



## Saxitoxin ELISA Summary Report

Office of Water Quality - Watershed Assessment and Planning Branch

<b>Sample #</b>	<b>Location</b>	<b>Date Collected</b>	<b>Date Analyzed</b>	<b>Conc. (ppb)</b>
AB43871	Summit Lake - State Park	8/17/2020	8/20/2020	< 0.05
AB43872	Kunkel Beach @ Ouabache SP (10x dilution)	8/17/2020	8/20/2020	1.84
AB43873	Pokagon State Park	8/17/2020	8/20/2020	< 0.05
AB43874	Potawatomi Inn's Beach	8/17/2020	8/20/2020	< 0.05
AB43875	Chain O'Lakes SP	8/17/2020	8/20/2020	< 0.05
AB43876	Potato Creek State Park	8/17/2020	8/20/2020	< 0.05
AB43877	Lost Bridge West SRA	8/17/2020	8/20/2020	< 0.05
AB43878	Mississinewa Lake Miami SRA	8/17/2020	8/20/2020	< 0.05
AB43879	Summit Lake - State Park (Field Duplicate)	8/17/2020	8/20/2020	< 0.05
AB43880	Field Blank	8/17/2020	8/20/2020	< 0.05
AB43881	Ft. Harrison SP Dog Lake	8/19/2020	8/20/2020	< 0.05

## Test Report (by Request)

## Test Information

Request: 8/20/2020 2:49:19 PM

Date: 8/20/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
STX Std 0	SAXITOXIN	1.522 Abs	0.002 µg/L	R <sup>2</sup> =0.99945, 98.960		19J1672
STX Std 0	SAXITOXIN	1.554 Abs [1.5380] {1.5 CV}	0.000 µg/L [0.001] {1.5 CV}	R <sup>2</sup> =0.99945, 101.04		19J1672
STX Std 1	SAXITOXIN	1.224 Abs	0.020 µg/L	R <sup>2</sup> =0.99945, 79.584		19J1672
STX Std 1	SAXITOXIN	1.229 Abs [1.2265] {0.3 CV}	0.019 µg/L [0.019] {0.3 CV}	R <sup>2</sup> =0.99945, 79.909		19J1672
STX Std 2	SAXITOXIN	0.855 Abs	0.048 µg/L	R <sup>2</sup> =0.99945, 55.592		19J1672
STX Std 2	SAXITOXIN	0.811 Abs [0.8330] {3.7 CV}	0.053 µg/L [0.050] {7.1 CV}	R <sup>2</sup> =0.99945, 52.731		19J1672
STX Std 3	SAXITOXIN	0.534 Abs	0.101 µg/L	R <sup>2</sup> =0.99945, 34.720		19J1672
STX Std 3	SAXITOXIN	0.526 Abs [0.5300] {1.1 CV}	0.103 µg/L [0.102] {1.1 CV}	R <sup>2</sup> =0.99945, 34.200		19J1672
STX Std 4	SAXITOXIN	0.350 Abs	0.180 µg/L	R <sup>2</sup> =0.99945, 22.757		19J1672
STX Std 4	SAXITOXIN	0.343 Abs [0.3465] {1.4 CV}	0.185 µg/L [0.183] {1.4 CV}	R <sup>2</sup> =0.99945, 22.302		19J1672
STX Std 5	SAXITOXIN	0.203 Abs	> 0.400 µg/L	13.199 %Abs		19J1672
STX Std 5	SAXITOXIN	0.198 Abs [0.2005] {1.8 CV}	> 0.400 µg/L	12.874 %Abs		19J1672
STX Control (0.060-0.090)	SAXITOXIN	0.683 Abs	0.070 µg/L	44.408 %Abs		19J1672
STX Control (0.060-0.090)	SAXITOXIN	0.659 Abs [0.6710] {2.5 CV}	0.074 µg/L [0.072] {2.5 CV}	42.848 %Abs [43.628]		19J1672

