



Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)	% Recovery
LRB	Lab Reagent Blank	6/18/2019	6/18/2019	<0.40	
LFB	Lab Fortified Blank	6/18/2019	6/18/2019	0.46	58
AB39228	Pokagon State Park	6/17/2019	6/18/2019	<0.40	
AB39229	Potawatomi Inn's Beach	6/17/2019	6/18/2019	<0.40	
AB39230	Chain O'Lakes SP	6/17/2019	6/18/2019	<0.40	
AB39231	Kunkel Beach @ Ouabache State Park	6/17/2019	6/18/2019	<0.40	
AB39235	Field Blank	6/17/2019	6/18/2019	<0.40	
AB39236	Kunkel Beach @ Ouabache State Park (Field Dup.)	6/17/2019	6/18/2019	<0.40	
AB39232	Potato Creek State Park	6/17/2019	6/18/2019	<0.40	
AB39232MS	Potato Creek State Park (Matrix Spk.)	6/17/2019	6/18/2019	0.53	63
AB39232MSD	Potato Creek State Park (Matrix Spk. Dup.)	6/17/2019	6/18/2019	0.63	76
AB39233	Mississinewa Lake Miami SRA	6/17/2019	6/18/2019	<0.40	
AB39234	Lost Bridge West SRA	6/17/2019	6/18/2019	<0.40	
AB39237	Mississinewa Lake Miami SRA	6/17/2019	6/18/2019	<0.40	
AB39238	Field Blank	6/17/2019	6/18/2019	<0.40	

