



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	7/10/2019	7/10/2019	<0.40	
LFB 1	Lab Fortified Blank	7/10/2019	7/10/2019	0.62	78
AB39825	Hardy Lake SRA	7/8/2019	7/10/2019	0.45	
AB39825MS	Hardy Lake SRA Matrix Spike	7/8/2019	7/10/2019	1.36	114
AB39825MSD	Hardy Lake SRA Matrix Spike Dup.	7/8/2019	7/10/2019	1.36	114
AB39824	Deam Lake SRA	7/8/2019	7/10/2019	<0.40	
AB39821	Deam Lake SRA Field Dup.	7/8/2019	7/10/2019	<0.40	
AB39822	Field Blank	7/8/2019	7/10/2019	<0.40	
AB39823	Starve Hollow SRA	7/8/2019	7/10/2019	<0.40	
AB39829	Raccoon Lake SRA	7/8/2019	7/10/2019	<0.40	
AB39826	Raccoon Lake SRA Field Dup.	7/8/2019	7/10/2019	<0.40	
AB39827	Field Blank	7/8/2019	7/10/2019	<0.40	
AB39831	Whitewater Memorial SP	7/8/2019	7/10/2019	<0.40	
AB39828	Quakertown SRA	7/8/2019	7/10/2019	<0.40	
AB39830	Mounds SRA	7/8/2019	7/10/2019	<0.40	
LRB 2	Lab Reagent Blank 2	7/10/2019	7/10/2019	<0.40	
LFB 2	Lab Fortified Blank 2	7/10/2019	7/10/2019	0.70	88

