



## Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)	% Recovery
LRB 1	Lab Reagent Blank	8/21/2019	8/21/2019	<0.40	
LFB 1	Lab Fortified Blank (Spike = 0.80 ppb)	8/21/2019	8/21/2019	0.74	93
AB40163	Miami SRA at Mississinewa Lake	8/19/2019	8/21/2019	<0.40	
AB40162	Field Blank	8/19/2019	8/21/2019	<0.40	
AB40152	Raccoon Lake SRA	8/19/2019	8/21/2019	<0.40	
AB40157	Whitewater Memorial SP	8/20/2019	8/21/2019	<0.40	
AB40157MS	Whitewater Memorial SP MS (Spk. = 0.8 ppb)	8/20/2019	8/21/2019	0.86	93
AB40157MSD	Whitewater Memorial SP MSD (Spk. = 0.8 ppb)	8/20/2019	8/21/2019	0.87	95
AB40151	Quakertown SRA	8/20/2019	8/21/2019	<0.40	
AB40155	Mounds SRA	8/20/2019	8/21/2019	<0.40	
AB40156	Paynetown SRA	8/19/2019	8/21/2019	<0.40	
AB40153	Fairfax SRA	8/19/2019	8/21/2019	<0.40	
AB40154	Hardy Lake SRA	8/19/2019	8/21/2019	1.12	
AB40158	Field Blank	8/20/2019	8/21/2019	<0.40	
AB40159	Mounds SRA Field Duplicate	8/20/2019	8/21/2019	<0.40	
LRB 2	Lab Reagent Blank 2	8/21/2019	8/21/2019	<0.40	
LFB 2	Lab Fortified Blank 2 (Spike = 0.80 ppb)	8/21/2019	8/21/2019	0.92	115

## Assay Information

Assay Name: ANATOXIN  
 Version: 2  
 Temperature: Room Temperature  
 Last Modified By: Security disabled  
 Units: µg/L  
 Assay Description: PN 520060  
 Assay Substances:

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: 19B8962

Controls:  
 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: "

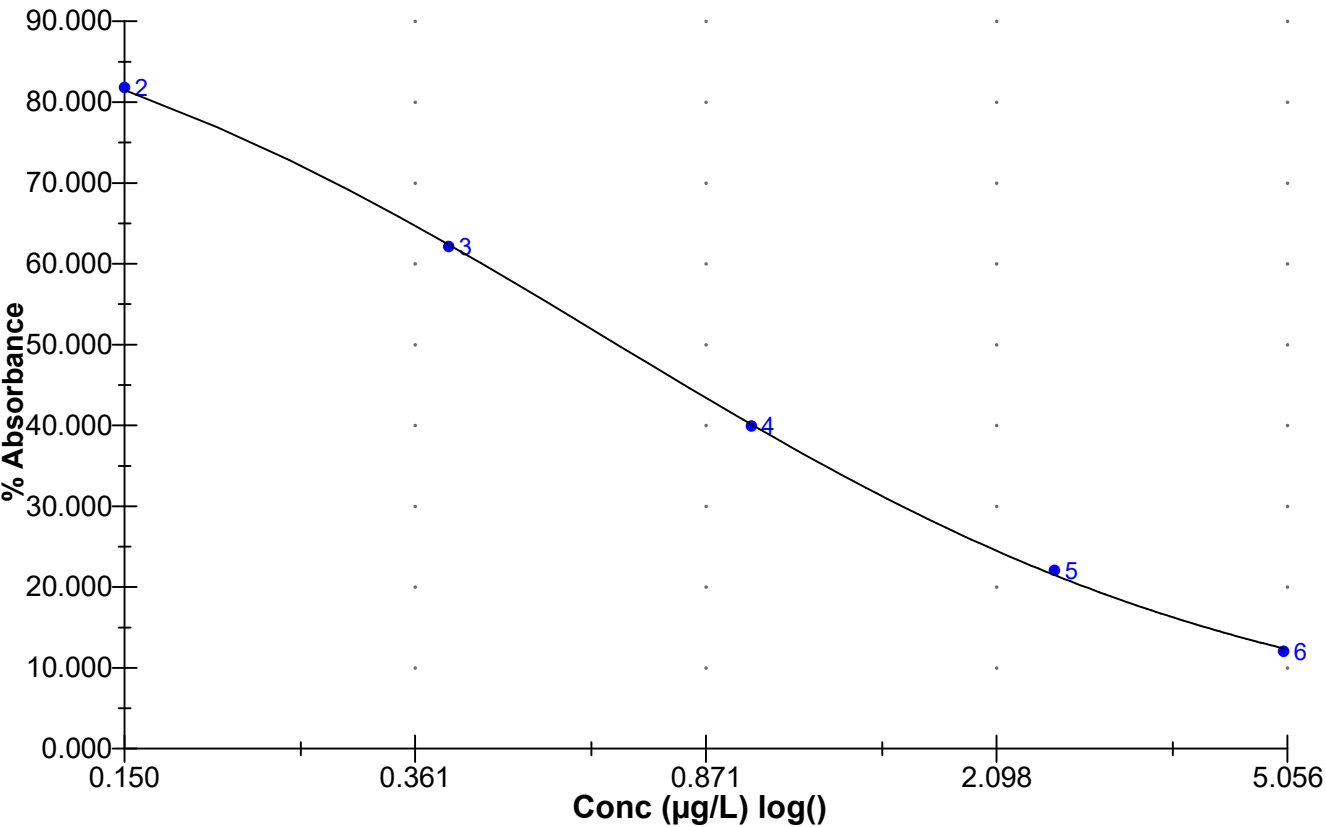
"