Test Information

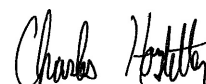
Request: 6/18/2019 11:03:29 AM
Date: 6/18/2019 - 6/18/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference
ATX Std 0	ANATOXIN	1.045 Abs	0.000 µg/L	R^2=0.99934	0.000
ATX Std 0	ANATOXIN	1.002 Abs [1.0235] {3.0 CV}	0.008 µg/L [0.004] {141.1}	R^2=0.99934	0.000
ATX Std 1	ANATOXIN	0.808 Abs	0.131 µg/L	R^2=0.99934	0.150
ATX Std 1	ANATOXIN	0.786 Abs [0.7970] {2.0 CV}	0.152 µg/L [0.141] {10.5}	R^2=0.99934	0.150
ATX Std 2	ANATOXIN	0.603 Abs	0.392 µg/L	R^2=0.99934	0.400
ATX Std 2	ANATOXIN	0.564 Abs [0.5835] {4.7 CV}	0.468 µg/L [0.430] {12.5}	R^2=0.99934	0.400
ATX Std 3	ANATOXIN	0.403 Abs	0.961 µg/L	R^2=0.99934	1.000
ATX Std 3	ANATOXIN	0.399 Abs [0.4010] {0.7 CV}	0.979 µg/L [0.970] {1.3}	R^2=0.99934	1.000
ATX Std 4	ANATOXIN	0.227 Abs	2.412 µg/L	R^2=0.99934	2.500
ATX Std 4	ANATOXIN	0.225 Abs [0.2260] {0.6 CV}	2.443 µg/L [2.428] {0.9}	R^2=0.99934	2.500
ATX Std 5	ANATOXIN	0.128 Abs	> 5.000 µg/L		5.000
ATX Std 5	ANATOXIN	0.123 Abs [0.1255] {2.8 CV}	> 5.000 µg/L		5.000
ATX Control	ANATOXIN	0.454 Abs	0.762 µg/L		0.75 +- 0.05
ATX Control	ANATOXIN	0.420 Abs [0.4370] {5.5 CV}	0.889 µg/L [0.826] {10.9}		0.75 +- 0.05
LRB	ANATOXIN	0.930 Abs	0.043 µg/L	LOW	0.150 - 5.000
LRB	ANATOXIN	0.882 Abs [0.9060] {3.7 CV}	0.074 µg/L [0.058] {37.5}	LOW [LOW]	0.150 - 5.000
LFB	ANATOXIN	0.585 Abs	0.426 µg/L		0.150 - 5.000
LFB	ANATOXIN	0.549 Abs [0.5670] {4.5 CV}	0.500 µg/L [0.463] {11.3}		0.150 - 5.000
AB39228	ANATOXIN	0.903 Abs	0.066 µg/L	LOW	0.150 - 5.000
AB39228	ANATOXIN	0.944 Abs [0.9235] {3.1 CV}	0.040 µg/L [0.053] {34.7}	LOW	0.150 - 5.000
AB39229	ANATOXIN	0.998 Abs	0.010 µg/L	LOW	0.150 - 5.000
AB39229	ANATOXIN	0.957 Abs [0.9775] {3.0 CV}	0.032 µg/L [0.021] {74.1}	LOW	0.150 - 5.000
AB39230	ANATOXIN	0.933 Abs	0.046 µg/L	LOW	0.150 - 5.000
AB39230	ANATOXIN	0.961 Abs [0.9470] {2.1 CV}	0.030 µg/L [0.038] {29.8}	LOW	0.150 - 5.000
AB39231	ANATOXIN	0.831 Abs	0.123 µg/L	LOW	0.150 - 5.000
AB39231	ANATOXIN	0.813 Abs [0.8220] {1.5 CV}	0.140 µg/L [0.132] {9.1}	LOW	0.150 - 5.000
AB39235	ANATOXIN	0.914 Abs	0.058 µg/L	LOW	0.150 - 5.000
AB39235	ANATOXIN	0.930 Abs [0.9220] {1.2 CV}	0.047 µg/L [0.052] {14.8}	LOW	0.150 - 5.000
AB39236	ANATOXIN	0.887 Abs	0.077 µg/L	LOW	0.150 - 5.000
AB39236	ANATOXIN	0.871 Abs [0.8790] {1.3 CV}	0.089 µg/L [0.083] {10.2}	LOW	0.150 - 5.000
AB39232	ANATOXIN	0.966 Abs	0.026 µg/L	LOW	0.150 - 5.000
AB39232	ANATOXIN	0.977 Abs [0.9715] {0.8 CV}	0.021 µg/L [0.023] {15.0}	LOW	0.150 - 5.000
AB39232MS	ANATOXIN	0.555 Abs	0.487 µg/L		0.150 - 5.000
AB39232MS	ANATOXIN	0.521 Abs [0.5380] {4.5 CV}	0.566 µg/L [0.526] {10.6}		0.150 - 5.000
AB39232MSD	ANATOXIN	0.511 Abs	0.592 µg/L		0.150 - 5.000
AB39232MSD	ANATOXIN	0.486 Abs [0.4985] {3.5 CV}	0.661 µg/L [0.627] {7.8}		0.150 - 5.000
AB39233	ANATOXIN	0.982 Abs	0.018 µg/L	LOW	0.150 - 5.000
AB39233	ANATOXIN	0.962 Abs [0.9720] {1.5 CV}	0.029 µg/L [0.023] {33.1}	LOW	0.150 - 5.000
AB39234	ANATOXIN	0.989 Abs	0.014 µg/L	LOW	0.150 - 5.000
AB39234	ANATOXIN	0.972 Abs [0.9805] {1.2 CV}	0.023 µg/L [0.019] {34.4}	LOW	0.150 - 5.000
AB39237	ANATOXIN	0.989 Abs	0.014 µg/L	LOW	0.150 - 5.000
AB39237	ANATOXIN	0.964 Abs [0.9765] {1.8 CV}	0.027 µg/L [0.021] {44.8}	LOW	0.150 - 5.000
AB39238	ANATOXIN	0.973 Abs	0.023 µg/L	LOW	0.150 - 5.000
AB39238	ANATOXIN	0.982 Abs [0.9775] {0.7 CV}	0.018 µg/L [0.021] {17.2}	LOW	0.150 - 5.000

Note

LFB and MS/MSD spiked at 0.8 ug/L.