Test Information

Request: 7/10/2019 9:00:56 AM
Date: 7/10/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference
ATX Std 0	ANATOXIN	1.101 Abs	0.000 µg/L	R^2=0.99941	0.000
ATX Std 0	ANATOXIN	1.079 Abs [1.0900] {1.4 CV}	0.003 µg/L [0.002] {141.1}	R^2=0.99941	0.000
ATX Std 1	ANATOXIN	0.851 Abs	0.136 µg/L	R^2=0.99941	0.150
ATX Std 1	ANATOXIN	0.836 Abs [0.8435] {1.3 CV}	0.149 µg/L [0.143] {6.5}	R^2=0.99941	0.150
ATX Std 2	ANATOXIN	0.632 Abs	0.412 µg/L	R^2=0.99941	0.400
ATX Std 2	ANATOXIN	0.619 Abs [0.6255] {1.5 CV}	0.436 µg/L [0.424] {4.0}	R^2=0.99941	0.400
ATX Std 3	ANATOXIN	0.424 Abs	1.009 µg/L	R^2=0.99941	1.000
ATX Std 3	ANATOXIN	0.432 Abs [0.4280] {1.3 CV}	0.974 µg/L [0.991] {2.5}	R^2=0.99941	1.000
ATX Std 4	ANATOXIN	0.256 Abs	2.307 µg/L	R^2=0.99941	2.500
ATX Std 4	ANATOXIN	0.248 Abs [0.2520] {2.2 CV}	2.416 µg/L [2.361] {3.3}	R^2=0.99941	2.500
ATX Std 5	ANATOXIN	0.136 Abs	> 5.000 µg/L		5.000
ATX Std 5	ANATOXIN	0.136 Abs [0.1360] {0.0 CV}	> 5.000 µg/L		5.000
ATX Control	ANATOXIN	0.487 Abs	0.767 µg/L		0.75 +- 0.05
ATX Control	ANATOXIN	0.470 Abs [0.4785] {2.5 CV}	0.825 µg/L [0.796] {5.2}		0.75 +- 0.05
LRB 1	ANATOXIN	0.977 Abs	0.048 µg/L	LOW	0.150 - 5.000
LRB 1	ANATOXIN	0.976 Abs [0.9765] {0.1 CV}	0.049 µg/L [0.049] {1.5}	LOW [LOW]	0.150 - 5.000
LFB 1	ANATOXIN	0.552 Abs	0.581 µg/L		0.150 - 5.000
LFB 1	ANATOXIN	0.521 Abs [0.5365] {4.1 CV}	0.663 µg/L [0.622] {9.3}		0.150 - 5.000
AB39825	ANATOXIN	0.655 Abs	0.409 µg/L		0.150 - 5.000
AB39825	ANATOXIN	0.617 Abs [0.6360] {4.2 CV}	0.484 µg/L [0.447] {11.9}		0.150 - 5.000
AB39825MS	ANATOXIN	0.360 Abs	1.351 µg/L		0.150 - 5.000
AB39825MS	ANATOXIN	0.356 Abs [0.3580] {0.8 CV}	1.377 µg/L [1.364] {1.3}		0.150 - 5.000
AB39825MSD	ANATOXIN	0.358 Abs	1.364 µg/L		0.150 - 5.000
AB39825MSD	ANATOXIN	0.360 Abs [0.3590] {0.4 CV}	1.351 µg/L [1.357] {0.7}		0.150 - 5.000
AB39824	ANATOXIN	1.071 Abs	0.007 µg/L	LOW	0.150 - 5.000
AB39824	ANATOXIN	1.006 Abs [1.0385] {4.4 CV}	0.036 µg/L [0.021] {95.4}	LOW	0.150 - 5.000
AB39821	ANATOXIN	0.996 Abs	0.042 µg/L	LOW	0.150 - 5.000
AB39821	ANATOXIN	0.978 Abs [0.9870] {1.3 CV}	0.053 µg/L [0.047] {16.4}	LOW	0.150 - 5.000
AB39822	ANATOXIN	0.941 Abs	0.076 µg/L	LOW	0.150 - 5.000
AB39822	ANATOXIN	0.945 Abs [0.9430] {0.3 CV}	0.074 µg/L [0.075] {1.9}	LOW	0.150 - 5.000
AB39823	ANATOXIN	0.923 Abs	0.089 µg/L	LOW	0.150 - 5.000
AB39823	ANATOXIN	0.931 Abs [0.9270] {0.6 CV}	0.084 µg/L [0.087] {4.1}	LOW	0.150 - 5.000
AB39829	ANATOXIN	1.000 Abs	0.040 µg/L	LOW	0.150 - 5.000
AB39829	ANATOXIN	0.972 Abs [0.9860] {2.0 CV}	0.056 µg/L [0.048] {23.6}	LOW	0.150 - 5.000
AB39826	ANATOXIN	0.954 Abs	0.067 µg/L	LOW	0.150 - 5.000
AB39826	ANATOXIN	0.920 Abs [0.9370] {2.6 CV}	0.091 µg/L [0.079] {21.5}	LOW	0.150 - 5.000
AB39827	ANATOXIN	0.951 Abs	0.069 µg/L	LOW	0.150 - 5.000
AB39827	ANATOXIN	0.942 Abs [0.9465] {0.7 CV}	0.076 µg/L [0.072] {6.8}	LOW	0.150 - 5.000
AB39831	ANATOXIN	0.957 Abs	0.066 µg/L	LOW	0.150 - 5.000
AB39831	ANATOXIN	0.989 Abs [0.9730] {2.3 CV}	0.046 µg/L [0.056] {25.3}	LOW	0.150 - 5.000
AB39828	ANATOXIN	1.052 Abs	0.014 µg/L	LOW	0.150 - 5.000
AB39828	ANATOXIN	1.005 Abs [1.0285] {3.2 CV}	0.036 µg/L [0.025] {62.2}	LOW	0.150 - 5.000
AB39830	ANATOXIN	0.980 Abs	0.051 µg/L	LOW	0.150 - 5.000
AB39830	ANATOXIN	0.966 Abs [0.9730] {1.0 CV}	0.059 µg/L [0.055] {10.3}	LOW	0.150 - 5.000
LRB 2	ANATOXIN	1.020 Abs	0.026 µg/L	LOW	0.150 - 5.000
LRB 2	ANATOXIN	1.012 Abs [1.0160] {0.6 CV}	0.030 µg/L [0.028] {10.1}	LOW [LOW]	0.150 - 5.000
LFB 2	ANATOXIN	0.510 Abs	0.695 µg/L		0.150 - 5.000
LFB 2	ANATOXIN	0.507 Abs [0.5085] {0.4 CV}	0.704 µg/L [0.699] {0.9}		0.150 - 5.000



