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	6/26/2019	6/26/2019	< 0.40	
LFB	Lab Fortified Blank (True value = 0.80)	6/26/2019	6/26/2019	0.62	78
AB39444	Quakertown SRA	6/24/2019	6/26/2019	< 0.40	
AB39445	Raccoon Lake SRA	6/24/2019	6/26/2019	< 0.40	
AB39446	Whitewater Memorial SP	6/24/2019	6/26/2019	< 0.40	
AB39446MS	Whitewater (Matrix Spike, True Value = 0.80)	6/26/2019	6/26/2019	0.60	67
AB39446MSD	Whitewater (Matrix Spike Duplicate, TV = 0.80)	6/26/2019	6/26/2019	0.70	80
AB39447	Hardy Lake SRA	6/24/2019	6/26/2019	< 0.40	
AB39448	Raccoon Lake (Field Duplicate)	6/24/2019	6/26/2019	< 0.40	
AB39449	Field Blank	6/24/2019	6/26/2019	< 0.40	

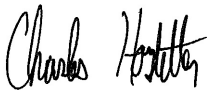
Test Report (by Request)

Test Information

Request: 6/26/2019 9:06:32 AM
Date: 6/26/2019 - 6/26/2019

Name/ID	Assay	Absorbance	Concentration	Interpretation	Referenc
ATX Std 0	ANATOXIN	1.129 Abs	0.000 µg/L	R^2=0.99933	0.000
ATX Std 0	ANATOXIN	1.085 Abs [1.1070] {2.8 CV}	0.007 µg/L [0.004] {141.	R^2=0.99933	0.000
ATX Std 1	ANATOXIN	0.881 Abs	0.126 µg/L	R^2=0.99933	0.150
ATX Std 1	ANATOXIN	0.846 Abs [0.8635] {2.9 CV}	0.156 µg/L [0.141] {15.0	R^2=0.99933	0.150
ATX Std 2	ANATOXIN	0.649 Abs	0.414 µg/L	R^2=0.99933	0.400
ATX Std 2	ANATOXIN	0.637 Abs [0.6430] {1.3 CV}	0.436 µg/L [0.425] {3.7 (	R^2=0.99933	0.400
ATX Std 3	ANATOXIN	0.444 Abs	0.986 µg/L	R^2=0.99933	1.000
ATX Std 3	ANATOXIN	0.442 Abs [0.4430] {0.3 CV}	0.994 µg/L [0.990] {0.6 (	R^2=0.99933	1.000
ATX Std 4	ANATOXIN	0.262 Abs	2.315 µg/L	R^2=0.99933	2.500
ATX Std 4	ANATOXIN	0.254 Abs [0.2580] {2.2 CV}	2.418 µg/L [2.366] {3.1 (	R^2=0.99933	2.500
ATX Std 5	ANATOXIN	0.141 Abs	4.991 µg/L	R^2=0.99933	5.000
ATX Std 5	ANATOXIN	0.128 Abs [0.1345] {6.8 CV}	> 5.000 µg/L [4.991]		5.000
ATX Control	ANATOXIN	0.509 Abs	0.749 µg/L		0.75 +- 0
ATX Control	ANATOXIN	0.479 Abs [0.4940] {4.3 CV}	0.849 µg/L [0.799] {8.8 (		0.75 +- 0
LRB	ANATOXIN	0.930 Abs	0.088 µg/L	**LOW**	0.150 - 5
LRB	ANATOXIN	0.916 Abs [0.9230] {1.1 CV}	0.098 µg/L [0.093] {7.6 (	**LOW [LOW]**	0.150 - 5
LFB	ANATOXIN	0.563 Abs	0.597 µg/L		0.150 - 5
LFB	ANATOXIN	0.548 Abs [0.5555] {1.9 CV}	0.636 µg/L [0.617] {4.5 (		0.150 - 5
AB39444	ANATOXIN	0.988 Abs	0.056 µg/L	**LOW**	0.150 - 5
AB39444	ANATOXIN	0.958 Abs [0.9730] {2.2 CV}	0.076 µg/L [0.066] {21.4	**LOW**	0.150 - 5
AB39445	ANATOXIN	0.938 Abs	0.091 µg/L	**LOW**	0.150 - 5
AB39445	ANATOXIN	0.937 Abs [0.9375] {0.1 CV}	0.091 µg/L [0.091] {0.0 (	**LOW**	0.150 - 5
AB39446	ANATOXIN	0.980 Abs	0.062 µg/L	**LOW**	0.150 - 5
AB39446	ANATOXIN	0.979 Abs [0.9795] {0.1 CV}	0.063 µg/L [0.063] {1.1 (	**LOW**	0.150 - 5
AB39446MS	ANATOXIN	0.574 Abs	0.570 µg/L		0.150 - 5
AB39446MS	ANATOXIN	0.551 Abs [0.5625] {2.9 CV}	0.628 µg/L [0.599] {6.8 (		0.150 - 5
AB39446MSD	ANATOXIN	0.532 Abs	0.680 µg/L		0.150 - 5
AB39446MSD	ANATOXIN	0.521 Abs [0.5265] {1.5 CV}	0.712 µg/L [0.696] {3.3 (		0.150 - 5
AB39447	ANATOXIN	0.933 Abs	0.095 µg/L	**LOW**	0.150 - 5
AB39447	ANATOXIN	0.908 Abs [0.9205] {1.9 CV}	0.114 µg/L [0.104] {12.9	**LOW**	0.150 - 5
AB39448	ANATOXIN	0.976 Abs	0.064 µg/L	**LOW**	0.150 - 5
AB39448	ANATOXIN	1.005 Abs [0.9905] {2.1 CV}	0.046 µg/L [0.055] {23.1	**LOW**	0.150 - 5
AB39449	ANATOXIN	1.048 Abs	0.023 µg/L	**LOW**	0.150 - 5
AB39449	ANATOXIN	1.026 Abs [1.0370] {1.5 CV}	0.034 µg/L [0.029] {27.3	**LOW**	0.150 - 5