Signature



Charles Hostetter 6/19/2019



ANATOXIN - Assay Calibration Report

Assay Information

Assay Name: ANATOXIN
Version: 1
Temperature: Room Temperature
Last Modified By: Security disabled
Units: µg/L
Assay Description: PN 520060
Assay Substances: 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: 7 days 0 hours

Axis Mode: Y = Abs, X = Log(Conc)

Assay Mode: 4-Parameter Logistic Weight by:None

Well Type: Flat bottom

Last Modified On: 1/16/2017 8:49:03 AM

Normal: 0.150 - 5.000

of decimals: 3

Assay Calibration

Current Calibration Status: "

"

Name	Absorbance	Concentration	Interpretation	Position
6/18/2019 11:03:29 AM				
ATX Std 0	1.045 Abs	0.000 µg/L	R^2=0.99934	RK1:23->A01@2
ATX Std 0	1.002 Abs [1.0235] {3.0 CV}	0.008 µg/L [0.004] {141.4 CV}	R^2=0.99934	RK1:23->B01@2
ATX Std 1	0.808 Abs	0.131 µg/L	R^2=0.99934	RK1:24->C01@2
ATX Std 1	0.786 Abs [0.7970] {2.0 CV}	0.152 µg/L [0.141] {10.5 CV}	R^2=0.99934	RK1:24->D01@2
ATX Std 2	0.603 Abs	0.392 µg/L	R^2=0.99934	RK1:25->E01@2
ATX Std 2	0.564 Abs [0.5835] {4.7 CV}	0.468 µg/L [0.430] {12.5 CV}	R^2=0.99934	RK1:25->F01@3
ATX Std 3	0.403 Abs	0.961 µg/L	R^2=0.99934	RK1:26->G01@3
ATX Std 3	0.399 Abs [0.4010] {0.7 CV}	0.979 µg/L [0.970] {1.3 CV}	R^2=0.99934	RK1:26->H01@3
ATX Std 4	0.227 Abs	2.412 µg/L	R^2=0.99934	RK1:27->A02@2
ATX Std 4	0.225 Abs [0.2260] {0.6 CV}	2.443 µg/L [2.428] {0.9 CV}	R^2=0.99934	RK1:27->B02@2
ATX Std 5	0.128 Abs	> 5.000 µg/L		RK1:28->C02@2
ATX Std 5	0.123 Abs [0.1255] {2.8 CV}	> 5.000 µg/L		RK1:28->D02@2

6/18/2019 11:03:29 AM				
ATX Control	0.454 Abs	0.762 µg/L		RK1:29->E02@2
ATX Control	0.420 Abs [0.4370] {5.5 CV}	0.889 µg/L [0.826] {10.9 CV}		RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.0235	0.0040		
ATX Std 0 [SD]	0.0304	0.0057		
ATX Std 0 [%CV]	2.9707	141.4214		
ATX Std 1 [MEAN]	0.7970	0.1415		
ATX Std 1 [SD]	0.0156	0.0148		
ATX Std 1 [%CV]	1.9519	10.4942		
ATX Std 1 [%DIFF]		-5.6667		
ATX Std 2 [MEAN]	0.5835	0.4300		
ATX Std 2 [SD]	0.0276	0.0537		
ATX Std 2 [%CV]	4.7262	12.4977		
ATX Std 2 [%DIFF]		7.5000		
ATX Std 3 [MEAN]	0.4010	0.9700		
ATX Std 3 [SD]	0.0028	0.0127		
ATX Std 3 [%CV]	0.7053	1.3122		
ATX Std 3 [%DIFF]		-3.0000		
ATX Std 4 [MEAN]	0.2260	2.4275		
ATX Std 4 [SD]	0.0014	0.0219		
ATX Std 4 [%CV]	0.6258	0.9030		
ATX Std 4 [%DIFF]		-2.9000		
ATX Std 5 [MEAN]	0.1255			
ATX Std 5 [SD]	0.0035			
ATX Std 5 [%CV]	2.8172			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.4370	0.8255		
ATX Control [SD]	0.0240	0.0898		
ATX Control [%CV]	5.5015	10.8786		
ATX Control [%DIFF]		10.0667		

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
Weight: NONE
A = 1.0247
B = 0.87328
C = 0.60210
D = -0.010397
R2 coef = 0.99934

