



Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB47949	Summit Lake - State Park	7/20/2021	7/22/2021	< 0.40
AB47950	Kunkel Beach @ Ouabache State Park	7/19/2021	7/22/2021	< 0.40
AB47951	Pokagon State Park	7/19/2021	7/22/2021	< 0.40
AB47952	Potawatomi Inn's Beach	7/19/2021	7/22/2021	< 0.40
AB47953	Chain O'Lakes SP	7/19/2021	7/22/2021	< 0.40
AB47954	Potato Creek State Park	7/19/2021	7/22/2021	< 0.40
AB47955	Lost Bridge West SRA	7/19/2021	7/22/2021	< 0.40
AB47956	Mississinewa Lake Miami SRA	7/19/2021	7/22/2021	< 0.40
AB47957	Lost Bridge West SRA (Field Dup)	7/19/2021	7/22/2021	< 0.40
AB47958	Field Blank	7/19/2021	7/22/2021	< 0.40
AB48042	Lincoln State Park	7/19/2021	7/22/2021	< 0.40
AB48043	Ferdinand State Forest Lake	7/19/2021	7/22/2021	< 0.40
AB48044	Patoka SRA Beach	7/19/2021	7/22/2021	< 0.40
AB48045	Ft. Ben Harrison SP Dog Lake - East	7/20/2021	7/22/2021	< 0.40

Test Report (by Request)

Test Information

 Request: 7/22/2021 11:34:11 AM
 Date: 7/22/2021

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.718 Abs	0.000 µg/L	R^2=0.99973, 100.5			20L4352
ATX Std 0	ANATOXIN	1.684 Abs [1.7010] {1.4 C	0.002 µg/L [0.001]	R^2=0.99973, 99.00			20L4352
ATX Std 1	ANATOXIN	1.350 Abs	0.131 µg/L	R^2=0.99973, 79.36			20L4352
ATX Std 1	ANATOXIN	1.303 Abs [1.3265] {2.5 C	0.161 µg/L [0.146]	R^2=0.99973, 76.60			20L4352
ATX Std 2	ANATOXIN	1.055 Abs	0.383 µg/L	R^2=0.99973, 62.02			20L4352
ATX Std 2	ANATOXIN	1.015 Abs [1.0350] {2.7 C	0.432 µg/L [0.407]	R^2=0.99973, 59.67			20L4352
ATX Std 3	ANATOXIN	0.717 Abs	1.009 µg/L	R^2=0.99973, 42.15			20L4352
ATX Std 3	ANATOXIN	0.709 Abs [0.7130] {0.8 C	1.032 µg/L [1.020]	R^2=0.99973, 41.68			20L4352
ATX Std 4	ANATOXIN	0.443 Abs	2.266 µg/L	R^2=0.99973, 26.04			20L4352
ATX Std 4	ANATOXIN	0.412 Abs [0.4275] {5.1 C	2.507 µg/L [2.386]	R^2=0.99973, 24.22			20L4352
ATX Std 5	ANATOXIN	0.226 Abs	> 5.000 µg/L	13.286 %Abs			20L4352
ATX Std 5	ANATOXIN	0.212 Abs [0.2190] {4.5 C	> 5.000 µg/L	12.463 %Abs			20L4352
ATX Control	ANATOXIN	0.791 Abs	0.820 µg/L	46.502 %Abs			20L4352
ATX Control	ANATOXIN	0.783 Abs [0.7870] {0.7 C	0.839 µg/L [0.829]	46.032 %Abs [46.2			20L4352

Note

Signature

Charles Hostetter 7/22/2021

Test Report (by Request)

