



## Microcystins ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC19241	Pokagon SP - Main Beach	8/14/2023	8/16/2023	< 0.30
AC19242	Pokagon SP - Potawatomi Inn Beach	8/14/2023	8/16/2023	< 0.30
AC19243	Chain O'Lakes SP - Sand Lake Beach	8/14/2023	8/16/2023	< 0.30
AC19244	Ouabache SP - Kunkel Lake Beach	8/14/2023	8/16/2023	< 0.30
AC19245	Potato Creek SP - Worster Lake Beach	8/15/2023	8/16/2023	< 0.30
AC19246	Mississinewa Lake - Miami SRA Beach	8/15/2023	8/16/2023	< 0.30
AC19247	Salamonie Lake - Lost Bridge West SRA Beach	8/15/2023	8/16/2023	< 0.30
AC19248	Summit Lake SP - Summit Lake Beach	8/15/2023	8/16/2023	< 0.30
AC19249	Ouabache SP - Kunkel Lake Beach (Field Duplicate)	8/14/2023	8/16/2023	< 0.30
AC19250	Field Blank	8/14/2023	8/16/2023	< 0.30
AC19251	Ferdinand State Forest - Ferdinand Lake Beach	8/14/2023	8/16/2023	< 0.30
AC19252	Lincoln SP - Lake Lincoln Beach	8/14/2023	8/16/2023	< 0.30
AC19253	Patoka Lake - Newton Stewart SRA	8/14/2023	8/16/2023	< 0.30

# Test Report (by Request)

**Test Information**

Request: 8/16/2023 4:35:27 PM  
Date: 8/16/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
MCT Std 0	MICROCYSTINS ADDA 54	1.083 Abs	0.000 µg/L	R^2=0.99946, 101.7		0.000	Kit:P23C0
MCT Std 0	MICROCYSTINS ADDA 54	1.045 Abs [1.0640] {2.5 C	0.044 µg/L [0.022]	R^2=0.99946, 98.21		0.000	Kit:P23C0
MCT Std 1	MICROCYSTINS ADDA 54	0.967 Abs	0.131 µg/L	R^2=0.99946, 90.86		0.150	Kit:P23C0
MCT Std 1	MICROCYSTINS ADDA 54	0.946 Abs [0.9565] {1.6 C	0.152 µg/L [0.142]	R^2=0.99946, 88.91		0.150	Kit:P23C0
MCT Std 2	MICROCYSTINS ADDA 54	0.729 Abs	0.392 µg/L	R^2=0.99946, 68.51		0.400	Kit:P23C0
MCT Std 2	MICROCYSTINS ADDA 54	0.702 Abs [0.7155] {2.7 C	0.428 µg/L [0.410]	R^2=0.99946, 65.97		0.400	Kit:P23C0
MCT Std 3	MICROCYSTINS ADDA 54	0.447 Abs	0.993 µg/L	R^2=0.99946, 42.01		1.000	Kit:P23C0
MCT Std 3	MICROCYSTINS ADDA 54	0.439 Abs [0.4430] {1.3 C	1.024 µg/L [1.009]	R^2=0.99946, 41.25		1.000	Kit:P23C0
MCT Std 4	MICROCYSTINS ADDA 54	0.314 Abs	1.857 µg/L	R^2=0.99946, 29.51		2.000	Kit:P23C0
MCT Std 4	MICROCYSTINS ADDA 54	0.313 Abs [0.3135] {0.2 C	1.869 µg/L [1.863]	R^2=0.99946, 29.41		2.000	Kit:P23C0
MCT Std 5	MICROCYSTINS ADDA 54	0.217 Abs	> 5.000 µg/L	20.395 %Abs		5.000	Kit:P23C0
MCT Std 5	MICROCYSTINS ADDA 54	0.206 Abs [0.2115] {3.7 C	> 5.000 µg/L	19.361 %Abs		5.000	Kit:P23C0
MCT 546 LRB 1	MICROCYSTINS ADDA 54	1.086 Abs	0.000 µg/L	102.068 %Abs			Kit:P23C0
MCT 546 LRB 1	MICROCYSTINS ADDA 54	1.062 Abs [1.0740] {1.6 C	0.017 µg/L [0.009]	99.812 %Abs [100.			Kit:P23C0
MCT 546 Low-CV	MICROCYSTINS ADDA 54	0.744 Abs	0.373 µg/L	69.925 %Abs			Kit:P23C0
MCT 546 Low-CV	MICROCYSTINS ADDA 54	0.749 Abs [0.7465] {0.5 C	0.366 µg/L [0.370]	70.395 %Abs [70.1			Kit:P23C0
MCT 546 LFB 1	MICROCYSTINS ADDA 54	0.608 Abs	0.578 µg/L	57.143 %Abs			Kit:P23C0
MCT 546 LFB 1	MICROCYSTINS ADDA 54	0.596 Abs [0.6020] {1.4 C	0.600 µg/L [0.589]	56.015 %Abs [56.5			Kit:P23C0

