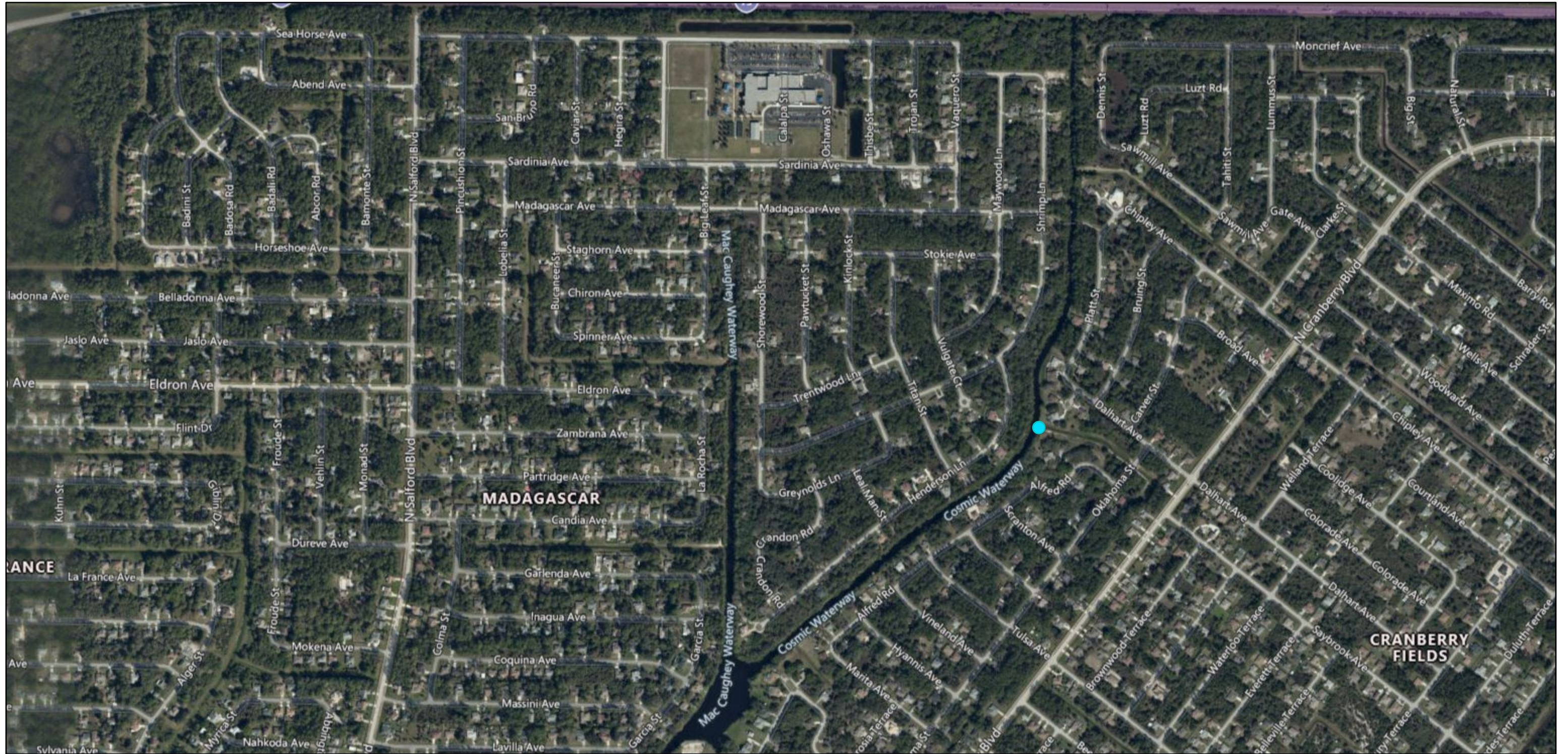


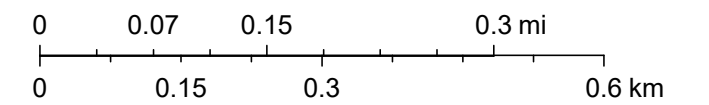
# Algal Bloom Sample Locations



6/1/2022, 1:40:04 PM

● FL\_Algal\_Bloom\_Site\_Visits

1:9,028



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# Biological Analysis Report

