



## 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>
AC03068	Cecil M. Harden Lake - Raccoon Lake SRA Beach	6/12/2023	6/15/2023	< 0.40
AC03069	Cagles Mill Lake - Lieber SRA Beach	6/12/2023	6/15/2023	< 0.40
AC03070	Monroe Lake - Paynetown SRA Beach	6/12/2023	6/15/2023	< 0.40
AC03071	Monroe Lake - Fairfax SRA Beach	6/12/2023	6/15/2023	< 0.40
AC03072	Starve Hollow SRA - Starve Hollow Lake Beach	6/12/2023	6/15/2023	< 0.40
AC03073	Whitewater Memorial SP - Whitewater Lake Beach	6/13/2023	6/15/2023	< 0.40
AC03074	Brookville Lake - Quakertown SRA Beach	6/13/2023	6/15/2023	< 0.40
AC03075	Brookville Lake - Mounds SRA Beach	6/13/2023	6/15/2023	< 0.40
AC03076	Hardy Lake SRA - Hardy Lake SRA Beach	6/13/2023	6/15/2023	< 0.40
AC03077	Deam Lake SRA - Deam Lake Beach	6/13/2023	6/15/2023	< 0.40
AC03078	Brookville Lake - Mounds SRA Beach (Field Duplicate)	6/13/2023	6/15/2023	< 0.40
AC03079	Field Blank	6/13/2023	6/15/2023	< 0.40
AC03080	Ft. Ben Harrison SP Dog Lake	6/13/2023	6/15/2023	< 0.40

# Test Report (by Request)

**Test Information**

Request: 6/15/2023 1:43:07 PM  
Date: 6/15/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.420 Abs	0.000 µg/L	R^2=0.99990, 101.5			P23B0244
ATX Std 0	ANATOXIN	1.375 Abs [1.3975] {2.3 C	0.007 µg/L [0.004]	R^2=0.99990, 98.35			P23B0244
ATX Std 1	ANATOXIN	1.140 Abs	0.127 µg/L	R^2=0.99990, 81.54			P23B0244
ATX Std 1	ANATOXIN	1.076 Abs [1.1080] {4.1 C	0.173 µg/L [0.150]	R^2=0.99990, 76.96			P23B0244
ATX Std 2	ANATOXIN	0.872 Abs	0.373 µg/L	R^2=0.99990, 62.37			P23B0244
ATX Std 2	ANATOXIN	0.830 Abs [0.8510] {3.5 C	0.428 µg/L [0.400]	R^2=0.99990, 59.37			P23B0244
ATX Std 3	ANATOXIN	0.561 Abs	0.995 µg/L	R^2=0.99990, 40.12			P23B0244
ATX Std 3	ANATOXIN	0.548 Abs [0.5545] {1.7 C	1.037 µg/L [1.016]	R^2=0.99990, 39.15			P23B0244
ATX Std 4	ANATOXIN	0.320 Abs	2.336 µg/L	R^2=0.99990, 22.85			P23B0244
ATX Std 4	ANATOXIN	0.303 Abs [0.3115] {3.9 C	2.509 µg/L [2.423]	R^2=0.99990, 21.67			P23B0244
ATX Std 5	ANATOXIN	0.169 Abs	4.972 µg/L	R^2=0.99990, 12.08			P23B0244
ATX Std 5	ANATOXIN	0.158 Abs [0.1635] {4.8 C	> 5.000 µg/L [4.97	11.302 %Abs			P23B0244
ATX Control	ANATOXIN	0.678 Abs	0.690 µg/L	48.498 %Abs			P23B0244
ATX Control	ANATOXIN	0.646 Abs [0.6620] {3.4 C	0.762 µg/L [0.726]	46.209 %Abs [47.3			P23B0244

**Note**

Signature \_\_\_\_\_

# Test Report (by Request)

**Test Information**

Request: 6/15/2023 2:08:52 PM  
Date: 6/15/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.235 Abs	0.070 µg/L	Low, 88.340 %Abs		0.150 - 5.000	P23B0244
LRB	ANATOXIN	1.195 Abs [1.2150] {2.3 C	0.092 µg/L [0.081]	Low, 85.479 %Abs		0.150 - 5.000	P23B0244
LFB (ANA)	ANATOXIN	0.712 Abs	0.621 µg/L	50.930 %Abs		0.150 - 5.000	P23B0244
LFB (ANA)	ANATOXIN	0.678 Abs [0.6950] {3.5 C	0.690 µg/L [0.655]	48.498 %Abs [49.7		0.150 - 5.000	P23B0244
AC03068	ANATOXIN	1.293 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03068	ANATOXIN	1.271 Abs [1.2820] {1.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03068MS	ANATOXIN	0.650 Abs	0.752 µg/L	46.495 %Abs		0.150 - 5.000	P23B0244
AC03068MS	ANATOXIN	0.621 Abs [0.6355] {3.2 C	0.823 µg/L [0.788]	44.421 %Abs [45.4		0.150 - 5.000	P23B0244
AC03068MSD	ANATOXIN	0.626 Abs	0.811 µg/L	44.778 %Abs		0.150 - 5.000	P23B0244
AC03068MSD	ANATOXIN	0.609 Abs [0.6175] {1.9 C	0.855 µg/L [0.833]	43.562 %Abs [44.1		0.150 - 5.000	P23B0244
AC03069	ANATOXIN	1.345 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03069	ANATOXIN	1.309 Abs [1.3270] {1.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03070	ANATOXIN	1.297 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03070	ANATOXIN	1.267 Abs [1.2820] {1.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03071	ANATOXIN	1.254 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03071	ANATOXIN	1.235 Abs [1.2445] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03072	ANATOXIN	1.198 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03072	ANATOXIN	1.115 Abs [1.1565] {5.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03073	ANATOXIN	1.338 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03073	ANATOXIN	1.313 Abs [1.3255] {1.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03074	ANATOXIN	1.323 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03074	ANATOXIN	1.285 Abs [1.3040] {2.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03075	ANATOXIN	1.224 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03075	ANATOXIN	1.193 Abs [1.2085] {1.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03076	ANATOXIN	1.153 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03076	ANATOXIN	1.097 Abs [1.1250] {3.5 C	0.173 µg/L [< LOD]	78.469 %Abs [Low,	MDF=1.100	0.150 - 5.000	P23B0244
AC03077	ANATOXIN	1.354 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03077	ANATOXIN	1.318 Abs [1.3360] {1.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03078	ANATOXIN	1.332 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03078	ANATOXIN	1.290 Abs [1.3110] {2.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03079	ANATOXIN	1.262 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03079	ANATOXIN	1.254 Abs [1.2580] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03080	ANATOXIN	1.252 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03080	ANATOXIN	1.224 Abs [1.2380] {1.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244

