



## Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03329	Pokagon SP - Main Beach	7/17/2023	7/20/2023	< 0.40
AC03330	Pokagon SP - Potawatomi Inn Beach	7/17/2023	7/20/2023	< 0.40
AC03331	Chain O'Lakes SP - Sand Lake Beach	7/17/2023	7/20/2023	< 0.40
AC03332	Ouabache SP - Kunkel Lake Beach	7/17/2023	7/20/2023	< 0.40
AC03333	Potato Creek SP - Worster Lake Beach	7/17/2023	7/20/2023	< 0.40
AC03334	Mississinewa Lake - Miami SRA Beach	7/18/2023	7/20/2023	< 0.40
AC03335	Salamonie Lake - Lost Bridge West SRA Beach	7/18/2023	7/20/2023	< 0.40
AC03336	Summit Lake SP - Summit Lake Beach	7/18/2023	7/20/2023	< 0.40
AC03337	Pokagon SP - Potawatomi Inn Beach (Field Duplicate)	7/17/2023	7/20/2023	< 0.40
AC03338	Field Blank	7/17/2023	7/20/2023	< 0.40
AC03339	Lincoln SP - Lake Lincoln Beach	7/17/2023	7/20/2023	< 0.40
AC03340	Ferdinand State Forest - Ferdinand Lake Beach	7/17/2023	7/20/2023	< 0.40
AC03341	Patoka Lake - Newton Stewart SRA	7/17/2023	7/20/2023	< 0.40

# Test Report (by Request)

**Test Information**

Request: 7/20/2023 1:26:13 PM  
Date: 7/20/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.298 Abs	0.000 µg/L	R^2=0.99953, 101.2		0.000	Kit:P23B0
ATX Std 0	ANATOXIN	1.265 Abs [1.2815] {1.8 C	0.009 µg/L [0.005]	R^2=0.99953, 98.67		0.000	Kit:P23B0
ATX Std 1	ANATOXIN	1.063 Abs	0.132 µg/L	R^2=0.99953, 82.91		0.150	Kit:P23B0
ATX Std 1	ANATOXIN	1.025 Abs [1.0440] {2.6 C	0.160 µg/L [0.146]	R^2=0.99953, 79.95		0.150	Kit:P23B0
ATX Std 2	ANATOXIN	0.795 Abs	0.396 µg/L	R^2=0.99953, 62.01		0.400	Kit:P23B0
ATX Std 2	ANATOXIN	0.781 Abs [0.7880] {1.3 C	0.415 µg/L [0.406]	R^2=0.99953, 60.92		0.400	Kit:P23B0
ATX Std 3	ANATOXIN	0.514 Abs	0.984 µg/L	R^2=0.99953, 40.05		1.000	Kit:P23B0
ATX Std 3	ANATOXIN	0.490 Abs [0.5020] {3.4 C	1.067 µg/L [1.026]	R^2=0.99953, 38.22		1.000	Kit:P23B0
ATX Std 4	ANATOXIN	0.297 Abs	2.260 µg/L	R^2=0.99953, 23.16		2.500	Kit:P23B0
ATX Std 4	ANATOXIN	0.287 Abs [0.2920] {2.4 C	2.368 µg/L [2.314]	R^2=0.99953, 22.38		2.500	Kit:P23B0
ATX Std 5	ANATOXIN	0.159 Abs	> 5.000 µg/L	12.402 %Abs		5.000	Kit:P23B0
ATX Std 5	ANATOXIN	0.147 Abs [0.1530] {5.5 C	> 5.000 µg/L	11.466 %Abs		5.000	Kit:P23B0
ATX Control	ANATOXIN	0.636 Abs	0.662 µg/L	49.610 %Abs			Kit:P23B0
ATX Control	ANATOXIN	0.602 Abs [0.6190] {3.9 C	0.739 µg/L [0.701]	46.958 %Abs [48.2			Kit:P23B0

**Note**

Signature \_\_\_\_\_

# Test Report (by Request)

**Test Information**

Request: 7/20/2023 1:48:25 PM  
Date: 7/20/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.160 Abs	0.067 µg/L	Low, 90.484 %Abs		0.150 - 5.000	Kit:P23B0
LRB	ANATOXIN	1.125 Abs [1.1425] {2.2 C	0.089 µg/L [0.078]	Low, 87.754 %Abs		0.150 - 5.000	Kit:P23B0
LFB (ANA)	ANATOXIN	0.649 Abs	0.636 µg/L	50.624 %Abs		0.150 - 5.000	Kit:P23B0
LFB (ANA)	ANATOXIN	0.626 Abs [0.6375] {2.6 C	0.684 µg/L [0.660]	48.830 %Abs [49.7		0.150 - 5.000	Kit:P23B0
AC03329	ANATOXIN	1.213 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03329	ANATOXIN	1.179 Abs [1.1960] {2.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03330	ANATOXIN	1.182 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03330	ANATOXIN	1.163 Abs [1.1725] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03331	ANATOXIN	1.120 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03331	ANATOXIN	1.071 Abs [1.0955] {3.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03332	ANATOXIN	1.154 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03332	ANATOXIN	1.147 Abs [1.1505] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03333	ANATOXIN	1.206 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03333	ANATOXIN	1.159 Abs [1.1825] {2.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03334	ANATOXIN	1.138 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03334	ANATOXIN	1.082 Abs [1.1100] {3.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03334MS	ANATOXIN	0.576 Abs	0.803 µg/L	44.930 %Abs		0.150 - 5.000	Kit:P23B0
AC03334MS	ANATOXIN	0.560 Abs [0.5680] {2.0 C	0.846 µg/L [0.825]	43.682 %Abs [44.3		0.150 - 5.000	Kit:P23B0
AC03334MSD	ANATOXIN	0.634 Abs	0.667 µg/L	49.454 %Abs		0.150 - 5.000	Kit:P23B0
AC03334MSD	ANATOXIN	0.604 Abs [0.6190] {3.4 C	0.734 µg/L [0.701]	47.114 %Abs [48.2		0.150 - 5.000	Kit:P23B0
AC03335	ANATOXIN	1.125 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03335	ANATOXIN	1.101 Abs [1.1130] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03336	ANATOXIN	1.171 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03336	ANATOXIN	1.137 Abs [1.1540] {2.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03337	ANATOXIN	1.132 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03337	ANATOXIN	1.126 Abs [1.1290] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03338	ANATOXIN	1.256 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03338	ANATOXIN	1.228 Abs [1.2420] {1.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03339	ANATOXIN	1.162 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03339	ANATOXIN	1.152 Abs [1.1570] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03340	ANATOXIN	1.157 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03340	ANATOXIN	1.142 Abs [1.1495] {0.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03341	ANATOXIN	1.121 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03341	ANATOXIN	1.111 Abs [1.1160] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0

