



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	8/7/2019	8/7/2019	<0.40	
LFB 1	Lab Fortified Blank (Spike = 0.80 ppb)	8/7/2019	8/7/2019	0.58	73
AB40022	Raccoon Lake SRA	8/5/2019	8/7/2019	<0.40	
AB40025	Starve Hollow SRA	8/5/2019	8/7/2019	<0.40	
AB40026	Whitewater Memorial SP	8/6/2019	8/7/2019	<0.40	
AB40026MS	Whitewater Memorial SP MS (Spk. = 0.8 ppb)	8/6/2019	8/7/2019	0.63	66
AB40026MSD	Whitewater Memorial SP MSD (Spk. = 0.8 ppb)	8/6/2019	8/7/2019	0.71	76
AB40027	Quakertown SRA	8/6/2019	8/7/2019	<0.40	
AB40028	Mounds SRA	8/6/2019	8/7/2019	<0.40	
AB40029	Hardy Lake SRA	8/6/2019	8/7/2019	<0.40	
AB40030	Deam Lake SRA	8/6/2019	8/7/2019	<0.40	
AB40031	Field Blank	8/6/2019	8/7/2019	<0.40	
AB40033	Raccoon Lake SRA Field Dup.	8/5/2019	8/7/2019	<0.40	
AB40046	Fairfax SRA	8/5/2019	8/7/2019	<0.40	
AB40047	Paynetown SRA	8/5/2019	8/7/2019	<0.40	
LRB 2	Lab Reagent Blank 2	8/7/2019	8/7/2019	<0.40	
LFB 2	Lab Fortified Blank 2 (Spike = 0.80 ppb)	8/7/2019	8/7/2019	0.66	83



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
8/7/2019 9:07:02 AM				
ATX Std 0	1.077 Abs	0.000 µg/L	R^2=0.99926	RK1:23->A01@2
ATX Std 0	1.043 Abs [1.0600] {2.3 CV}	0.007 µg/L [0.004] {141.4 CV}	R^2=0.99926	RK1:23->B01@2
ATX Std 1	0.838 Abs	0.132 µg/L	R^2=0.99926	RK1:24->C01@2
ATX Std 1	0.803 Abs [0.8205] {3.0 CV}	0.163 µg/L [0.148] {14.9 CV}	R^2=0.99926	RK1:24->D01@2
ATX Std 2	0.619 Abs	0.393 µg/L	R^2=0.99926	RK1:25->E01@2
ATX Std 2	0.606 Abs [0.6125] {1.5 CV}	0.415 µg/L [0.404] {3.9 CV}	R^2=0.99926	RK1:25->F01@3
ATX Std 3	0.396 Abs	1.021 µg/L	R^2=0.99926	RK1:26->G01@3
ATX Std 3	0.388 Abs [0.3920] {1.4 CV}	1.059 µg/L [1.040] {2.6 CV}	R^2=0.99926	RK1:26->H01@3
ATX Std 4	0.247 Abs	2.204 µg/L	R^2=0.99926	RK1:27->A02@2
ATX Std 4	0.241 Abs [0.2440] {1.7 CV}	2.288 µg/L [2.246] {2.6 CV}	R^2=0.99926	RK1:27->B02@2
ATX Std 5	0.135 Abs	> 5.000 µg/L		RK1:28->C02@2
ATX Std 5	0.126 Abs [0.1305] {4.9 CV}	> 5.000 µg/L		RK1:28->D02@2

