



## 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>
AB47626	Raccoon Lake SRA	6/14/2021	6/16/2021	< 0.40
AB47628	Cagles Mill Lake Beach	6/14/2021	6/16/2021	< 0.40
AB47629	Paynetown SRA	6/14/2021	6/16/2021	< 0.40
AB47630	Fairfax SRA	6/14/2021	6/16/2021	< 0.40
AB47631	Starve Hollow SRA	6/14/2021	6/16/2021	< 0.40
AB47632	Whitewater Memorial SP	6/15/2021	6/16/2021	< 0.40
AB47633	Quakertown SRA	6/15/2021	6/16/2021	< 0.40
AB47634	Mounds SRA	6/15/2021	6/16/2021	< 0.40
AB47635	Hardy Lake SRA	6/15/2021	6/16/2021	< 0.40
AB47627	Deam Lake SRA	6/15/2021	6/16/2021	< 0.40
AB47636	Paynetown SRA (Field Duplicate)	6/14/2021	6/16/2021	< 0.40
AB47637	Field Blank	6/14/2021	6/16/2021	< 0.40
AB47651	Ft. Ben Harrison SP Dog Lake - East	6/14/2021	6/16/2021	< 0.40

# Test Report (by Request)

**Test Information**

Request: 6/16/2021 6:37:50 PM

Date: 6/16/2021

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.575 Abs	0.000 µg/L	R^2=0.99995, 101.2			20L4352
ATX Std 0	ANATOXIN	1.535 Abs [1.5550] {1.8 C	0.004 µg/L [0.002]	R^2=0.99995, 98.71			20L4352
ATX Std 1	ANATOXIN	1.262 Abs	0.142 µg/L	R^2=0.99995, 81.15			20L4352
ATX Std 1	ANATOXIN	1.234 Abs [1.2480] {1.6 C	0.163 µg/L [0.153]	R^2=0.99995, 79.35			20L4352
ATX Std 2	ANATOXIN	1.025 Abs	0.365 µg/L	R^2=0.99995, 65.91			20L4352
ATX Std 2	ANATOXIN	0.982 Abs [1.0035] {3.0 C	0.420 µg/L [0.392]	R^2=0.99995, 63.15			20L4352
ATX Std 3	ANATOXIN	0.693 Abs	0.987 µg/L	R^2=0.99995, 44.56			20L4352
ATX Std 3	ANATOXIN	0.675 Abs [0.6840] {1.9 C	1.039 µg/L [1.013]	R^2=0.99995, 43.40			20L4352
ATX Std 4	ANATOXIN	0.399 Abs	2.391 µg/L	R^2=0.99995, 25.65			20L4352
ATX Std 4	ANATOXIN	0.375 Abs [0.3870] {4.4 C	2.591 µg/L [2.491]	R^2=0.99995, 24.11			20L4352
ATX Std 5	ANATOXIN	0.209 Abs	4.892 µg/L	R^2=0.99995, 13.44			20L4352
ATX Std 5	ANATOXIN	0.199 Abs [0.2040] {3.5 C	> 5.000 µg/L [4.89	12.797 %Abs			20L4352
ATX Control	ANATOXIN	0.741 Abs	0.860 µg/L	47.653 %Abs			20L4352
ATX Control	ANATOXIN	0.720 Abs [0.7305] {2.0 C	0.914 µg/L [0.887]	46.302 %Abs [46.9			20L4352