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	
7/10/2019 9:00:56 AM					
ATX Std 0	1.101 Abs	0.000 µg/L	R ² =0.99941	RK1:23->A01@2	
ATX Std 0	1.079 Abs [1.0900] {1.4 CV}	0.003 µg/L [0.002] {141.4 CV}	R ² =0.99941	RK1:23->B01@2	
ATX Std 1	0.851 Abs	0.136 µg/L	R ² =0.99941	RK1:24->C01@2	
ATX Std 1	0.836 Abs [0.8435] {1.3 CV}	0.149 µg/L [0.143] {6.5 CV}	R ² =0.99941	RK1:24->D01@2	
ATX Std 2	0.632 Abs	0.412 µg/L	R ² =0.99941	RK1:25->E01@2	
ATX Std 2	0.619 Abs [0.6255] {1.5 CV}	0.436 µg/L [0.424] {4.0 CV}	R ² =0.99941	RK1:25->F01@3	
ATX Std 3	0.424 Abs	1.009 µg/L	R ² =0.99941	RK1:26->G01@3	
ATX Std 3	0.432 Abs [0.4280] {1.3 CV}	0.974 µg/L [0.991] {2.5 CV}	R ² =0.99941	RK1:26->H01@3	
ATX Std 4	0.256 Abs	2.307 µg/L	R ² =0.99941	RK1:27->A02@2	
ATX Std 4	0.248 Abs [0.2520] {2.2 CV}	2.416 µg/L [2.361] {3.3 CV}	R ² =0.99941	RK1:27->B02@2	
ATX Std 5	0.136 Abs	> 5.000 µg/L		RK1:28->C02@2	
ATX Std 5	0.136 Abs [0.1360] {0.0 CV}	> 5.000 µg/L		RK1:28->D02@2	

7/10/2019 9:00:56 AM					
ATX Control	0.487 Abs	0.767 µg/L		RK1:29->E02@2	
ATX Control	0.470 Abs [0.4785] {2.5 CV}	0.825 µg/L [0.796] {5.2 CV}		RK1:29->F02@3	

Statistic					
ATX Std 0 [MEAN]	1.0900	0.0015			
ATX Std 0 [SD]	0.0156	0.0021			
ATX Std 0 [%CV]	1.4272	141.4214			
ATX Std 1 [MEAN]	0.8435	0.1425			
ATX Std 1 [SD]	0.0106	0.0092			
ATX Std 1 [%CV]	1.2575	6.4508			
ATX Std 1 [%DIFF]		-5.0000			
ATX Std 2 [MEAN]	0.6255	0.4240			
ATX Std 2 [SD]	0.0092	0.0170			
ATX Std 2 [%CV]	1.4696	4.0025			
ATX Std 2 [%DIFF]		6.0000			
ATX Std 3 [MEAN]	0.4280	0.9915			
ATX Std 3 [SD]	0.0057	0.0247			
ATX Std 3 [%CV]	1.3217	2.4961			
ATX Std 3 [%DIFF]		-0.8500			
ATX Std 4 [MEAN]	0.2520	2.3615			
ATX Std 4 [SD]	0.0057	0.0771			
ATX Std 4 [%CV]	2.2448	3.2638			
ATX Std 4 [%DIFF]		-5.5400			
ATX Std 5 [MEAN]	0.1360				
ATX Std 5 [SD]	0.0000				
ATX Std 5 [%CV]	0.0000				

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.4785	0.7960		
ATX Control [SD]	0.0120	0.0410		
ATX Control [%CV]	2.5122	5.1523		
ATX Control [%DIFF]		6.1333		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.0917
B = 0.84128
C = 0.62427
D = -0.022177
R2 coef = 0.99939

