



## Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB43832	Raccoon Lake SRA	8/10/2020	8/13/2020	< 0.40
AB43833	Deam Lake SRA	8/11/2020	8/13/2020	< 0.40
AB43834	Cagles Mill Lake Beach	8/10/2020	8/13/2020	< 0.40
AB43835	Paynetown SRA	8/10/2020	8/13/2020	< 0.40
AB43836	Fairfax SRA	8/10/2020	8/13/2020	< 0.40
AB43837	Starve Hollow SRA	8/10/2020	8/13/2020	< 0.40
AB43838	Whitewater Memorial SP	8/11/2020	8/13/2020	< 0.40
AB43839	Quakertown SRA	8/11/2020	8/13/2020	< 0.40
AB43840	Mounds SRA	8/11/2020	8/13/2020	< 0.40
AB43841	Hardy Lake SRA	8/11/2020	8/13/2020	0.90
AB43842	Fairfax SRA (Field Duplicate)	8/10/2020	8/13/2020	< 0.40
AB43843	Field Blank	8/10/2020	8/13/2020	< 0.40
AB43844	Lincoln State Park	8/10/2020	8/13/2020	< 0.40
AB43845	Ferdinand State Forest Lake	8/10/2020	8/13/2020	< 0.40
AB43846	Patoka Lake	8/10/2020	8/13/2020	< 0.40
AB43847	Ft. Harrison SP Dog Lake	8/11/2020	8/13/2020	< 0.40

## Test Information

Request: 8/13/2020 3:23:26 PM

Date: 8/13/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
ATX Std 0	ANATOXIN	1.079 Abs	0.003 µg/L	R <sup>2</sup> =0.99834, 99.815		20A2174
ATX Std 0	ANATOXIN	1.082 Abs [1.0805] {0.2 CV}	0.001 µg/L [0.002] {7}	R <sup>2</sup> =0.99834, 100.00		20A2174
ATX Std 1	ANATOXIN	0.918 Abs	0.120 µg/L	R <sup>2</sup> =0.99834, 84.921		20A2174
ATX Std 1	ANATOXIN	0.862 Abs [0.8900] {4.4 CV}	0.169 µg/L [0.145] {2}	R <sup>2</sup> =0.99834, 79.741		20A2174
ATX Std 2	ANATOXIN	0.684 Abs	0.381 µg/L	R <sup>2</sup> =0.99834, 63.275		20A2174
ATX Std 2	ANATOXIN	0.654 Abs [0.6690] {3.2 CV}	0.428 µg/L [0.405] {8}	R <sup>2</sup> =0.99834, 60.500		20A2174
ATX Std 3	ANATOXIN	0.424 Abs	1.026 µg/L	R <sup>2</sup> =0.99834, 39.223		20A2174
ATX Std 3	ANATOXIN	0.409 Abs [0.4165] {2.5 CV}	1.090 µg/L [1.058] {4}	R <sup>2</sup> =0.99834, 37.835		20A2174
ATX Std 4	ANATOXIN	0.268 Abs	2.101 µg/L	R <sup>2</sup> =0.99834, 24.792		20A2174
ATX Std 4	ANATOXIN	0.259 Abs [0.2635] {2.4 CV}	2.209 µg/L [2.155] {3}	R <sup>2</sup> =0.99834, 23.959		20A2174
ATX Std 5	ANATOXIN	0.140 Abs	> 5.000 µg/L	12.951 %Abs		20A2174
ATX Std 5	ANATOXIN	0.129 Abs [0.1345] {5.8 CV}	> 5.000 µg/L	11.933 %Abs		20A2174
ATX Control	ANATOXIN	0.503 Abs	0.755 µg/L	46.531 %Abs		20A2174
ATX Control	ANATOXIN	0.487 Abs [0.4950] {2.3 CV}	0.802 µg/L [0.778] {4}	45.051 %Abs [45.79]		20A2174

