Anatoxin-a ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

Sample #	Location	Date Collected	Date Analyzed	Conc. (ppb)
AB42867	Raccoon Lake SRA	6/15/2020	6/17/2020	< 0.40
AB42869	Cagles Mill Lake Beach	6/15/2020	6/17/2020	< 0.40
AB42870	Paynetown SRA	6/15/2020	6/17/2020	< 0.40
AB42871	Fairfax SRA	6/15/2020	6/17/2020	< 0.40
AB42872	Starve Hollow SRA	6/15/2020	6/17/2020	< 0.40
AB42873	Whitewater Memorial SP	6/16/2020	6/17/2020	< 0.40
AB42874	Quakertown SRA	6/16/2020	6/17/2020	< 0.40
AB42875	Mounds SRA	6/16/2020	6/17/2020	< 0.40
AB42876	Hardy Lake SRA	6/16/2020	6/17/2020	< 0.40
AB42877	Field Blank	6/15/2020	6/17/2020	< 0.40
AB42868	Deam Lake SRA	6/16/2020	6/17/2020	< 0.40
AB42878	Starve Hollow SRA	6/15/2020	6/17/2020	< 0.40
AB42912	Ferdinand Forest Lake	6/15/2020	6/17/2020	< 0.40
AB42913	Lincoln State Park	6/15/2020	6/17/2020	< 0.40
AB42914	Patoka Lake	6/15/2020	6/17/2020	< 0.40

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Test Report (by Request)

Test Information

Request: 6/17/2020 4:54:19 PM
Date: 6/17/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
ATX Std 0	ANATOXIN	1.198 Abs	0.005 µg/L	R^2=0.99963, 99.667		20A2174
ATX Std 0	ANATOXIN	1.206 Abs [1.2020] {0.5 CV}	0.000 µg/L [0.003] {1	R^2=0.99963, 100.33		20A2174
ATX Std 1	ANATOXIN	1.044 Abs	0.142 µg/L	R^2=0.99963, 86.855		20A2174
ATX Std 1	ANATOXIN	1.030 Abs [1.0370] {1.0 CV}	0.156 µg/L [0.149] {6	R^2=0.99963, 85.691		20A2174
ATX Std 2	ANATOXIN	0.838 Abs	0.384 µg/L	R^2=0.99963, 69.717		20A2174
ATX Std 2	ANATOXIN	0.825 Abs [0.8315] {1.1 CV}	0.403 µg/L [0.394] {3	R^2=0.99963, 68.636		20A2174
ATX Std 3	ANATOXIN	0.538 Abs	1.027 µg/L	R^2=0.99963, 44.759		20A2174
ATX Std 3	ANATOXIN	0.535 Abs [0.5365] {0.4 CV}	1.037 µg/L [1.032] {0	R^2=0.99963, 44.509		20A2174
ATX Std 4	ANATOXIN	0.302 Abs	2.342 µg/L	R^2=0.99963, 25.125		20A2174
ATX Std 4	ANATOXIN	0.297 Abs [0.2995] {1.2 CV}	2.390 µg/L [2.366] {1	R^2=0.99963, 24.709		20A2174
ATX Std 5	ANATOXIN	0.149 Abs	> 5.000 µg/L	12.396 %Abs		20A2174
ATX Std 5	ANATOXIN	0.147 Abs [0.1480] {1.0 CV}	> 5.000 µg/L	12.230 %Abs		20A2174
ATX Control	ANATOXIN	0.601 Abs	0.843 µg/L	50.000 %Abs		20A2174
ATX Control	ANATOXIN	0.575 Abs [0.5880] {3.1 CV}	0.914 µg/L [0.878] {5	47.837 %Abs [48.918		20A2174

Note

Signature David Jordan

Date: 6/17/2020

* 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 (6.4.1.1073/1085/1.00/0.95) 6/17/2020 4:56:06 PM

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Test Report (by Request)

