



## Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

<b>Sample #</b>	<b>Location</b>	<b>Date Collected</b>	<b>Date Analyzed</b>	<b>Conc. (ppb)</b>
AC03737	Potato Creek SP - Worster Lake Beach	7/31/2023	8/3/2023	< 0.40
AC03738	Chain O'Lakes SP - Sand Lake Beach	7/31/2023	8/3/2023	< 0.40
AC03739	Mississinewa Lake - Miami SRA Beach	7/31/2023	8/3/2023	< 0.40
AC03740	Salamonie Lake - Lost Bridge West SRA Beach	7/31/2023	8/3/2023	< 0.40
AC03741	Mississinewa Lake - Miami SRA Beach (Field Duplicate)	7/31/2023	8/3/2023	< 0.40
AC03742	Field Blank	7/31/2023	8/3/2023	< 0.40
AC03743	Ferdinand State Forest - Ferdinand Lake Beach	7/31/2023	8/3/2023	< 0.40
AC03744	Patoka Lake - Newton Stewart SRA	7/31/2023	8/3/2023	< 0.40

# Test Report (by Request)

**Test Information**

Request: 8/3/2023 1:36:06 PM  
Date: 8/3/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.318 Abs	0.000 µg/L	R^2=0.99953, 100.0		0.000	Kit:P23B0
ATX Std 0	ANATOXIN	1.293 Abs [1.3055] {1.4 C	0.008 µg/L [0.004]	R^2=0.99953, 99.0		0.000	Kit:P23B0
ATX Std 1	ANATOXIN	1.086 Abs	0.135 µg/L	R^2=0.99953, 83.15		0.150	Kit:P23B0
ATX Std 1	ANATOXIN	1.060 Abs [1.0730] {1.7 C	0.154 µg/L [0.145]	R^2=0.99953, 81.16		0.150	Kit:P23B0
ATX Std 2	ANATOXIN	0.816 Abs	0.391 µg/L	R^2=0.99953, 62.48		0.400	Kit:P23B0
ATX Std 2	ANATOXIN	0.789 Abs [0.8025] {2.4 C	0.426 µg/L [0.409]	R^2=0.99953, 60.41		0.400	Kit:P23B0
ATX Std 3	ANATOXIN	0.514 Abs	1.001 µg/L	R^2=0.99953, 39.35		1.000	Kit:P23B0
ATX Std 3	ANATOXIN	0.503 Abs [0.5085] {1.5 C	1.038 µg/L [1.020]	R^2=0.99953, 38.51		1.000	Kit:P23B0
ATX Std 4	ANATOXIN	0.300 Abs	2.240 µg/L	R^2=0.99953, 22.97		2.500	Kit:P23B0
ATX Std 4	ANATOXIN	0.286 Abs [0.2930] {3.4 C	2.393 µg/L [2.317]	R^2=0.99953, 21.85		2.500	Kit:P23B0
ATX Std 5	ANATOXIN	0.160 Abs	> 5.000 µg/L	12.251 %Abs		5.000	Kit:P23B0
ATX Std 5	ANATOXIN	0.152 Abs [0.1560] {3.6 C	> 5.000 µg/L	11.639 %Abs		5.000	Kit:P23B0
ATX Control	ANATOXIN	0.644 Abs	0.667 µg/L	49.311 %Abs			Kit:P23B0
ATX Control	ANATOXIN	0.612 Abs [0.6280] {3.6 C	0.735 µg/L [0.701]	46.861 %Abs [48.0			Kit:P23B0

**Note**

Signature \_\_\_\_\_

\* 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) 8/3/2023 2:43:01 PM

# Test Report (by Request)

**Test Information**

Request: 8/3/2023 2:24:40 PM  
Date: 8/3/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.159 Abs	0.086 µg/L	Low, 88.744 %Abs		0.150 - 5.000	Kit:P23B0
LRB	ANATOXIN	1.135 Abs [1.1470] {1.5 C	0.102 µg/L [0.094]	Low, 86.907 %Abs		0.150 - 5.000	Kit:P23B0
LFB (ANA)	ANATOXIN	0.663 Abs	0.629 µg/L	50.766 %Abs		0.150 - 5.000	Kit:P23B0
LFB (ANA)	ANATOXIN	0.640 Abs [0.6515] {2.5 C	0.675 µg/L [0.652]	49.005 %Abs [49.8		0.150 - 5.000	Kit:P23B0
AC03737	ANATOXIN	1.194 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03737	ANATOXIN	1.195 Abs [1.1945] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03737MS	ANATOXIN	0.601 Abs	0.761 µg/L	46.018 %Abs		0.150 - 5.000	Kit:P23B0
AC03737MS	ANATOXIN	0.588 Abs [0.5945] {1.5 C	0.792 µg/L [0.777]	45.023 %Abs [45.5		0.150 - 5.000	Kit:P23B0
AC03737MSD	ANATOXIN	0.576 Abs	0.822 µg/L	44.104 %Abs		0.150 - 5.000	Kit:P23B0
AC03737MSD	ANATOXIN	0.550 Abs [0.5630] {3.3 C	0.892 µg/L [0.857]	42.113 %Abs [43.1		0.150 - 5.000	Kit:P23B0
AC03738	ANATOXIN	1.254 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03738	ANATOXIN	1.235 Abs [1.2445] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03739	ANATOXIN	1.170 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03739	ANATOXIN	1.191 Abs [1.1805] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03740	ANATOXIN	1.152 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03740	ANATOXIN	1.140 Abs [1.1460] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03741	ANATOXIN	1.146 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03741	ANATOXIN	1.093 Abs [1.1195] {3.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03742	ANATOXIN	1.257 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03742	ANATOXIN	1.222 Abs [1.2395] {2.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03743	ANATOXIN	1.151 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03743	ANATOXIN	1.133 Abs [1.1420] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03744	ANATOXIN	1.187 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC03744	ANATOXIN	1.097 Abs [1.1420] {5.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0

