



## Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB52631	Chain O'Lakes SP	8/29/2022	8/31/2022	< 0.40
AB52632	Kunkel Lake @ Oubache SP	8/29/2022	8/31/2022	4.95
AB52633	Potato Creek State Park	8/30/2022	8/31/2022	< 0.40
AB52634	Mississinewa Lake Miami SRA	8/30/2022	8/31/2022	< 0.40
AB52635	Lost Bridge West SRA	8/30/2022	8/31/2022	< 0.40
AB52636	Mississinewa Lake Miami SRA (Field Dup)	8/30/2022	8/31/2022	< 0.40
AB52637	Field Blank	8/30/2022	8/31/2022	< 0.40
AB52638	Patoka SRA Beach	8/30/2022	8/31/2022	< 0.40
AB52642	Ft. Ben Harrison SP Dog Lake	8/30/2022	8/31/2022	< 0.40
AB52643	Lincoln State Park	8/30/2022	8/31/2022	< 0.40

# Test Report (by Request)

## Test Information

Request: 9/1/2022 4:34:39 PM  
Date: 9/1/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.093 Abs	0.000 µg/L	R <sup>2</sup> =0.99976, 100.6			M21L0919
ATX Std 0	ANATOXIN	1.079 Abs [1.0860] {0.9 C	0.004 µg/L [0.002]	R <sup>2</sup> =0.99976, 99.35			M21L0919
ATX Std 1	ANATOXIN	0.888 Abs	0.138 µg/L	R <sup>2</sup> =0.99976, 81.76			M21L0919
ATX Std 1	ANATOXIN	0.864 Abs [0.8760] {1.9 C	0.160 µg/L [0.149]	R <sup>2</sup> =0.99976, 79.55			M21L0919
ATX Std 2	ANATOXIN	0.686 Abs	0.372 µg/L	R <sup>2</sup> =0.99976, 63.16			M21L0919
ATX Std 2	ANATOXIN	0.653 Abs [0.6695] {3.5 C	0.424 µg/L [0.398]	R <sup>2</sup> =0.99976, 60.12			M21L0919
ATX Std 3	ANATOXIN	0.432 Abs	0.998 µg/L	R <sup>2</sup> =0.99976, 39.77			M21L0919
ATX Std 3	ANATOXIN	0.418 Abs [0.4250] {2.3 C	1.056 µg/L [1.027]	R <sup>2</sup> =0.99976, 38.45			M21L0919
ATX Std 4	ANATOXIN	0.250 Abs	2.289 µg/L	R <sup>2</sup> =0.99976, 23.02			M21L0919
ATX Std 4	ANATOXIN	0.238 Abs [0.2440] {3.5 C	2.448 µg/L [2.368]	R <sup>2</sup> =0.99976, 21.91			M21L0919
ATX Std 5	ANATOXIN	0.136 Abs	> 5.000 µg/L	12.523 %Abs			M21L0919
ATX Std 5	ANATOXIN	0.129 Abs [0.1325] {3.7 C	> 5.000 µg/L	11.878 %Abs			M21L0919
ATX Control	ANATOXIN	0.539 Abs	0.659 µg/L	49.632 %Abs			M21L0919
ATX Control	ANATOXIN	0.504 Abs [0.5215] {4.7 C	0.753 µg/L [0.706]	46.409 %Abs [48.0			M21L0919

## Note

Signature 

David Jordan 9/1/2022

# Test Report (by Request)

## Test Information

Request: 9/1/2022 4:35:43 PM  
Date: 9/1/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (ANA)	ANATOXIN	0.976 Abs	0.069 µg/L	Low, 89.871 %Abs		0.150 - 5.000	M21L0919
LRB (ANA)	ANATOXIN	0.951 Abs [0.9635] {1.8 C	0.087 µg/L [0.078]	Low, 87.569 %Abs		0.150 - 5.000	M21L0919
LFB (ANA)	ANATOXIN	0.551 Abs	0.629 µg/L	50.737 %Abs		0.150 - 5.000	M21L0919
LFB (ANA)	ANATOXIN	0.535 Abs [0.5430] {2.1 C	0.669 µg/L [0.649]	49.263 %Abs [50.0		0.150 - 5.000	M21L0919
AB52631	ANATOXIN	0.850 Abs	0.190 µg/L	78.269 %Abs	MDF=1.100	0.150 - 5.000	M21L0919
AB52631	ANATOXIN	0.845 Abs [0.8475] {0.4 C	0.196 µg/L [0.193]	77.808 %Abs [78.0	MDF=1.100	0.150 - 5.000	M21L0919
AB52631MS	ANATOXIN	0.463 Abs	0.883 µg/L	42.634 %Abs		0.150 - 5.000	M21L0919
AB52631MS	ANATOXIN	0.423 Abs [0.4430] {6.4 C	1.035 µg/L [0.959]	38.950 %Abs [40.7		0.150 - 5.000	M21L0919
AB52631MSD	ANATOXIN	0.442 Abs	0.959 µg/L	40.700 %Abs		0.150 - 5.000	M21L0919
AB52631MSD	ANATOXIN	0.441 Abs [0.4415] {0.2 C	0.963 µg/L [0.961]	40.608 %Abs [40.6		0.150 - 5.000	M21L0919
AB52632	ANATOXIN	0.152 Abs	4.826 µg/L	13.996 %Abs	MDF=1.100	0.150 - 5.000	M21L0919
AB52632	ANATOXIN	0.146 Abs [0.1490] {2.8 C	5.076 µg/L [4.951]	High, 13.444 %Abs	MDF=1.100	0.150 - 5.000	M21L0919
AB52633	ANATOXIN	0.959 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52633	ANATOXIN	0.948 Abs [0.9535] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52634	ANATOXIN	0.922 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52634	ANATOXIN	0.910 Abs [0.9160] {0.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52635	ANATOXIN	0.928 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52635	ANATOXIN	0.932 Abs [0.9300] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52636	ANATOXIN	1.008 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52636	ANATOXIN	0.981 Abs [0.9945] {1.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52637	ANATOXIN	0.947 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52637	ANATOXIN	0.991 Abs [0.9690] {3.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52638	ANATOXIN	0.911 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52638	ANATOXIN	0.905 Abs [0.9080] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52642	ANATOXIN	0.946 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52642	ANATOXIN	0.933 Abs [0.9395] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52643	ANATOXIN	1.031 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52643	ANATOXIN	0.946 Abs [0.9885] {6.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919

