



Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB43415	Raccoon Lake SRA	7/13/2020	7/15/2020	< 0.40
AB43417	Cagles Mill Lake Beach	7/13/2020	7/15/2020	< 0.40
AB43418	Paynetown SRA	7/13/2020	7/15/2020	< 0.40
AB43419	Fairfax SRA	7/13/2020	7/15/2020	< 0.40
AB43420	Starve Hollow SRA	7/13/2020	7/15/2020	< 0.40
AB43421	Whitewater Memorial SP	7/14/2020	7/15/2020	< 0.40
AB43422	Quakertown SRA	7/14/2020	7/15/2020	< 0.40
AB43423	Mounds SRA	7/14/2020	7/15/2020	< 0.40
AB43424	Hardy Lake SRA	7/14/2020	7/15/2020	< 0.40
AB43416	Deam Lake SRA	7/14/2020	7/15/2020	< 0.40
AB43425	Whitewater Memorial SP (Field Duplicate)	7/14/2020	7/15/2020	< 0.40
AB43426	Field Blank	7/13/2020	7/15/2020	< 0.40
AB43427	Lincoln State Park	7/13/2020	7/15/2020	< 0.40
AB43428	Ferdinand State Forest Lake	7/13/2020	7/15/2020	< 0.40
AB43429	Patoka Lake	7/14/2020	7/15/2020	< 0.40

Test Report (by Request)

Test Information

Request: 7/15/2020 5:03:59 PM

Date: 7/15/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
ATX Std 0	ANATOXIN	1.204 Abs	0.000 µg/L	R ² =0.99975, 100.83		20A2174
ATX Std 0	ANATOXIN	1.184 Abs [1.1940] {1.2 CV}	0.012 µg/L [0.006] {1.2 CV}	R ² =0.99975, 99.162		20A2174
ATX Std 1	ANATOXIN	1.031 Abs	0.153 µg/L	R ² =0.99975, 86.348		20A2174
ATX Std 1	ANATOXIN	1.048 Abs [1.0395] {1.2 CV}	0.137 µg/L [0.145] {1.2 CV}	R ² =0.99975, 87.772		20A2174
ATX Std 2	ANATOXIN	0.830 Abs	0.396 µg/L	R ² =0.99975, 69.514		20A2174
ATX Std 2	ANATOXIN	0.823 Abs [0.8265] {0.6 CV}	0.407 µg/L [0.401] {0.6 CV}	R ² =0.99975, 68.928		20A2174
ATX Std 3	ANATOXIN	0.543 Abs	1.023 µg/L	R ² =0.99975, 45.477		20A2174
ATX Std 3	ANATOXIN	0.546 Abs [0.5445] {0.4 CV}	1.013 µg/L [1.018] {0.4 CV}	R ² =0.99975, 45.729		20A2174
ATX Std 4	ANATOXIN	0.310 Abs	2.365 µg/L	R ² =0.99975, 25.963		20A2174
ATX Std 4	ANATOXIN	0.305 Abs [0.3075] {1.1 CV}	2.417 µg/L [2.391] {1.1 CV}	R ² =0.99975, 25.544		20A2174
ATX Std 5	ANATOXIN	0.169 Abs	> 5.000 µg/L	14.154 %Abs		20A2174
ATX Std 5	ANATOXIN	0.163 Abs [0.1660] {2.6 CV}	> 5.000 µg/L	13.652 %Abs		20A2174
ATX Control	ANATOXIN	0.625 Abs	0.788 µg/L	52.345 %Abs		20A2174
ATX Control	ANATOXIN	0.602 Abs [0.6135] {2.7 CV}	0.847 µg/L [0.817] {2.7 CV}	50.419 %Abs [51.382]		20A2174

Note

 Signature *David Jordan*

Date: 7/16/2020

Test Report (by Request)