## Note

Signature

David Jordan

Date: 8/20/2020

# Test Report (by Request)

**Test Information**

 Request: 8/20/2020 3:03:54 PM  
 Date: 8/20/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	SAXITOXIN	1.408 Abs	0.009 µg/L	<b>LOW, 91.547 %ABS</b>	0.020 - 0.400	19J1672
LRB	SAXITOXIN	1.440 Abs [1.4240] {1.6 CV}	0.007 µg/L [0.008] {1.4 CV}	<b>LOW, 93.628 %ABS</b>	0.020 - 0.400	19J1672
LFB	SAXITOXIN	0.714 Abs	0.066 µg/L	46.424 %Abs	0.020 - 0.400	19J1672
LFB	SAXITOXIN	0.687 Abs [0.7005] {2.7 CV}	0.070 µg/L [0.068] {4.0 CV}	44.668 %Abs [45.546]	0.020 - 0.400	19J1672
AB43871	SAXITOXIN	1.390 Abs	0.011 µg/L	<b>LOW, 90.377 %ABS</b>	0.020 - 0.400	19J1672
AB43871	SAXITOXIN	1.357 Abs [1.3735] {1.7 CV}	0.013 µg/L [0.012] {1.7 CV}	<b>LOW, 88.231 %ABS</b>	0.020 - 0.400	19J1672
AB43871MS	SAXITOXIN	0.640 Abs	0.078 µg/L	41.612 %Abs	0.020 - 0.400	19J1672
AB43871MS	SAXITOXIN	0.601 Abs [0.6205] {4.4 CV}	0.085 µg/L [0.082] {6.0 CV}	39.077 %Abs [40.345]	0.020 - 0.400	19J1672
AB43871MSD	SAXITOXIN	0.655 Abs	0.075 µg/L	42.588 %Abs	0.020 - 0.400	19J1672
AB43871MSD	SAXITOXIN	0.630 Abs [0.6425] {2.8 CV}	0.079 µg/L [0.077] {3.0 CV}	40.962 %Abs [41.775]	0.020 - 0.400	19J1672
AB43872	SAXITOXIN	0.060 Abs	> 0.400 µg/L	3.901 %Abs, Out(LR)	0.020 - 0.400	19J1672
AB43872	SAXITOXIN	0.057 Abs [0.0585] {3.6 CV}	> 0.400 µg/L	3.706 %Abs, Out(LR)	0.020 - 0.400	19J1672
AB43873	SAXITOXIN	1.434 Abs	0.009 µg/L	<b>LOW, 93.238 %ABS</b>	0.020 - 0.400	19J1672
AB43873	SAXITOXIN	1.395 Abs [1.4145] {1.9 CV}	0.011 µg/L [0.010] {1.9 CV}	<b>LOW, 90.702 %ABS</b>	0.020 - 0.400	19J1672
AB43874	SAXITOXIN	1.414 Abs	0.010 µg/L	<b>LOW, 91.938 %ABS</b>	0.020 - 0.400	19J1672
AB43874	SAXITOXIN	1.395 Abs [1.4045] {1.0 CV}	0.011 µg/L [0.010] {6.0 CV}	<b>LOW, 90.702 %ABS</b>	0.020 - 0.400	19J1672
