



## 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>
AC37262	Cecil M. Harden Lake - Raccoon Lake SRA Beach	8/21/2023	8/24/2023	< 0.40
AC37263	Cagles Mill Lake - Lieber SRA Beach	8/21/2023	8/24/2023	< 0.40
AC37269	Monroe Lake - Fairfax SRA Beach	8/21/2023	8/24/2023	< 0.40
AC37268	Monroe Lake - Paynetown SRA Beach	8/21/2023	8/24/2023	< 0.40
AC37267	Starve Hollow SRA - Starve Hollow Lake Beach	8/21/2023	8/24/2023	< 0.40
AC37266	Whitewater Memorial SP - Whitewater Lake Beach	8/22/2023	8/24/2023	< 0.40
AC37264	Brookville Lake - Quakertown SRA Beach	8/22/2023	8/24/2023	< 0.40
AC37265	Brookville Lake - Mounds SRA Beach	8/22/2023	8/24/2023	< 0.40
AC37270	Hardy Lake SRA - Hardy Lake SRA Beach	8/22/2023	8/24/2023	< 0.40
AC37260	Monroe Lake - Paynetown SRA Beach (Field Duplicate)	8/21/2023	8/24/2023	< 0.40
AC37261	Field Blank	8/21/2023	8/24/2023	< 0.40
AC37271	Ft. Ben Harrison SP Dog Lake	8/21/2023	8/24/2023	< 0.40

# Test Report (by Request)

**Test Information**

Request: 8/24/2023 2:17:29 PM  
 Date: 8/24/2023 - 8/24/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.291 Abs	0.000 µg/L	R^2=0.99976, 101.3		0.000	Kit:M22J2
ATX Std 0	ANATOXIN	1.256 Abs [1.2735] {1.9 C	0.012 µg/L [0.006]	R^2=0.99976, 98.5		0.000	Kit:M22J2
ATX Std 1	ANATOXIN	1.085 Abs	0.131 µg/L	R^2=0.99976, 85.1		0.150	Kit:M22J2
ATX Std 1	ANATOXIN	1.048 Abs [1.0665] {2.5 C	0.161 µg/L [0.146]	R^2=0.99976, 82.2		0.150	Kit:M22J2
ATX Std 2	ANATOXIN	0.833 Abs	0.391 µg/L	R^2=0.99976, 65.3		0.400	Kit:M22J2
ATX Std 2	ANATOXIN	0.811 Abs [0.8220] {1.9 C	0.421 µg/L [0.406]	R^2=0.99976, 63.6		0.400	Kit:M22J2
ATX Std 3	ANATOXIN	0.546 Abs	0.984 µg/L	R^2=0.99976, 42.8		1.000	Kit:M22J2
ATX Std 3	ANATOXIN	0.528 Abs [0.5370] {2.4 C	1.044 µg/L [1.014]	R^2=0.99976, 41.4		1.000	Kit:M22J2
ATX Std 4	ANATOXIN	0.314 Abs	2.315 µg/L	R^2=0.99976, 24.6		2.500	Kit:M22J2
ATX Std 4	ANATOXIN	0.302 Abs [0.3080] {2.8 C	2.444 µg/L [2.380]	R^2=0.99976, 23.7		2.500	Kit:M22J2
ATX Std 5	ANATOXIN	0.174 Abs	> 5.000 µg/L	13.658 %Abs		5.000	Kit:M22J2
ATX Std 5	ANATOXIN	0.167 Abs [0.1705] {2.9 C	> 5.000 µg/L	13.108 %Abs		5.000	Kit:M22J2
ATX Control	ANATOXIN	0.664 Abs	0.677 µg/L	52.119 %Abs			Kit:M22J2
ATX Control	ANATOXIN	0.641 Abs [0.6525] {2.5 C	0.728 µg/L [0.703]	50.314 %Abs [51.2			Kit:M22J2

**Note**

Signature

Charles Hostetter 8/25/2023

# Test Report (by Request)

**Test Information**

 Request: 8/24/2023 2:40:19 PM  
 Date: 8/24/2023 - 8/24/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.178 Abs	0.063 µg/L	Low, 92.465 %Abs		0.150 - 5.000	Kit:M22J2
LRB	ANATOXIN	1.146 Abs [1.1620] {1.9 C	0.085 µg/L [0.074]			0.150 - 5.000	Kit:M22J2
LFB (ANA)	ANATOXIN	0.677 Abs	0.650 µg/L	53.140 %Abs		0.150 - 5.000	Kit:M22J2
LFB (ANA)	ANATOXIN	0.651 Abs [0.6640] {2.8 C	0.705 µg/L [0.678]	51.099 %Abs [52.1		0.150 - 5.000	Kit:M22J2
AC37262	ANATOXIN	1.147 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37262	ANATOXIN	1.132 Abs [1.1395] {0.9 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37263	ANATOXIN	1.185 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37263	ANATOXIN	1.168 Abs [1.1765] {1.0 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37269	ANATOXIN	1.175 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37269	ANATOXIN	1.148 Abs [1.1615] {1.6 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37268	ANATOXIN	1.236 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37268	ANATOXIN	1.214 Abs [1.2250] {1.3 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37267	ANATOXIN	1.178 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37267	ANATOXIN	1.150 Abs [1.1640] {1.7 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37266	ANATOXIN	1.175 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37266	ANATOXIN	1.161 Abs [1.1680] {0.8 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37266MS	ANATOXIN	0.617 Abs	0.785 µg/L	48.430 %Abs		0.150 - 5.000	Kit:M22J2
AC37266MS	ANATOXIN	0.594 Abs [0.6055] {2.7 C	0.844 µg/L [0.815]	46.625 %Abs [47.5		0.150 - 5.000	Kit:M22J2
AC37266MSD	ANATOXIN	0.650 Abs	0.707 µg/L	51.020 %Abs		0.150 - 5.000	Kit:M22J2
AC37266MSD	ANATOXIN	0.634 Abs [0.6420] {1.8 C	0.744 µg/L [0.726]	49.765 %Abs [50.3		0.150 - 5.000	Kit:M22J2
AC37264	ANATOXIN	1.202 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37264	ANATOXIN	1.168 Abs [1.1850] {2.0 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37265	ANATOXIN	1.157 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37265	ANATOXIN	1.150 Abs [1.1535] {0.4 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37270	ANATOXIN	1.059 Abs	0.167 µg/L	83.124 %Abs	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37270	ANATOXIN	1.027 Abs [1.0430] {2.2 C	0.198 µg/L [0.183]	80.612 %Abs [81.8	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37260	ANATOXIN	1.229 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37260	ANATOXIN	1.213 Abs [1.2210] {0.9 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37261	ANATOXIN	1.219 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37261	ANATOXIN	1.206 Abs [1.2125] {0.8 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37271	ANATOXIN	1.190 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:M22J2
AC37271	ANATOXIN	1.186 Abs [1.1880] {0.2 C	< LOD [< LOD]		MDF=1.100	0.150 - 5.000	Kit:M22J2

