



Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AC40789	Pokagon SP - Main Beach	7/15/2024	7/17/2024	< 0.40
AC40790	Pokagon SP - Potawatomi Inn Beach	7/15/2024	7/17/2024	< 0.40
AC40791	Chain O'Lakes SP - Sand Lake Beach	7/15/2024	7/17/2024	< 0.40
AC40792	Ouabache SP - Kunkel Lake Beach	7/15/2024	7/17/2024	< 0.40
AC40793	Potato Creek SP - Worster Lake Beach	7/16/2024	7/17/2024	< 0.40
AC40794	Mississinewa Lake - Miami SRA Beach	7/16/2024	7/17/2024	< 0.40
AC40795	Salamonie Lake - Lost Bridge West SRA Beach	7/16/2024	7/17/2024	< 0.40
AC40796	Summit Lake SP - Summit Lake Beach	7/16/2024	7/17/2024	< 0.40
AC40797	Potato Creek SP - Worster Lake Beach (Field Duplicate)	7/16/2024	7/17/2024	< 0.40
AC40798	Field Blank	7/16/2024	7/17/2024	< 0.40
AC40799	Ferdinand State Forest - Ferdinand Lake Beach	7/15/2024	7/17/2024	< 0.40
AC40800	Lincoln SP - Lake Lincoln Beach	7/15/2024	7/17/2024	< 0.40
AC40801	Patoka Lake - Newton Stewart SRA	7/15/2024	7/17/2024	< 0.40

Test Report (by Request)

Test Information

Request: 7/17/2024 2:07:32 PM
 Date: 7/17/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
ATX Std 0	ANATOXIN	1.261 Abs	0.000 µg/L	R^2=0.99959, 101.7		0.000	Kit:P23B0
ATX Std 0	ANATOXIN	1.217 Abs [1.2390] {2.5 C	0.011 µg/L [0.006]	R^2=0.99959, 98.22		0.000	Kit:P23B0
ATX Std 1	ANATOXIN	1.032 Abs	0.126 µg/L	R^2=0.99959, 83.25		0.150	Kit:P23B0
ATX Std 1	ANATOXIN	0.986 Abs [1.0090] {3.2 C	0.163 µg/L [0.145]	R^2=0.99959, 79.58		0.150	Kit:P23B0
ATX Std 2	ANATOXIN	0.753 Abs	0.431 µg/L	R^2=0.99959, 60.77		0.400	Kit:P23B0
ATX Std 2	ANATOXIN	0.778 Abs [0.7655] {2.3 C	0.394 µg/L [0.413]	R^2=0.99959, 62.75		0.400	Kit:P23B0
ATX Std 3	ANATOXIN	0.508 Abs	1.011 µg/L	R^2=0.99959, 41.00		1.000	Kit:P23B0
ATX Std 3	ANATOXIN	0.507 Abs [0.5075] {0.1 C	1.015 µg/L [1.013]	R^2=0.99959, 40.92		1.000	Kit:P23B0
ATX Std 4	ANATOXIN	0.302 Abs	2.306 µg/L	R^2=0.99959, 24.37		2.500	Kit:P23B0
ATX Std 4	ANATOXIN	0.293 Abs [0.2975] {2.1 C	2.407 µg/L [2.357]	R^2=0.99959, 23.64		2.500	Kit:P23B0
ATX Std 5	ANATOXIN	0.162 Abs	> 5.000 µg/L	13.075 %Abs		5.000	Kit:P23B0
ATX Std 5	ANATOXIN	0.161 Abs [0.1615] {0.4 C	> 5.000 µg/L	12.994 %Abs		5.000	Kit:P23B0
ATX Control	ANATOXIN	0.597 Abs	0.741 µg/L	48.184 %Abs			Kit:P23B0
ATX Control	ANATOXIN	0.588 Abs [0.5925] {1.1 C	0.765 µg/L [0.753]	47.458 %Abs [47.8			Kit:P23B0