## Note

Signature David Jordan

Date: 8/13/2020

# Test Report (by Request)

**Test Information**

 Request: 8/13/2020 3:28:34 PM  
 Date: 8/13/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	ANATOXIN	0.955 Abs	0.090 µg/L	<b>LOW, 88.344 %ABS</b>	0.150 - 5.000	20A2174
LRB	ANATOXIN	0.951 Abs [0.9530] {0.3 CV}	0.093 µg/L [0.091] {2}	<b>LOW, 87.974 %ABS</b>	0.150 - 5.000	20A2174
LFB	ANATOXIN	0.559 Abs	0.612 µg/L	51.711 %Abs	0.150 - 5.000	20A2174
LFB	ANATOXIN	0.534 Abs [0.5465] {3.2 CV}	0.672 µg/L [0.642] {6}	49.399 %Abs [50.555]	0.150 - 5.000	20A2174
AB43832	ANATOXIN	1.009 Abs	0.055 µg/L	<b>LOW, 93.340 %ABS</b>	0.150 - 5.000	20A2174
AB43832	ANATOXIN	0.952 Abs [0.9805] {4.1 CV}	0.101 µg/L [0.078] {4}	<b>LOW, 88.067 %ABS</b>	0.150 - 5.000	20A2174
AB43833	ANATOXIN	0.958 Abs	0.097 µg/L	<b>LOW, 88.622 %ABS</b>	0.150 - 5.000	20A2174
AB43833	ANATOXIN	0.931 Abs [0.9445] {2.0 CV}	0.120 µg/L [0.109] {1}	<b>LOW, 86.124 %ABS</b>	0.150 - 5.000	20A2174
AB43834	ANATOXIN	0.915 Abs	0.134 µg/L	<b>LOW, 84.644 %ABS</b>	0.150 - 5.000	20A2174
AB43834	ANATOXIN	0.928 Abs [0.9215] {1.0 CV}	0.123 µg/L [0.128] {6}	<b>LOW, 85.846 %ABS</b>	0.150 - 5.000	20A2174
AB43835	ANATOXIN	1.052 Abs	0.023 µg/L	<b>LOW, 97.317 %ABS</b>	0.150 - 5.000	20A2174
AB43835	ANATOXIN	1.020 Abs [1.0360] {2.2 CV}	0.047 µg/L [0.035] {4}	<b>LOW, 94.357 %ABS</b>	0.150 - 5.000	20A2174
AB43836	ANATOXIN	0.988 Abs	0.071 µg/L	<b>LOW, 91.397 %ABS</b>	0.150 - 5.000	20A2174
AB43836	ANATOXIN	0.954 Abs [0.9710] {2.5 CV}	0.100 µg/L [0.086] {2}	<b>LOW, 88.252 %ABS</b>	0.150 - 5.000	20A2174
AB43837	ANATOXIN	0.945 Abs	0.108 µg/L	<b>LOW, 87.419 %ABS</b>	0.150 - 5.000	20A2174
AB43837	ANATOXIN	0.928 Abs [0.9365] {1.3 CV}	0.123 µg/L [0.116] {9}	<b>LOW, 85.846 %ABS</b>	0.150 - 5.000	20A2174
AB43837MS	ANATOXIN	0.461 Abs	0.886 µg/L	42.646 %Abs	0.150 - 5.000	20A2174
AB43837MS	ANATOXIN	0.475 Abs [0.4680] {2.1 CV}	0.840 µg/L [0.863] {3}	43.941 %Abs [43.293]	0.150 - 5.000	20A2174
AB43837MSD	ANATOXIN	0.551 Abs	0.630 µg/L	50.971 %Abs	0.150 - 5.000	20A2174
AB43837MSD	ANATOXIN	0.533 Abs [0.5420] {2.3 CV}	0.674 µg/L [0.652] {4}	49.306 %Abs [50.135]	0.150 - 5.000	20A2174
AB43838	ANATOXIN	0.965 Abs	0.090 µg/L	<b>LOW, 89.269 %ABS</b>	0.150 - 5.000	20A2174
