



## Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB52058	Summit Lake State Park	7/19/2022	7/21/2022	< 0.40
AB52059	Kunkel Lake @ Oubache State Park	7/18/2022	7/21/2022	1.2
AB52060	Pokagon State Park	7/18/2022	7/21/2022	< 0.40
AB52061	Potawatomi Inn's Beach	7/18/2022	7/21/2022	< 0.40
AB52062	Chain O'Lakes SP	7/18/2022	7/21/2022	< 0.40
AB52063	Potato Creek State Park	7/19/2022	7/21/2022	< 0.40
AB52064	Lost Bridge West SRA	7/19/2022	7/21/2022	< 0.40
AB52065	Mississinewa Lake Miami SRA	7/19/2022	7/21/2022	< 0.40
AB52072	Summit Lake State Park (Field Dup)	7/19/2022	7/21/2022	< 0.40
AB52073	Field Blank	7/19/2022	7/21/2022	< 0.40
AB52074	Lincoln State Park	7/18/2022	7/21/2022	< 0.40
AB52075	Ferdinand State Forest Lake	7/18/2022	7/21/2022	< 0.40
AB52076	Patoka SRA Beach	7/18/2022	7/21/2022	< 0.40

# Test Report (by Request)

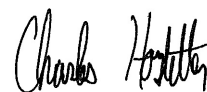
## Test Information

Request: 7/21/2022 10:31:00 AM  
Date: 7/21/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.489 Abs	0.000 µg/L	R^2=0.99949, 100.8			M21L0919
ATX Std 0	ANATOXIN	1.464 Abs [1.4765] {1.2 C	0.007 µg/L [0.004]	R^2=0.99949, 99.12			M21L0919
ATX Std 1	ANATOXIN	1.220 Abs	0.142 µg/L	R^2=0.99949, 82.60			M21L0919
ATX Std 1	ANATOXIN	1.206 Abs [1.2130] {0.8 C	0.151 µg/L [0.146]	R^2=0.99949, 81.65			M21L0919
ATX Std 2	ANATOXIN	0.936 Abs	0.383 µg/L	R^2=0.99949, 63.37			M21L0919
ATX Std 2	ANATOXIN	0.899 Abs [0.9175] {2.9 C	0.426 µg/L [0.405]	R^2=0.99949, 60.86			M21L0919
ATX Std 3	ANATOXIN	0.600 Abs	0.976 µg/L	R^2=0.99949, 40.62			M21L0919
ATX Std 3	ANATOXIN	0.565 Abs [0.5825] {4.2 C	1.081 µg/L [1.028]	R^2=0.99949, 38.25			M21L0919
ATX Std 4	ANATOXIN	0.358 Abs	2.180 µg/L	R^2=0.99949, 24.23			M21L0919
ATX Std 4	ANATOXIN	0.331 Abs [0.3445] {5.5 C	2.440 µg/L [2.310]	R^2=0.99949, 22.41			M21L0919
ATX Std 5	ANATOXIN	0.191 Abs	> 5.000 µg/L	12.932 %Abs			M21L0919
ATX Std 5	ANATOXIN	0.186 Abs [0.1885] {1.9 C	> 5.000 µg/L	12.593 %Abs			M21L0919
ATX Control	ANATOXIN	0.744 Abs	0.653 µg/L	50.372 %Abs			M21L0919
ATX Control	ANATOXIN	0.725 Abs [0.7345] {1.8 C	0.688 µg/L [0.671]	49.086 %Abs [49.7			M21L0919

## Note

Signature



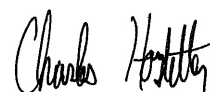
# Test Report (by Request)

