



Anatoxin-a Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ug/L)	% Recovery
LRB	Lab Reagent Blank	8/14/2019	8/14/2019	< 0.40	
LFB	Lab Fortified Blank (True value = 0.80)	8/14/2019	8/14/2019	0.52	65
AB40034	Pokagon State Park Beach	8/12/2019	8/14/2019	< 0.40	
AB40034MS	Pokagon (Matrix Spike, True Value = 0.80)	8/12/2019	8/14/2019	0.79	94
AB40034MSD	Pokagon (Matrix Spike Duplicate, True Value = 0.80)	8/12/2019	8/14/2019	0.73	86
AB40035	Potawatomi Inn's Beach @ Pokagon SP	8/12/2019	8/14/2019	< 0.40	
AB40036	Chain O'Lakes SP	8/12/2019	8/14/2019	< 0.40	
AB40037	Kunkel Beach @ Ouabache State Park	8/12/2019	8/14/2019	< 0.40	
AB40038	Potato Creek State Park	8/13/2019	8/14/2019	< 0.40	
AB40039	Mississinewa Lake Miami SRA	8/13/2019	8/14/2019	< 0.40	
AB40040	Lost Bridge West SRA @ Salamonie Lake	8/13/2019	8/14/2019	< 0.40	
AB40041	Field Blank	8/13/2019	8/14/2019	< 0.40	
AB40042	Mississinewa Lake Miami SRA	8/13/2019	8/14/2019	< 0.40	

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
8/14/2019 1:34:30 PM				
ATX Std 0	1.108 Abs		R ² =0.99916, 102.498 %Abs	RK1:23->A01@2
ATX Std 0	1.053 Abs [1.0805] {3.6 CV}		R ² =0.99916, 97.410 %Abs	RK1:23->B01@2
ATX Std 1	0.850 Abs		R ² =0.99916, 78.631 %Abs	RK1:24->C01@2
ATX Std 1	0.835 Abs [0.8425] {1.3 CV}		R ² =0.99916, 77.243 %Abs	RK1:24->D01@2
ATX Std 2	0.641 Abs		R ² =0.99916, 59.297 %Abs	RK1:25->E01@2
ATX Std 2	0.598 Abs [0.6195] {4.9 CV}		R ² =0.99916, 55.319 %Abs	RK1:25->F01@3
ATX Std 3	0.423 Abs		R ² =0.99916, 39.130 %Abs	RK1:26->G01@3
ATX Std 3	0.426 Abs [0.4245] {0.5 CV}		R ² =0.99916, 39.408 %Abs	RK1:26->H01@3
ATX Std 4	0.251 Abs		R ² =0.99916, 23.219 %Abs	RK1:27->A02@2
ATX Std 4	0.242 Abs [0.2465] {2.6 CV}		R ² =0.99916, 22.387 %Abs	RK1:27->B02@2
ATX Std 5	0.131 Abs		12.118 %Abs	RK1:28->C02@2
ATX Std 5	0.125 Abs [0.1280] {3.3 CV}		11.563 %Abs	RK1:28->D02@2