Test Information

Request: 7/22/2021 11:35:30 AM

Date: 7/22/2021

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.403 Abs	0.101 µg/L	Low, 82.481 %Abs		0.150 - 5.000	20L4352
LRB	ANATOXIN	1.435 Abs [1.4190] {1.6 C	0.085 µg/L [0.093]	Low, 84.362 %Abs		0.150 - 5.000	20L4352
LFB	ANATOXIN	0.900 Abs	0.604 µg/L	52.910 %Abs		0.150 - 5.000	20L4352
LFB	ANATOXIN	0.865 Abs [0.8825] {2.8 C	0.667 µg/L [0.635]	50.852 %Abs [51.8		0.150 - 5.000	20L4352
AB47949	ANATOXIN	1.552 Abs	0.037 µg/L	Low, 91.240 %Abs		0.150 - 5.000	20L4352
AB47949	ANATOXIN	1.535 Abs [1.5435] {0.8 C	0.043 µg/L [0.040]	Low, 90.241 %Abs		0.150 - 5.000	20L4352
AB47950	ANATOXIN	1.403 Abs	0.101 µg/L	Low, 82.481 %Abs		0.150 - 5.000	20L4352
AB47950	ANATOXIN	1.404 Abs [1.4035] {0.1 C	0.101 µg/L [0.101]	Low, 82.540 %Abs		0.150 - 5.000	20L4352
AB47951	ANATOXIN	1.505 Abs	0.055 µg/L	Low, 88.477 %Abs		0.150 - 5.000	20L4352
AB47951	ANATOXIN	1.493 Abs [1.4990] {0.6 C	0.059 µg/L [0.057]	Low, 87.772 %Abs		0.150 - 5.000	20L4352
AB47952	ANATOXIN	1.689 Abs	0.001 µg/L	Low, 99.295 %Abs		0.150 - 5.000	20L4352
AB47952	ANATOXIN	1.591 Abs [1.6400] {4.2 C	0.024 µg/L [0.013]	Low, 93.533 %Abs		0.150 - 5.000	20L4352
AB47953	ANATOXIN	1.204 Abs	0.234 µg/L	70.782 %Abs		0.150 - 5.000	20L4352
AB47953	ANATOXIN	1.154 Abs [1.1790] {3.0 C	0.279 µg/L [0.257]	67.842 %Abs [69.3		0.150 - 5.000	20L4352
AB47954	ANATOXIN	1.370 Abs	0.119 µg/L	Low, 80.541 %Abs		0.150 - 5.000	20L4352
AB47954	ANATOXIN	1.374 Abs [1.3720] {0.2 C	0.117 µg/L [0.118]	Low, 80.776 %Abs		0.150 - 5.000	20L4352
AB47954MS	ANATOXIN	0.771 Abs	0.868 µg/L	45.326 %Abs		0.150 - 5.000	20L4352
AB47954MS	ANATOXIN	0.779 Abs [0.7750] {0.7 C	0.848 µg/L [0.858]	45.797 %Abs [45.5		0.150 - 5.000	20L4352
AB47954MSD	ANATOXIN	0.859 Abs	0.678 µg/L	50.500 %Abs		0.150 - 5.000	20L4352
AB47954MSD	ANATOXIN	0.802 Abs [0.8305] {4.9 C	0.796 µg/L [0.737]	47.149 %Abs [48.8		0.150 - 5.000	20L4352
AB47955	ANATOXIN	1.501 Abs	0.056 µg/L	Low, 88.242 %Abs		0.150 - 5.000	20L4352
AB47955	ANATOXIN	1.426 Abs [1.4635] {3.6 C	0.090 µg/L [0.073]	Low, 83.833 %Abs		0.150 - 5.000	20L4352
AB47956	ANATOXIN	1.503 Abs	0.055 µg/L	Low, 88.360 %Abs		0.150 - 5.000	20L4352
AB47956	ANATOXIN	1.459 Abs [1.4810] {2.1 C	0.074 µg/L [0.065]	Low, 85.773 %Abs		0.150 - 5.000	20L4352
AB47957	ANATOXIN	1.441 Abs	0.083 µg/L	Low, 84.715 %Abs		0.150 - 5.000	20L4352
AB47957	ANATOXIN	1.445 Abs [1.4430] {0.2 C	0.081 µg/L [0.082]	Low, 84.950 %Abs		0.150 - 5.000	20L4352
AB47958	ANATOXIN	1.628 Abs	0.014 µg/L	Low, 95.708 %Abs		0.150 - 5.000	20L4352
AB47958	ANATOXIN	1.535 Abs [1.5815] {4.2 C	0.043 µg/L [0.029]	Low, 90.241 %Abs		0.150 - 5.000	20L4352
AB48042	ANATOXIN	1.616 Abs	0.017 µg/L	Low, 95.003 %Abs		0.150 - 5.000	20L4352
AB48042	ANATOXIN	1.589 Abs [1.6025] {1.2 C	0.025 µg/L [0.021]	Low, 93.416 %Abs		0.150 - 5.000	20L4352
AB48043	ANATOXIN	1.592 Abs	0.024 µg/L	Low, 93.592 %Abs		0.150 - 5.000	20L4352
AB48043	ANATOXIN	1.530 Abs [1.5610] {2.8 C	0.045 µg/L [0.035]	Low, 89.947 %Abs		0.150 - 5.000	20L4352
AB48044	ANATOXIN	1.561 Abs	0.034 µg/L	Low, 91.770 %Abs		0.150 - 5.000	20L4352
AB48044	ANATOXIN	1.527 Abs [1.5440] {1.6 C	0.046 µg/L [0.040]	Low, 89.771 %Abs		0.150 - 5.000	20L4352
AB48045	ANATOXIN	1.625 Abs	0.015 µg/L	Low, 95.532 %Abs		0.150 - 5.000	20L4352
AB48045	ANATOXIN	1.607 Abs [1.6160] {0.8 C	0.020 µg/L [0.018]	Low, 94.474 %Abs		0.150 - 5.000	20L4352

