



Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB52432	Summit Lake State Park	8/16/2022	8/18/2022	< 0.40
AB52433	Kunkel Lake @ Oubache SP	8/15/2022	8/18/2022	0.73
AB52434	Pokagon State Park	8/15/2022	8/18/2022	< 0.40
AB52435	Potawatomi Inn's Beach	8/15/2022	8/18/2022	< 0.40
AB52436	Chain O'Lakes SP	8/15/2022	8/18/2022	< 0.40
AB52437	Potato Creek State Park	8/16/2022	8/18/2022	< 0.40
AB52438	Lost Bridge West SRA	8/16/2022	8/18/2022	< 0.40
AB52439	Mississinewa Lake Miami SRA	8/16/2022	8/18/2022	< 0.40
AB52440	Kunkel Lake @ Oubache SP (Field Dup)	8/15/2022	8/18/2022	0.76
AB52441	Field Blank	8/15/2022	8/18/2022	< 0.40
AB52442	Lincoln State Park	8/15/2022	8/18/2022	< 0.40
AB52443	Ferdinand State Forest Lake	8/15/2022	8/18/2022	< 0.40
AB52444	Patoka SRA Beach	8/15/2022	8/18/2022	< 0.40
AB52560	Ft. Ben Harrison SP Dog Lake	8/16/2022	8/18/2022	< 0.40

Test Report (by Request)

Test Information

Request: 8/18/2022 3:18:59 PM
Date: 8/18/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.422 Abs	0.000 µg/L	R^2=0.99936, 101.3			M21L0919
ATX Std 0	ANATOXIN	1.383 Abs [1.4025] {2.0 C	0.015 µg/L [0.007]	R^2=0.99936, 98.57			M21L0919
ATX Std 1	ANATOXIN	1.196 Abs	0.134 µg/L	R^2=0.99936, 85.24			M21L0919
ATX Std 1	ANATOXIN	1.160 Abs [1.1780] {2.2 C	0.160 µg/L [0.147]	R^2=0.99936, 82.68			M21L0919
ATX Std 2	ANATOXIN	0.915 Abs	0.378 µg/L	R^2=0.99936, 65.21			M21L0919
ATX Std 2	ANATOXIN	0.877 Abs [0.8960] {3.0 C	0.422 µg/L [0.400]	R^2=0.99936, 62.50			M21L0919
ATX Std 3	ANATOXIN	0.559 Abs	1.018 µg/L	R^2=0.99936, 39.84			M21L0919
ATX Std 3	ANATOXIN	0.546 Abs [0.5525] {1.7 C	1.057 µg/L [1.038]	R^2=0.99936, 38.91			M21L0919
ATX Std 4	ANATOXIN	0.334 Abs	2.189 µg/L	R^2=0.99936, 23.80			M21L0919
ATX Std 4	ANATOXIN	0.316 Abs [0.3250] {3.9 C	2.367 µg/L [2.278]	R^2=0.99936, 22.52			M21L0919
ATX Std 5	ANATOXIN	0.179 Abs	> 5.000 µg/L	12.758 %Abs			M21L0919
ATX Std 5	ANATOXIN	0.172 Abs [0.1755] {2.8 C	> 5.000 µg/L	12.259 %Abs			M21L0919
ATX Control	ANATOXIN	0.703 Abs	0.681 µg/L	50.107 %Abs			M21L0919
ATX Control	ANATOXIN	0.685 Abs [0.6940] {1.8 C	0.715 µg/L [0.698]	48.824 %Abs [49.4			M21L0919

Note

Signature 

David Jordan 8/18/2022

Test Report (by Request)

