



## 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>
AC41095	Cecil M. Harden Lake - Raccoon Lake SRA Beach	7/22/2024	7/24/2024	< 0.40
AC41096	Cagles Mill Lake - Lieber SRA Beach	7/22/2024	7/24/2024	< 0.40
AC41097	Starve Hollow SRA - Starve Hollow Lake Beach	7/22/2024	7/24/2024	< 0.40
AC41098	Hardy Lake SRA - Hardy Lake SRA Beach	7/22/2024	7/24/2024	< 0.40
AC41099	Whitewater Memorial SP - Whitewater Lake Beach	7/23/2024	7/24/2024	< 0.40
AC41100	Brookville Lake - Quakertown SRA Beach	7/23/2024	7/24/2024	< 0.40
AC41101	Brookville Lake - Mounds SRA Beach	7/23/2024	7/24/2024	< 0.40
AC41102	Whitewater Memorial SP - Whitewater Lake Beach (Field Duplicate)	7/22/2024	7/24/2024	< 0.40
AC41103	Field Blank	7/22/2024	7/24/2024	< 0.40
AC41104	Ft. Ben Harrison SP Dog Lake	7/23/2024	7/24/2024	< 0.40

# Test Report (by Request)

**Test Information**

Request: 7/24/2024 12:33:07 PM  
 Date: 7/24/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.211 Abs	0.000 µg/L	R^2=0.99950, 101.3		0.000	Kit:P23B0
ATX Std 0	ANATOXIN	1.179 Abs [1.1950] {1.9 C	0.008 µg/L [0.004]	R^2=0.99950, 98.66		0.000	Kit:P23B0
ATX Std 1	ANATOXIN	0.987 Abs	0.130 µg/L	R^2=0.99950, 82.55		0.150	Kit:P23B0
ATX Std 1	ANATOXIN	0.951 Abs [0.9690] {2.6 C	0.160 µg/L [0.145]	R^2=0.99950, 79.58		0.150	Kit:P23B0
ATX Std 2	ANATOXIN	0.731 Abs	0.410 µg/L	R^2=0.99950, 61.17		0.400	Kit:P23B0
ATX Std 2	ANATOXIN	0.733 Abs [0.7320] {0.2 C	0.407 µg/L [0.409]	R^2=0.99950, 61.33		0.400	Kit:P23B0
ATX Std 3	ANATOXIN	0.481 Abs	1.009 µg/L	R^2=0.99950, 40.25		1.000	Kit:P23B0
ATX Std 3	ANATOXIN	0.475 Abs [0.4780] {0.9 C	1.032 µg/L [1.021]	R^2=0.99950, 39.74		1.000	Kit:P23B0
ATX Std 4	ANATOXIN	0.292 Abs	2.253 µg/L	R^2=0.99950, 24.43		2.500	Kit:P23B0
ATX Std 4	ANATOXIN	0.281 Abs [0.2865] {2.7 C	2.385 µg/L [2.319]	R^2=0.99950, 23.51		2.500	Kit:P23B0
ATX Std 5	ANATOXIN	0.162 Abs	> 5.000 µg/L	13.556 %Abs		5.000	Kit:P23B0
ATX Std 5	ANATOXIN	0.155 Abs [0.1585] {3.1 C	> 5.000 µg/L	12.971 %Abs		5.000	Kit:P23B0
ATX Control	ANATOXIN	0.583 Abs	0.697 µg/L	48.787 %Abs			Kit:P23B0
ATX Control	ANATOXIN	0.573 Abs [0.5780] {1.2 C	0.722 µg/L [0.710]	47.950 %Abs [48.3			Kit:P23B0

**Note**

Signature *David Jordan*

David Jordan 7/24/2024

\* 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) 7/24/2024 12:57:03 PM

# Test Report (by Request)

**Test Information**

Request: 7/24/2024 12:56:07 PM  
Date: 7/24/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.072 Abs	0.070 µg/L	Low, 89.707 %Abs		0.150 - 5.000	Kit:P23B0
LRB	ANATOXIN	1.057 Abs [1.0645] {1.0 C	0.080 µg/L [0.075]	Low, 88.452 %Abs		0.150 - 5.000	Kit:P23B0
LFB (ANA)	ANATOXIN	0.633 Abs	0.584 µg/L	52.971 %Abs		0.150 - 5.000	Kit:P23B0
LFB (ANA)	ANATOXIN	0.609 Abs [0.6210] {2.7 C	0.636 µg/L [0.610]	50.962 %Abs [51.9		0.150 - 5.000	Kit:P23B0
AC41095	ANATOXIN	1.010 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41095	ANATOXIN	0.991 Abs [1.0005] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41096	ANATOXIN	1.053 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41096	ANATOXIN	1.063 Abs [1.0580] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41097	ANATOXIN	0.933 Abs	0.192 µg/L	78.075 %Abs	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41097	ANATOXIN	0.908 Abs [0.9205] {1.9 C	0.218 µg/L [0.205]	75.983 %Abs [77.0	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41097MS	ANATOXIN	0.594 Abs	0.670 µg/L	49.707 %Abs		0.150 - 5.000	Kit:P23B0
AC41097MS	ANATOXIN	0.576 Abs [0.5850] {2.2 C	0.715 µg/L [0.693]	48.201 %Abs [48.9		0.150 - 5.000	Kit:P23B0
AC41097MSD	ANATOXIN	0.556 Abs	0.767 µg/L	46.527 %Abs		0.150 - 5.000	Kit:P23B0
AC41097MSD	ANATOXIN	0.544 Abs [0.5500] {1.5 C	0.801 µg/L [0.784]	45.523 %Abs [46.0		0.150 - 5.000	Kit:P23B0
AC41098	ANATOXIN	0.928 Abs	0.198 µg/L	77.657 %Abs	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41098	ANATOXIN	0.926 Abs [0.9270] {0.2 C	0.200 µg/L [0.199]	77.490 %Abs [77.5	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41099	ANATOXIN	1.006 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41099	ANATOXIN	0.999 Abs [1.0025] {0.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41100	ANATOXIN	1.151 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41100	ANATOXIN	1.132 Abs [1.1415] {1.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41101	ANATOXIN	1.069 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41101	ANATOXIN	1.078 Abs [1.0735] {0.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41102	ANATOXIN	1.039 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41102	ANATOXIN	1.018 Abs [1.0285] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41103	ANATOXIN	1.057 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41103	ANATOXIN	1.054 Abs [1.0555] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41104	ANATOXIN	1.159 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC41104	ANATOXIN	1.111 Abs [1.1350] {3.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0