AB43875	SAXITOXIN	1.263 Abs	0.019 µg/L	<b>LOW, 82.120 %ABS</b>	0.020 - 0.400	19J1672
AB43875	SAXITOXIN	1.281 Abs [1.2720] {1.0 CV}	0.018 µg/L [0.019] {3.0 CV}	<b>LOW, 83.290 %ABS</b>	0.020 - 0.400	19J1672
AB43876	SAXITOXIN	0.922 Abs	0.046 µg/L	59.948 %Abs	0.020 - 0.400	19J1672
AB43876	SAXITOXIN	0.874 Abs [0.8980] {3.8 CV}	0.051 µg/L [0.049] {7.0 CV}	56.827 %Abs [58.386]	0.020 - 0.400	19J1672
AB43877	SAXITOXIN	1.217 Abs	0.022 µg/L	79.129 %Abs	0.020 - 0.400	19J1672
AB43877	SAXITOXIN	1.199 Abs [1.2080] {1.1 CV}	0.023 µg/L [0.023] {3.0 CV}	77.958 %Abs [78.544]	0.020 - 0.400	19J1672
AB43878	SAXITOXIN	1.396 Abs	0.011 µg/L	<b>LOW, 90.767 %ABS</b>	0.020 - 0.400	19J1672
AB43878	SAXITOXIN	1.366 Abs [1.3810] {1.5 CV}	0.012 µg/L [0.012] {6.0 CV}	<b>LOW, 88.817 %ABS</b>	0.020 - 0.400	19J1672
AB43879	SAXITOXIN	1.359 Abs	0.013 µg/L	<b>LOW, 88.362 %ABS</b>	0.020 - 0.400	19J1672
AB43879	SAXITOXIN	1.362 Abs [1.3605] {0.2 CV}	0.013 µg/L [0.013] {0.2 CV}	<b>LOW, 88.557 %ABS</b>	0.020 - 0.400	19J1672
AB43880	SAXITOXIN	1.526 Abs	0.002 µg/L	<b>LOW, 99.220 %ABS</b>	0.020 - 0.400	19J1672
AB43880	SAXITOXIN	1.509 Abs [1.5175] {0.8 CV}	0.003 µg/L [0.003] {2.0 CV}	<b>LOW, 98.114 %ABS</b>	0.020 - 0.400	19J1672
AB43881	SAXITOXIN	1.395 Abs	0.011 µg/L	<b>LOW, 90.702 %ABS</b>	0.020 - 0.400	19J1672
AB43881	SAXITOXIN	1.388 Abs [1.3915] {0.4 CV}	0.011 µg/L [0.011] {0.4 CV}	<b>LOW, 90.247 %ABS</b>	0.020 - 0.400	19J1672
LFB 2	SAXITOXIN	0.683 Abs	0.070 µg/L	44.408 %Abs	0.020 - 0.400	19J1672
LFB 2	SAXITOXIN	0.670 Abs [0.6765] {1.4 CV}	0.072 µg/L [0.071] {2.0 CV}	43.563 %Abs [43.986]	0.020 - 0.400	19J1672
LRB 2	SAXITOXIN	1.485 Abs	0.004 µg/L	<b>LOW, 96.554 %ABS</b>	0.020 - 0.400	19J1672
LRB 2	SAXITOXIN	1.484 Abs [1.4845] {0.0 CV}	0.005 µg/L [0.004] {1.0 CV}	<b>LOW, 96.489 %ABS</b>	0.020 - 0.400	19J1672