Test Information

Request: 6/17/2020 4:55:40 PM
Date: 6/17/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	ANATOXIN	1.125 Abs	0.068 µg/L	**LOW, 93.594 %ABS**	0.150 - 5.000	20A2174
LRB	ANATOXIN	1.122 Abs [1.1235] {0.2 CV}	0.070 µg/L [0.069] {2	**LOW, 93.344 %ABS**	0.150 - 5.000	20A2174
LFB	ANATOXIN	0.728 Abs	0.563 µg/L	60.566 %Abs	0.150 - 5.000	20A2174
LFB	ANATOXIN	0.699 Abs [0.7135] {2.9 CV}	0.618 µg/L [0.590] {6	58.153 %Abs [59.35	0.150 - 5.000	20A2174
AB42867	ANATOXIN	1.143 Abs	0.057 µg/L	**LOW, 95.092 %ABS**	0.150 - 5.000	20A2174
AB42867	ANATOXIN	1.129 Abs [1.1360] {0.9 CV}	0.070 µg/L [0.064] {1	**LOW, 93.927 %ABS**	0.150 - 5.000	20A2174
AB42869	ANATOXIN	0.897 Abs	0.336 µg/L	74.626 %Abs	0.150 - 5.000	20A2174
AB42869	ANATOXIN	0.868 Abs [0.8825] {2.3 CV}	0.377 µg/L [0.356] {8	72.213 %Abs [73.41	0.150 - 5.000	20A2174
AB42870	ANATOXIN	1.116 Abs	0.083 µg/L	**LOW, 92.845 %ABS**	0.150 - 5.000	20A2174
AB42870	ANATOXIN	1.121 Abs [1.1185] {0.3 CV}	0.078 µg/L [0.080] {4	**LOW, 93.261 %ABS**	0.150 - 5.000	20A2174
AB42871	ANATOXIN	1.140 Abs	0.059 µg/L	**LOW, 94.842 %ABS**	0.150 - 5.000	20A2174
AB42871	ANATOXIN	1.110 Abs [1.1250] {1.9 CV}	0.089 µg/L [0.074] {2	**LOW, 92.346 %ABS**	0.150 - 5.000	20A2174
AB42872	ANATOXIN	1.097 Abs	0.101 µg/L	**LOW, 91.265 %ABS**	0.150 - 5.000	20A2174
AB42872	ANATOXIN	1.100 Abs [1.0985] {0.2 CV}	0.099 µg/L [0.100] {1	**LOW, 91.514 %ABS**	0.150 - 5.000	20A2174
AB42873	ANATOXIN	1.115 Abs	0.084 µg/L	**LOW, 92.762 %ABS**	0.150 - 5.000	20A2174
AB42873	ANATOXIN	1.100 Abs [1.1075] {1.0 CV}	0.099 µg/L [0.091] {1	**LOW, 91.514 %ABS**	0.150 - 5.000	20A2174
AB42873MS	ANATOXIN	0.662 Abs	0.696 µg/L	55.075 %Abs	0.150 - 5.000	20A2174
AB42873MS	ANATOXIN	0.668 Abs [0.6650] {0.6 CV}	0.683 µg/L [0.689] {1	55.574 %Abs [55.32	0.150 - 5.000	20A2174
AB42873MSD	ANATOXIN	0.694 Abs	0.628 µg/L	57.737 %Abs	0.150 - 5.000	20A2174
AB42873MSD	ANATOXIN	0.666 Abs [0.6800] {2.9 CV}	0.687 µg/L [0.658] {6	55.408 %Abs [56.57	0.150 - 5.000	20A2174
AB42874	ANATOXIN	1.089 Abs	0.110 µg/L	**LOW, 90.599 %ABS**	0.150 - 5.000	20A2174
AB42874	ANATOXIN	1.087 Abs [1.0880] {0.1 CV}	0.112 µg/L [0.111] {1	**LOW, 90.433 %ABS**	0.150 - 5.000	20A2174
AB42875	ANATOXIN	1.080 Abs	0.119 µg/L	**LOW, 89.850 %ABS**	0.150 - 5.000	20A2174
AB42875	ANATOXIN	1.063 Abs [1.0715] {1.1 CV}	0.136 µg/L [0.127] {9	**LOW, 88.436 %ABS**	0.150 - 5.000	20A2174
AB42876	ANATOXIN	1.092 Abs	0.107 µg/L	**LOW, 90.849 %ABS**	0.150 - 5.000	20A2174
AB42876	ANATOXIN	1.091 Abs [1.0915] {0.1 CV}	0.108 µg/L [0.108] {0	**LOW, 90.765 %ABS**	0.150 - 5.000	20A2174
AB42877	ANATOXIN	1.073 Abs	0.126 µg/L	**LOW, 89.268 %ABS**	0.150 - 5.000	20A2174
AB42877	ANATOXIN	1.090 Abs [1.0815] {1.1 CV}	0.109 µg/L [0.117] {1	**LOW, 90.682 %ABS**	0.150 - 5.000	20A2174
AB42868	ANATOXIN	1.074 Abs	0.125 µg/L	**LOW, 89.351 %ABS**	0.150 - 5.000	20A2174
AB42868	ANATOXIN	1.038 Abs [1.0560] {2.4 CV}	0.163 µg/L [0.144] {1	86.356 %Abs [87.85	0.150 - 5.000	20A2174
AB42878	ANATOXIN	1.061 Abs	0.139 µg/L	**LOW, 88.270 %ABS**	0.150 - 5.000	20A2174
AB42878	ANATOXIN	1.071 Abs [1.0660] {0.7 CV}	0.128 µg/L [0.134] {5	**LOW, 89.101 %ABS**	0.150 - 5.000	20A2174
AB42912	ANATOXIN	0.899 Abs	0.332 µg/L	74.792 %Abs	0.150 - 5.000	20A2174
AB42912	ANATOXIN	0.892 Abs [0.8955] {0.6 CV}	0.342 µg/L [0.337] {2	74.210 %Abs [74.50	0.150 - 5.000	20A2174
AB42913	ANATOXIN	1.089 Abs	0.110 µg/L	**LOW, 90.599 %ABS**	0.150 - 5.000	20A2174
AB42913	ANATOXIN	1.040 Abs [1.0645] {3.3 CV}	0.161 µg/L [0.135] {2	86.522 %Abs [88.56	0.150 - 5.000	20A2174
AB42914	ANATOXIN	1.048 Abs	0.152 µg/L	87.188 %Abs	0.150 - 5.000	20A2174
AB42914	ANATOXIN	1.033 Abs [1.0405] {1.0 CV}	0.168 µg/L [0.160] {7	85.940 %Abs [86.56	0.150 - 5.000	20A2174