AB43838	ANATOXIN	0.931 Abs [0.9480] {2.5 CV}	0.120 µg/L [0.105] {2}	<b>LOW, 86.124 %ABS</b>	0.150 - 5.000	20A2174
AB43839	ANATOXIN	0.939 Abs	0.113 µg/L	<b>LOW, 86.864 %ABS</b>	0.150 - 5.000	20A2174
AB43839	ANATOXIN	0.930 Abs [0.9345] {0.7 CV}	0.121 µg/L [0.117] {4}	<b>LOW, 86.031 %ABS</b>	0.150 - 5.000	20A2174
AB43840	ANATOXIN	0.889 Abs	0.160 µg/L	82.239 %Abs	0.150 - 5.000	20A2174
AB43840	ANATOXIN	0.919 Abs [0.9040] {2.3 CV}	0.131 µg/L [0.146] {1}	<b>LOW, 85.014 %ABS</b>	0.150 - 5.000	20A2174
AB43841	ANATOXIN	0.493 Abs	0.862 µg/L	45.606 %Abs	0.150 - 5.000	20A2174
AB43841	ANATOXIN	0.473 Abs [0.4830] {2.9 CV}	0.931 µg/L [0.896] {5}	43.756 %Abs [44.683]	0.150 - 5.000	20A2174
AB43842	ANATOXIN	0.994 Abs	0.067 µg/L	<b>LOW, 91.952 %ABS</b>	0.150 - 5.000	20A2174
AB43842	ANATOXIN	0.959 Abs [0.9765] {2.5 CV}	0.096 µg/L [0.082] {2}	<b>LOW, 88.714 %ABS</b>	0.150 - 5.000	20A2174
AB43843	ANATOXIN	0.956 Abs	0.098 µg/L	<b>LOW, 88.437 %ABS</b>	0.150 - 5.000	20A2174
AB43843	ANATOXIN	0.939 Abs [0.9475] {1.3 CV}	0.113 µg/L [0.105] {1}	<b>LOW, 86.864 %ABS</b>	0.150 - 5.000	20A2174
AB43844	ANATOXIN	0.927 Abs	0.123 µg/L	<b>LOW, 85.754 %ABS</b>	0.150 - 5.000	20A2174
AB43844	ANATOXIN	0.947 Abs [0.9370] {1.5 CV}	0.106 µg/L [0.115] {1}	<b>LOW, 87.604 %ABS</b>	0.150 - 5.000	20A2174
AB43845	ANATOXIN	0.991 Abs	0.069 µg/L	<b>LOW, 91.674 %ABS</b>	0.150 - 5.000	20A2174
AB43845	ANATOXIN	0.985 Abs [0.9880] {0.4 CV}	0.074 µg/L [0.072] {4}	<b>LOW, 91.119 %ABS</b>	0.150 - 5.000	20A2174
AB43846	ANATOXIN	0.942 Abs	0.110 µg/L	<b>LOW, 87.142 %ABS</b>	0.150 - 5.000	20A2174
AB43846	ANATOXIN	0.953 Abs [0.9475] {0.8 CV}	0.101 µg/L [0.105] {6}	<b>LOW, 88.159 %ABS</b>	0.150 - 5.000	20A2174
AB43847	ANATOXIN	0.967 Abs	0.089 µg/L	<b>LOW, 89.454 %ABS</b>	0.150 - 5.000	20A2174
AB43847	ANATOXIN	0.955 Abs [0.9610] {0.9 CV}	0.099 µg/L [0.094] {7}	<b>LOW, 88.344 %ABS</b>	0.150 - 5.000	20A2174
LFB 2	ANATOXIN	0.507 Abs	0.743 µg/L	46.901 %Abs	0.150 - 5.000	20A2174
LFB 2	ANATOXIN	0.501 Abs [0.5040] {0.8 CV}	0.761 µg/L [0.752] {1}	46.346 %Abs [46.623]	0.150 - 5.000	20A2174
LRB 2	ANATOXIN	1.008 Abs	0.051 µg/L	<b>LOW, 93.247 %ABS</b>	0.150 - 5.000	20A2174
LRB 2	ANATOXIN	0.988 Abs [0.9980] {1.4 CV}	0.065 µg/L [0.058] {1}	<b>LOW, 91.397 %ABS</b>	0.150 - 5.000	20A2174