Test Information

Request: 7/15/2020 5:05:18 PM
Date: 7/15/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	ANATOXIN	1.103 Abs	0.084 µg/L	LOW, 92.379 %ABS	0.150 - 5.000	20A2174
LRB	ANATOXIN	1.094 Abs [1.0985] {0.6 CV}	0.093 µg/L [0.089] {7}	LOW, 91.625 %ABS	0.150 - 5.000	20A2174
LFB	ANATOXIN	0.721 Abs	0.578 µg/L	60.385 %Abs	0.150 - 5.000	20A2174
LFB	ANATOXIN	0.722 Abs [0.7215] {0.1 CV}	0.576 µg/L [0.577] {0}	60.469 %Abs [60.42]	0.150 - 5.000	20A2174
AB43415	ANATOXIN	1.053 Abs	0.145 µg/L	LOW, 88.191 %ABS	0.150 - 5.000	20A2174
AB43415	ANATOXIN	1.042 Abs [1.0475] {0.7 CV}	0.156 µg/L [0.150] {5}	87.270 %Abs [87.730]	0.150 - 5.000	20A2174
AB43417	ANATOXIN	1.108 Abs	0.088 µg/L	LOW, 92.797 %ABS	0.150 - 5.000	20A2174
AB43417	ANATOXIN	1.080 Abs [1.0940] {1.8 CV}	0.117 µg/L [0.102] {2}	LOW, 90.452 %ABS	0.150 - 5.000	20A2174
AB43418	ANATOXIN	1.091 Abs	0.104 µg/L	LOW, 91.374 %ABS	0.150 - 5.000	20A2174
AB43418	ANATOXIN	1.094 Abs [1.0925] {0.2 CV}	0.102 µg/L [0.103] {1}	LOW, 91.625 %ABS	0.150 - 5.000	20A2174
AB43418MS	ANATOXIN	0.693 Abs	0.634 µg/L	58.040 %Abs	0.150 - 5.000	20A2174
AB43418MS	ANATOXIN	0.716 Abs [0.7045] {2.3 CV}	0.588 µg/L [0.611] {5}	59.966 %Abs [59.003]	0.150 - 5.000	20A2174
AB43418MSD	ANATOXIN	0.688 Abs	0.644 µg/L	57.621 %Abs	0.150 - 5.000	20A2174
AB43418MSD	ANATOXIN	0.692 Abs [0.6900] {0.4 CV}	0.636 µg/L [0.640] {0}	57.956 %Abs [57.789]	0.150 - 5.000	20A2174
AB43419	ANATOXIN	1.059 Abs	0.139 µg/L	LOW, 88.693 %ABS	0.150 - 5.000	20A2174
AB43419	ANATOXIN	1.059 Abs [1.0590] {0.0 CV}	0.139 µg/L [0.139] {0}	LOW, 88.693 %ABS	0.150 - 5.000	20A2174
AB43420	ANATOXIN	1.059 Abs	0.139 µg/L	LOW, 88.693 %ABS	0.150 - 5.000	20A2174
AB43420	ANATOXIN	1.066 Abs [1.0625] {0.5 CV}	0.131 µg/L [0.135] {4}	LOW, 89.280 %ABS	0.150 - 5.000	20A2174
AB43421	ANATOXIN	1.049 Abs	0.150 µg/L	LOW, 87.856 %ABS	0.150 - 5.000	20A2174
AB43421	ANATOXIN	1.018 Abs [1.0335] {2.1 CV}	0.184 µg/L [0.167] {1}	85.260 %Abs [86.558]	0.150 - 5.000	20A2174
AB43422	ANATOXIN	1.047 Abs	0.152 µg/L	87.688 %Abs	0.150 - 5.000	20A2174
AB43422	ANATOXIN	1.044 Abs [1.0455] {0.2 CV}	0.154 µg/L [0.153] {0}	87.437 %Abs [87.563]	0.150 - 5.000	20A2174
AB43423	ANATOXIN	0.991 Abs	0.214 µg/L	82.998 %Abs	0.150 - 5.000	20A2174
AB43423	ANATOXIN	1.013 Abs [1.0020] {1.6 CV}	0.189 µg/L [0.201] {8}	84.841 %Abs [83.920]	0.150 - 5.000	20A2174
AB43424	ANATOXIN	0.949 Abs	0.266 µg/L	79.481 %Abs	0.150 - 5.000	20A2174
AB43424	ANATOXIN	0.962 Abs [0.9555] {1.0 CV}	0.250 µg/L [0.258] {4}	80.570 %Abs [80.025]	0.150 - 5.000	20A2174
AB43416	ANATOXIN	1.073 Abs	0.123 µg/L	LOW, 89.866 %ABS	0.150 - 5.000	20A2174
AB43416	ANATOXIN	1.067 Abs [1.0700] {0.4 CV}	0.130 µg/L [0.126] {3}	LOW, 89.363 %ABS	0.150 - 5.000	20A2174
AB43425	ANATOXIN	0.996 Abs	0.209 µg/L	83.417 %Abs	0.150 - 5.000	20A2174
AB43425	ANATOXIN	0.990 Abs [0.9930] {0.4 CV}	0.216 µg/L [0.213] {2}	82.915 %Abs [83.166]	0.150 - 5.000	20A2174
AB43426	ANATOXIN	1.041 Abs	0.157 µg/L	87.186 %Abs	0.150 - 5.000	20A2174
AB43426	ANATOXIN	1.056 Abs [1.0485] {1.0 CV}	0.142 µg/L [0.150] {7}	LOW, 88.442 %ABS	0.150 - 5.000	20A2174
AB43427	ANATOXIN	1.036 Abs	0.163 µg/L	86.767 %Abs	0.150 - 5.000	20A2174
AB43427	ANATOXIN	1.034 Abs [1.0350] {0.1 CV}	0.165 µg/L [0.164] {0}	86.600 %Abs [86.683]	0.150 - 5.000	20A2174
AB43428	ANATOXIN	1.039 Abs	0.160 µg/L	87.018 %Abs	0.150 - 5.000	20A2174
AB43428	ANATOXIN	1.067 Abs [1.0530] {1.9 CV}	0.130 µg/L [0.145] {1}	LOW, 89.363 %ABS	0.150 - 5.000	20A2174
AB43429	ANATOXIN	1.031 Abs	0.168 µg/L	86.348 %Abs	0.150 - 5.000	20A2174
AB43429	ANATOXIN	1.025 Abs [1.0280] {0.4 CV}	0.176 µg/L [0.172] {3}	85.846 %Abs [86.099]	0.150 - 5.000	20A2174