**Note**

Signature \_\_\_\_\_

Charles Hostetter 6/15/2023

**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>6/15/2023 1:43:07 PM</b>				
ATX Std 0	1.420 Abs	0.000 µg/L	R <sup>2</sup> =0.99990, 101.574 %Abs	RK1:23->A01@2
ATX Std 0	1.375 Abs [1.3975] {2.3 CV}	0.007 µg/L [0.004] {141.4 CV}	R <sup>2</sup> =0.99990, 98.355 %Abs	RK1:23->B01@2
ATX Std 1	1.140 Abs	0.127 µg/L	R <sup>2</sup> =0.99990, 81.545 %Abs	RK1:24->C01@2
ATX Std 1	1.076 Abs [1.1080] {4.1 CV}	0.173 µg/L [0.150] {21.7 CV}	R <sup>2</sup> =0.99990, 76.967 %Abs	RK1:24->D01@2
ATX Std 2	0.872 Abs	0.373 µg/L	R <sup>2</sup> =0.99990, 62.375 %Abs	RK1:25->E01@2
ATX Std 2	0.830 Abs [0.8510] {3.5 CV}	0.428 µg/L [0.400] {9.7 CV}	R <sup>2</sup> =0.99990, 59.371 %Abs	RK1:25->F01@3
ATX Std 3	0.561 Abs	0.995 µg/L	R <sup>2</sup> =0.99990, 40.129 %Abs	RK1:26->G01@3
ATX Std 3	0.548 Abs [0.5545] {1.7 CV}	1.037 µg/L [1.016] {2.9 CV}	R <sup>2</sup> =0.99990, 39.199 %Abs	RK1:26->H01@3
ATX Std 4	0.320 Abs	2.336 µg/L	R <sup>2</sup> =0.99990, 22.890 %Abs	RK1:27->A02@2
ATX Std 4	0.303 Abs [0.3115] {3.9 CV}	2.509 µg/L [2.423] {5.0 CV}	R <sup>2</sup> =0.99990, 21.674 %Abs	RK1:27->B02@2
ATX Std 5	0.169 Abs	4.972 µg/L	R <sup>2</sup> =0.99990, 12.089 %Abs	RK1:28->C02@2
ATX Std 5	0.158 Abs [0.1635] {4.8 CV}	> 5.000 µg/L [4.972]	11.302 %Abs	RK1:28->D02@2
*****				
<b>6/15/2023 1:43:07 PM</b>				
ATX Control	0.678 Abs	0.690 µg/L	48.498 %Abs	RK1:29->E02@2
ATX Control	0.646 Abs [0.6620] {3.4 CV}	0.762 µg/L [0.726] {7.0 CV}	46.209 %Abs [47.353 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.3975	0.0035		
ATX Std 0 [SD]	0.0318	0.0049		
ATX Std 0 [%CV]	2.2769	141.4214		
ATX Std 1 [MEAN]	1.1080	0.1500		
ATX Std 1 [SD]	0.0453	0.0325		
ATX Std 1 [%CV]	4.0844	21.6846		
ATX Std 1 [%DIFF]		-0.0000		
ATX Std 2 [MEAN]	0.8510	0.4005		
ATX Std 2 [SD]	0.0297	0.0389		
ATX Std 2 [%CV]	3.4898	9.7106		
ATX Std 2 [%DIFF]		0.1250		
ATX Std 3 [MEAN]	0.5545	1.0160		
ATX Std 3 [SD]	0.0092	0.0297		
ATX Std 3 [%CV]	1.6578	2.9231		
ATX Std 3 [%DIFF]		1.6000		
ATX Std 4 [MEAN]	0.3115	2.4225		
ATX Std 4 [SD]	0.0120	0.1223		
ATX Std 4 [%CV]	3.8590	5.0497		
ATX Std 4 [%DIFF]		-3.1000		
ATX Std 5 [MEAN]	0.1635			
ATX Std 5 [SD]	0.0078			
ATX Std 5 [%CV]	4.7573			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.6620	0.7260		
ATX Control [SD]	0.0226	0.0509		
ATX Control [%CV]	3.4180	7.0126		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.3985  
 B = 0.89918  
 C = 0.68488  
 D = -0.037834  
 R2 coef = 0.99990  
 50% = 0.646

