



Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03317	Cecil M. Harden Lake - Raccoon Lake SRA Beach	7/10/2023	7/14/2023	< 0.40
AC03318	Cagles Mill Lake - Lieber SRA Beach	7/10/2023	7/14/2023	< 0.40
AC03319	Monroe Lake - Paynetown SRA Beach	7/10/2023	7/14/2023	< 0.40
AC03320	Monroe Lake - Fairfax SRA Beach	7/10/2023	7/14/2023	< 0.40
AC03321	Starve Hollow SRA - Starve Hollow Lake Beach	7/10/2023	7/14/2023	< 0.40
AC03322	Whitewater Memorial SP - Whitewater Lake Beach	7/11/2023	7/14/2023	< 0.40
AC03323	Brookville Lake - Quakertown SRA Beach	7/11/2023	7/14/2023	< 0.40
AC03324	Brookville Lake - Mounds SRA Beach	7/11/2023	7/14/2023	< 0.40
AC03325	Hardy Lake SRA - Hardy Lake SRA Beach	7/11/2023	7/14/2023	< 0.40
AC03326	Deam Lake SRA - Deam Lake Beach	7/11/2023	7/14/2023	< 0.40
AC03327	Whitewater Memorial SP - Whitewater Lake Beach (Field Duplicate)	7/11/2023	7/14/2023	< 0.40
AC03328	Field Blank	7/11/2023	7/14/2023	< 0.40
AC03342	Ft. Ben Harrison SP Dog Lake	7/10/2023	7/14/2023	< 0.40

Test Report (by Request)

Test Information

Request: 7/14/2023 10:17:56 AM
 Date: 7/14/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.257 Abs	0.004 µg/L	R^2=0.99945, 99.2%			P23B0244
ATX Std 0	ANATOXIN	1.275 Abs [1.2660] {1.0 C	0.000 µg/L [0.002]	R^2=0.99945, 100.7%			P23B0244
ATX Std 1	ANATOXIN	1.048 Abs	0.120 µg/L	R^2=0.99945, 82.7%			P23B0244
ATX Std 1	ANATOXIN	0.991 Abs [1.0195] {4.0 C	0.164 µg/L [0.142]	R^2=0.99945, 78.2%			P23B0244
ATX Std 2	ANATOXIN	0.775 Abs	0.400 µg/L	R^2=0.99945, 61.2%			P23B0244
ATX Std 2	ANATOXIN	0.745 Abs [0.7600] {2.8 C	0.445 µg/L [0.423]	R^2=0.99945, 58.8%			P23B0244
ATX Std 3	ANATOXIN	0.509 Abs	0.999 µg/L	R^2=0.99945, 40.2%			P23B0244
ATX Std 3	ANATOXIN	0.515 Abs [0.5120] {0.8 C	0.978 µg/L [0.988]	R^2=0.99945, 40.6%			P23B0244
ATX Std 4	ANATOXIN	0.294 Abs	2.315 µg/L	R^2=0.99945, 23.2%			P23B0244
ATX Std 4	ANATOXIN	0.279 Abs [0.2865] {3.7 C	2.483 µg/L [2.399]	R^2=0.99945, 22.0%			P23B0244
ATX Std 5	ANATOXIN	0.160 Abs	4.886 µg/L	R^2=0.99945, 12.6%			P23B0244
ATX Std 5	ANATOXIN	0.141 Abs [0.1505] {8.9 C	> 5.000 µg/L [4.88]	11.137 %Abs			P23B0244
ATX Control	ANATOXIN	0.594 Abs	0.746 µg/L	46.919 %Abs			P23B0244
ATX Control	ANATOXIN	0.568 Abs [0.5810] {3.2 C	0.815 µg/L [0.780]	44.866 %Abs [45.8			P23B0244

Note

Signature

Charles Hostetter 7/14/2023

* 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 (6.4.1.1139/1085/1.00/0.95) 7/14/2023 10:22:59 AM

Test Report (by Request)

Test Information

Request: 7/14/2023 10:19:03 AM

Date: 7/14/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.087 Abs	0.094 µg/L	Low, 85.861 %Abs		0.150 - 5.000	P23B0244
LRB	ANATOXIN	1.086 Abs [1.0865] {0.1 C	0.094 µg/L [0.094]	Low, 85.782 %Abs		0.150 - 5.000	P23B0244
LFB	ANATOXIN	0.627 Abs	0.667 µg/L	49.526 %Abs		0.150 - 5.000	P23B0244
LFB	ANATOXIN	0.616 Abs [0.6215] {1.3 C	0.692 µg/L [0.679]	48.657 %Abs [49.0		0.150 - 5.000	P23B0244
AC03317	ANATOXIN	1.109 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03317	ANATOXIN	1.054 Abs [1.0815] {3.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03318	ANATOXIN	1.120 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03318	ANATOXIN	1.059 Abs [1.0895] {4.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03319	ANATOXIN	1.057 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03319	ANATOXIN	1.044 Abs [1.0505] {0.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03320	ANATOXIN	1.213 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03320	ANATOXIN	1.207 Abs [1.2100] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03321	ANATOXIN	1.151 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03321	ANATOXIN	1.117 Abs [1.1340] {2.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03322	ANATOXIN	1.119 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03322	ANATOXIN	1.070 Abs [1.0945] {3.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03323	ANATOXIN	1.119 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03323	ANATOXIN	1.103 Abs [1.1110] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03323MS	ANATOXIN	0.624 Abs	0.674 µg/L	49.289 %Abs		0.150 - 5.000	P23B0244
AC03323MS	ANATOXIN	0.607 Abs [0.6155] {2.0 C	0.713 µg/L [0.694]	47.946 %Abs [48.6		0.150 - 5.000	P23B0244
AC03323MSD	ANATOXIN	0.606 Abs	0.716 µg/L	47.867 %Abs		0.150 - 5.000	P23B0244
AC03323MSD	ANATOXIN	0.596 Abs [0.6010] {1.2 C	0.741 µg/L [0.729]	47.077 %Abs [47.4		0.150 - 5.000	P23B0244
AC03324	ANATOXIN	1.149 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03324	ANATOXIN	1.106 Abs [1.1275] {2.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03325	ANATOXIN	1.028 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03325	ANATOXIN	1.007 Abs [1.0175] {1.5 C	0.166 µg/L	79.542 %Abs	MDF=1.100	0.150 - 5.000	P23B0244
AC03326	ANATOXIN	1.222 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03326	ANATOXIN	1.222 Abs [1.2220] {0.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03327	ANATOXIN	1.196 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03327	ANATOXIN	1.160 Abs [1.1780] {2.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03328	ANATOXIN	1.202 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03328	ANATOXIN	1.186 Abs [1.1940] {0.9 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03342	ANATOXIN	1.164 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03342	ANATOXIN	1.165 Abs [1.1645] {0.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244

