



## 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>
AC41208	Pokagon SP - Main Beach	8/12/2024	8/14/2024	< 0.40
AC41209	Pokagon SP - Potawatomi Inn Beach	8/12/2024	8/14/2024	< 0.40
AC41210	Chain O'Lakes SP - Sand Lake Beach	8/12/2024	8/14/2024	< 0.40
AC41211	Ouabache SP - Kunkel Lake Beach	8/12/2024	8/14/2024	< 0.40
AC41212	Potato Creek SP - Worster Lake Beach	8/13/2024	8/14/2024	< 0.40
AC41213	Mississinewa Lake - Miami SRA Beach	8/13/2024	8/14/2024	< 0.40
AC41214	Salamonie Lake - Lost Bridge West SRA Beach	8/13/2024	8/14/2024	< 0.40
AC41215	Summit Lake SP - Summit Lake Beach	8/13/2024	8/14/2024	< 0.40
AC41216	Summit Lake SP - Summit Lake Beach (Field Duplicate)	8/13/2024	8/14/2024	< 0.40
AC41217	Field Blank	8/13/2024	8/14/2024	< 0.40
AC41218	Ferdinand State Forest - Ferdinand Lake Beach	8/12/2024	8/14/2024	< 0.40
AC41219	Lincoln SP - Lake Lincoln Beach	8/12/2024	8/14/2024	< 0.40
AC41220	Patoka Lake - Newton Stewart SRA	8/12/2024	8/14/2024	< 0.40

# Test Report (by Request)

**Test Information**

Request: 8/14/2024 2:31:02 PM  
Date: 8/14/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.107 Abs	0.000 µg/L	R^2=0.99941, 101.4		0.000	Kit:P23L3t
ATX Std 0	ANATOXIN	1.074 Abs [1.0905] {2.1 C	0.010 µg/L [0.005]	R^2=0.99941, 98.44		0.000	Kit:P23L3t
ATX Std 1	ANATOXIN	0.903 Abs	0.136 µg/L	R^2=0.99941, 82.76		0.150	Kit:P23L3t
ATX Std 1	ANATOXIN	0.873 Abs [0.8880] {2.4 C	0.164 µg/L [0.150]	R^2=0.99941, 80.01		0.150	Kit:P23L3t
ATX Std 2	ANATOXIN	0.690 Abs	0.391 µg/L	R^2=0.99941, 63.24		0.400	Kit:P23L3t
ATX Std 2	ANATOXIN	0.686 Abs [0.6880] {0.4 C	0.398 µg/L [0.395]	R^2=0.99941, 62.87		0.400	Kit:P23L3t
ATX Std 3	ANATOXIN	0.442 Abs	1.033 µg/L	R^2=0.99941, 40.51		1.000	Kit:P23L3t
ATX Std 3	ANATOXIN	0.435 Abs [0.4385] {1.1 C	1.062 µg/L [1.048]	R^2=0.99941, 39.87		1.000	Kit:P23L3t
ATX Std 4	ANATOXIN	0.268 Abs	2.291 µg/L	R^2=0.99941, 24.56		2.500	Kit:P23L3t
ATX Std 4	ANATOXIN	0.266 Abs [0.2670] {0.5 C	2.317 µg/L [2.304]	R^2=0.99941, 24.38		2.500	Kit:P23L3t
ATX Std 5	ANATOXIN	0.154 Abs	> 5.000 µg/L	14.115 %Abs		5.000	Kit:P23L3t
ATX Std 5	ANATOXIN	0.139 Abs [0.1465] {7.2 C	> 5.000 µg/L	12.741 %Abs		5.000	Kit:P23L3t
ATX Control	ANATOXIN	0.546 Abs	0.687 µg/L	50.046 %Abs			Kit:P23L3t
ATX Control	ANATOXIN	0.545 Abs [0.5455] {0.1 C	0.690 µg/L [0.689]	49.954 %Abs [50.0			Kit:P23L3t

**Note**

Signature David Jordan  
David Jordan 8/14/2024

# Test Report (by Request)

**Test Information**

Request: 8/14/2024 2:55:46 PM  
Date: 8/14/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	0.973 Abs	0.078 µg/L	Low, 89.184 %Abs		0.150 - 5.000	Kit:P23L3i
LRB	ANATOXIN	0.957 Abs [0.9650] {1.2 C	0.090 µg/L [0.084]	Low, 87.718 %Abs		0.150 - 5.000	Kit:P23L3i
LFB (ANA)	ANATOXIN	0.555 Abs	0.664 µg/L	50.871 %Abs		0.150 - 5.000	Kit:P23L3i
LFB (ANA)	ANATOXIN	0.549 Abs [0.5520] {0.8 C	0.680 µg/L [0.672]	50.321 %Abs [50.5		0.150 - 5.000	Kit:P23L3i
AC41208	ANATOXIN	1.007 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41208	ANATOXIN	0.991 Abs [0.9990] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41209	ANATOXIN	0.962 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41209	ANATOXIN	0.967 Abs [0.9645] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41210	ANATOXIN	0.859 Abs	0.195 µg/L	78.735 %Abs	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41210	ANATOXIN	0.867 Abs [0.8630] {0.7 C	0.186 µg/L [0.191]	79.468 %Abs [79.1	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41211	ANATOXIN	0.981 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41211	ANATOXIN	0.957 Abs [0.9690] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41211MS	ANATOXIN	0.528 Abs	0.737 µg/L	48.396 %Abs		0.150 - 5.000	Kit:P23L3i
AC41211MS	ANATOXIN	0.511 Abs [0.5195] {2.3 C	0.787 µg/L [0.762]	46.838 %Abs [47.6		0.150 - 5.000	Kit:P23L3i
AC41211MSD	ANATOXIN	0.500 Abs	0.821 µg/L	45.830 %Abs		0.150 - 5.000	Kit:P23L3i
AC41211MSD	ANATOXIN	0.486 Abs [0.4930] {2.0 C	0.867 µg/L [0.844]	44.546 %Abs [45.1		0.150 - 5.000	Kit:P23L3i
AC41212	ANATOXIN	0.931 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41212	ANATOXIN	0.926 Abs [0.9285] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41213	ANATOXIN	1.014 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41213	ANATOXIN	0.996 Abs [1.0050] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41214	ANATOXIN	0.979 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41214	ANATOXIN	0.974 Abs [0.9765] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41215	ANATOXIN	0.979 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41215	ANATOXIN	0.987 Abs [0.9830] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41216	ANATOXIN	0.956 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41216	ANATOXIN	0.954 Abs [0.9550] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41217	ANATOXIN	1.033 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41217	ANATOXIN	1.031 Abs [1.0320] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41218	ANATOXIN	0.903 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41218	ANATOXIN	0.881 Abs [0.8920] {1.7 C	0.172 µg/L [< LOD]	80.752 %Abs [Low,	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41219	ANATOXIN	0.997 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41219	ANATOXIN	1.001 Abs [0.9990] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41220	ANATOXIN	0.951 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i
AC41220	ANATOXIN	0.957 Abs [0.9540] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23L3i