**Note**

Signature \_\_\_\_\_

Charles Hostetter 8/3/2023

\* 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) 8/3/2023 2:43:01 PM

**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: "

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Name	Absorbance	Concentration	Interpretation	Position
<b>8/3/2023 1:36:06 PM</b>				
ATX Std 0	1.318 Abs	0.000 µg/L	R <sup>2</sup> =0.99953, 100.919 %Abs	RK1:23->A01@2
ATX Std 0	1.293 Abs [1.3055] {1.4 CV}	0.008 µg/L [0.004] {141.4 CV}	R <sup>2</sup> =0.99953, 99.005 %Abs	RK1:23->B01@2
ATX Std 1	1.086 Abs	0.135 µg/L	R <sup>2</sup> =0.99953, 83.155 %Abs	RK1:24->C01@2
ATX Std 1	1.060 Abs [1.0730] {1.7 CV}	0.154 µg/L [0.145] {9.3 CV}	R <sup>2</sup> =0.99953, 81.164 %Abs	RK1:24->D01@2
ATX Std 2	0.816 Abs	0.391 µg/L	R <sup>2</sup> =0.99953, 62.481 %Abs	RK1:25->E01@2
ATX Std 2	0.789 Abs [0.8025] {2.4 CV}	0.426 µg/L [0.409] {6.1 CV}	R <sup>2</sup> =0.99953, 60.413 %Abs	RK1:25->F01@3
ATX Std 3	0.514 Abs	1.001 µg/L	R <sup>2</sup> =0.99953, 39.357 %Abs	RK1:26->G01@3
ATX Std 3	0.503 Abs [0.5085] {1.5 CV}	1.038 µg/L [1.020] {2.6 CV}	R <sup>2</sup> =0.99953, 38.515 %Abs	RK1:26->H01@3
ATX Std 4	0.300 Abs	2.240 µg/L	R <sup>2</sup> =0.99953, 22.971 %Abs	RK1:27->A02@2
ATX Std 4	0.286 Abs [0.2930] {3.4 CV}	2.393 µg/L [2.317] {4.7 CV}	R <sup>2</sup> =0.99953, 21.899 %Abs	RK1:27->B02@2
ATX Std 5	0.160 Abs	> 5.000 µg/L	12.251 %Abs	RK1:28->C02@2
ATX Std 5	0.152 Abs [0.1560] {3.6 CV}	> 5.000 µg/L	11.639 %Abs	RK1:28->D02@2
*****				
<b>8/3/2023 1:36:06 PM</b>				
ATX Control	0.644 Abs	0.667 µg/L	49.311 %Abs	RK1:29->E02@2
ATX Control	0.612 Abs [0.6280] {3.6 CV}	0.735 µg/L [0.701] {6.9 CV}	46.861 %Abs [48.086 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.3055	0.0040		
ATX Std 0 [SD]	0.0177	0.0057		
ATX Std 0 [%CV]	1.3541	141.4214		
ATX Std 1 [MEAN]	1.0730	0.1445		
ATX Std 1 [SD]	0.0184	0.0134		
ATX Std 1 [%CV]	1.7134	9.2976		
ATX Std 1 [%DIFF]		-3.6667		
ATX Std 2 [MEAN]	0.8025	0.4085		
ATX Std 2 [SD]	0.0191	0.0247		
ATX Std 2 [%CV]	2.3791	6.0584		
ATX Std 2 [%DIFF]		2.1250		
ATX Std 3 [MEAN]	0.5085	1.0195		
ATX Std 3 [SD]	0.0078	0.0262		
ATX Std 3 [%CV]	1.5296	2.5662		
ATX Std 3 [%DIFF]		1.9500		
ATX Std 4 [MEAN]	0.2930	2.3165		
ATX Std 4 [SD]	0.0099	0.1082		
ATX Std 4 [%CV]	3.3787	4.6703		
ATX Std 4 [%DIFF]		-7.3400		
ATX Std 5 [MEAN]	0.1560			
ATX Std 5 [SD]	0.0057			
ATX Std 5 [%CV]	3.6262			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.6280	0.7010		
ATX Control [SD]	0.0226	0.0481		
ATX Control [%CV]	3.6031	6.8592		

### Assay Curve

$$y = (A-D)/(1+(x/C)^B) + D$$

Weight: NONE

A = 1.3083

B = 1.0270

C = 0.61470

D = 0.032829

R2 coef = 0.99953

50% = 0.649