**Note**

Signature \_\_\_\_\_

Charles Hostetter 7/20/23

**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: Kit: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>7/20/2023 1:26:13 PM</b>				
ATX Std 0	1.298 Abs	0.000 µg/L	R <sup>2</sup> =0.99953, 101.248 %Abs	RK1:23->A01@2
ATX Std 0	1.265 Abs [1.2815] {1.8 CV}	0.009 µg/L [0.005] {141.4 CV}	R <sup>2</sup> =0.99953, 98.674 %Abs	RK1:23->B01@2
ATX Std 1	1.063 Abs	0.132 µg/L	R <sup>2</sup> =0.99953, 82.917 %Abs	RK1:24->C01@2
ATX Std 1	1.025 Abs [1.0440] {2.6 CV}	0.160 µg/L [0.146] {13.6 CV}	R <sup>2</sup> =0.99953, 79.953 %Abs	RK1:24->D01@2
ATX Std 2	0.795 Abs	0.396 µg/L	R <sup>2</sup> =0.99953, 62.012 %Abs	RK1:25->E01@2
ATX Std 2	0.781 Abs [0.7880] {1.3 CV}	0.415 µg/L [0.406] {3.3 CV}	R <sup>2</sup> =0.99953, 60.920 %Abs	RK1:25->F01@3
ATX Std 3	0.514 Abs	0.984 µg/L	R <sup>2</sup> =0.99953, 40.094 %Abs	RK1:26->G01@3
ATX Std 3	0.490 Abs [0.5020] {3.4 CV}	1.067 µg/L [1.026] {5.7 CV}	R <sup>2</sup> =0.99953, 38.222 %Abs	RK1:26->H01@3
ATX Std 4	0.297 Abs	2.260 µg/L	R <sup>2</sup> =0.99953, 23.167 %Abs	RK1:27->A02@2
ATX Std 4	0.287 Abs [0.2920] {2.4 CV}	2.368 µg/L [2.314] {3.3 CV}	R <sup>2</sup> =0.99953, 22.387 %Abs	RK1:27->B02@2
ATX Std 5	0.159 Abs	> 5.000 µg/L	12.402 %Abs	RK1:28->C02@2
ATX Std 5	0.147 Abs [0.1530] {5.5 CV}	> 5.000 µg/L	11.466 %Abs	RK1:28->D02@2
*****				
<b>7/20/2023 1:26:13 PM</b>				
ATX Control	0.636 Abs	0.662 µg/L	49.610 %Abs	RK1:29->E02@2
ATX Control	0.602 Abs [0.6190] {3.9 CV}	0.739 µg/L [0.701] {7.8 CV}	46.958 %Abs [48.284 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.2815	0.0045		
ATX Std 0 [SD]	0.0233	0.0064		
ATX Std 0 [%CV]	1.8209	141.4214		
ATX Std 1 [MEAN]	1.0440	0.1460		
ATX Std 1 [SD]	0.0269	0.0198		
ATX Std 1 [%CV]	2.5738	13.5610		
ATX Std 1 [%DIFF]		-2.6667		
ATX Std 2 [MEAN]	0.7880	0.4055		
ATX Std 2 [SD]	0.0099	0.0134		
ATX Std 2 [%CV]	1.2563	3.3132		
ATX Std 2 [%DIFF]		1.3750		
ATX Std 3 [MEAN]	0.5020	1.0255		
ATX Std 3 [SD]	0.0170	0.0587		
ATX Std 3 [%CV]	3.3806	5.7230		
ATX Std 3 [%DIFF]		2.5500		
ATX Std 4 [MEAN]	0.2920	2.3140		
ATX Std 4 [SD]	0.0071	0.0764		
ATX Std 4 [%CV]	2.4216	3.3002		
ATX Std 4 [%DIFF]		-7.4400		
ATX Std 5 [MEAN]	0.1530			
ATX Std 5 [SD]	0.0085			
ATX Std 5 [%CV]	5.5459			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.6190	0.7005		
ATX Control [SD]	0.0240	0.0544		
ATX Control [%CV]	3.8839	7.7726		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.2838  
 B = 0.99024  
 C = 0.63208  
 D = 0.017490  
 R2 coef = 0.99953  
 50% = 0.652