**Note**

Signature *David Jordan*

David Jordan 8/14/2024

\* 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) 8/14/2024 3:06:16 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:P23L3054

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>8/14/2024 2:31:02 PM</b>				
ATX Std 0	1.107 Abs	0.000 µg/L	R <sup>2</sup> =0.99941, 101.467 %Abs	RK1:23->A01@2
ATX Std 0	1.074 Abs [1.0905] {2.1 CV}	0.010 µg/L [0.005] {141.4 CV}	R <sup>2</sup> =0.99941, 98.442 %Abs	RK1:23->B01@2
ATX Std 1	0.903 Abs	0.136 µg/L	R <sup>2</sup> =0.99941, 82.768 %Abs	RK1:24->C01@2
ATX Std 1	0.873 Abs [0.8880] {2.4 CV}	0.164 µg/L [0.150] {13.2 CV}	R <sup>2</sup> =0.99941, 80.018 %Abs	RK1:24->D01@2
ATX Std 2	0.690 Abs	0.391 µg/L	R <sup>2</sup> =0.99941, 63.245 %Abs	RK1:25->E01@2
ATX Std 2	0.686 Abs [0.6880] {0.4 CV}	0.398 µg/L [0.395] {1.3 CV}	R <sup>2</sup> =0.99941, 62.878 %Abs	RK1:25->F01@3
ATX Std 3	0.442 Abs	1.033 µg/L	R <sup>2</sup> =0.99941, 40.513 %Abs	RK1:26->G01@3
ATX Std 3	0.435 Abs [0.4385] {1.1 CV}	1.062 µg/L [1.048] {2.0 CV}	R <sup>2</sup> =0.99941, 39.872 %Abs	RK1:26->H01@3
ATX Std 4	0.268 Abs	2.291 µg/L	R <sup>2</sup> =0.99941, 24.565 %Abs	RK1:27->A02@2
ATX Std 4	0.266 Abs [0.2670] {0.5 CV}	2.317 µg/L [2.304] {0.8 CV}	R <sup>2</sup> =0.99941, 24.381 %Abs	RK1:27->B02@2
ATX Std 5	0.154 Abs	> 5.000 µg/L	14.115 %Abs	RK1:28->C02@2
ATX Std 5	0.139 Abs [0.1465] {7.2 CV}	> 5.000 µg/L	12.741 %Abs	RK1:28->D02@2
*****				
<b>8/14/2024 2:31:02 PM</b>				
ATX Control	0.546 Abs	0.687 µg/L	50.046 %Abs	RK1:29->E02@2
ATX Control	0.545 Abs [0.5455] {0.1 CV}	0.690 µg/L [0.689] {0.3 CV}	49.954 %Abs [50.000 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.0905	0.0050		
ATX Std 0 [SD]	0.0233	0.0071		
ATX Std 0 [%CV]	2.1398	141.4214		
ATX Std 1 [MEAN]	0.8880	0.1500		
ATX Std 1 [SD]	0.0212	0.0198		
ATX Std 1 [%CV]	2.3889	13.1993		
ATX Std 1 [%DIFF]		-0.0000		
ATX Std 2 [MEAN]	0.6880	0.3945		
ATX Std 2 [SD]	0.0028	0.0049		
ATX Std 2 [%CV]	0.4111	1.2547		
ATX Std 2 [%DIFF]		-1.3750		
ATX Std 3 [MEAN]	0.4385	1.0475		
ATX Std 3 [SD]	0.0049	0.0205		
ATX Std 3 [%CV]	1.1288	1.9576		
ATX Std 3 [%DIFF]		4.7500		
ATX Std 4 [MEAN]	0.2670	2.3040		
ATX Std 4 [SD]	0.0014	0.0184		
ATX Std 4 [%CV]	0.5297	0.7980		
ATX Std 4 [%DIFF]		-7.8400		
ATX Std 5 [MEAN]	0.1465			
ATX Std 5 [SD]	0.0106			
ATX Std 5 [%CV]	7.2400			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.5455	0.6885		
ATX Control [SD]	0.0007	0.0021		
ATX Control [%CV]	0.1296	0.3081		

### Assay Curve

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

Weight: NONE

A = 1.0917

B = 0.97587

C = 0.65526

D = 0.025218

R2 coef = 0.99941

50% = 0.689