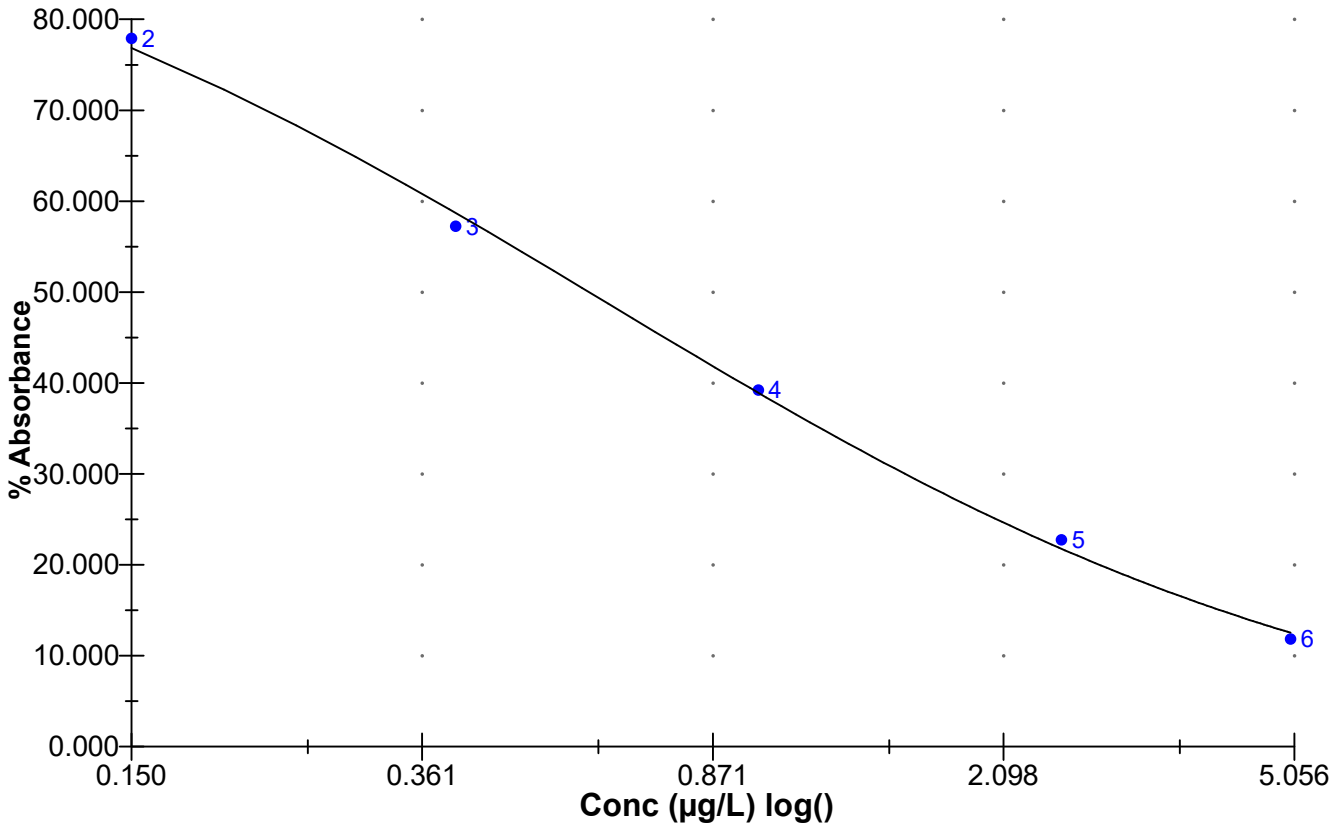
8/14/2019 1:34:30 PM				
ATX Control	0.488 Abs		45.143 %Abs	RK1:29->E02@2
ATX Control	0.467 Abs [0.4775] {3.1 CV}		43.201 %Abs [44.172 %Abs]	RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.0805			
ATX Std 0 [SD]	0.0389			
ATX Std 0 [%CV]	3.5993			
ATX Std 1 [MEAN]	0.8425			
ATX Std 1 [SD]	0.0106			
ATX Std 1 [%CV]	1.2589			
ATX Std 1 [%DIFF]				
ATX Std 2 [MEAN]	0.6195			
ATX Std 2 [SD]	0.0304			
ATX Std 2 [%CV]	4.9081			
ATX Std 2 [%DIFF]				
ATX Std 3 [MEAN]	0.4245			
ATX Std 3 [SD]	0.0021			
ATX Std 3 [%CV]	0.4997			
ATX Std 3 [%DIFF]				
ATX Std 4 [MEAN]	0.2465			
ATX Std 4 [SD]	0.0064			
ATX Std 4 [%CV]	2.5817			
ATX Std 4 [%DIFF]				
ATX Std 5 [MEAN]	0.1280			
ATX Std 5 [SD]	0.0042			
ATX Std 5 [%CV]	3.3146			

Name	Absorbance	Concentration	Interpretation	Position	
ATX Control [MEAN]	0.4775				
ATX Control [SD]	0.0148				
ATX Control [%CV]	3.1098				

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.0831
 B = 0.85204
 C = 0.63126
 D = -0.027035
 R2 coef = 0.99916
 50% = 0.599



Test Information

Request: 8/14/2019 1:34:30 PM
Date: 8/14/2019 - 8/16/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #	
ATX Std 0	ANATOXIN	1.108 Abs	0.000 µg/L	R^2=0.99916, 102.49		19B8962	
ATX Std 0	ANATOXIN	1.053 Abs [1.0805] {3.6 CV}	0.009 µg/L [0.004] {1.0 CV}	R^2=0.99916, 97.410		19B8962	
ATX Std 1	ANATOXIN	0.850 Abs	0.133 µg/L	R^2=0.99916, 78.631		19B8962	
ATX Std 1	ANATOXIN	0.835 Abs [0.8425] {1.3 CV}	0.146 µg/L [0.139] {0.6 CV}	R^2=0.99916, 77.243		19B8962	
ATX Std 2	ANATOXIN	0.641 Abs	0.389 µg/L	R^2=0.99916, 59.297		19B8962	
ATX Std 2	ANATOXIN	0.598 Abs [0.6195] {4.9 CV}	0.469 µg/L [0.429] {1.0 CV}	R^2=0.99916, 55.319		19B8962	
ATX Std 3	ANATOXIN	0.423 Abs	0.990 µg/L	R^2=0.99916, 39.130		19B8962	
ATX Std 3	ANATOXIN	0.426 Abs [0.4245] {0.5 CV}	0.977 µg/L [0.984] {0.0 CV}	R^2=0.99916, 39.408		19B8962	
ATX Std 4	ANATOXIN	0.251 Abs	2.285 µg/L	R^2=0.99916, 23.219		19B8962	
ATX Std 4	ANATOXIN	0.242 Abs [0.2465] {2.6 CV}	2.405 µg/L [2.345] {0.3 CV}	R^2=0.99916, 22.387		19B8962	
ATX Std 5	ANATOXIN	0.131 Abs	> 5.000 µg/L	12.118 %Abs		19B8962	
ATX Std 5	ANATOXIN	0.125 Abs [0.1280] {3.3 CV}	> 5.000 µg/L	11.563 %Abs		19B8962	
ATX Control	ANATOXIN	0.488 Abs	0.748 µg/L	45.143 %Abs		19B8962	
ATX Control	ANATOXIN	0.467 Abs [0.4775] {3.1 CV}	0.818 µg/L [0.783] {0.6 CV}	43.201 %Abs [44.174]		19B8962	