**WQAP-2022-05-25-04**

Florida Department of Environmental Protection  
Central Laboratory  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
DOH Accreditation E31780

Event Description: **Algal Bloom Response -SOROC**  
Request ID: **RQ-2022-03-07-14**  
Customer: **WQAP**  
Project ID: **BLOOM-RESP**

Send Reports to:  
FL Dept. of Environmental Protection  
2295 Victoria AVE  
Suite 364  
Fort Myers, FL 33901  
Attn: Kirby Wolfe

For additional information please contact  
Cheryl Swanson - Administrator  
Sarah Menz, Ph.D. - Bench Biology & Aquatic  
Toxicity  
Puja Jasrotia, Ph.D. - Molecular Biology & Taxonomy  
Thekkekalathil Chandrasekhar, Ph.D, QA Officer  
Phone (850) 245-8177

Certified by: Puja Jasrotia, Environmental Administrator

Date Certified: 09-JUN-2022 15:00



## Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: AlgalBio and Chlorophyll/Grain Size/BOD.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to  $1.3 \times 10^3$  or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (\*\*) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
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- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
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- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Cosmic Canal - Oklahoma St.

Collection Date/Time: 05/24/2022 10:45

Field ID: HAB-SD-052422-1045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329859	SOP-AB05	Dominant sample taxon**	No Dominant				

Ref. Method and Comment:  
 SOP-AB05: There was no clear dominant taxon in the sample.

Sample Location: Cosmic Canal - Oklahoma St.

Collection Date/Time: 05/24/2022 10:45

Field ID: HAB-SD-052422-1045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329862	SM 10200 H (mod.)	Chlorophyll-a, Corrected	100		ug/L	P414647	
		Phaeophytin-a	8.6		ug/L	P414647	
		Chlorophyll-a, Uncorrected	110		ug/L	P414647	

Ref. Method and Comment:  
 SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

## Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)

Batch ID: P414647

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.89	U	ug/L
Chlorophyll-a, Uncorrected	0.65	U	ug/L
Phaeophytin-a	0.98	U	ug/L

## Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)

Batch ID: P414647

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	95.4		P	84 - 116

## Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected	95.4				

## Reference Method Descriptions

Method	Description	Associated Samples
SM 10200 H (mod.)	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2329862
SOP-AB05	Assessment of dominant algal taxa in bloom or mat sample	2329859

## Preparation and Analysis Log

<b>Ref. Method</b>	<b>Received Date</b>	<b>Prep Date/Time</b>	<b>Prepared By</b>	<b>Analysis Date/Time</b>	<b>Analyzed By</b>	<b>Associated Samples</b>
SM 10200 H (mod.)	05/25/2022	05/25/2022 14:10	Amber S. Eells	06/01/2022 09:26	Joel Wharton	2329862
SOP-AB05	05/25/2022			05/25/2022 13:23	Rachael Dragon	2329859

# Chemical Analysis Report

**WQAP-2022-05-25-04**

Florida Department of Environmental Protection  
Central Laboratory  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
DOH Accreditation E31780

Event Description: **Algal Bloom Response -SOROC**  
Request ID: **RQ-2022-03-07-14**  
Customer: **WQAP**  
Project ID: **BLOOM-RESP**

Send Reports to:  
FL Dept. of Environmental Protection  
2295 Victoria AVE  
Suite 364  
Fort Myers, FL 33901  
Attn: Kirby Wolfe

For additional information please contact  
Colin Wright, Ph.D.  
Liang-Tsair Lin, Ph.D.  
Kerry Tate, Ph.D.  
Dr. rer. nat. Bettina Steinbock  
Thekkekalathil Chandrasekhar, Ph.D, QA Officer  
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 17-JUN-2022 11:45



## Case Narrative

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- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
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Sample Location: Cosmic Canal - Oklahoma St.