**Note**

Signature *David Jordan*

David Jordan 8/16/2023

\* 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 (6.4.1.1171/1085/1.00/0.95) 8/17/2023 9:18:54 AM

# Test Report (by Request)

**Test Information**

Request: 8/16/2023 4:36:35 PM  
Date: 8/16/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
AC19241	MICROCYSTINS ADDA 54	0.992 Abs	0.105 µg/L	Low, 93.233 %Abs		0.300 - 5.000	Kit:P23C0
AC19241	MICROCYSTINS ADDA 54	0.994 Abs [0.9930] {0.1 C	0.103 µg/L [0.104]	Low, 93.421 %Abs		0.300 - 5.000	Kit:P23C0
AC19242	MICROCYSTINS ADDA 54	1.030 Abs	0.063 µg/L	Low, 96.805 %Abs		0.300 - 5.000	Kit:P23C0
AC19242	MICROCYSTINS ADDA 54	1.008 Abs [1.0190] {1.5 C	0.088 µg/L [0.076]	Low, 94.737 %Abs		0.300 - 5.000	Kit:P23C0
AC19242MS	MICROCYSTINS ADDA 54	0.542 Abs	0.714 µg/L	50.940 %Abs		0.300 - 5.000	Kit:P23C0
AC19242MS	MICROCYSTINS ADDA 54	0.506 Abs [0.5240] {4.9 C	0.805 µg/L [0.760]	47.556 %Abs [49.2		0.300 - 5.000	Kit:P23C0
AC19242MSD	MICROCYSTINS ADDA 54	0.571 Abs	0.650 µg/L	53.665 %Abs		0.300 - 5.000	Kit:P23C0
AC19242MSD	MICROCYSTINS ADDA 54	0.575 Abs [0.5730] {0.5 C	0.641 µg/L [0.646]	54.041 %Abs [53.8		0.300 - 5.000	Kit:P23C0
AC19243	MICROCYSTINS ADDA 54	1.087 Abs	0.000 µg/L	Low, 102.162 %Abs		0.300 - 5.000	Kit:P23C0
AC19243	MICROCYSTINS ADDA 54	1.080 Abs [1.0835] {0.5 C	0.000 µg/L [0.000]	Low, 101.504 %Abs		0.300 - 5.000	Kit:P23C0
AC19244	MICROCYSTINS ADDA 54	0.989 Abs	0.108 µg/L	Low, 92.951 %Abs		0.300 - 5.000	Kit:P23C0
AC19244	MICROCYSTINS ADDA 54	0.968 Abs [0.9785] {1.5 C	0.130 µg/L [0.119]	Low, 90.977 %Abs		0.300 - 5.000	Kit:P23C0
AC19245	MICROCYSTINS ADDA 54	0.993 Abs	0.104 µg/L	Low, 93.327 %Abs		0.300 - 5.000	Kit:P23C0
AC19245	MICROCYSTINS ADDA 54	0.965 Abs [0.9790] {2.0 C	0.133 µg/L [0.119]	Low, 90.695 %Abs		0.300 - 5.000	Kit:P23C0
AC19246	MICROCYSTINS ADDA 54	0.910 Abs	0.188 µg/L	Low, 85.526 %Abs		0.300 - 5.000	Kit:P23C0