**Note**

 Signature *David Jordan*

Date: 8/20/2020

**Assay Information**

Assay Name: SAXITOXIN  
 Version: 2  
 Temperature: Room Temperature  
 Last Modified By: Security disabled  
 Units: µg/L  
 Assay Description: PN. 52255B  
 Assay Substances: Controls:

Assay Mode: 4-Parameter Logistic Weight by:None  
 Well Type: Flat bottom  
 Last Modified On: 7/25/2019 3:55:28 PM  
 Normal: 0.020 - 0.400  
 # of decimals: 3  
 Kit Lot Number: 19J1672

STX Control (0.060-0.090)  
 Standards:  
 STX Std 0, Concentration = 0.000, Minimum number to use: 2  
 STX Std 1, Concentration = 0.020, Minimum number to use: 2  
 STX Std 2, Concentration = 0.050, Minimum number to use: 2  
 STX Std 3, Concentration = 0.100, Minimum number to use: 2  
 STX Std 4, Concentration = 0.200, Minimum number to use: 2  
 STX Std 5, Concentration = 0.400, Minimum number to use: 2  
 Curve valid interval: 1 days 0 hours  
 Axis Mode: Y = Abs, X = Log(Conc)

**Assay Calibration**

Current Calibration Status: "

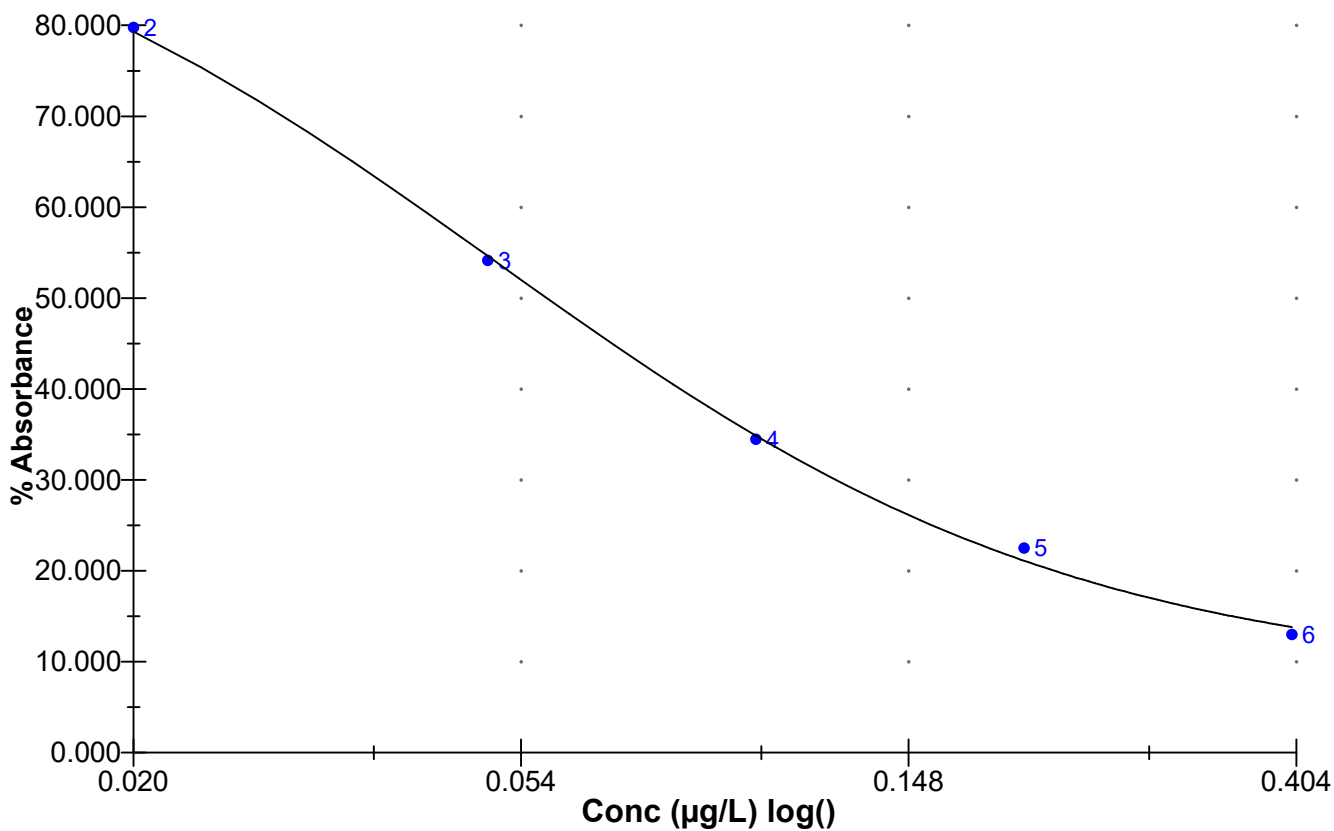
"