Name	Absorbance	Concentration	Interpretation	Position
8/21/2019 2:11:59 PM				
ATX Std 0	1.152 Abs		R <sup>2</sup> =0.99989, 99.310 %Abs	RK1:23->A01@2
ATX Std 0	1.168 Abs [1.1600] {1.0 CV}		R <sup>2</sup> =0.99989, 100.690 %Abs	RK1:23->B01@2
ATX Std 1	0.940 Abs		R <sup>2</sup> =0.99989, 81.034 %Abs	RK1:24->C01@2
ATX Std 1	0.957 Abs [0.9485] {1.3 CV}		R <sup>2</sup> =0.99989, 82.500 %Abs	RK1:24->D01@2
ATX Std 2	0.726 Abs		R <sup>2</sup> =0.99989, 62.586 %Abs	RK1:25->E01@2
ATX Std 2	0.716 Abs [0.7210] {1.0 CV}		R <sup>2</sup> =0.99989, 61.724 %Abs	RK1:25->F01@3
ATX Std 3	0.467 Abs		R <sup>2</sup> =0.99989, 40.259 %Abs	RK1:26->G01@3
ATX Std 3	0.458 Abs [0.4625] {1.4 CV}		R <sup>2</sup> =0.99989, 39.483 %Abs	RK1:26->H01@3
ATX Std 4	0.254 Abs		R <sup>2</sup> =0.99989, 21.897 %Abs	RK1:27->A02@2
ATX Std 4	0.257 Abs [0.2555] {0.8 CV}		R <sup>2</sup> =0.99989, 22.155 %Abs	RK1:27->B02@2
ATX Std 5	0.143 Abs		12.328 %Abs	RK1:28->C02@2
ATX Std 5	0.137 Abs [0.1400] {3.0 CV}		11.810 %Abs	RK1:28->D02@2
*****				
8/21/2019 2:11:59 PM				
ATX Control	0.546 Abs		47.069 %Abs	RK1:29->E02@2
ATX Control	0.525 Abs [0.5355] {2.8 CV}		45.259 %Abs [46.164 %Abs]	RK1:29->F02@3
*****				
Statistic				
ATX Std 0 [MEAN]	1.1600			
ATX Std 0 [SD]	0.0113			
ATX Std 0 [%CV]	0.9753			
ATX Std 1 [MEAN]	0.9485			
ATX Std 1 [SD]	0.0120			
ATX Std 1 [%CV]	1.2674			
ATX Std 1 [%DIFF]				
ATX Std 2 [MEAN]	0.7210			
ATX Std 2 [SD]	0.0071			
ATX Std 2 [%CV]	0.9807			
ATX Std 2 [%DIFF]				
ATX Std 3 [MEAN]	0.4625			
ATX Std 3 [SD]	0.0064			
ATX Std 3 [%CV]	1.3760			
ATX Std 3 [%DIFF]				
ATX Std 4 [MEAN]	0.2555			
ATX Std 4 [SD]	0.0021			
ATX Std 4 [%CV]	0.8303			
ATX Std 4 [%DIFF]				
ATX Std 5 [MEAN]	0.1400			
ATX Std 5 [SD]	0.0042			
ATX Std 5 [%CV]	3.0305			