Note

Signature David Jordan

Date: 6/17/2020

* 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 (6.4.1.1073/1085/1.00/0.95) 6/17/2020 4:56:06 PM

ANATOXIN - Assay Calibration Report

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:
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 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: 20A2174

Assay Calibration

Current Calibration Status: " **"**

Name	Absorbance	Concentration	Interpretation	Position
6/17/2020 4:54:19 PM				
ATX Std 0	1.198 Abs		R^2=0.99963, 99.667 %Abs	RK1:23->A01@2
ATX Std 0	1.206 Abs [1.2020] {0.5 CV}		R^2=0.99963, 100.333 %Abs	RK1:23->B01@2
ATX Std 1	1.044 Abs		R^2=0.99963, 86.855 %Abs	RK1:24->C01@2
ATX Std 1	1.030 Abs [1.0370] {1.0 CV}		R^2=0.99963, 85.691 %Abs	RK1:24->D01@2
ATX Std 2	0.838 Abs		R^2=0.99963, 69.717 %Abs	RK1:25->E01@2
ATX Std 2	0.825 Abs [0.8315] {1.1 CV}		R^2=0.99963, 68.636 %Abs	RK1:25->F01@3
ATX Std 3	0.538 Abs		R^2=0.99963, 44.759 %Abs	RK1:26->G01@3
ATX Std 3	0.535 Abs [0.5365] {0.4 CV}		R^2=0.99963, 44.509 %Abs	RK1:26->H01@3
ATX Std 4	0.302 Abs		R^2=0.99963, 25.125 %Abs	RK1:27->A02@2
ATX Std 4	0.297 Abs [0.2995] {1.2 CV}		R^2=0.99963, 24.709 %Abs	RK1:27->B02@2
ATX Std 5	0.149 Abs		12.396 %Abs	RK1:28->C02@2
ATX Std 5	0.147 Abs [0.1480] {1.0 CV}		12.230 %Abs	RK1:28->D02@2
++++++++++++++++++++++++++++++++	++++++++++++++++++++++++		++++++++++++++++++++++++	++++++++++++++++++++++++
6/17/2020 4:54:19 PM				
ATX Control	0.601 Abs		50.000 %Abs	RK1:29->E02@2
ATX Control	0.575 Abs [0.5880] {3.1 CV}		47.837 %Abs [48.918 %Abs]	RK1:29->F02@3
**********	**********	**********	**********	**********
Statistic				
ATX Std 0 [MEAN]	1.2020			
ATX Std 0 [SD]	0.0057			
ATX Std 0 [%CV]	0.4706			
ATX Std 1 [MEAN]	1.0370			
ATX Std 1 [SD]	0.0099			
ATX Std 1 [%CV]	0.9546			
ATX Std 1 [%DIFF]				
ATX Std 2 [MEAN]	0.8315			
ATX Std 2 [SD]	0.0092			
ATX Std 2 [%CV]	1.1055			
ATX Std 2 [%DIFF]				
ATX Std 3 [MEAN]	0.5365			
ATX Std 3 [SD]	0.0021			
ATX Std 3 [%CV]	0.3954			
ATX Std 3 [%DIFF]				
ATX Std 4 [MEAN]	0.2995			
ATX Std 4 [SD]	0.0035			
ATX Std 4 [%CV]	1.1805			
ATX Std 4 [%DIFF]				
ATX Std 5 [MEAN]	0.1480			
ATX Std 5 [SD]	0.0014			
ATX Std 5 [%CV]	0.9556			

ANATOXIN - Assay Calibration Report

Name	Absorbance	Concentration	Interpretation	Position
ATX Control [MEAN]	0.5880			
ATX Control [SD]	0.0184			
ATX Control [%CV]	3.1267			

Assay Curve

y = (A-D)/(1+(x/C)^B) + D
Weight: NONE
A = 1.2030
B = 1.0555
C = 0.85152
D = -0.0077739
R2 coef = 0.99963
50% = 0.843