**Note**

 Signature David Jordan  
 Date: 8/13/2020

**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: 20A2174

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>8/13/2020 3:23:26 PM</b>				
ATX Std 0	1.079 Abs		R <sup>2</sup> =0.99834, 99.815 %Abs	RK1:23->A01@2
ATX Std 0	1.082 Abs [1.0805] {0.2 CV}		R <sup>2</sup> =0.99834, 100.000 %Abs	RK1:23->B01@2
ATX Std 1	0.918 Abs		R <sup>2</sup> =0.99834, 84.921 %Abs	RK1:24->C01@2
ATX Std 1	0.862 Abs [0.8900] {4.4 CV}		R <sup>2</sup> =0.99834, 79.741 %Abs	RK1:24->D01@2
ATX Std 2	0.684 Abs		R <sup>2</sup> =0.99834, 63.275 %Abs	RK1:25->E01@2
ATX Std 2	0.654 Abs [0.6690] {3.2 CV}		R <sup>2</sup> =0.99834, 60.500 %Abs	RK1:25->F01@3
ATX Std 3	0.424 Abs		R <sup>2</sup> =0.99834, 39.223 %Abs	RK1:26->G01@3
ATX Std 3	0.409 Abs [0.4165] {2.5 CV}		R <sup>2</sup> =0.99834, 37.835 %Abs	RK1:26->H01@3
ATX Std 4	0.268 Abs		R <sup>2</sup> =0.99834, 24.792 %Abs	RK1:27->A02@2
ATX Std 4	0.259 Abs [0.2635] {2.4 CV}		R <sup>2</sup> =0.99834, 23.959 %Abs	RK1:27->B02@2
ATX Std 5	0.140 Abs		12.951 %Abs	RK1:28->C02@2
ATX Std 5	0.129 Abs [0.1345] {5.8 CV}		11.933 %Abs	RK1:28->D02@2
*****				
<b>8/13/2020 3:23:26 PM</b>				
ATX Control	0.503 Abs		46.531 %Abs	RK1:29->E02@2
ATX Control	0.487 Abs [0.4950] {2.3 CV}		45.051 %Abs [45.791 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
ATX Std 0 [MEAN]	1.0805			
ATX Std 0 [SD]	0.0021			
ATX Std 0 [%CV]	0.1963			
ATX Std 1 [MEAN]	0.8900			
ATX Std 1 [SD]	0.0396			
ATX Std 1 [%CV]	4.4492			
ATX Std 1 [%DIFF]				
ATX Std 2 [MEAN]	0.6690			
ATX Std 2 [SD]	0.0212			
ATX Std 2 [%CV]	3.1709			
ATX Std 2 [%DIFF]				
ATX Std 3 [MEAN]	0.4165			
ATX Std 3 [SD]	0.0106			
ATX Std 3 [%CV]	2.5466			
ATX Std 3 [%DIFF]				
ATX Std 4 [MEAN]	0.2635			
ATX Std 4 [SD]	0.0064			
ATX Std 4 [%CV]	2.4152			
ATX Std 4 [%DIFF]				
ATX Std 5 [MEAN]	0.1345			
ATX Std 5 [SD]	0.0078			
ATX Std 5 [%CV]	5.7830			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.4950			
ATX Control [SD]	0.0113			
ATX Control [%CV]	2.2856			

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.0835  
 B = 1.0314  
 C = 0.60198  
 D = 0.043306  
 R2 coef = 0.99834  
 50% = 0.656