Test Information

Request: 8/18/2022 3:20:20 PM
Date: 8/18/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB (ANA)	ANATOXIN	1.270 Abs	0.085 µg/L	Low, 90.520 %Abs		0.150 - 5.000	M21L0919
LRB (ANA)	ANATOXIN	1.281 Abs [1.2755] {0.6 C	0.078 µg/L [0.082]	Low, 91.304 %Abs		0.150 - 5.000	M21L0919
LFB (ANA)	ANATOXIN	0.732 Abs	0.629 µg/L	52.174 %Abs		0.150 - 5.000	M21L0919
LFB (ANA)	ANATOXIN	0.694 Abs [0.7130] {3.8 C	0.698 µg/L [0.664]	49.465 %Abs [50.8		0.150 - 5.000	M21L0919
AB52432	ANATOXIN	1.343 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52432	ANATOXIN	1.324 Abs [1.3335] {1.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52433	ANATOXIN	0.735 Abs	0.686 µg/L	52.388 %Abs	MDF=1.100	0.150 - 5.000	M21L0919
AB52433	ANATOXIN	0.693 Abs [0.7140] {4.2 C	0.770 µg/L [0.728]	49.394 %Abs [50.8	MDF=1.100	0.150 - 5.000	M21L0919
AB52434	ANATOXIN	1.256 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52434	ANATOXIN	1.261 Abs [1.2585] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52435	ANATOXIN	1.365 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52435	ANATOXIN	1.371 Abs [1.3680] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52436	ANATOXIN	1.228 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52436	ANATOXIN	1.225 Abs [1.2265] {0.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52437	ANATOXIN	1.253 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52437	ANATOXIN	1.229 Abs [1.2410] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52437MS	ANATOXIN	0.629 Abs	0.834 µg/L	44.833 %Abs		0.150 - 5.000	M21L0919
AB52437MS	ANATOXIN	0.608 Abs [0.6185] {2.4 C	0.885 µg/L [0.859]	43.336 %Abs [44.0		0.150 - 5.000	M21L0919
AB52437MSD	ANATOXIN	0.698 Abs	0.690 µg/L	49.751 %Abs		0.150 - 5.000	M21L0919
AB52437MSD	ANATOXIN	0.686 Abs [0.6920] {1.2 C	0.713 µg/L [0.701]	48.895 %Abs [49.3		0.150 - 5.000	M21L0919
AB52438	ANATOXIN	1.240 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52438	ANATOXIN	1.265 Abs [1.2525] {1.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52439	ANATOXIN	1.180 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52439	ANATOXIN	1.213 Abs [1.1965] {2.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52440	ANATOXIN	0.702 Abs	0.751 µg/L	50.036 %Abs	MDF=1.100	0.150 - 5.000	M21L0919
AB52440	ANATOXIN	0.691 Abs [0.6965] {1.1 C	0.773 µg/L [0.762]	49.252 %Abs [49.6	MDF=1.100	0.150 - 5.000	M21L0919
AB52441	ANATOXIN	1.341 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52441	ANATOXIN	1.320 Abs [1.3305] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52442	ANATOXIN	1.250 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52442	ANATOXIN	1.256 Abs [1.2530] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52443	ANATOXIN	1.230 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52443	ANATOXIN	1.224 Abs [1.2270] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52444	ANATOXIN	1.202 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52444	ANATOXIN	1.166 Abs [1.1840] {2.1 C	0.170 µg/L [< LOD]	83.108 %Abs [Low,	MDF=1.100	0.150 - 5.000	M21L0919
AB52560	ANATOXIN	1.335 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100		M21L0919
AB52560	ANATOXIN	1.274 Abs [1.3045] {3.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100		M21L0919

Note

Signature 

David Jordan 8/18/2022

Assay Information

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

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: M21L0919

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: 1 days 0 hours
Axis Mode: Y = Abs, X = Log(Conc)

Assay Calibration

Current Calibration Status: "

"