Note

Signature

Charles Hostetter 7/22/2021

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: 20L4352

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: "

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Name	Absorbance	Concentration	Interpretation	Position
7/22/2021 11:34:11 AM				
ATX Std 0	1.718 Abs	0.000 µg/L	R ² =0.99973, 100.999 %Abs	RK1:23->A01@2
ATX Std 0	1.684 Abs [1.7010] {1.4 CV}	0.002 µg/L [0.001] {141.4 CV}	R ² =0.99973, 99.001 %Abs	RK1:23->B01@2
ATX Std 1	1.350 Abs	0.131 µg/L	R ² =0.99973, 79.365 %Abs	RK1:24->C01@2
ATX Std 1	1.303 Abs [1.3265] {2.5 CV}	0.161 µg/L [0.146] {14.5 CV}	R ² =0.99973, 76.602 %Abs	RK1:24->D01@2
ATX Std 2	1.055 Abs	0.383 µg/L	R ² =0.99973, 62.022 %Abs	RK1:25->E01@2
ATX Std 2	1.015 Abs [1.0350] {2.7 CV}	0.432 µg/L [0.407] {8.5 CV}	R ² =0.99973, 59.671 %Abs	RK1:25->F01@3
ATX Std 3	0.717 Abs	1.009 µg/L	R ² =0.99973, 42.152 %Abs	RK1:26->G01@3
ATX Std 3	0.709 Abs [0.7130] {0.8 CV}	1.032 µg/L [1.020] {1.6 CV}	R ² =0.99973, 41.681 %Abs	RK1:26->H01@3
ATX Std 4	0.443 Abs	2.266 µg/L	R ² =0.99973, 26.044 %Abs	RK1:27->A02@2
ATX Std 4	0.412 Abs [0.4275] {5.1 CV}	2.507 µg/L [2.386] {7.1 CV}	R ² =0.99973, 24.221 %Abs	RK1:27->B02@2
ATX Std 5	0.226 Abs	> 5.000 µg/L	13.286 %Abs	RK1:28->C02@2
ATX Std 5	0.212 Abs [0.2190] {4.5 CV}	> 5.000 µg/L	12.463 %Abs	RK1:28->D02@2

7/22/2021 11:34:11 AM				
ATX Control	0.791 Abs	0.820 µg/L	46.502 %Abs	RK1:29->E02@2
ATX Control	0.783 Abs [0.7870] {0.7 CV}	0.839 µg/L [0.829] {1.6 CV}	46.032 %Abs [46.267 %Abs]	RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.7010	0.0010		
ATX Std 0 [SD]	0.0240	0.0014		
ATX Std 0 [%CV]	1.4134	141.4214		
ATX Std 1 [MEAN]	1.3265	0.1460		
ATX Std 1 [SD]	0.0332	0.0212		
ATX Std 1 [%CV]	2.5054	14.5296		
ATX Std 1 [%DIFF]		-2.6667		
ATX Std 2 [MEAN]	1.0350	0.4075		
ATX Std 2 [SD]	0.0283	0.0346		
ATX Std 2 [%CV]	2.7328	8.5026		
ATX Std 2 [%DIFF]		1.8750		
ATX Std 3 [MEAN]	0.7130	1.0205		
ATX Std 3 [SD]	0.0057	0.0163		
ATX Std 3 [%CV]	0.7934	1.5937		
ATX Std 3 [%DIFF]		2.0500		
ATX Std 4 [MEAN]	0.4275	2.3865		
ATX Std 4 [SD]	0.0219	0.1704		
ATX Std 4 [%CV]	5.1276	7.1407		
ATX Std 4 [%DIFF]		-4.5400		
ATX Std 5 [MEAN]	0.2190			
ATX Std 5 [SD]	0.0099			
ATX Std 5 [%CV]	4.5203			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.7870	0.8295		
ATX Control [SD]	0.0057	0.0134		
ATX Control [%CV]	0.7188	1.6197		

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.7024
 B = 0.77227
 C = 0.85596
 D = -0.15082
 R2 coef = 0.99973
 50% = 0.694