Note

Signature 

Charles Hostetter 6/27/2019

* A - Abs > 3; IA - Initial Abs; DA - Delta Abs; SD - SD of Abs; LR - Linear Range; [...] - Mean result of duplicate tests
* Generated by software version (6.4.1.943/1085/1.00/0.95) 6/27/2019 7:46:27 AM

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
6/26/2019 9:06:32 AM				
ATX Std 0	1.129 Abs	0.000 µg/L	R^2=0.99933	RK1:23->A01@2
ATX Std 0	1.085 Abs [1.1070] {2.8 CV}	0.007 µg/L [0.004] {141.4 C\	R^2=0.99933	RK1:23->B01@2
ATX Std 1	0.881 Abs	0.126 µg/L	R^2=0.99933	RK1:24->C01@2
ATX Std 1	0.846 Abs [0.8635] {2.9 CV}	0.156 µg/L [0.141] {15.0 CV}	R^2=0.99933	RK1:24->D01@2
ATX Std 2	0.649 Abs	0.414 µg/L	R^2=0.99933	RK1:25->E01@2
ATX Std 2	0.637 Abs [0.6430] {1.3 CV}	0.436 µg/L [0.425] {3.7 CV}	R^2=0.99933	RK1:25->F01@3
ATX Std 3	0.444 Abs	0.986 µg/L	R^2=0.99933	RK1:26->G01@3
ATX Std 3	0.442 Abs [0.4430] {0.3 CV}	0.994 µg/L [0.990] {0.6 CV}	R^2=0.99933	RK1:26->H01@3
ATX Std 4	0.262 Abs	2.315 µg/L	R^2=0.99933	RK1:27->A02@2
ATX Std 4	0.254 Abs [0.2580] {2.2 CV}	2.418 µg/L [2.366] {3.1 CV}	R^2=0.99933	RK1:27->B02@2
ATX Std 5	0.141 Abs	4.991 µg/L	R^2=0.99933	RK1:28->C02@2
ATX Std 5	0.128 Abs [0.1345] {6.8 CV}	> 5.000 µg/L [4.991]		RK1:28->D02@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++	++++++++++++++++++++++	++++++++++++++++++++++	++++++++++++++++++++++
6/26/2019 9:06:32 AM				
ATX Control	0.509 Abs	0.749 µg/L		RK1:29->E02@2
ATX Control	0.479 Abs [0.4940] {4.3 CV}	0.849 µg/L [0.799] {8.8 CV}		RK1:29->F02@3
**********	**********	**********	**********	**********
Statistic				
ATX Std 0 [MEAN]	1.1070	0.0035		
ATX Std 0 [SD]	0.0311	0.0049		
ATX Std 0 [%CV]	2.8105	141.4214		
ATX Std 1 [MEAN]	0.8635	0.1410		
ATX Std 1 [SD]	0.0247	0.0212		
ATX Std 1 [%CV]	2.8661	15.0448		
ATX Std 1 [%DIFF]		-6.0000		
ATX Std 2 [MEAN]	0.6430	0.4250		
ATX Std 2 [SD]	0.0085	0.0156		
ATX Std 2 [%CV]	1.3196	3.6603		
ATX Std 2 [%DIFF]		6.2500		
ATX Std 3 [MEAN]	0.4430	0.9900		
ATX Std 3 [SD]	0.0014	0.0057		
ATX Std 3 [%CV]	0.3192	0.5714		
ATX Std 3 [%DIFF]		-1.0000		
ATX Std 4 [MEAN]	0.2580	2.3665		
ATX Std 4 [SD]	0.0057	0.0728		
ATX Std 4 [%CV]	2.1926	3.0776		
ATX Std 4 [%DIFF]		-5.3400		
ATX Std 5 [MEAN]	0.1345			
ATX Std 5 [SD]	0.0092			
ATX Std 5 [%CV]	6.8345			

ANATOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.4940	0.7990		
ATX Control [SD]	0.0212	0.0707		
ATX Control [%CV]	4.2942	8.8499		
ATX Control [%DIFF]		6.5333		

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.1089
B = 0.83240
C = 0.67385
D = -0.040760
R2 coef = 0.99935