## Test Information

Request: 7/21/2022 11:03:53 AM  
Date: 7/21/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.304 Abs	0.090 µg/L	Low, 88.287 %Abs		0.150 - 5.000	M21L091E
LRB	ANATOXIN	1.264 Abs [1.2840] {2.2 C	0.114 µg/L [0.102]	Low, 85.579 %Abs		0.150 - 5.000	M21L091E
LFB (ANA)	ANATOXIN	0.747 Abs	0.648 µg/L	50.575 %Abs		0.150 - 5.000	M21L091E
LFB (ANA)	ANATOXIN	0.722 Abs [0.7345] {2.4 C	0.694 µg/L [0.671]	48.883 %Abs [49.7		0.150 - 5.000	M21L091E
AB52058	ANATOXIN	1.369 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52058	ANATOXIN	1.344 Abs [1.3565] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52059	ANATOXIN	0.575 Abs	1.155 µg/L	38.930 %Abs	MDF=1.100	0.150 - 5.000	M21L091E
AB52059	ANATOXIN	0.550 Abs [0.5625] {3.1 C	1.244 µg/L [1.199]	37.238 %Abs [38.0	MDF=1.100	0.150 - 5.000	M21L091E
AB52060	ANATOXIN	1.274 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52060	ANATOXIN	1.261 Abs [1.2675] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52061	ANATOXIN	1.412 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52061	ANATOXIN	1.383 Abs [1.3975] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52061MS	ANATOXIN	0.730 Abs	0.679 µg/L	49.425 %Abs		0.150 - 5.000	M21L091E
AB52061MS	ANATOXIN	0.700 Abs [0.7150] {3.0 C	0.737 µg/L [0.708]	47.393 %Abs [48.4		0.150 - 5.000	M21L091E
AB52061MSD	ANATOXIN	0.690 Abs	0.757 µg/L	46.716 %Abs		0.150 - 5.000	M21L091E
AB52061MSD	ANATOXIN	0.652 Abs [0.6710] {4.0 C	0.842 µg/L [0.799]	44.144 %Abs [45.4		0.150 - 5.000	M21L091E
AB52062	ANATOXIN	1.250 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52062	ANATOXIN	1.210 Abs [1.2300] {2.3 C	0.163 µg/L [< LOD]	81.923 %Abs [Low,	MDF=1.100	0.150 - 5.000	M21L091E
AB52063	ANATOXIN	1.345 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52063	ANATOXIN	1.320 Abs [1.3325] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52064	ANATOXIN	1.281 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52064	ANATOXIN	1.260 Abs [1.2705] {1.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52065	ANATOXIN	1.096 Abs	0.254 µg/L	74.204 %Abs	MDF=1.100	0.150 - 5.000	M21L091E
AB52065	ANATOXIN	1.086 Abs [1.0910] {0.6 C	0.264 µg/L [0.259]	73.527 %Abs [73.8	MDF=1.100	0.150 - 5.000	M21L091E
AB52072	ANATOXIN	1.248 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52072	ANATOXIN	1.188 Abs [1.2180] {3.5 C	0.179 µg/L [< LOD]	80.433 %Abs [Low,	MDF=1.100	0.150 - 5.000	M21L091E
AB52073	ANATOXIN	1.383 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52073	ANATOXIN	1.378 Abs [1.3805] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52074	ANATOXIN	1.324 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52074	ANATOXIN	1.311 Abs [1.3175] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52075	ANATOXIN	1.295 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52075	ANATOXIN	1.276 Abs [1.2855] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52076	ANATOXIN	1.264 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L091E
AB52076	ANATOXIN	1.236 Abs [1.2500] {1.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L091E

## Note



Signature

## Assay Information

Assay Name: ANATOXIN  
 Version: 2  
 Temperature: Room Temperature  
 Last Modified By: Security disabled  
 Units: µg/L  
 Assay Description: PN 520060  
 Assay Substances: Controls:

Assay Mode: 4-Parameter Logistic Weight by:None  
 Well Type: Flat bottom  
 Last Modified On: 7/25/2019 3:49:23 PM  
 Normal: 0.150 - 5.000  
 # of decimals: 3  
 Kit Lot Number: M21L0919