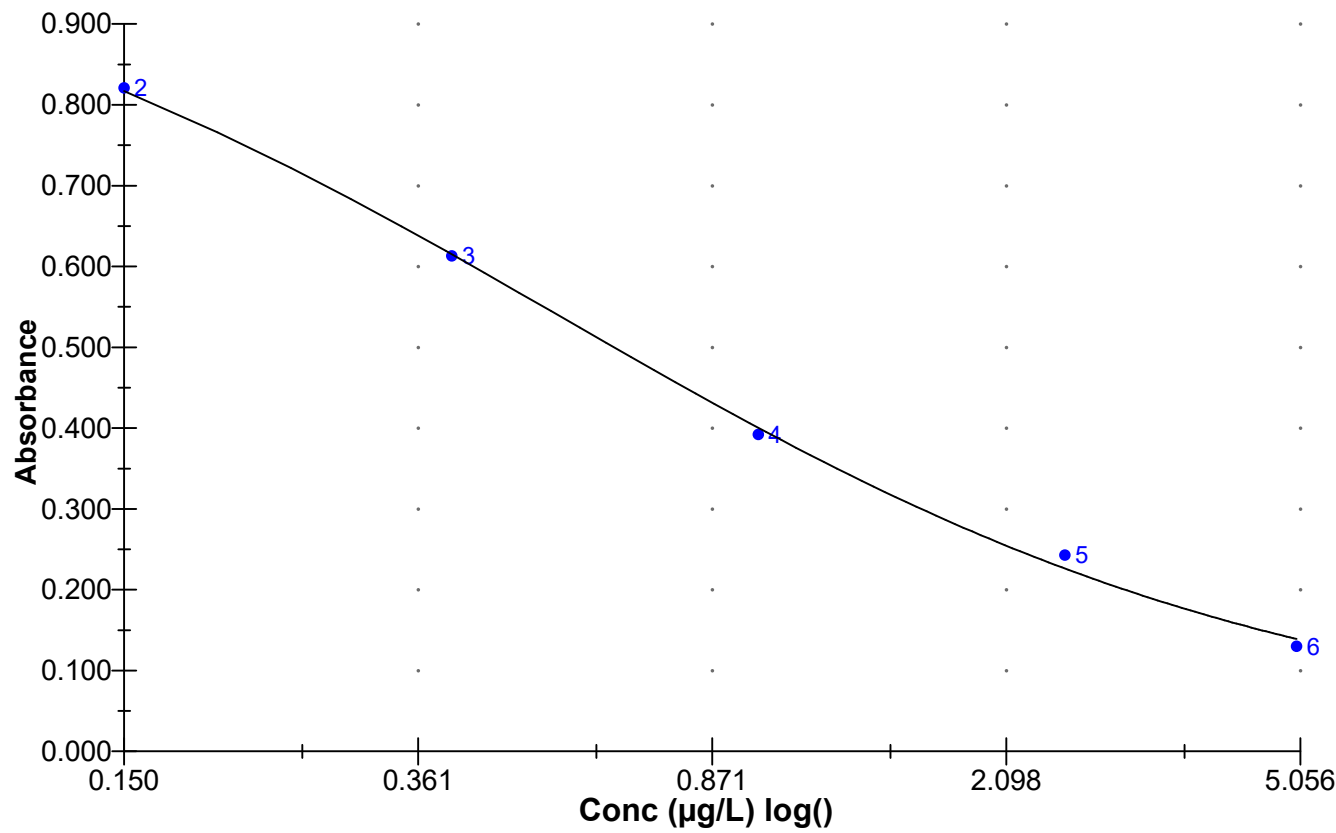
8/7/2019 9:07:02 AM				
ATX Control	0.471 Abs	0.735 µg/L		RK1:29->E02@2
ATX Control	0.446 Abs [0.4585] {3.9 CV}	0.818 µg/L [0.776] {7.6 CV}		RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.0600	0.0035		
ATX Std 0 [SD]	0.0240	0.0049		
ATX Std 0 [%CV]	2.2681	141.4214		
ATX Std 1 [MEAN]	0.8205	0.1475		
ATX Std 1 [SD]	0.0247	0.0219		
ATX Std 1 [%CV]	3.0163	14.8612		
ATX Std 1 [%DIFF]		-1.6667		
ATX Std 2 [MEAN]	0.6125	0.4040		
ATX Std 2 [SD]	0.0092	0.0156		
ATX Std 2 [%CV]	1.5008	3.8506		
ATX Std 2 [%DIFF]		1.0000		
ATX Std 3 [MEAN]	0.3920	1.0400		
ATX Std 3 [SD]	0.0057	0.0269		
ATX Std 3 [%CV]	1.4431	2.5837		
ATX Std 3 [%DIFF]		4.0000		
ATX Std 4 [MEAN]	0.2440	2.2460		
ATX Std 4 [SD]	0.0042	0.0594		
ATX Std 4 [%CV]	1.7388	2.6446		
ATX Std 4 [%DIFF]		-10.1600		
ATX Std 5 [MEAN]	0.1305			
ATX Std 5 [SD]	0.0064			
ATX Std 5 [%CV]	4.8766			