## Note

Signature 

David Jordan 9/1/2022

## 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
<b>9/1/2022 4:34:39 PM</b>				
ATX Std 0	1.093 Abs	0.000 µg/L	R <sup>2</sup> =0.99976, 100.645 %Abs	RK1:23->A01@2
ATX Std 0	1.079 Abs [1.0860] {0.9 CV}	0.004 µg/L [0.002] {141.4 CV}	R <sup>2</sup> =0.99976, 99.355 %Abs	RK1:23->B01@2
ATX Std 1	0.888 Abs	0.138 µg/L	R <sup>2</sup> =0.99976, 81.768 %Abs	RK1:24->C01@2
ATX Std 1	0.864 Abs [0.8760] {1.9 CV}	0.160 µg/L [0.149] {10.4 CV}	R <sup>2</sup> =0.99976, 79.558 %Abs	RK1:24->D01@2
ATX Std 2	0.686 Abs	0.372 µg/L	R <sup>2</sup> =0.99976, 63.168 %Abs	RK1:25->E01@2
ATX Std 2	0.653 Abs [0.6695] {3.5 CV}	0.424 µg/L [0.398] {9.2 CV}	R <sup>2</sup> =0.99976, 60.129 %Abs	RK1:25->F01@3
ATX Std 3	0.432 Abs	0.998 µg/L	R <sup>2</sup> =0.99976, 39.779 %Abs	RK1:26->G01@3
ATX Std 3	0.418 Abs [0.4250] {2.3 CV}	1.056 µg/L [1.027] {4.0 CV}	R <sup>2</sup> =0.99976, 38.490 %Abs	RK1:26->H01@3
ATX Std 4	0.250 Abs	2.289 µg/L	R <sup>2</sup> =0.99976, 23.020 %Abs	RK1:27->A02@2
ATX Std 4	0.238 Abs [0.2440] {3.5 CV}	2.448 µg/L [2.368] {4.7 CV}	R <sup>2</sup> =0.99976, 21.915 %Abs	RK1:27->B02@2
ATX Std 5	0.136 Abs	> 5.000 µg/L	12.523 %Abs	RK1:28->C02@2
ATX Std 5	0.129 Abs [0.1325] {3.7 CV}	> 5.000 µg/L	11.878 %Abs	RK1:28->D02@2
*****				
<b>9/1/2022 4:34:39 PM</b>				
ATX Control	0.539 Abs	0.659 µg/L	49.632 %Abs	RK1:29->E02@2
ATX Control	0.504 Abs [0.5215] {4.7 CV}	0.753 µg/L [0.706] {9.4 CV}	46.409 %Abs [48.020 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.0860	0.0020		
ATX Std 0 [SD]	0.0099	0.0028		
ATX Std 0 [%CV]	0.9116	141.4214		
ATX Std 1 [MEAN]	0.8760	0.1490		
ATX Std 1 [SD]	0.0170	0.0156		
ATX Std 1 [%CV]	1.9373	10.4405		
ATX Std 1 [%DIFF]		-0.6667		
ATX Std 2 [MEAN]	0.6695	0.3980		
ATX Std 2 [SD]	0.0233	0.0368		
ATX Std 2 [%CV]	3.4854	9.2386		
ATX Std 2 [%DIFF]		-0.5000		
ATX Std 3 [MEAN]	0.4250	1.0270		
ATX Std 3 [SD]	0.0099	0.0410		
ATX Std 3 [%CV]	2.3293	3.9934		
ATX Std 3 [%DIFF]		2.7000		
ATX Std 4 [MEAN]	0.2440	2.3685		
ATX Std 4 [SD]	0.0085	0.1124		
ATX Std 4 [%CV]	3.4776	4.7469		
ATX Std 4 [%DIFF]		-5.2600		
ATX Std 5 [MEAN]	0.1325			
ATX Std 5 [SD]	0.0049			
ATX Std 5 [%CV]	3.7357			

Name	Absorbance	Concentration	Interpretation	Position	
ATX Control [MEAN]	0.5215	0.7060			
ATX Control [SD]	0.0247	0.0665			
ATX Control [%CV]	4.7457	9.4147			

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.0866  
 B = 0.97338  
 C = 0.63701  
 D = 0.0091551  
 R2 coef = 0.99976  
 50% = 0.649

