



Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC03253	Cecil M. Harden Lake - Raccoon Lake SRA Beach	6/26/2023	6/29/2023	< 0.40
AC03254	Starve Hollow SRA - Starve Hollow Lake Beach	6/26/2023	6/29/2023	< 0.40
AC03255	Hardy Lake SRA - Hardy Lake SRA Beach	6/26/2023	6/29/2023	< 0.40
AC03256	Whitewater Memorial SP - Whitewater Lake Beach	6/26/2023	6/29/2023	< 0.40
AC03257	Starve Hollow SRA - Starve Hollow Lake Beach (Field Duplicate)	6/26/2023	6/29/2023	< 0.40
AC03258	Field Blank	6/26/2023	6/29/2023	< 0.40

Test Report (by Request)

Test Information

 Request: 6/29/2023 1:21:37 PM
 Date: 6/29/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.332 Abs	0.000 µg/L	R ² =0.99923, 101.2			P23B0244
ATX Std 0	ANATOXIN	1.297 Abs [1.3145] {1.9 C	0.010 µg/L [0.005]	R ² =0.99923, 98.63			P23B0244
ATX Std 1	ANATOXIN	1.097 Abs	0.127 µg/L	R ² =0.99923, 83.42			P23B0244
ATX Std 1	ANATOXIN	1.058 Abs [1.0775] {2.6 C	0.155 µg/L [0.141]	R ² =0.99923, 80.45			P23B0244
ATX Std 2	ANATOXIN	0.811 Abs	0.401 µg/L	R ² =0.99923, 61.67			P23B0244
ATX Std 2	ANATOXIN	0.786 Abs [0.7985] {2.2 C	0.435 µg/L [0.418]	R ² =0.99923, 59.77			P23B0244
ATX Std 3	ANATOXIN	0.526 Abs	0.992 µg/L	R ² =0.99923, 40.00			P23B0244
ATX Std 3	ANATOXIN	0.516 Abs [0.5210] {1.4 C	1.025 µg/L [1.008]	R ² =0.99923, 39.24			P23B0244
ATX Std 4	ANATOXIN	0.318 Abs	2.171 µg/L	R ² =0.99923, 24.18			P23B0244
ATX Std 4	ANATOXIN	0.293 Abs [0.3055] {5.8 C	2.440 µg/L [2.306]	R ² =0.99923, 22.28			P23B0244
ATX Std 5	ANATOXIN	0.168 Abs	> 5.000 µg/L	12.776 %Abs			P23B0244
ATX Std 5	ANATOXIN	0.159 Abs [0.1635] {3.9 C	> 5.000 µg/L	12.091 %Abs			P23B0244
ATX Control	ANATOXIN	0.630 Abs	0.711 µg/L	47.909 %Abs			P23B0244
ATX Control	ANATOXIN	0.596 Abs [0.6130] {3.9 C	0.791 µg/L [0.751]	45.323 %Abs [46.6			P23B0244

Note

Signature _____

Test Report (by Request)

Test Information

 Request: 6/29/2023 1:43:46 PM
 Date: 6/29/2023

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.189 Abs	0.068 µg/L	Low, 90.418 %Abs		0.150 - 5.000	P23B0244
LRB	ANATOXIN	1.094 Abs [1.1415] {5.9 C	0.129 µg/L [0.098]	Low, 83.194 %Abs		0.150 - 5.000	P23B0244
LFB (ANA)	ANATOXIN	0.687 Abs	0.595 µg/L	52.243 %Abs		0.150 - 5.000	P23B0244
LFB (ANA)	ANATOXIN	0.650 Abs [0.6685] {3.9 C	0.667 µg/L [0.631]	49.430 %Abs [50.8		0.150 - 5.000	P23B0244
AC03253	ANATOXIN	1.229 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03253	ANATOXIN	1.200 Abs [1.2145] {1.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03254	ANATOXIN	1.207 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03254	ANATOXIN	1.181 Abs [1.1940] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03255	ANATOXIN	1.126 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03255	ANATOXIN	1.085 Abs [1.1055] {2.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03255MS	ANATOXIN	0.673 Abs	0.621 µg/L	51.179 %Abs		0.150 - 5.000	P23B0244
AC03255MS	ANATOXIN	0.639 Abs [0.6560] {3.7 C	0.691 µg/L [0.656]	48.593 %Abs [49.8		0.150 - 5.000	P23B0244
AC03255MSD	ANATOXIN	0.640 Abs	0.689 µg/L	48.669 %Abs		0.150 - 5.000	P23B0244
AC03255MSD	ANATOXIN	0.622 Abs [0.6310] {2.0 C	0.729 µg/L [0.709]	47.300 %Abs [47.9		0.150 - 5.000	P23B0244
AC03256	ANATOXIN	1.209 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03256	ANATOXIN	1.172 Abs [1.1905] {2.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03257	ANATOXIN	1.168 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03257	ANATOXIN	1.074 Abs [1.1210] {5.9 C	0.157 µg/L [< LOD]	81.673 %Abs [Low,	MDF=1.100	0.150 - 5.000	P23B0244
AC03258	ANATOXIN	1.277 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		P23B0244
AC03258	ANATOXIN	1.251 Abs [1.2640] {1.5 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		P23B0244