Name	Absorbance	Concentration	Interpretation	Position	
ATX Control [MEAN]	0.5355				
ATX Control [SD]	0.0148				
ATX Control [%CV]	2.7730				

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.1610  
 B = 0.99830  
 C = 0.65298  
 D = 0.010653  
 R2 coef = 0.99989  
 50% = 0.666



## Test Information

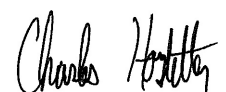
Request: 8/21/2019 2:11:59 PM  
Date: 8/21/2019 - 8/21/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #	
ATX Std 0	ANATOXIN	1.152 Abs	0.005 µg/L	R^2=0.99989, 99.310		19B8962	
ATX Std 0	ANATOXIN	1.168 Abs [1.1600] {1.0 CV}	0.000 µg/L [0.003] {1.0 CV}	R^2=0.99989, 100.69		19B8962	
ATX Std 1	ANATOXIN	0.940 Abs	0.155 µg/L	R^2=0.99989, 81.034		19B8962	
ATX Std 1	ANATOXIN	0.957 Abs [0.9485] {1.3 CV}	0.140 µg/L [0.148] {1.3 CV}	R^2=0.99989, 82.500		19B8962	
ATX Std 2	ANATOXIN	0.726 Abs	0.397 µg/L	R^2=0.99989, 62.586		19B8962	
ATX Std 2	ANATOXIN	0.716 Abs [0.7210] {1.0 CV}	0.412 µg/L [0.405] {1.0 CV}	R^2=0.99989, 61.724		19B8962	
ATX Std 3	ANATOXIN	0.467 Abs	0.994 µg/L	R^2=0.99989, 40.259		19B8962	
ATX Std 3	ANATOXIN	0.458 Abs [0.4625] {1.4 CV}	1.027 µg/L [1.010] {1.4 CV}	R^2=0.99989, 39.483		19B8962	
ATX Std 4	ANATOXIN	0.254 Abs	2.439 µg/L	R^2=0.99989, 21.897		19B8962	
ATX Std 4	ANATOXIN	0.257 Abs [0.2555] {0.8 CV}	2.401 µg/L [2.420] {0.8 CV}	R^2=0.99989, 22.155		19B8962	
ATX Std 5	ANATOXIN	0.143 Abs	> 5.000 µg/L	12.328 %Abs		19B8962	
ATX Std 5	ANATOXIN	0.137 Abs [0.1400] {3.0 CV}	> 5.000 µg/L	11.810 %Abs		19B8962	
ATX Control	ANATOXIN	0.546 Abs	0.750 µg/L	47.069 %Abs		19B8962	
ATX Control	ANATOXIN	0.525 Abs [0.5355] {2.8 CV}	0.808 µg/L [0.779] {2.8 CV}	45.259 %Abs [46.164]		19B8962	