**Note**

Signature *David Jordan*

David Jordan 7/24/2024

\* 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) 7/24/2024 12:57:03 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: "

"

Name	Absorbance	Concentration	Interpretation	Position
<b>7/24/2024 12:33:07 PM</b>				
ATX Std 0	1.211 Abs	0.000 µg/L	R <sup>2</sup> =0.99950, 101.339 %Abs	RK1:23->A01@2
ATX Std 0	1.179 Abs [1.1950] {1.9 CV}	0.008 µg/L [0.004] {141.4 CV}	R <sup>2</sup> =0.99950, 98.661 %Abs	RK1:23->B01@2
ATX Std 1	0.987 Abs	0.130 µg/L	R <sup>2</sup> =0.99950, 82.594 %Abs	RK1:24->C01@2
ATX Std 1	0.951 Abs [0.9690] {2.6 CV}	0.160 µg/L [0.145] {14.6 CV}	R <sup>2</sup> =0.99950, 79.582 %Abs	RK1:24->D01@2
ATX Std 2	0.731 Abs	0.410 µg/L	R <sup>2</sup> =0.99950, 61.172 %Abs	RK1:25->E01@2
ATX Std 2	0.733 Abs [0.7320] {0.2 CV}	0.407 µg/L [0.409] {0.5 CV}	R <sup>2</sup> =0.99950, 61.339 %Abs	RK1:25->F01@3
ATX Std 3	0.481 Abs	1.009 µg/L	R <sup>2</sup> =0.99950, 40.251 %Abs	RK1:26->G01@3
ATX Std 3	0.475 Abs [0.4780] {0.9 CV}	1.032 µg/L [1.021] {1.6 CV}	R <sup>2</sup> =0.99950, 39.749 %Abs	RK1:26->H01@3
ATX Std 4	0.292 Abs	2.253 µg/L	R <sup>2</sup> =0.99950, 24.435 %Abs	RK1:27->A02@2
ATX Std 4	0.281 Abs [0.2865] {2.7 CV}	2.385 µg/L [2.319] {4.0 CV}	R <sup>2</sup> =0.99950, 23.515 %Abs	RK1:27->B02@2
ATX Std 5	0.162 Abs	> 5.000 µg/L	13.556 %Abs	RK1:28->C02@2
ATX Std 5	0.155 Abs [0.1585] {3.1 CV}	> 5.000 µg/L	12.971 %Abs	RK1:28->D02@2
*****				
<b>7/24/2024 12:33:07 PM</b>				
ATX Control	0.583 Abs	0.697 µg/L	48.787 %Abs	RK1:29->E02@2
ATX Control	0.573 Abs [0.5780] {1.2 CV}	0.722 µg/L [0.710] {2.5 CV}	47.950 %Abs [48.368 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.1950	0.0040		
ATX Std 0 [SD]	0.0226	0.0057		
ATX Std 0 [%CV]	1.8935	141.4214		
ATX Std 1 [MEAN]	0.9690	0.1450		
ATX Std 1 [SD]	0.0255	0.0212		
ATX Std 1 [%CV]	2.6270	14.6298		
ATX Std 1 [%DIFF]		-3.3333		
ATX Std 2 [MEAN]	0.7320	0.4085		
ATX Std 2 [SD]	0.0014	0.0021		
ATX Std 2 [%CV]	0.1932	0.5193		
ATX Std 2 [%DIFF]		2.1250		
ATX Std 3 [MEAN]	0.4780	1.0205		
ATX Std 3 [SD]	0.0042	0.0163		
ATX Std 3 [%CV]	0.8876	1.5937		
ATX Std 3 [%DIFF]		2.0500		
ATX Std 4 [MEAN]	0.2865	2.3190		
ATX Std 4 [SD]	0.0078	0.0933		
ATX Std 4 [%CV]	2.7149	4.0249		
ATX Std 4 [%DIFF]		-7.2400		
ATX Std 5 [MEAN]	0.1585			
ATX Std 5 [SD]	0.0049			
ATX Std 5 [%CV]	3.1229			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.5780	0.7095		
ATX Control [SD]	0.0071	0.0177		
ATX Control [%CV]	1.2234	2.4916		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.1969  
 B = 0.96638  
 C = 0.62613  
 D = 0.029471  
 R2 coef = 0.99950  
 50% = 0.662