**Note**

Signature

Charles Hostetter 8/25/2023

**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: Kit:M22J2558

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>8/24/2023 2:17:29 PM</b>				
ATX Std 0	1.291 Abs	0.000 µg/L	R <sup>2</sup> =0.99976, 101.334 %Abs	RK1:23->A01@2
ATX Std 0	1.256 Abs [1.2735] {1.9 CV}	0.012 µg/L [0.006] {141.4 CV}	R <sup>2</sup> =0.99976, 98.587 %Abs	RK1:23->B01@2
ATX Std 1	1.085 Abs	0.131 µg/L	R <sup>2</sup> =0.99976, 85.165 %Abs	RK1:24->C01@2
ATX Std 1	1.048 Abs [1.0665] {2.5 CV}	0.161 µg/L [0.146] {14.5 CV}	R <sup>2</sup> =0.99976, 82.261 %Abs	RK1:24->D01@2
ATX Std 2	0.833 Abs	0.391 µg/L	R <sup>2</sup> =0.99976, 65.385 %Abs	RK1:25->E01@2
ATX Std 2	0.811 Abs [0.8220] {1.9 CV}	0.421 µg/L [0.406] {5.2 CV}	R <sup>2</sup> =0.99976, 63.658 %Abs	RK1:25->F01@3
ATX Std 3	0.546 Abs	0.984 µg/L	R <sup>2</sup> =0.99976, 42.857 %Abs	RK1:26->G01@3
ATX Std 3	0.528 Abs [0.5370] {2.4 CV}	1.044 µg/L [1.014] {4.2 CV}	R <sup>2</sup> =0.99976, 41.444 %Abs	RK1:26->H01@3
ATX Std 4	0.302 Abs	2.444 µg/L	R <sup>2</sup> =0.99976, 23.705 %Abs	RK1:27->B02@2
ATX Std 4	0.314 Abs [0.3080] {2.8 CV}	2.315 µg/L [2.380] {3.8 CV}	R <sup>2</sup> =0.99976, 24.647 %Abs	RK1:27->A02@2
ATX Std 5	0.174 Abs	> 5.000 µg/L	13.658 %Abs	RK1:28->C02@2
ATX Std 5	0.167 Abs [0.1705] {2.9 CV}	> 5.000 µg/L	13.108 %Abs	RK1:28->D02@2
*****				
<b>8/24/2023 2:17:29 PM</b>				
ATX Control	0.664 Abs	0.677 µg/L	52.119 %Abs	RK1:29->E02@2
ATX Control	0.641 Abs [0.6525] {2.5 CV}	0.728 µg/L [0.703] {5.1 CV}	50.314 %Abs [51.217 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.2735	0.0060		
ATX Std 0 [SD]	0.0247	0.0085		
ATX Std 0 [%CV]	1.9434	141.4214		
ATX Std 1 [MEAN]	1.0665	0.1460		
ATX Std 1 [SD]	0.0262	0.0212		
ATX Std 1 [%CV]	2.4532	14.5296		
ATX Std 1 [%DIFF]		-2.6667		
ATX Std 2 [MEAN]	0.8220	0.4060		
ATX Std 2 [SD]	0.0156	0.0212		
ATX Std 2 [%CV]	1.8925	5.2249		
ATX Std 2 [%DIFF]		1.5000		
ATX Std 3 [MEAN]	0.5370	1.0140		
ATX Std 3 [SD]	0.0127	0.0424		
ATX Std 3 [%CV]	2.3702	4.1841		
ATX Std 3 [%DIFF]		1.4000		
ATX Std 4 [MEAN]	0.3080	2.3795		
ATX Std 4 [SD]	0.0085	0.0912		
ATX Std 4 [%CV]	2.7550	3.8334		
ATX Std 4 [%DIFF]		-4.8200		
ATX Std 5 [MEAN]	0.1705			
ATX Std 5 [SD]	0.0049			
ATX Std 5 [%CV]	2.9031			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.6525	0.7025		
ATX Control [SD]	0.0163	0.0361		
ATX Control [%CV]	2.4925	5.1334		

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.2758  
 B = 1.0184  
 C = 0.70243  
 D = 0.028435  
 R2 coef = 0.99976  
 50% = 0.737