Name	Absorbance	Concentration	Interpretation	Position	
ATX Control [MEAN]	0.4585	0.7765			
ATX Control [SD]	0.0177	0.0587			
ATX Control [%CV]	3.8555	7.5583			
ATX Control [%DIFF]		3.5333			

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.0611
B = 0.91090
C = 0.55372
D = 0.014892
R2 coef = 0.99928



Test Information

Request: 8/7/2019 9:07:02 AM
Date: 8/7/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference
ATX Std 0	ANATOXIN	1.077 Abs	0.000 µg/L	R^2=0.99926	0.000
ATX Std 0	ANATOXIN	1.043 Abs [1.0600] {2.3 CV}	0.007 µg/L [0.004] {141.1}	R^2=0.99926	0.000
ATX Std 1	ANATOXIN	0.838 Abs	0.132 µg/L	R^2=0.99926	0.150
ATX Std 1	ANATOXIN	0.803 Abs [0.8205] {3.0 CV}	0.163 µg/L [0.148] {14.9}	R^2=0.99926	0.150
ATX Std 2	ANATOXIN	0.619 Abs	0.393 µg/L	R^2=0.99926	0.400
ATX Std 2	ANATOXIN	0.606 Abs [0.6125] {1.5 CV}	0.415 µg/L [0.404] {3.9}	R^2=0.99926	0.400
ATX Std 3	ANATOXIN	0.396 Abs	1.021 µg/L	R^2=0.99926	1.000
ATX Std 3	ANATOXIN	0.388 Abs [0.3920] {1.4 CV}	1.059 µg/L [1.040] {2.6}	R^2=0.99926	1.000
ATX Std 4	ANATOXIN	0.247 Abs	2.204 µg/L	R^2=0.99926	2.500
ATX Std 4	ANATOXIN	0.241 Abs [0.2440] {1.7 CV}	2.288 µg/L [2.246] {2.6}	R^2=0.99926	2.500
ATX Std 5	ANATOXIN	0.135 Abs	> 5.000 µg/L		5.000
ATX Std 5	ANATOXIN	0.126 Abs [0.1305] {4.9 CV}	> 5.000 µg/L		5.000
ATX Control	ANATOXIN	0.471 Abs	0.735 µg/L		0.75 +- 0.05
ATX Control	ANATOXIN	0.446 Abs [0.4585] {3.9 CV}	0.818 µg/L [0.776] {7.6}		0.75 +- 0.05
LRB 1	ANATOXIN	0.926 Abs	0.068 µg/L	LOW	0.150 - 5.000
LRB 1	ANATOXIN	0.925 Abs [0.9255] {0.1 CV}	0.069 µg/L [0.068] {1.0}	LOW [LOW]	0.150 - 5.000
LFB 1	ANATOXIN	0.537 Abs	0.556 µg/L		0.150 - 5.000
LFB 1	ANATOXIN	0.519 Abs [0.5280] {2.4 CV}	0.600 µg/L [0.578] {5.4}		0.150 - 5.000
AB40022	ANATOXIN	0.911 Abs	0.086 µg/L	LOW	0.150 - 5.000
AB40022	ANATOXIN	0.900 Abs [0.9055] {0.9 CV}	0.094 µg/L [0.090] {6.3}	LOW	0.150 - 5.000
AB40025	ANATOXIN	0.946 Abs	0.062 µg/L	LOW	0.150 - 5.000
AB40025	ANATOXIN	0.920 Abs [0.9330] {2.0 CV}	0.079 µg/L [0.071] {17.1}	LOW	0.150 - 5.000
