



## Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03081	Pokagon SP - Main Beach	6/19/2023	6/22/2023	< 0.40
AC03082	Pokagon SP - Potawatomi Inn Beach	6/19/2023	6/22/2023	< 0.40
AC03083	Chain O'Lakes SP - Sand Lake Beach	6/19/2023	6/22/2023	< 0.40
AC03084	Ouabache SP - Kunkel Lake Beach	6/19/2023	6/22/2023	< 0.40
AC03085	Potato Creek SP - Worster Lake Beach	6/20/2023	6/22/2023	< 0.40
AC03086	Mississinewa Lake - Miami SRA Beach	6/20/2023	6/22/2023	< 0.40
AC03087	Salamonie Lake - Lost Bridge West SRA Beach	6/20/2023	6/22/2023	0.46
AC03088	Summit Lake SP - Summit Lake Beach	6/20/2023	6/22/2023	< 0.40
AC03089	Salamonie Lake - Lost Bridge West SRA Beach (Field Duplicate)	6/20/2023	6/22/2023	0.62
AC03090	Field Blank	6/20/2023	6/22/2023	< 0.40
AC03091	Lincoln SP - Lake Lincoln Beach	6/19/2023	6/22/2023	< 0.40
AC03092	Ferdinand State Forest - Ferdinand Lake Beach	6/19/2023	6/22/2023	< 0.40
AC03093	Patoka Lake - Newton Stewart SRA	6/19/2023	6/22/2023	< 0.40

# Test Report (by Request)

**Test Information**

 Request: 6/22/2023 2:07:56 PM  
 Date: 6/22/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.386 Abs	0.000 µg/L	R^2=0.99898, 100.0			P23B0244
ATX Std 0	ANATOXIN	1.367 Abs [1.3765] {1.0 C	0.005 µg/L [0.003]	R^2=0.99898, 99.27			P23B0244
ATX Std 1	ANATOXIN	1.128 Abs	0.133 µg/L	R^2=0.99898, 81.91			P23B0244
ATX Std 1	ANATOXIN	1.081 Abs [1.1045] {3.0 C	0.164 µg/L [0.148]	R^2=0.99898, 78.50			P23B0244
ATX Std 2	ANATOXIN	0.841 Abs	0.385 µg/L	R^2=0.99898, 61.07			P23B0244
ATX Std 2	ANATOXIN	0.820 Abs [0.8305] {1.8 C	0.411 µg/L [0.398]	R^2=0.99898, 59.55			P23B0244
ATX Std 3	ANATOXIN	0.526 Abs	1.004 µg/L	R^2=0.99898, 38.15			P23B0244
ATX Std 3	ANATOXIN	0.496 Abs [0.5110] {4.2 C	1.107 µg/L [1.056]	R^2=0.99898, 36.02			P23B0244
ATX Std 4	ANATOXIN	0.325 Abs	2.114 µg/L	R^2=0.99898, 23.60			P23B0244
ATX Std 4	ANATOXIN	0.305 Abs [0.3150] {4.5 C	2.317 µg/L [2.215]	R^2=0.99898, 22.15			P23B0244
ATX Std 5	ANATOXIN	0.167 Abs	> 5.000 µg/L	12.128 %Abs			P23B0244
ATX Std 5	ANATOXIN	0.162 Abs [0.1645] {2.1 C	> 5.000 µg/L	11.765 %Abs			P23B0244
ATX Control	ANATOXIN	0.664 Abs	0.656 µg/L	48.221 %Abs			P23B0244
ATX Control	ANATOXIN	0.626 Abs [0.6450] {4.2 C	0.735 µg/L [0.696]	45.461 %Abs [46.8			P23B0244

**Note**

Signature \_\_\_\_\_

# Test Report (by Request)

**Test Information**

Request: 6/22/2023 2:31:04 PM  
Date: 6/22/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.191 Abs	0.094 µg/L	Low, 86.492 %Abs		0.150 - 5.000	P23B0244
LRB	ANATOXIN	1.162 Abs [1.1765] {1.7 C	0.111 µg/L [0.102]	Low, 84.386 %Abs		0.150 - 5.000	P23B0244
LFB (ANA)	ANATOXIN	0.736 Abs	0.529 µg/L	53.450 %Abs		0.150 - 5.000	P23B0244
LFB (ANA)	ANATOXIN	0.681 Abs [0.7085] {5.5 C	0.623 µg/L [0.576]	49.455 %Abs [51.4		0.150 - 5.000	P23B0244
AC03081	ANATOXIN	1.283 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03081	ANATOXIN	1.236 Abs [1.2595] {2.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03082	ANATOXIN	1.212 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03082	ANATOXIN	1.213 Abs [1.2125] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03082MS	ANATOXIN	0.594 Abs	0.811 µg/L	43.137 %Abs		0.150 - 5.000	P23B0244
AC03082MS	ANATOXIN	0.591 Abs [0.5925] {0.4 C	0.818 µg/L [0.814]	42.919 %Abs [43.0		0.150 - 5.000	P23B0244
AC03082MSD	ANATOXIN	0.684 Abs	0.618 µg/L	49.673 %Abs		0.150 - 5.000	P23B0244
AC03082MSD	ANATOXIN	0.660 Abs [0.6720] {2.5 C	0.664 µg/L [0.641]	47.930 %Abs [48.8		0.150 - 5.000	P23B0244
AC03083	ANATOXIN	1.278 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03083	ANATOXIN	1.246 Abs [1.2620] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03084	ANATOXIN	0.944 Abs	0.304 µg/L	68.555 %Abs	MDF=1.100	0.150 - 5.000	P23B0244
AC03084	ANATOXIN	0.931 Abs [0.9375] {1.0 C	0.317 µg/L [0.310]	67.611 %Abs [68.0	MDF=1.100	0.150 - 5.000	P23B0244
AC03085	ANATOXIN	1.185 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03085	ANATOXIN	1.167 Abs [1.1760] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03086	ANATOXIN	1.309 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03086	ANATOXIN	1.264 Abs [1.2865] {2.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03087	ANATOXIN	0.826 Abs	0.443 µg/L	59.985 %Abs	MDF=1.100	0.150 - 5.000	P23B0244
AC03087	ANATOXIN	0.808 Abs [0.8170] {1.6 C	0.469 µg/L [0.456]	58.678 %Abs [59.3	MDF=1.100	0.150 - 5.000	P23B0244
AC03088	ANATOXIN	1.212 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03088	ANATOXIN	1.186 Abs [1.1990] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03089	ANATOXIN	0.741 Abs	0.573 µg/L	53.813 %Abs	MDF=1.100	0.150 - 5.000	P23B0244
AC03089	ANATOXIN	0.691 Abs [0.7160] {4.9 C	0.666 µg/L [0.620]	50.182 %Abs [51.9	MDF=1.100	0.150 - 5.000	P23B0244
AC03090	ANATOXIN	1.339 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03090	ANATOXIN	1.311 Abs [1.3250] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03091	ANATOXIN	1.250 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03091	ANATOXIN	1.224 Abs [1.2370] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03092	ANATOXIN	1.224 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03092	ANATOXIN	1.189 Abs [1.2065] {2.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03093	ANATOXIN	1.210 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03093	ANATOXIN	1.180 Abs [1.1950] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244