Note

Signature *David Jordan*

David Jordan 7/17/2024

Test Report (by Request)

Test Information

Request: 7/17/2024 2:36:06 PM
Date: 7/17/2024

Name/ID	Assay	Absorbance	Concentration	Interpretation	Note	Reference	Lot#
LRB	ANATOXIN	1.065 Abs	0.101 µg/L	Low, 85.956 %Abs		0.150 - 5.000	Kit:P23B0
LRB	ANATOXIN	1.077 Abs [1.0710] {0.8 C	0.093 µg/L [0.097]	Low, 86.925 %Abs		0.150 - 5.000	Kit:P23B0
LFB (ANA)	ANATOXIN	0.657 Abs	0.603 µg/L	53.027 %Abs		0.150 - 5.000	Kit:P23B0
LFB (ANA)	ANATOXIN	0.632 Abs [0.6445] {2.7 C	0.657 µg/L [0.630]	51.009 %Abs [52.0		0.150 - 5.000	Kit:P23B0
AC40789	ANATOXIN	1.153 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40789	ANATOXIN	1.127 Abs [1.1400] {1.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40790	ANATOXIN	1.095 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40790	ANATOXIN	1.100 Abs [1.0975] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40791	ANATOXIN	1.048 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40791	ANATOXIN	1.059 Abs [1.0535] {0.7 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40792	ANATOXIN	1.188 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40792	ANATOXIN	1.162 Abs [1.1750] {1.6 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40793	ANATOXIN	1.102 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40793	ANATOXIN	1.109 Abs [1.1055] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40794	ANATOXIN	1.101 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40794	ANATOXIN	1.101 Abs [1.1010] {0.0 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40794MS	ANATOXIN	0.576 Abs	0.797 µg/L	46.489 %Abs		0.150 - 5.000	Kit:P23B0
AC40794MS	ANATOXIN	0.558 Abs [0.5670] {2.2 C	0.848 µg/L [0.823]	45.036 %Abs [45.7		0.150 - 5.000	Kit:P23B0
AC40794MSD	ANATOXIN	0.667 Abs	0.583 µg/L	53.834 %Abs		0.150 - 5.000	Kit:P23B0
AC40794MSD	ANATOXIN	0.627 Abs [0.6470] {4.4 C	0.669 µg/L [0.626]	50.605 %Abs [52.2		0.150 - 5.000	Kit:P23B0
AC40795	ANATOXIN	1.147 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40795	ANATOXIN	1.130 Abs [1.1385] {1.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40796	ANATOXIN	1.109 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40796	ANATOXIN	1.122 Abs [1.1155] {0.8 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40797	ANATOXIN	1.019 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40797	ANATOXIN	1.008 Abs [1.0135] {0.8 C	0.160 µg/L [< LOD]	81.356 %Abs [Low,	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40798	ANATOXIN	1.190 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40798	ANATOXIN	1.184 Abs [1.1870] {0.4 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40799	ANATOXIN	1.186 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40799	ANATOXIN	1.135 Abs [1.1605] {3.1 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40800	ANATOXIN	1.125 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40800	ANATOXIN	1.106 Abs [1.1155] {1.2 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40801	ANATOXIN	1.081 Abs	< LOD	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0
AC40801	ANATOXIN	1.076 Abs [1.0785] {0.3 C	< LOD [< LOD]	Low, Out Adjust Dilu	MDF=1.100	0.150 - 5.000	Kit:P23B0

Note

Signature *David Jordan*

David Jordan 7/17/2024

* 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 (6.4.1.1171/1085/1.00/0.95) 7/17/2024 2:37:59 PM

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: Kit: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: "