Note

Signature *David Jordan*

Date: 7/16/2020

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
7/15/2020 5:03:59 PM				
ATX Std 0	1.204 Abs		R ² =0.99975, 100.838 %Abs	RK1:23->A01@2
ATX Std 0	1.184 Abs [1.1940] {1.2 CV}		R ² =0.99975, 99.162 %Abs	RK1:23->B01@2
ATX Std 1	1.031 Abs		R ² =0.99975, 86.348 %Abs	RK1:24->C01@2
ATX Std 1	1.048 Abs [1.0395] {1.2 CV}		R ² =0.99975, 87.772 %Abs	RK1:24->D01@2
ATX Std 2	0.830 Abs		R ² =0.99975, 69.514 %Abs	RK1:25->E01@2
ATX Std 2	0.823 Abs [0.8265] {0.6 CV}		R ² =0.99975, 68.928 %Abs	RK1:25->F01@3
ATX Std 3	0.543 Abs		R ² =0.99975, 45.477 %Abs	RK1:26->G01@3
ATX Std 3	0.546 Abs [0.5445] {0.4 CV}		R ² =0.99975, 45.729 %Abs	RK1:26->H01@3
ATX Std 4	0.310 Abs		R ² =0.99975, 25.963 %Abs	RK1:27->A02@2
ATX Std 4	0.305 Abs [0.3075] {1.1 CV}		R ² =0.99975, 25.544 %Abs	RK1:27->B02@2
ATX Std 5	0.169 Abs		14.154 %Abs	RK1:28->C02@2
ATX Std 5	0.163 Abs [0.1660] {2.6 CV}		13.652 %Abs	RK1:28->D02@2

7/15/2020 5:03:59 PM				
ATX Control	0.625 Abs		52.345 %Abs	RK1:29->E02@2
ATX Control	0.602 Abs [0.6135] {2.7 CV}		50.419 %Abs [51.382 %Abs]	RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.1940			
ATX Std 0 [SD]	0.0141			
ATX Std 0 [%CV]	1.1844			
ATX Std 1 [MEAN]	1.0395			
ATX Std 1 [SD]	0.0120			
ATX Std 1 [%CV]	1.1564			
ATX Std 1 [%DIFF]				
ATX Std 2 [MEAN]	0.8265			
ATX Std 2 [SD]	0.0049			
ATX Std 2 [%CV]	0.5989			
ATX Std 2 [%DIFF]				
ATX Std 3 [MEAN]	0.5445			
ATX Std 3 [SD]	0.0021			
ATX Std 3 [%CV]	0.3896			
ATX Std 3 [%DIFF]				
ATX Std 4 [MEAN]	0.3075			
ATX Std 4 [SD]	0.0035			
ATX Std 4 [%CV]	1.1498			
ATX Std 4 [%DIFF]				
ATX Std 5 [MEAN]	0.1660			
ATX Std 5 [SD]	0.0042			
ATX Std 5 [%CV]	2.5558			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.6135			
ATX Control [SD]	0.0163			
ATX Control [%CV]	2.6509			

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.1960
 B = 1.0745
 C = 0.82668
 D = 0.023647
 R2 coef = 0.99975
 50% = 0.861