AB40026	ANATOXIN	0.891 Abs	0.101 µg/L	LOW	0.150 - 5.000
AB40026	ANATOXIN	0.872 Abs [0.8815] {1.5 CV}	0.115 µg/L [0.108] {9.2}	LOW	0.150 - 5.000
AB40026MS	ANATOXIN	0.514 Abs	0.612 µg/L		0.150 - 5.000
AB40026MS	ANATOXIN	0.498 Abs [0.5060] {2.2 CV}	0.655 µg/L [0.633] {4.8}		0.150 - 5.000
AB40026MSD	ANATOXIN	0.491 Abs	0.675 µg/L		0.150 - 5.000
AB40026MSD	ANATOXIN	0.467 Abs [0.4790] {3.5 CV}	0.748 µg/L [0.712] {7.3}		0.150 - 5.000
AB40027	ANATOXIN	0.913 Abs	0.085 µg/L	LOW	0.150 - 5.000
AB40027	ANATOXIN	0.889 Abs [0.9010] {1.9 CV}	0.102 µg/L [0.094] {12.9}	LOW	0.150 - 5.000
AB40028	ANATOXIN	0.897 Abs	0.096 µg/L	LOW	0.150 - 5.000
AB40028	ANATOXIN	0.909 Abs [0.9030] {0.9 CV}	0.087 µg/L [0.091] {7.0}	LOW	0.150 - 5.000
AB40029	ANATOXIN	0.808 Abs	0.174 µg/L		0.150 - 5.000
AB40029	ANATOXIN	0.785 Abs [0.7965] {2.0 CV}	0.198 µg/L [0.186] {9.1}		0.150 - 5.000
AB40030	ANATOXIN	0.967 Abs	0.048 µg/L	LOW	0.150 - 5.000
AB40030	ANATOXIN	0.952 Abs [0.9595] {1.1 CV}	0.057 µg/L [0.053] {12.1}	LOW	0.150 - 5.000
AB40031	ANATOXIN	0.950 Abs	0.058 µg/L	LOW	0.150 - 5.000
AB40031	ANATOXIN	0.942 Abs [0.9460] {0.6 CV}	0.064 µg/L [0.061] {7.0}	LOW	0.150 - 5.000
AB40033	ANATOXIN	0.892 Abs	0.100 µg/L	LOW	0.150 - 5.000
AB40033	ANATOXIN	0.891 Abs [0.8915] {0.1 CV}	0.101 µg/L [0.101] {0.7}	LOW	0.150 - 5.000
AB40046	ANATOXIN	1.027 Abs	0.014 µg/L	LOW	0.150 - 5.000
AB40046	ANATOXIN	0.989 Abs [1.0080] {2.7 CV}	0.035 µg/L [0.025] {60.6}	LOW	0.150 - 5.000
AB40047	ANATOXIN	0.965 Abs	0.050 µg/L	LOW	0.150 - 5.000
AB40047	ANATOXIN	0.949 Abs [0.9570] {1.2 CV}	0.059 µg/L [0.054] {11.7}	LOW	0.150 - 5.000
LRB 2	ANATOXIN	0.993 Abs	0.030 µg/L	LOW	0.150 - 5.000
LRB 2	ANATOXIN	1.025 Abs [1.0090] {2.2 CV}	0.014 µg/L [0.022] {51.4}	LOW [LOW]	0.150 - 5.000
LFB 2	ANATOXIN	0.513 Abs	0.615 µg/L		0.150 - 5.000
LFB 2	ANATOXIN	0.478 Abs [0.4955] {5.0 CV}	0.713 µg/L [0.664] {10.4}		0.150 - 5.000



Test Report (by Request)

Note

A handwritten signature in black ink, appearing to read 'Charles Hostetter'.

Signature

Charles Hostetter August 7th, 2019