Collection Date/Time: 05/24/2022 10:45

Field ID: HAB-SD-052422-1045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329865	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P414339	
		Cylindrospermopsin	0.10	U	ug/L	P414339	
		Desmethyl microcystin LR	0.25	U	ug/L	P414339	
		Microcystin HllR**	0.25	U	ug/L	P414339	
		Microcystin HtyR**	0.25	U	ug/L	P414339	
		Microcystin LA	0.11	I	ug/L	P414339	
		Microcystin LF	0.10	U	ug/L	P414339	
		Microcystin LR	0.25	U	ug/L	P414339	
		Microcystin LW	0.25	U	ug/L	P414339	
		Microcystin LY	0.10	U	ug/L	P414339	
		Microcystin RR	0.10	U	ug/L	P414339	
		Microcystin WR	0.50	U	ug/L	P414339	
		Microcystin YR	0.25	U	ug/L	P414339	
		Nodularin-R**	0.10	U	ug/L	P414339	
2329870	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P415146	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P414563	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P414641	
	EPA 365.1 Rev. 2.0	Total-P	0.091		mg P/L	P414410	
2329871	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P414425	



## Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0  
Batch ID: P415146

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0  
Batch ID: P414563

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0  
Batch ID: P414641

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0  
Batch ID: P414410

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved  
Batch ID: P414425

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8321B  
Batch ID: P414339

Component	Result	Code	Units
Anatoxin-a	0.25	U	ug/L
Cylindrospermopsin	0.10	U	ug/L
Desmethyl microcystin LR	0.25	U	ug/L
Microcystin HIR	0.25	U	ug/L
Microcystin HtyR	0.25	U	ug/L
Microcystin LA	0.10	U	ug/L
Microcystin LF	0.10	U	ug/L
Microcystin LR	0.25	U	ug/L
Microcystin LW	0.25	U	ug/L
Microcystin LY	0.10	U	ug/L
Microcystin RR	0.10	U	ug/L
Microcystin WR	0.50	U	ug/L
Microcystin YR	0.25	U	ug/L
Nodularin-R	0.10	U	ug/L

## Quality Assurance Report Laboratory Control Sample Accuracy

**Reference Method: EPA 350.1 Rev. 2.0**  
**Batch ID: P415146**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.2		P	90 - 110

**Reference Method: EPA 351.2 Rev. 2.0**  
**Batch ID: P414563**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.9		P	90 - 110

**Reference Method: EPA 353.2 Rev. 2.0**  
**Batch ID: P414641**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

**Reference Method: EPA 365.1 Rev. 2.0**  
**Batch ID: P414410**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	102		P	90 - 110

**Reference Method: EPA 365.1 Rev. 2.0 dissolved**  
**Batch ID: P414425**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	102		P	90 - 110

**Reference Method: EPA 8321B**  
**Batch ID: P414339**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	74.7		P	40 - 150
Cylindrospermopsin	77.3		P	40 - 150
Desmethyl microcystin LR	85.7		P	40 - 150
Microcystin HIR	69.4		P	40 - 150
Microcystin HtyR	71.7		P	40 - 150
Microcystin LA	56.3		P	40 - 150
Microcystin LF	68.9		P	40 - 150
Microcystin LR	76.2		P	40 - 150
Microcystin LW	51.2		P	40 - 150
Microcystin LY	52.7		P	40 - 150
Microcystin RR	78.4		P	40 - 150
Microcystin WR	78.3		P	40 - 150
Microcystin YR	75.6		P	40 - 150
Nodularin-R	71.5		P	40 - 150

## Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0  
 Batch ID: P415146

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329886	Ammonia-N	96.0	95.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0  
 Batch ID: P414563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329701	Kjeldahl Nitrogen	91.5	92.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0  
 Batch ID: P414641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329857	NO2NO3-N	96.0	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0  
 Batch ID: P414410

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329857	Total-P	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved  
 Batch ID: P414425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329783	O-Phosphate-P	99.0	99.5	P/P	90 - 110