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Name	Absorbance	Concentration	Interpretation	Position
7/17/2024 2:07:32 PM				
ATX Std 0	1.261 Abs	0.000 µg/L	R ² =0.99959, 101.776 %Abs	RK1:23->A01@2
ATX Std 0	1.217 Abs [1.2390] {2.5 CV}	0.011 µg/L [0.006] {141.4 CV}	R ² =0.99959, 98.224 %Abs	RK1:23->B01@2
ATX Std 1	1.032 Abs	0.126 µg/L	R ² =0.99959, 83.293 %Abs	RK1:24->C01@2
ATX Std 1	0.986 Abs [1.0090] {3.2 CV}	0.163 µg/L [0.145] {18.1 CV}	R ² =0.99959, 79.580 %Abs	RK1:24->D01@2
ATX Std 2	0.753 Abs	0.431 µg/L	R ² =0.99959, 60.775 %Abs	RK1:25->E01@2
ATX Std 2	0.778 Abs [0.7655] {2.3 CV}	0.394 µg/L [0.413] {6.3 CV}	R ² =0.99959, 62.793 %Abs	RK1:25->F01@3
ATX Std 3	0.508 Abs	1.011 µg/L	R ² =0.99959, 41.001 %Abs	RK1:26->G01@3
ATX Std 3	0.507 Abs [0.5075] {0.1 CV}	1.015 µg/L [1.013] {0.3 CV}	R ² =0.99959, 40.920 %Abs	RK1:26->H01@3
ATX Std 4	0.302 Abs	2.306 µg/L	R ² =0.99959, 24.374 %Abs	RK1:27->A02@2
ATX Std 4	0.293 Abs [0.2975] {2.1 CV}	2.407 µg/L [2.357] {3.0 CV}	R ² =0.99959, 23.648 %Abs	RK1:27->B02@2
ATX Std 5	0.162 Abs	> 5.000 µg/L	13.075 %Abs	RK1:28->C02@2
ATX Std 5	0.161 Abs [0.1615] {0.4 CV}	> 5.000 µg/L	12.994 %Abs	RK1:28->D02@2

7/17/2024 2:07:32 PM				
ATX Control	0.597 Abs	0.741 µg/L	48.184 %Abs	RK1:29->E02@2
ATX Control	0.588 Abs [0.5925] {1.1 CV}	0.765 µg/L [0.753] {2.3 CV}	47.458 %Abs [47.821 %Abs]	RK1:29->F02@3

Statistic				
ATX Std 0 [MEAN]	1.2390	0.0055		
ATX Std 0 [SD]	0.0311	0.0078		
ATX Std 0 [%CV]	2.5111	141.4214		
ATX Std 1 [MEAN]	1.0090	0.1445		
ATX Std 1 [SD]	0.0325	0.0262		
ATX Std 1 [%CV]	3.2237	18.1058		
ATX Std 1 [%DIFF]		-3.6667		
ATX Std 2 [MEAN]	0.7655	0.4125		
ATX Std 2 [SD]	0.0177	0.0262		
ATX Std 2 [%CV]	2.3093	6.3425		
ATX Std 2 [%DIFF]		3.1250		
ATX Std 3 [MEAN]	0.5075	1.0130		
ATX Std 3 [SD]	0.0007	0.0028		
ATX Std 3 [%CV]	0.1393	0.2792		
ATX Std 3 [%DIFF]		1.3000		
ATX Std 4 [MEAN]	0.2975	2.3565		
ATX Std 4 [SD]	0.0064	0.0714		
ATX Std 4 [%CV]	2.1391	3.0307		
ATX Std 4 [%DIFF]		-5.7400		
ATX Std 5 [MEAN]	0.1615			
ATX Std 5 [SD]	0.0007			
ATX Std 5 [%CV]	0.4378			

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.5925	0.7530		
ATX Control [SD]	0.0064	0.0170		
ATX Control [%CV]	1.0741	2.2537		

Assay Curve

$y = (A-D)/(1+(x/C)^B) + D$
 Weight: NONE
 A = 1.2411
 B = 0.94557
 C = 0.67378
 D = 0.0085977
 R2 coef = 0.99959
 50% = 0.686