**Note**

Signature

David Jordan 6/16/2021

# Test Report (by Request)

**Test Information**

 Request: 6/16/2021 6:38:55 PM  
 Date: 6/16/2021

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (ANA)	ANATOXIN	1.385 Abs	0.067 µg/L	Low, 89.068 %Abs		0.150 - 5.000	20L4352
LRB (ANA)	ANATOXIN	1.354 Abs [1.3695] {1.6 C	0.084 µg/L [0.075]	Low, 87.074 %Abs		0.150 - 5.000	20L4352
LFB (ANA)	ANATOXIN	0.893 Abs	0.552 µg/L	57.428 %Abs		0.150 - 5.000	20L4352
LFB (ANA)	ANATOXIN	0.857 Abs [0.8750] {2.9 C	0.615 µg/L [0.584]	55.113 %Abs [56.2		0.150 - 5.000	20L4352
AB47626	ANATOXIN	1.406 Abs	0.056 µg/L	Low, 90.418 %Abs		0.150 - 5.000	20L4352
AB47626	ANATOXIN	1.389 Abs [1.3975] {0.9 C	0.064 µg/L [0.060]	Low, 89.325 %Abs		0.150 - 5.000	20L4352
AB47628	ANATOXIN	1.077 Abs	0.306 µg/L	69.260 %Abs		0.150 - 5.000	20L4352
AB47628	ANATOXIN	1.060 Abs [1.0685] {1.1 C	0.324 µg/L [0.315]	68.167 %Abs [68.7		0.150 - 5.000	20L4352
AB47629	ANATOXIN	1.354 Abs	0.084 µg/L	Low, 87.074 %Abs		0.150 - 5.000	20L4352
AB47629	ANATOXIN	1.342 Abs [1.3480] {0.6 C	0.091 µg/L [0.087]	Low, 86.302 %Abs		0.150 - 5.000	20L4352
AB47630	ANATOXIN	1.477 Abs	0.024 µg/L	Low, 94.984 %Abs		0.150 - 5.000	20L4352
AB47630	ANATOXIN	1.426 Abs [1.4515] {2.5 C	0.046 µg/L [0.035]	Low, 91.704 %Abs		0.150 - 5.000	20L4352
AB47631	ANATOXIN	1.392 Abs	0.063 µg/L	Low, 89.518 %Abs		0.150 - 5.000	20L4352
AB47631	ANATOXIN	1.375 Abs [1.3835] {0.9 C	0.072 µg/L [0.067]	Low, 88.424 %Abs		0.150 - 5.000	20L4352
AB47632	ANATOXIN	1.352 Abs	0.085 µg/L	Low, 86.945 %Abs		0.150 - 5.000	20L4352
AB47632	ANATOXIN	1.349 Abs [1.3505] {0.2 C	0.086 µg/L [0.086]	Low, 86.752 %Abs		0.150 - 5.000	20L4352
AB47633	ANATOXIN	1.341 Abs	0.091 µg/L	Low, 86.238 %Abs		0.150 - 5.000	20L4352
AB47633	ANATOXIN	1.325 Abs [1.3330] {0.8 C	0.101 µg/L [0.096]	Low, 85.209 %Abs		0.150 - 5.000	20L4352
AB47634	ANATOXIN	1.472 Abs	0.026 µg/L	Low, 94.662 %Abs		0.150 - 5.000	20L4352
AB47634	ANATOXIN	1.429 Abs [1.4505] {2.1 C	0.045 µg/L [0.036]	Low, 91.897 %Abs		0.150 - 5.000	20L4352
AB47634MS	ANATOXIN	0.331 Abs	3.021 µg/L	21.286 %Abs		0.150 - 5.000	20L4352
AB47634MS	ANATOXIN	0.325 Abs [0.3280] {1.3 C	3.086 µg/L [3.053]	20.900 %Abs [21.0		0.150 - 5.000	20L4352
AB47634MSD	ANATOXIN	0.426 Abs	2.189 µg/L	27.395 %Abs		0.150 - 5.000	20L4352
AB47634MSD	ANATOXIN	0.403 Abs [0.4145] {3.9 C	2.359 µg/L [2.274]	25.916 %Abs [26.6		0.150 - 5.000	20L4352
AB47635	ANATOXIN	1.327 Abs	0.100 µg/L	Low, 85.338 %Abs		0.150 - 5.000	20L4352
AB47635	ANATOXIN	1.327 Abs [1.3270] {0.0 C	0.100 µg/L [0.100]	Low, 85.338 %Abs		0.150 - 5.000	20L4352
AB47627	ANATOXIN	1.479 Abs	0.023 µg/L	Low, 95.113 %Abs		0.150 - 5.000	20L4352
AB47627	ANATOXIN	1.411 Abs [1.4450] {3.3 C	0.053 µg/L [0.038]	Low, 90.740 %Abs		0.150 - 5.000	20L4352
AB47636	ANATOXIN	1.426 Abs	0.046 µg/L	Low, 91.704 %Abs		0.150 - 5.000	20L4352
AB47636	ANATOXIN	1.398 Abs [1.4120] {1.4 C	0.060 µg/L [0.053]	Low, 89.904 %Abs		0.150 - 5.000	20L4352
AB47637	ANATOXIN	1.423 Abs	0.048 µg/L	Low, 91.511 %Abs		0.150 - 5.000	20L4352
AB47637	ANATOXIN	1.389 Abs [1.4060] {1.7 C	0.064 µg/L [0.056]	Low, 89.325 %Abs		0.150 - 5.000	20L4352
AB47651	ANATOXIN	1.386 Abs	0.066 µg/L	Low, 89.132 %Abs		0.150 - 5.000	20L4352
AB47651	ANATOXIN	1.370 Abs [1.3780] {0.8 C	0.075 µg/L [0.071]	Low, 88.103 %Abs		0.150 - 5.000	20L4352

