.2366  
 C = 0.43806  
 D = 0.18487  
 R2 coef = 0.99700  
 50% = 0.607