AC19246	MICROCYSTINS ADDA 54	0.924 Abs [0.9170] {1.1 C	0.174 µg/L [0.181]	Low, 86.842 %Abs		0.300 - 5.000	Kit:P23C0
AC19247	MICROCYSTINS ADDA 54	1.003 Abs	0.093 µg/L	Low, 94.267 %Abs		0.300 - 5.000	Kit:P23C0
AC19247	MICROCYSTINS ADDA 54	0.985 Abs [0.9940] {1.3 C	0.112 µg/L [0.103]	Low, 92.575 %Abs		0.300 - 5.000	Kit:P23C0
AC19248	MICROCYSTINS ADDA 54	1.020 Abs	0.075 µg/L	Low, 95.865 %Abs		0.300 - 5.000	Kit:P23C0
AC19248	MICROCYSTINS ADDA 54	1.014 Abs [1.0170] {0.4 C	0.081 µg/L [0.078]	Low, 95.301 %Abs		0.300 - 5.000	Kit:P23C0
AC19249	MICROCYSTINS ADDA 54	1.002 Abs	0.094 µg/L	Low, 94.173 %Abs		0.300 - 5.000	Kit:P23C0
AC19249	MICROCYSTINS ADDA 54	0.979 Abs [0.9905] {1.6 C	0.119 µg/L [0.107]	Low, 92.011 %Abs		0.300 - 5.000	Kit:P23C0
AC19250	MICROCYSTINS ADDA 54	1.112 Abs	0.000 µg/L	Low, 104.511 %Abs		0.300 - 5.000	Kit:P23C0
AC19250	MICROCYSTINS ADDA 54	1.112 Abs [1.1120] {0.0 C	0.000 µg/L [0.000]	Low, 104.511 %Abs		0.300 - 5.000	Kit:P23C0
AC19251	MICROCYSTINS ADDA 54	0.945 Abs	0.153 µg/L	Low, 88.816 %Abs		0.300 - 5.000	Kit:P23C0
AC19251	MICROCYSTINS ADDA 54	0.937 Abs [0.9410] {0.6 C	0.161 µg/L [0.157]	Low, 88.064 %Abs		0.300 - 5.000	Kit:P23C0
AC19252	MICROCYSTINS ADDA 54	0.984 Abs	0.113 µg/L	Low, 92.481 %Abs		0.300 - 5.000	Kit:P23C0
AC19252	MICROCYSTINS ADDA 54	0.974 Abs [0.9790] {0.7 C	0.124 µg/L [0.119]	Low, 91.541 %Abs		0.300 - 5.000	Kit:P23C0
AC19253	MICROCYSTINS ADDA 54	1.013 Abs	0.082 µg/L	Low, 95.207 %Abs		0.300 - 5.000	Kit:P23C0
AC19253	MICROCYSTINS ADDA 54	0.999 Abs [1.0060] {1.0 C	0.098 µg/L [0.090]	Low, 93.891 %Abs		0.300 - 5.000	Kit:P23C0
LFB 2	MICROCYSTINS ADDA 54	0.675 Abs	0.467 µg/L	63.440 %Abs		0.300 - 5.000	Kit:P23C0
LFB 2	MICROCYSTINS ADDA 54	0.652 Abs [0.6635] {2.5 C	0.503 µg/L [0.485]	61.278 %Abs [62.3		0.300 - 5.000	Kit:P23C0
LRB 2	MICROCYSTINS ADDA 54	1.142 Abs	0.000 µg/L	Low, 107.331 %Abs		0.300 - 5.000	Kit:P23C0
LRB 2	MICROCYSTINS ADDA 54	1.116 Abs [1.1290] {1.6 C	0.000 µg/L [0.000]	Low, 104.887 %Abs		0.300 - 5.000	Kit:P23C0