Name	Absorbance	Concentration	Interpretation	Position
<b>8/20/2020 2:49:19 PM</b>				
STX Std 0	1.522 Abs		R <sup>2</sup> =0.99945, 98.960 %Abs	RK1:23->A01@2
STX Std 0	1.554 Abs [1.5380] {1.5 CV}		R <sup>2</sup> =0.99945, 101.040 %Abs	RK1:23->B01@2
STX Std 1	1.224 Abs		R <sup>2</sup> =0.99945, 79.584 %Abs	RK1:24->C01@2
STX Std 1	1.229 Abs [1.2265] {0.3 CV}		R <sup>2</sup> =0.99945, 79.909 %Abs	RK1:24->D01@2
STX Std 2	0.855 Abs		R <sup>2</sup> =0.99945, 55.592 %Abs	RK1:25->E01@2
STX Std 2	0.811 Abs [0.8330] {3.7 CV}		R <sup>2</sup> =0.99945, 52.731 %Abs	RK1:25->F01@3
STX Std 3	0.534 Abs		R <sup>2</sup> =0.99945, 34.720 %Abs	RK1:26->G01@3
STX Std 3	0.526 Abs [0.5300] {1.1 CV}		R <sup>2</sup> =0.99945, 34.200 %Abs	RK1:26->H01@3
STX Std 4	0.350 Abs		R <sup>2</sup> =0.99945, 22.757 %Abs	RK1:27->A02@2
STX Std 4	0.343 Abs [0.3465] {1.4 CV}		R <sup>2</sup> =0.99945, 22.302 %Abs	RK1:27->B02@2
STX Std 5	0.203 Abs		13.199 %Abs	RK1:28->C02@2
STX Std 5	0.198 Abs [0.2005] {1.8 CV}		12.874 %Abs	RK1:28->D02@2
*****				
<b>8/20/2020 2:49:19 PM</b>				
STX Control (0.060-0.090)	0.683 Abs		44.408 %Abs	RK1:29->E02@2
STX Control (0.060-0.090)	0.659 Abs [0.6710] {2.5 CV}		42.848 %Abs [43.628 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
STX Std 0 [MEAN]	1.5380			
STX Std 0 [SD]	0.0226			
STX Std 0 [%CV]	1.4712			
STX Std 1 [MEAN]	1.2265			
STX Std 1 [SD]	0.0035			
STX Std 1 [%CV]	0.2883			
STX Std 1 [%DIFF]				
STX Std 2 [MEAN]	0.8330			
STX Std 2 [SD]	0.0311			
STX Std 2 [%CV]	3.7350			
STX Std 2 [%DIFF]				
STX Std 3 [MEAN]	0.5300			
STX Std 3 [SD]	0.0057			
STX Std 3 [%CV]	1.0673			
STX Std 3 [%DIFF]				
STX Std 4 [MEAN]	0.3465			
STX Std 4 [SD]	0.0049			
STX Std 4 [%CV]	1.4285			
STX Std 4 [%DIFF]				
STX Std 5 [MEAN]	0.2005			
STX Std 5 [SD]	0.0035			
STX Std 5 [%CV]	1.7634			

Name	Absorbance	Concentration	Interpretation	Position
STX Control (0.060-0.090) [MEAN]	0.6710			
STX Control (0.060-0.090) [SD]	0.0170			
STX Control (0.060-0.090) [%CV]	2.5292			

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.5403  
 B = 1.3181  
 C = 0.050803  
 D = 0.12512  
 R2 coef = 0.99945  
 50% = 0.058