**Note**

Signature

David Jordan 6/16/2021

**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: 20L4352

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>6/16/2021 6:37:50 PM</b>				
ATX Std 0	1.575 Abs	0.000 µg/L	R <sup>2</sup> =0.99995, 101.286 %Abs	RK1:23->A01@2
ATX Std 0	1.535 Abs [1.5550] {1.8 CV}	0.004 µg/L [0.002] {141.4 CV}	R <sup>2</sup> =0.99995, 98.714 %Abs	RK1:23->B01@2
ATX Std 1	1.262 Abs	0.142 µg/L	R <sup>2</sup> =0.99995, 81.158 %Abs	RK1:24->C01@2
ATX Std 1	1.234 Abs [1.2480] {1.6 CV}	0.163 µg/L [0.153] {9.7 CV}	R <sup>2</sup> =0.99995, 79.357 %Abs	RK1:24->D01@2
ATX Std 2	1.025 Abs	0.365 µg/L	R <sup>2</sup> =0.99995, 65.916 %Abs	RK1:25->E01@2
ATX Std 2	0.982 Abs [1.0035] {3.0 CV}	0.420 µg/L [0.392] {9.9 CV}	R <sup>2</sup> =0.99995, 63.151 %Abs	RK1:25->F01@3
ATX Std 3	0.693 Abs	0.987 µg/L	R <sup>2</sup> =0.99995, 44.566 %Abs	RK1:26->G01@3
ATX Std 3	0.675 Abs [0.6840] {1.9 CV}	1.039 µg/L [1.013] {3.6 CV}	R <sup>2</sup> =0.99995, 43.408 %Abs	RK1:26->H01@3
ATX Std 4	0.399 Abs	2.391 µg/L	R <sup>2</sup> =0.99995, 25.659 %Abs	RK1:27->A02@2
ATX Std 4	0.375 Abs [0.3870] {4.4 CV}	2.591 µg/L [2.491] {5.7 CV}	R <sup>2</sup> =0.99995, 24.116 %Abs	RK1:27->B02@2
ATX Std 5	0.209 Abs	4.892 µg/L	R <sup>2</sup> =0.99995, 13.441 %Abs	RK1:28->C02@2
ATX Std 5	0.199 Abs [0.2040] {3.5 CV}	> 5.000 µg/L [4.892]	12.797 %Abs	RK1:28->D02@2
*****				
<b>6/16/2021 6:37:50 PM</b>				
ATX Control	0.741 Abs	0.860 µg/L	47.653 %Abs	RK1:29->E02@2
ATX Control	0.720 Abs [0.7305] {2.0 CV}	0.914 µg/L [0.887] {4.3 CV}	46.302 %Abs [46.977 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.5550	0.0020		
ATX Std 0 [SD]	0.0283	0.0028		
ATX Std 0 [%CV]	1.8189	141.4214		
ATX Std 1 [MEAN]	1.2480	0.1525		
ATX Std 1 [SD]	0.0198	0.0148		
ATX Std 1 [%CV]	1.5865	9.7372		
ATX Std 1 [%DIFF]		1.6667		
ATX Std 2 [MEAN]	1.0035	0.3925		
ATX Std 2 [SD]	0.0304	0.0389		
ATX Std 2 [%CV]	3.0300	9.9085		
ATX Std 2 [%DIFF]		-1.8750		
ATX Std 3 [MEAN]	0.6840	1.0130		
ATX Std 3 [SD]	0.0127	0.0368		
ATX Std 3 [%CV]	1.8608	3.6298		
ATX Std 3 [%DIFF]		1.3000		
ATX Std 4 [MEAN]	0.3870	2.4910		
ATX Std 4 [SD]	0.0170	0.1414		
ATX Std 4 [%CV]	4.3852	5.6773		
ATX Std 4 [%DIFF]		-0.3600		
ATX Std 5 [MEAN]	0.2040			
ATX Std 5 [SD]	0.0071			
ATX Std 5 [%CV]	3.4662			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.7305	0.8870		
ATX Control [SD]	0.0148	0.0382		
ATX Control [%CV]	2.0327	4.3048		

### Assay Curve

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

Weight: NONE

A = 1.5545

B = 0.82850

C = 0.93939

D = -0.13388

R2 coef = 0.99995

50% = 0.775