Test Information

Request: 8/14/2019 1:37:28 PM
Date: 8/14/2019 - 8/16/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	ANATOXIN	0.996 Abs	0.035 µg/L	LOW, 92.137 %ABS	0.150 - 5.000	19B8962
LRB	ANATOXIN	1.000 Abs [0.9980] {0.3 CV}	0.033 µg/L [0.034] {4}		0.150 - 5.000	19B8962
LFB	ANATOXIN	0.591 Abs	0.483 µg/L	54.672 %Abs	0.150 - 5.000	19B8962
LFB	ANATOXIN	0.557 Abs [0.5740] {4.2 CV}	0.558 µg/L [0.521] {1}	51.526 %Abs [53.09]	0.150 - 5.000	19B8962
AB40034	ANATOXIN	0.997 Abs	0.038 µg/L	LOW, 92.229 %ABS	0.150 - 5.000	19B8962
AB40034	ANATOXIN	0.988 Abs [0.9925] {0.6 CV}	0.043 µg/L [0.041] {8}		0.150 - 5.000	19B8962
AB40034MS	ANATOXIN	0.487 Abs	0.751 µg/L	45.051 %Abs	0.150 - 5.000	19B8962
AB40034MS	ANATOXIN	0.463 Abs [0.4750] {3.6 CV}	0.832 µg/L [0.791] {7}	42.831 %Abs [43.94]	0.150 - 5.000	19B8962
AB40034MSD	ANATOXIN	0.495 Abs	0.726 µg/L	45.791 %Abs	0.150 - 5.000	19B8962
AB40034MSD	ANATOXIN	0.492 Abs [0.4935] {0.4 CV}	0.735 µg/L [0.730] {0}	45.513 %Abs [45.65]	0.150 - 5.000	19B8962
AB40035	ANATOXIN	1.067 Abs	0.004 µg/L	LOW, 98.705 %ABS	0.150 - 5.000	19B8962
AB40035	ANATOXIN	1.019 Abs [1.0430] {3.3 CV}	0.026 µg/L [0.015] {1}		0.150 - 5.000	19B8962
AB40036	ANATOXIN	0.959 Abs	0.060 µg/L	LOW, 88.714 %ABS	0.150 - 5.000	19B8962
AB40036	ANATOXIN	0.952 Abs [0.9555] {0.5 CV}	0.066 µg/L [0.063] {6}		0.150 - 5.000	19B8962
AB40037	ANATOXIN	0.957 Abs	0.063 µg/L	LOW, 88.529 %ABS	0.150 - 5.000	19B8962
AB40037	ANATOXIN	0.957 Abs [0.9570] {0.0 CV}	0.063 µg/L [0.063] {0}		0.150 - 5.000	19B8962
AB40038	ANATOXIN	0.977 Abs	0.050 µg/L	LOW, 90.379 %ABS	0.150 - 5.000	19B8962
AB40038	ANATOXIN	0.998 Abs [0.9875] {1.5 CV}	0.037 µg/L [0.043] {2}		0.150 - 5.000	19B8962
AB40039	ANATOXIN	1.028 Abs	0.022 µg/L	LOW, 95.097 %ABS	0.150 - 5.000	19B8962
AB40039	ANATOXIN	0.984 Abs [1.0060] {3.1 CV}	0.045 µg/L [0.034] {4}		0.150 - 5.000	19B8962
AB40040	ANATOXIN	0.993 Abs	0.041 µg/L	LOW, 91.859 %ABS	0.150 - 5.000	19B8962
AB40040	ANATOXIN	0.989 Abs [0.9910] {0.3 CV}	0.043 µg/L [0.042] {3}		0.150 - 5.000	19B8962
AB40041	ANATOXIN	1.004 Abs	0.034 µg/L	LOW, 92.877 %ABS	0.150 - 5.000	19B8962
AB40041	ANATOXIN	0.996 Abs [1.0000] {0.6 CV}	0.038 µg/L [0.036] {7}		0.150 - 5.000	19B8962
AB40042	ANATOXIN	0.950 Abs	0.067 µg/L	LOW, 87.882 %ABS	0.150 - 5.000	19B8962
AB40042	ANATOXIN	0.992 Abs [0.9710] {3.1 CV}	0.041 µg/L [0.054] {3}		0.150 - 5.000	19B8962



Charles Hostetter 8/16/2019