Note

Signature

Charles Hostetter 7/14/2023

Assay Information

Assay Name: ANATOXIN
 Version: 2
 Temperature: Room Temperature
 Last Modified By: Security disabled
 Units: µg/L
 Assay Description: PN 520060
 Assay Substances: Controls:

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: P23B0244

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
7/14/2023 10:17:56 AM				
ATX Std 0	1.257 Abs	0.004 µg/L	R ² =0.99945, 99.289 %Abs	RK1:23->A01@2
ATX Std 0	1.275 Abs [1.2660] {1.0 CV}	0.000 µg/L [0.002] {141.4 CV}	R ² =0.99945, 100.711 %Abs	RK1:23->B01@2
ATX Std 1	1.048 Abs	0.120 µg/L	R ² =0.99945, 82.780 %Abs	RK1:24->C01@2
ATX Std 1	0.991 Abs [1.0195] {4.0 CV}	0.164 µg/L [0.142] {21.9 CV}	R ² =0.99945, 78.278 %Abs	RK1:24->D01@2
ATX Std 2	0.775 Abs	0.400 µg/L	R ² =0.99945, 61.216 %Abs	RK1:25->E01@2
ATX Std 2	0.745 Abs [0.7600] {2.8 CV}	0.445 µg/L [0.423] {7.5 CV}	R ² =0.99945, 58.847 %Abs	RK1:25->F01@3
ATX Std 3	0.509 Abs	0.999 µg/L	R ² =0.99945, 40.205 %Abs	RK1:26->G01@3
ATX Std 3	0.515 Abs [0.5120] {0.8 CV}	0.978 µg/L [0.988] {1.5 CV}	R ² =0.99945, 40.679 %Abs	RK1:26->H01@3
ATX Std 4	0.294 Abs	2.315 µg/L	R ² =0.99945, 23.223 %Abs	RK1:27->A02@2
ATX Std 4	0.279 Abs [0.2865] {3.7 CV}	2.483 µg/L [2.399] {5.0 CV}	R ² =0.99945, 22.038 %Abs	RK1:27->B02@2
ATX Std 5	0.160 Abs	4.886 µg/L	R ² =0.99945, 12.638 %Abs	RK1:28->C02@2
ATX Std 5	0.141 Abs [0.1505] {8.9 CV}	> 5.000 µg/L [4.886]	11.137 %Abs	RK1:28->D02@2

7/14/2023 10:17:56 AM				
ATX Control	0.594 Abs	0.746 µg/L	46.919 %Abs	RK1:29->E02@2
ATX Control	0.568 Abs [0.5810] {3.2 CV}	0.815 µg/L [0.780] {6.3 CV}	44.866 %Abs [45.893 %Abs]	RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.2660	0.0020		
ATX Std 0 [SD]	0.0127	0.0028		
ATX Std 0 [%CV]	1.0054	141.4214		
ATX Std 1 [MEAN]	1.0195	0.1420		
ATX Std 1 [SD]	0.0403	0.0311		
ATX Std 1 [%CV]	3.9534	21.9104		
ATX Std 1 [%DIFF]		-5.3333		
ATX Std 2 [MEAN]	0.7600	0.4225		
ATX Std 2 [SD]	0.0212	0.0318		
ATX Std 2 [%CV]	2.7912	7.5313		
ATX Std 2 [%DIFF]		5.6250		
ATX Std 3 [MEAN]	0.5120	0.9885		
ATX Std 3 [SD]	0.0042	0.0148		
ATX Std 3 [%CV]	0.8286	1.5022		
ATX Std 3 [%DIFF]		-1.1500		
ATX Std 4 [MEAN]	0.2865	2.3990		
ATX Std 4 [SD]	0.0106	0.1188		
ATX Std 4 [%CV]	3.7021	4.9518		
ATX Std 4 [%DIFF]		-4.0400		
ATX Std 5 [MEAN]	0.1505			
ATX Std 5 [SD]	0.0134			
ATX Std 5 [%CV]	8.9269			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.5810	0.7805		
ATX Control [SD]	0.0184	0.0488		
ATX Control [%CV]	3.1643	6.2512		

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.2685
 B = 0.91619
 C = 0.67335
 D = -0.020357
 R2 coef = 0.99945
 50% = 0.653