**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: P23B0244

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>6/22/2023 2:07:56 PM</b>				
ATX Std 0	1.386 Abs	0.000 µg/L	R <sup>2</sup> =0.99898, 100.654 %Abs	RK1:23->A01@2
ATX Std 0	1.367 Abs [1.3765] {1.0 CV}	0.005 µg/L [0.003] {141.4 CV}	R <sup>2</sup> =0.99898, 99.274 %Abs	RK1:23->B01@2
ATX Std 1	1.128 Abs	0.133 µg/L	R <sup>2</sup> =0.99898, 81.917 %Abs	RK1:24->C01@2
ATX Std 1	1.081 Abs [1.1045] {3.0 CV}	0.164 µg/L [0.148] {14.8 CV}	R <sup>2</sup> =0.99898, 78.504 %Abs	RK1:24->D01@2
ATX Std 2	0.841 Abs	0.385 µg/L	R <sup>2</sup> =0.99898, 61.075 %Abs	RK1:25->E01@2
ATX Std 2	0.820 Abs [0.8305] {1.8 CV}	0.411 µg/L [0.398] {4.6 CV}	R <sup>2</sup> =0.99898, 59.550 %Abs	RK1:25->F01@3
ATX Std 3	0.526 Abs	1.004 µg/L	R <sup>2</sup> =0.99898, 38.199 %Abs	RK1:26->G01@3
ATX Std 3	0.496 Abs [0.5110] {4.2 CV}	1.107 µg/L [1.056] {6.9 CV}	R <sup>2</sup> =0.99898, 36.020 %Abs	RK1:26->H01@3
ATX Std 4	0.325 Abs	2.114 µg/L	R <sup>2</sup> =0.99898, 23.602 %Abs	RK1:27->A02@2
ATX Std 4	0.305 Abs [0.3150] {4.5 CV}	2.317 µg/L [2.215] {6.5 CV}	R <sup>2</sup> =0.99898, 22.150 %Abs	RK1:27->B02@2
ATX Std 5	0.167 Abs	> 5.000 µg/L	12.128 %Abs	RK1:28->C02@2
ATX Std 5	0.162 Abs [0.1645] {2.1 CV}	> 5.000 µg/L	11.765 %Abs	RK1:28->D02@2
*****				
<b>6/22/2023 2:07:56 PM</b>				
ATX Control	0.664 Abs	0.656 µg/L	48.221 %Abs	RK1:29->E02@2
ATX Control	0.626 Abs [0.6450] {4.2 CV}	0.735 µg/L [0.696] {8.0 CV}	45.461 %Abs [46.841 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.3765	0.0025		
ATX Std 0 [SD]	0.0134	0.0035		
ATX Std 0 [%CV]	0.9760	141.4214		
ATX Std 1 [MEAN]	1.1045	0.1485		
ATX Std 1 [SD]	0.0332	0.0219		
ATX Std 1 [%CV]	3.0090	14.7612		
ATX Std 1 [%DIFF]		-1.0000		
ATX Std 2 [MEAN]	0.8305	0.3980		
ATX Std 2 [SD]	0.0148	0.0184		
ATX Std 2 [%CV]	1.7880	4.6193		
ATX Std 2 [%DIFF]		-0.5000		
ATX Std 3 [MEAN]	0.5110	1.0555		
ATX Std 3 [SD]	0.0212	0.0728		
ATX Std 3 [%CV]	4.1513	6.9002		
ATX Std 3 [%DIFF]		5.5500		
ATX Std 4 [MEAN]	0.3150	2.2155		
ATX Std 4 [SD]	0.0141	0.1435		
ATX Std 4 [%CV]	4.4896	6.4790		
ATX Std 4 [%DIFF]		-11.3800		
ATX Std 5 [MEAN]	0.1645			
ATX Std 5 [SD]	0.0035			
ATX Std 5 [%CV]	2.1493			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.6450	0.6955		
ATX Control [SD]	0.0269	0.0559		
ATX Control [%CV]	4.1659	8.0318		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.3785  
 B = 1.0040  
 C = 0.57165  
 D = 0.041631  
 R2 coef = 0.99898  
 50% = 0.610