Note

Signature _____

Charles Hostetter 6/29/2023

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
6/29/2023 1:21:37 PM				
ATX Std 0	1.332 Abs	0.000 µg/L	R ² =0.99923, 101.293 %Abs	RK1:23->A01@2
ATX Std 0	1.297 Abs [1.3145] {1.9 CV}	0.010 µg/L [0.005] {141.4 CV}	R ² =0.99923, 98.631 %Abs	RK1:23->B01@2
ATX Std 1	1.097 Abs	0.127 µg/L	R ² =0.99923, 83.422 %Abs	RK1:24->C01@2
ATX Std 1	1.058 Abs [1.0775] {2.6 CV}	0.155 µg/L [0.141] {14.0 CV}	R ² =0.99923, 80.456 %Abs	RK1:24->D01@2
ATX Std 2	0.811 Abs	0.401 µg/L	R ² =0.99923, 61.673 %Abs	RK1:25->E01@2
ATX Std 2	0.786 Abs [0.7985] {2.2 CV}	0.435 µg/L [0.418] {5.8 CV}	R ² =0.99923, 59.772 %Abs	RK1:25->F01@3
ATX Std 3	0.526 Abs	0.992 µg/L	R ² =0.99923, 40.000 %Abs	RK1:26->G01@3
ATX Std 3	0.516 Abs [0.5210] {1.4 CV}	1.025 µg/L [1.008] {2.3 CV}	R ² =0.99923, 39.240 %Abs	RK1:26->H01@3
ATX Std 4	0.318 Abs	2.171 µg/L	R ² =0.99923, 24.183 %Abs	RK1:27->A02@2
ATX Std 4	0.293 Abs [0.3055] {5.8 CV}	2.440 µg/L [2.306] {8.3 CV}	R ² =0.99923, 22.281 %Abs	RK1:27->B02@2
ATX Std 5	0.168 Abs	> 5.000 µg/L	12.776 %Abs	RK1:28->C02@2
ATX Std 5	0.159 Abs [0.1635] {3.9 CV}	> 5.000 µg/L	12.091 %Abs	RK1:28->D02@2

6/29/2023 1:21:37 PM				
ATX Control	0.630 Abs	0.711 µg/L	47.909 %Abs	RK1:29->E02@2
ATX Control	0.596 Abs [0.6130] {3.9 CV}	0.791 µg/L [0.751] {7.5 CV}	45.323 %Abs [46.616 %Abs]	RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.3145	0.0050		
ATX Std 0 [SD]	0.0247	0.0071		
ATX Std 0 [%CV]	1.8827	141.4214		
ATX Std 1 [MEAN]	1.0775	0.1410		
ATX Std 1 [SD]	0.0276	0.0198		
ATX Std 1 [%CV]	2.5594	14.0418		
ATX Std 1 [%DIFF]		-6.0000		
ATX Std 2 [MEAN]	0.7985	0.4180		
ATX Std 2 [SD]	0.0177	0.0240		
ATX Std 2 [%CV]	2.2139	5.7516		
ATX Std 2 [%DIFF]		4.5000		
ATX Std 3 [MEAN]	0.5210	1.0085		
ATX Std 3 [SD]	0.0071	0.0233		
ATX Std 3 [%CV]	1.3572	2.3138		
ATX Std 3 [%DIFF]		0.8500		
ATX Std 4 [MEAN]	0.3055	2.3055		
ATX Std 4 [SD]	0.0177	0.1902		
ATX Std 4 [%CV]	5.7865	8.2503		
ATX Std 4 [%DIFF]		-7.7800		
ATX Std 5 [MEAN]	0.1635			
ATX Std 5 [SD]	0.0064			
ATX Std 5 [%CV]	3.8923			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.6130	0.7510		
ATX Control [SD]	0.0240	0.0566		
ATX Control [%CV]	3.9220	7.5324		

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.3182
 B = 0.99417
 C = 0.61755
 D = 0.031449
 R2 coef = 0.99923
 50% = 0.652