# Test Report (by Request)

**Test Information**

Request: 8/20/2020 9:56:28 PM

Date: 8/20/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
STX Std 0	SAXITOXIN	1.449 Abs	0.000 µg/L	R <sup>2</sup> =0.99988, 103.72		19L2082
STX Std 0	SAXITOXIN	1.345 Abs [1.3970] {5.3 CV}	0.006 µg/L [0.003] {1.1 CV}	R <sup>2</sup> =0.99988, 96.278		19L2082
STX Std 1	SAXITOXIN	1.145 Abs	0.020 µg/L	R <sup>2</sup> =0.99988, 81.961		19L2082
STX Std 1	SAXITOXIN	1.159 Abs [1.1520] {0.9 CV}	0.019 µg/L [0.019] {0.9 CV}	R <sup>2</sup> =0.99988, 82.963		19L2082
STX Std 2	SAXITOXIN	0.840 Abs	0.048 µg/L	R <sup>2</sup> =0.99988, 60.129		19L2082
STX Std 2	SAXITOXIN	0.797 Abs [0.8185] {3.7 CV}	0.053 µg/L [0.050] {7.1 CV}	R <sup>2</sup> =0.99988, 57.051		19L2082
STX Std 3	SAXITOXIN	0.547 Abs	0.096 µg/L	R <sup>2</sup> =0.99988, 39.155		19L2082
STX Std 3	SAXITOXIN	0.527 Abs [0.5370] {2.6 CV}	0.101 µg/L [0.098] {3.5 CV}	R <sup>2</sup> =0.99988, 37.724		19L2082
STX Std 4	SAXITOXIN	0.313 Abs	0.199 µg/L	R <sup>2</sup> =0.99988, 22.405		19L2082
STX Std 4	SAXITOXIN	0.296 Abs [0.3045] {3.9 CV}	0.214 µg/L [0.206] {5.5 CV}	R <sup>2</sup> =0.99988, 21.188		19L2082
STX Std 5	SAXITOXIN	0.196 Abs	0.384 µg/L	R <sup>2</sup> =0.99988, 14.030		19L2082
STX Std 5	SAXITOXIN	0.193 Abs [0.1945] {1.1 CV}	0.393 µg/L [0.389] {1.1 CV}	R <sup>2</sup> =0.99988, 13.815		19L2082
STX Control (0.060-0.090)	SAXITOXIN	0.659 Abs	0.073 µg/L	47.173 %Abs		19L2082
STX Control (0.060-0.090)	SAXITOXIN	0.630 Abs [0.6445] {3.2 CV}	0.078 µg/L [0.075] {4.4 CV}	45.097 %Abs [46.135]		19L2082

**Note**

Signature

Date: 8/20/2020

# Test Report (by Request)

**Test Information**

 Request: 8/20/2020 9:57:41 PM  
 Date: 8/20/2020

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Lot #
LRB	SAXITOXIN	1.500 Abs	0.000 µg/L	<b>LOW, 107.373 %ABS</b>	0.020 - 0.400	19L2082
LRB	SAXITOXIN	1.485 Abs [1.4925] {0.7 CV}	0.000 µg/L [0.000]	<b>LOW, 106.299 %ABS</b>	0.020 - 0.400	19L2082
LFB	SAXITOXIN	0.661 Abs	0.073 µg/L	47.316 %Abs	0.020 - 0.400	19L2082
LFB	SAXITOXIN	0.635 Abs [0.6480] {2.8 CV}	0.077 µg/L [0.075] {3.0 CV}	45.455 %Abs [46.385 %]	0.020 - 0.400	19L2082
AB43872 10X	SAXITOXIN	0.338 Abs	1.800 µg/L	<b>HIGH, 24.195 %ABS</b>	0.020 - 0.400	19L2082
AB43872 10X	SAXITOXIN	0.328 Abs [0.3330] {2.1 CV}	1.870 µg/L [1.835] {2.1 CV}	<b>HIGH, 23.479 %ABS</b>	0.020 - 0.400	19L2082
AB43872LD 10X	SAXITOXIN	0.341 Abs	1.780 µg/L	<b>HIGH, 24.409 %ABS</b>	0.020 - 0.400	19L2082
AB43872LD 10X	SAXITOXIN	0.321 Abs [0.3310] {4.3 CV}	1.920 µg/L [1.850] {4.3 CV}	<b>HIGH, 22.978 %ABS</b>	0.020 - 0.400	19L2082

**Note**

 Signature David Jordan  
 Date: 8/20/2020

**Assay Information**

Assay Name: SAXITOXIN  
 Version: 2  
 Temperature: Room Temperature  
 Last Modified By: Security disabled  
 Units: µg/L  
 Assay Description: PN. 52255B  
 Assay Substances: Controls:

Assay Mode: 4-Parameter Logistic Weight by:None  
 Well Type: Flat bottom  
 Last Modified On: 7/25/2019 3:55:28 PM  
 Normal: 0.020 - 0.400  
 # of decimals: 3  
 Kit Lot Number: 19L2082