## Test Information

Request: 8/21/2019 2:19:07 PM  
Date: 8/21/2019 - 8/21/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	ANATOXIN	1.061 Abs	0.062 µg/L	<b>LOW, 91.466 %ABS</b>	0.150 - 5.000	19B8962
LRB	ANATOXIN	1.075 Abs [1.0680] {0.9 CV}	0.053 µg/L [0.057] {1}		0.150 - 5.000	19B8962
LFB	ANATOXIN	0.545 Abs	0.753 µg/L	46.983 %Abs	0.150 - 5.000	19B8962
LFB	ANATOXIN	0.558 Abs [0.5515] {1.7 CV}	0.719 µg/L [0.736] {3}	48.103 %Abs [47.543]	0.150 - 5.000	19B8962
AB40163	ANATOXIN	1.036 Abs	0.087 µg/L	<b>LOW, 89.310 %ABS</b>	0.150 - 5.000	19B8962
AB40163	ANATOXIN	1.046 Abs [1.0410] {0.7 CV}	0.079 µg/L [0.083] {6}		0.150 - 5.000	19B8962
AB40163LD	ANATOXIN	1.030 Abs	0.092 µg/L	<b>LOW, 88.793 %ABS</b>	0.150 - 5.000	19B8962
AB40163LD	ANATOXIN	1.005 Abs [1.0175] {1.7 CV}	0.112 µg/L [0.102] {1}		0.150 - 5.000	19B8962
AB40162	ANATOXIN	1.058 Abs	0.070 µg/L	<b>LOW, 91.207 %ABS</b>	0.150 - 5.000	19B8962
AB40162	ANATOXIN	1.048 Abs [1.0530] {0.7 CV}	0.078 µg/L [0.074] {7}		0.150 - 5.000	19B8962
AB40152	ANATOXIN	1.053 Abs	0.074 µg/L	<b>LOW, 90.776 %ABS</b>	0.150 - 5.000	19B8962
AB40152	ANATOXIN	1.047 Abs [1.0500] {0.4 CV}	0.079 µg/L [0.076] {4}		0.150 - 5.000	19B8962
AB40157	ANATOXIN	1.013 Abs	0.106 µg/L	<b>LOW, 87.328 %ABS</b>	0.150 - 5.000	19B8962
AB40157	ANATOXIN	1.001 Abs [1.0070] {0.8 CV}	0.115 µg/L [0.111] {5}		0.150 - 5.000	19B8962
AB40157MS	ANATOXIN	0.513 Abs	0.843 µg/L	44.224 %Abs	0.150 - 5.000	19B8962
AB40157MS	ANATOXIN	0.505 Abs [0.5090] {1.1 CV}	0.867 µg/L [0.855] {2}	43.534 %Abs [43.875]	0.150 - 5.000	19B8962
AB40157MSD	ANATOXIN	0.512 Abs	0.846 µg/L	44.138 %Abs	0.150 - 5.000	19B8962
AB40157MSD	ANATOXIN	0.495 Abs [0.5035] {2.4 CV}	0.898 µg/L [0.872] {4}	42.672 %Abs [43.405]	0.150 - 5.000	19B8962
AB40151	ANATOXIN	1.049 Abs	0.077 µg/L	<b>LOW, 90.431 %ABS</b>	0.150 - 5.000	19B8962
AB40151	ANATOXIN	1.033 Abs [1.0410] {1.1 CV}	0.089 µg/L [0.083] {1}		0.150 - 5.000	19B8962
AB40155	ANATOXIN	1.009 Abs	0.109 µg/L	<b>LOW, 86.983 %ABS</b>	0.150 - 5.000	19B8962
AB40155	ANATOXIN	0.986 Abs [0.9975] {1.6 CV}	0.129 µg/L [0.119] {1}		0.150 - 5.000	19B8962
AB40156	ANATOXIN	0.999 Abs	0.118 µg/L	<b>LOW, 86.121 %ABS</b>	0.150 - 5.000	19B8962
AB40156	ANATOXIN	0.974 Abs [0.9865] {1.8 CV}	0.139 µg/L [0.128] {1}		0.150 - 5.000	19B8962
AB40153	ANATOXIN	0.982 Abs	0.132 µg/L	<b>LOW, 84.655 %ABS</b>	0.150 - 5.000	19B8962
AB40153	ANATOXIN	0.988 Abs [0.9850] {0.4 CV}	0.126 µg/L [0.129] {3}		0.150 - 5.000	19B8962
AB40154	ANATOXIN	0.467 Abs	1.093 µg/L	40.259 %Abs	0.150 - 5.000	19B8962
AB40154	ANATOXIN	0.456 Abs [0.4615] {1.7 CV}	1.137 µg/L [1.115] {2}	39.310 %Abs [39.784]	0.150 - 5.000	19B8962
AB40158	ANATOXIN	0.992 Abs	0.123 µg/L	<b>LOW, 85.517 %ABS</b>	0.150 - 5.000	19B8962
AB40158	ANATOXIN	0.970 Abs [0.9810] {1.6 CV}	0.143 µg/L [0.133] {1}		0.150 - 5.000	19B8962
AB40159	ANATOXIN	0.994 Abs	0.122 µg/L	<b>LOW, 85.690 %ABS</b>	0.150 - 5.000	19B8962
AB40159	ANATOXIN	0.984 Abs [0.9890] {0.7 CV}	0.130 µg/L [0.126] {4}		0.150 - 5.000	19B8962
LRB 2	ANATOXIN	1.014 Abs	0.095 µg/L	<b>LOW, 87.414 %ABS</b>	0.150 - 5.000	19B8962
LRB 2	ANATOXIN	0.982 Abs [0.9980] {2.3 CV}	0.120 µg/L [0.108] {1}		0.150 - 5.000	19B8962
LFB 2	ANATOXIN	0.515 Abs	0.837 µg/L	44.397 %Abs	0.150 - 5.000	19B8962
LFB 2	ANATOXIN	0.467 Abs [0.4910] {6.9 CV}	0.994 µg/L [0.916] {1}	40.259 %Abs [42.328]	0.150 - 5.000	19B8962



Charles Hostetter 8/21/19