Name	Absorbance	Concentration	Interpretation	Position
8/18/2022 3:18:59 PM				
ATX Std 0	1.422 Abs	0.000 µg/L	R ² =0.99936, 101.354 %Abs	RK1:23->A01@2
ATX Std 0	1.383 Abs [1.4025] {2.0 CV}	0.015 µg/L [0.007] {141.4 CV}	R ² =0.99936, 98.574 %Abs	RK1:23->B01@2
ATX Std 1	1.196 Abs	0.134 µg/L	R ² =0.99936, 85.246 %Abs	RK1:24->C01@2
ATX Std 1	1.160 Abs [1.1780] {2.2 CV}	0.160 µg/L [0.147] {12.5 CV}	R ² =0.99936, 82.680 %Abs	RK1:24->D01@2
ATX Std 2	0.915 Abs	0.378 µg/L	R ² =0.99936, 65.217 %Abs	RK1:25->E01@2
ATX Std 2	0.877 Abs [0.8960] {3.0 CV}	0.422 µg/L [0.400] {7.8 CV}	R ² =0.99936, 62.509 %Abs	RK1:25->F01@3
ATX Std 3	0.559 Abs	1.018 µg/L	R ² =0.99936, 39.843 %Abs	RK1:26->G01@3
ATX Std 3	0.546 Abs [0.5525] {1.7 CV}	1.057 µg/L [1.038] {2.7 CV}	R ² =0.99936, 38.917 %Abs	RK1:26->H01@3
ATX Std 4	0.334 Abs	2.189 µg/L	R ² =0.99936, 23.806 %Abs	RK1:27->A02@2
ATX Std 4	0.316 Abs [0.3250] {3.9 CV}	2.367 µg/L [2.278] {5.5 CV}	R ² =0.99936, 22.523 %Abs	RK1:27->B02@2
ATX Std 5	0.179 Abs	> 5.000 µg/L	12.758 %Abs	RK1:28->C02@2
ATX Std 5	0.172 Abs [0.1755] {2.8 CV}	> 5.000 µg/L	12.259 %Abs	RK1:28->D02@2

8/18/2022 3:18:59 PM				
ATX Control	0.703 Abs	0.681 µg/L	50.107 %Abs	RK1:29->E02@2
ATX Control	0.685 Abs [0.6940] {1.8 CV}	0.715 µg/L [0.698] {3.4 CV}	48.824 %Abs [49.465 %Abs]	RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.4025	0.0075		
ATX Std 0 [SD]	0.0276	0.0106		
ATX Std 0 [%CV]	1.9663	141.4214		
ATX Std 1 [MEAN]	1.1780	0.1470		
ATX Std 1 [SD]	0.0255	0.0184		
ATX Std 1 [%CV]	2.1609	12.5066		
ATX Std 1 [%DIFF]		-2.0000		
ATX Std 2 [MEAN]	0.8960	0.4000		
ATX Std 2 [SD]	0.0269	0.0311		
ATX Std 2 [%CV]	2.9989	7.7782		
ATX Std 2 [%DIFF]		-0.0000		
ATX Std 3 [MEAN]	0.5525	1.0375		
ATX Std 3 [SD]	0.0092	0.0276		
ATX Std 3 [%CV]	1.6638	2.6580		
ATX Std 3 [%DIFF]		3.7500		
ATX Std 4 [MEAN]	0.3250	2.2780		
ATX Std 4 [SD]	0.0127	0.1259		
ATX Std 4 [%CV]	3.9163	5.5252		
ATX Std 4 [%DIFF]		-8.8800		
ATX Std 5 [MEAN]	0.1755			
ATX Std 5 [SD]	0.0049			
ATX Std 5 [%CV]	2.8204			

Name	Absorbance	Concentration	Interpretation	Position	
ATX Control [MEAN]	0.6940	0.6980			
ATX Control [SD]	0.0127	0.0240			
ATX Control [%CV]	1.8340	3.4444			

Assay Curve

$$y = (A-D)/(1+(x/C)^B) + D$$
 Weight: NONE
 A = 1.4050
 B = 1.0986
 C = 0.62511
 D = 0.063767
 R2 coef = 0.99936
 50% = 0.684