STX Control (0.060-0.090)  
 Standards:  
 STX Std 0, Concentration = 0.000, Minimum number to use: 2  
 STX Std 1, Concentration = 0.020, Minimum number to use: 2  
 STX Std 2, Concentration = 0.050, Minimum number to use: 2  
 STX Std 3, Concentration = 0.100, Minimum number to use: 2  
 STX Std 4, Concentration = 0.200, Minimum number to use: 2  
 STX Std 5, Concentration = 0.400, 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
<b>8/20/2020 9:56:28 PM</b>				
STX Std 0	1.449 Abs		R <sup>2</sup> =0.99988, 103.722 %Abs	RK1:23->A01@2
STX Std 0	1.345 Abs [1.3970] {5.3 CV}		R <sup>2</sup> =0.99988, 96.278 %Abs	RK1:23->B01@2
STX Std 1	1.145 Abs		R <sup>2</sup> =0.99988, 81.961 %Abs	RK1:24->C01@2
STX Std 1	1.159 Abs [1.1520] {0.9 CV}		R <sup>2</sup> =0.99988, 82.963 %Abs	RK1:24->D01@2
STX Std 2	0.840 Abs		R <sup>2</sup> =0.99988, 60.129 %Abs	RK1:25->E01@2
STX Std 2	0.797 Abs [0.8185] {3.7 CV}		R <sup>2</sup> =0.99988, 57.051 %Abs	RK1:25->F01@3
STX Std 3	0.547 Abs		R <sup>2</sup> =0.99988, 39.155 %Abs	RK1:26->G01@3
STX Std 3	0.527 Abs [0.5370] {2.6 CV}		R <sup>2</sup> =0.99988, 37.724 %Abs	RK1:26->H01@3
STX Std 4	0.313 Abs		R <sup>2</sup> =0.99988, 22.405 %Abs	RK1:27->A02@2
STX Std 4	0.296 Abs [0.3045] {3.9 CV}		R <sup>2</sup> =0.99988, 21.188 %Abs	RK1:27->B02@2
STX Std 5	0.196 Abs		R <sup>2</sup> =0.99988, 14.030 %Abs	RK1:28->C02@2
STX Std 5	0.193 Abs [0.1945] {1.1 CV}		R <sup>2</sup> =0.99988, 13.815 %Abs	RK1:28->D02@2
*****				
<b>8/20/2020 9:56:28 PM</b>				
STX Control (0.060-0.090)	0.659 Abs		47.173 %Abs	RK1:29->E02@2
STX Control (0.060-0.090)	0.630 Abs [0.6445] {3.2 CV}		45.097 %Abs [46.135 %Abs]	RK1:29->F02@3
*****				
<b>Statistic</b>				
STX Std 0 [MEAN]	1.3970			
STX Std 0 [SD]	0.0735			
STX Std 0 [%CV]	5.2641			
STX Std 1 [MEAN]	1.1520			
STX Std 1 [SD]	0.0099			
STX Std 1 [%CV]	0.8593			
STX Std 1 [%DIFF]				
STX Std 2 [MEAN]	0.8185			
STX Std 2 [SD]	0.0304			
STX Std 2 [%CV]	3.7148			
STX Std 2 [%DIFF]				
STX Std 3 [MEAN]	0.5370			
STX Std 3 [SD]	0.0141			
STX Std 3 [%CV]	2.6335			
STX Std 3 [%DIFF]				
STX Std 4 [MEAN]	0.3045			
STX Std 4 [SD]	0.0120			
STX Std 4 [%CV]	3.9477			
STX Std 4 [%DIFF]				
STX Std 5 [MEAN]	0.1945			
STX Std 5 [SD]	0.0021			
STX Std 5 [%CV]	1.0906			



Name	Absorbance	Concentration	Interpretation	Position
STX Std 5 [%DIFF]				
STX Control (0.060-0.090) [MEAN]	0.6445			
STX Control (0.060-0.090) [SD]	0.0205			
STX Control (0.060-0.090) [%CV]	3.1817			

**Assay Curve**

$y = (A-D)/(1+(x/C)^B) + D$   
 Weight: NONE  
 A = 1.3971  
 B = 1.3353  
 C = 0.059495  
 D = 0.096263  
 R2 coef = 0.99988  
 50% = 0.066