**Note**

Signature *David Jordan*

David Jordan 8/16/2023

\* 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:

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: Kit:P23C0589

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 Calibration**

Current Calibration Status: "

"

Name	Absorbance	Concentration	Interpretation	Position
<b>8/16/2023 4:35:27 PM</b>				
MCT Std 0	1.083 Abs	0.000 µg/L	R <sup>2</sup> =0.99946, 101.786 %Abs	RK1:23->A01@2
MCT Std 0	1.045 Abs [1.0640] {2.5 CV}	0.044 µg/L [0.022] {141.4 CV}	R <sup>2</sup> =0.99946, 98.214 %Abs	RK1:23->B01@2
MCT Std 1	0.967 Abs	0.131 µg/L	R <sup>2</sup> =0.99946, 90.883 %Abs	RK1:24->C01@2
MCT Std 1	0.946 Abs [0.9565] {1.6 CV}	0.152 µg/L [0.142] {10.5 CV}	R <sup>2</sup> =0.99946, 88.910 %Abs	RK1:24->D01@2
MCT Std 2	0.729 Abs	0.392 µg/L	R <sup>2</sup> =0.99946, 68.515 %Abs	RK1:25->E01@2
MCT Std 2	0.702 Abs [0.7155] {2.7 CV}	0.428 µg/L [0.410] {6.2 CV}	R <sup>2</sup> =0.99946, 65.977 %Abs	RK1:25->F01@3
MCT Std 3	0.447 Abs	0.993 µg/L	R <sup>2</sup> =0.99946, 42.011 %Abs	RK1:26->G01@3
MCT Std 3	0.439 Abs [0.4430] {1.3 CV}	1.024 µg/L [1.009] {2.2 CV}	R <sup>2</sup> =0.99946, 41.259 %Abs	RK1:26->H01@3
MCT Std 4	0.314 Abs	1.857 µg/L	R <sup>2</sup> =0.99946, 29.511 %Abs	RK1:27->A02@2
MCT Std 4	0.313 Abs [0.3135] {0.2 CV}	1.869 µg/L [1.863] {0.5 CV}	R <sup>2</sup> =0.99946, 29.417 %Abs	RK1:27->B02@2
MCT Std 5	0.217 Abs	> 5.000 µg/L	20.395 %Abs	RK1:28->C02@2
MCT Std 5	0.206 Abs [0.2115] {3.7 CV}	> 5.000 µg/L	19.361 %Abs	RK1:28->D02@2
*****				
<b>8/16/2023 4:35:27 PM</b>				
MCT 546 LRB 1	1.086 Abs	0.000 µg/L	102.068 %Abs	RK1:29->E02@2
MCT 546 LRB 1	1.062 Abs [1.0740] {1.6 CV}	0.017 µg/L [0.009] {141.4 CV}	99.812 %Abs [100.940 %Abs]	RK1:29->F02@3
MCT 546 Low-CV	0.744 Abs	0.373 µg/L	69.925 %Abs	RK1:30->G02@3
MCT 546 Low-CV	0.749 Abs [0.7465] {0.5 CV}	0.366 µg/L [0.370] {1.3 CV}	70.395 %Abs [70.160 %Abs]	RK1:30->H02@3
MCT 546 LFB 1	0.608 Abs	0.578 µg/L	57.143 %Abs	RK1:31->A03@2
MCT 546 LFB 1	0.596 Abs [0.6020] {1.4 CV}	0.600 µg/L [0.589] {2.6 CV}	56.015 %Abs [56.579 %Abs]	RK1:31->B03@2
*****				
<b>Statistic</b>				
MCT Std 0 [MEAN]	1.0640	0.0220		
MCT Std 0 [SD]	0.0269	0.0311		
MCT Std 0 [%CV]	2.5254	141.4214		
MCT Std 1 [MEAN]	0.9565	0.1415		
MCT Std 1 [SD]	0.0148	0.0148		
MCT Std 1 [%CV]	1.5525	10.4942		
MCT Std 1 [%DIFF]		-5.6667		
MCT Std 2 [MEAN]	0.7155	0.4100		
MCT Std 2 [SD]	0.0191	0.0255		
MCT Std 2 [%CV]	2.6683	6.2087		
MCT Std 2 [%DIFF]		2.5000		
MCT Std 3 [MEAN]	0.4430	1.0085		
MCT Std 3 [SD]	0.0057	0.0219		
MCT Std 3 [%CV]	1.2769	2.1736		
MCT Std 3 [%DIFF]		0.8500		
MCT Std 4 [MEAN]	0.3135	1.8630		

Name	Absorbance	Concentration	Interpretation	Position
MCT Std 4 [SD]	0.0007	0.0085		
MCT Std 4 [%CV]	0.2256	0.4555		
MCT Std 4 [%DIFF]		-6.8500		
MCT Std 5 [MEAN]	0.2115			
MCT Std 5 [SD]	0.0078			
MCT Std 5 [%CV]	3.6776			
MCT 546 LRB 1 [MEAN]	1.0740	0.0085		
MCT 546 LRB 1 [SD]	0.0170	0.0120		
MCT 546 LRB 1 [%CV]	1.5801	141.4214		
MCT 546 Low-CV [MEAN]	0.7465	0.3695		
MCT 546 Low-CV [SD]	0.0035	0.0049		
MCT 546 Low-CV [%CV]	0.4736	1.3396		
MCT 546 LFB 1 [MEAN]	0.6020	0.5890		
MCT 546 LFB 1 [SD]	0.0085	0.0156		
MCT 546 LFB 1 [%CV]	1.4095	2.6411		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.0681  
 B = 1.4336  
 C = 0.54597  
 D = 0.18362  
 R2 coef = 0.99946  
 50% = 0.737