ATX Control  
 Standards:  
 ATX Std 0, Concentration = 0.000, Minimum number to use: 2  
 ATX Std 1, Concentration = 0.150, Minimum number to use: 2  
 ATX Std 2, Concentration = 0.400, Minimum number to use: 2  
 ATX Std 3, Concentration = 1.000, Minimum number to use: 2  
 ATX Std 4, Concentration = 2.500, Minimum number to use: 2  
 ATX 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
7/21/2022 10:31:00 AM				
ATX Std 0	1.489 Abs	0.000 µg/L	R <sup>2</sup> =0.99949, 100.812 %Abs	RK1:23->A01@2
ATX Std 0	1.464 Abs [1.4765] {1.2 CV}	0.007 µg/L [0.004] {141.4 CV}	R <sup>2</sup> =0.99949, 99.120 %Abs	RK1:23->B01@2
ATX Std 1	1.220 Abs	0.142 µg/L	R <sup>2</sup> =0.99949, 82.600 %Abs	RK1:24->C01@2
ATX Std 1	1.206 Abs [1.2130] {0.8 CV}	0.151 µg/L [0.146] {4.3 CV}	R <sup>2</sup> =0.99949, 81.652 %Abs	RK1:24->D01@2
ATX Std 2	0.936 Abs	0.383 µg/L	R <sup>2</sup> =0.99949, 63.372 %Abs	RK1:25->E01@2
ATX Std 2	0.899 Abs [0.9175] {2.9 CV}	0.426 µg/L [0.405] {7.5 CV}	R <sup>2</sup> =0.99949, 60.867 %Abs	RK1:25->F01@3
ATX Std 3	0.600 Abs	0.976 µg/L	R <sup>2</sup> =0.99949, 40.623 %Abs	RK1:26->G01@3
ATX Std 3	0.565 Abs [0.5825] {4.2 CV}	1.081 µg/L [1.028] {7.2 CV}	R <sup>2</sup> =0.99949, 38.253 %Abs	RK1:26->H01@3
ATX Std 4	0.358 Abs	2.180 µg/L	R <sup>2</sup> =0.99949, 24.238 %Abs	RK1:27->A02@2
ATX Std 4	0.331 Abs [0.3445] {5.5 CV}	2.440 µg/L [2.310] {8.0 CV}	R <sup>2</sup> =0.99949, 22.410 %Abs	RK1:27->B02@2
ATX Std 5	0.191 Abs	> 5.000 µg/L	12.932 %Abs	RK1:28->C02@2
ATX Std 5	0.186 Abs [0.1885] {1.9 CV}	> 5.000 µg/L	12.593 %Abs	RK1:28->D02@2
*****				
7/21/2022 10:31:00 AM				
ATX Control	0.744 Abs	0.653 µg/L	50.372 %Abs	RK1:29->E02@2
ATX Control	0.725 Abs [0.7345] {1.8 CV}	0.688 µg/L [0.671] {3.7 CV}	49.086 %Abs [49.729 %Abs]	RK1:29->F02@3
*****				
Statistic				
ATX Std 0 [MEAN]	1.4765	0.0035		
ATX Std 0 [SD]	0.0177	0.0049		
ATX Std 0 [%CV]	1.1973	141.4214		
ATX Std 1 [MEAN]	1.2130	0.1465		
ATX Std 1 [SD]	0.0099	0.0064		
ATX Std 1 [%CV]	0.8161	4.3440		
ATX Std 1 [%DIFF]		-2.3333		
ATX Std 2 [MEAN]	0.9175	0.4045		
ATX Std 2 [SD]	0.0262	0.0304		
ATX Std 2 [%CV]	2.8515	7.5168		
ATX Std 2 [%DIFF]		1.1250		
ATX Std 3 [MEAN]	0.5825	1.0285		
ATX Std 3 [SD]	0.0247	0.0742		
ATX Std 3 [%CV]	4.2487	7.2189		
ATX Std 3 [%DIFF]		2.8500		
ATX Std 4 [MEAN]	0.3445	2.3100		
ATX Std 4 [SD]	0.0191	0.1838		
ATX Std 4 [%CV]	5.5419	7.9588		
ATX Std 4 [%DIFF]		-7.6000		
ATX Std 5 [MEAN]	0.1885			
ATX Std 5 [SD]	0.0035			
ATX Std 5 [%CV]	1.8756			

Name	Absorbance	Concentration	Interpretation	Position	
ATX Control [MEAN]	0.7345	0.6705			
ATX Control [SD]	0.0134	0.0247			
ATX Control [%CV]	1.8291	3.6911			

Assay Curve

$$y = (A-D)/(1+(x/C)^B) + D$$
 Weight: NONE  
 A = 1.4791  
 B = 1.0234  
 C = 0.61775  
 D = 0.049570  
 R2 coef = 0.99949  
 50% = 0.663