Reference Method: EPA 8321B  
 Batch ID: P414339

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329415	Anatoxin-a	83.7	96.1	P/P	40 - 150
2329415	Cylindrospermopsin	78.7	85.7	P/P	40 - 150
2329415	Desmethyl microcystin LR	86.0	92.4	P/P	40 - 150
2329415	Microcystin HiLR	69.7	81.1	P/P	40 - 150
2329415	Microcystin HtyR	72.7	77.9	P/P	40 - 150
2329415	Microcystin LA	63.1	51.8	P/P	40 - 150
2329415	Microcystin LF	63.6	55.8	P/P	40 - 150
2329415	Microcystin LR	73.2	77.6	P/P	40 - 150
2329415	Microcystin LW	47.9	64.1	P/P	40 - 150
2329415	Microcystin LY	57.7	51.6	P/P	40 - 150
2329415	Microcystin RR	78.0	86.5	P/P	40 - 150
2329415	Microcystin WR	69.4	81.4	P/P	40 - 150
2329415	Microcystin YR	78.3	85.5	P/P	40 - 150
2329415	Nodularin-R	71.6	79.0	P/P	40 - 150

## Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0  
 Batch ID: P415146

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329886	Ammonia-N	0.362	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0  
 Batch ID: P414563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329701	Kjeldahl Nitrogen	0.685	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0  
 Batch ID: P414641

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329857	NO2NO3-N	0.519	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0  
 Batch ID: P414410

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329857	Total-P	1.79	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved  
 Batch ID: P414425

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329783	O-Phosphate-P	0.504	Spike	P	0 - 20

Reference Method: EPA 8321B  
 Batch ID: P414339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329415	Anatoxin-a	13.8	Spike	P	0 - 30
2329415	Cylindrospermopsin	8.51	Spike	P	0 - 30
2329415	Desmethyl microcystin LR	7.11	Spike	P	0 - 30
2329415	Microcystin HllR	15.1	Spike	P	0 - 30
2329415	Microcystin HtyR	6.95	Spike	P	0 - 30
2329415	Microcystin LA	16.7	Spike	P	0 - 30
2329415	Microcystin LF	13.2	Spike	P	0 - 30
2329415	Microcystin LR	3.85	Spike	P	0 - 30
2329415	Microcystin LW	29.0	Spike	P	0 - 30
2329415	Microcystin LY	11.1	Spike	P	0 - 30
2329415	Microcystin RR	6.28	Spike	P	0 - 30
2329415	Microcystin WR	15.9	Spike	P	0 - 30
2329415	Microcystin YR	8.79	Spike	P	0 - 30
2329415	Nodularin-R	9.78	Spike	P	0 - 30

## Quality Assurance Report Precision

\* Sample, spike and/or laboratory control sample precision (LCS) is reported.

## Quality Assurance Report Surrogates

Lab Sample ID: 2329865  
Field Sample ID: HAB-SD-052422-1045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	69.7	P	30 - 160

## Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B  
Run ID: A112405  
Included Lab Sample IDs: 2329865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	85.1	84.3	P/P	50 - 160
Cylindrospermopsin	91.3	89.5	P/P	50 - 160
Desmethyl microcystin LR	92.9	86.9	P/P	50 - 160
Microcystin HllR	80.8	78.1	P/P	50 - 160
Microcystin HtyR	79.0	81.7	P/P	50 - 160
Microcystin LA	64.6	76.8	P/P	50 - 160
Microcystin LF	64.2	69.9	P/P	50 - 160
Microcystin LR	91.0	80.4	P/P	50 - 160
Microcystin LW	70.8	78.9	P/P	50 - 160
Microcystin LY	61.1	65.2	P/P	50 - 160
Microcystin RR	92.5	96.2	P/P	50 - 160
Microcystin WR	85.7	83.0	P/P	50 - 160
Microcystin YR	85.9	76.9	P/P	50 - 160
Nodularin-R	76.8	74.5	P/P	50 - 160

Reference Method: EPA 365.1 Rev. 2.0 dissolved  
Run ID: A112422  
Included Lab Sample IDs: 2329871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0  
Run ID: A112529  
Included Lab Sample IDs: 2329870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0  
Run ID: A112565  
Included Lab Sample IDs: 2329870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0  
Run ID: A112613  
Included Lab Sample IDs: 2329870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.3	98.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0  
Run ID: A112802  
Included Lab Sample IDs: 2329870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	97.9	P/P	90 - 110

## Quality Assurance Report Calibration Verification

\* Pass/Fail determinations are made for each bracketing calibration verification check.  
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.  
Where they are different, both control limits are provided.



## Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		MS
					LCS	SMP	
EPA 350.1 Rev. 2.0	Ammonia-N	98.2	96.0	95.6			0.362
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.9	91.5	92.2			0.685
EPA 353.2 Rev. 2.0	NO <sub>2</sub> NO <sub>3</sub> -N	97.5	96.0	96.5			0.519
EPA 365.1 Rev. 2.0	Total-P	102	103	105			1.79
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	99.0	99.5			0.504
EPA 8321B	Anatoxin-a	74.7	83.7	96.1			13.8
	Cylindrospermopsin	77.3	78.7	85.7			8.51
	Desmethyl microcystin LR	85.7	86.0	92.4			7.11
	Microcystin HiR	69.4	69.7	81.1			15.1
	Microcystin HtyR	71.7	72.7	77.9			6.95
	Microcystin LA	56.3	63.1	51.8			16.7
	Microcystin LF	68.9	63.6	55.8			13.2
	Microcystin LR	76.2	73.2	77.6			3.85
	Microcystin LW	51.2	47.9	64.1			29.0
	Microcystin LY	52.7	57.7	51.6			11.1
	Microcystin RR	78.4	78.0	86.5			6.28
	Microcystin WR	78.3	69.4	81.4			15.9
	Microcystin YR	75.6	78.3	85.5			8.79
	Nodularin-R	71.5	71.6	79.0			9.78

## Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2329870
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2329870
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2329870
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2329870
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2329871
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2329865

## Preparation and Analysis Log

<b>Ref. Method</b>	<b>Received Date</b>	<b>Prep Date/Time</b>	<b>Prepared By</b>	<b>Analysis Date/Time</b>	<b>Analyzed By</b>	<b>Associated Samples</b>
EPA 350.1 Rev. 2.0	05/25/2022			06/14/2022 10:02	Ping Hua	2329870
EPA 351.2 Rev. 2.0	05/25/2022	06/02/2022 15:43	Samantha L Bates	06/03/2022 14:41	Alexandra J Mattheus	2329870
EPA 353.2 Rev. 2.0	05/25/2022			06/01/2022 16:50	Nathaniel J Jones	2329870
EPA 365.1 Rev. 2.0	05/25/2022	05/27/2022 16:17	Adam P Silver	05/31/2022 12:12	James L Waggerby	2329870
EPA 365.1 Rev. 2.0 dissolved	05/25/2022			05/25/2022 18:25	Nathaniel J Jones	2329871
EPA 8321B	05/25/2022	05/26/2022 09:00	Manjita Shrestha	05/26/2022 13:54	Manjita Shrestha	2329865

**From:** [Reistad, Nicole](#)  
**To:** [Reaves, Shawn D](#)  
**Cc:** [Mullen, William](#)  
**Subject:** RE: RQ-2022-03-07-14  
**Date:** Thursday, May 26, 2022 3:18:27 PM

---

Hi Shawn,

The matrix for the algal bloom sample was freshwater.

Thanks,

*Nicole Reistad*

---

**From:** Reaves, Shawn D <Shawn.Reaves@FloridaDEP.gov>  
**Sent:** Thursday, May 26, 2022 11:14 AM  
**To:** Reistad, Nicole <Nicole.Reistad@FloridaDEP.gov>  
**Cc:** Mullen, William <William.Mullen@FloridaDEP.gov>  
**Subject:** RQ-2022-03-07-14  
**Importance:** High

Good Morning,

Can you verify the water matrix for the attached submittal form it's missing ?

Thanks

Shawn D. Reaves  
DEP-Lab Support  
Environmental Specialist I  
Office: 850-245-8082  
Direct: 58082  
Email: [Shawn.Reaves@FloridaDEP.gov](mailto:Shawn.Reaves@FloridaDEP.gov)

# Login Checklist

RQ- 2022-03-07-14

Login Station ID: #4

Shipping Method: FedEx | UPS | HD | Greyhound

Date/Time of Receipt: 05/25/22 @ 9:35

*Cooler Temperature	Samples Frozen? YES	* All Samples in Cooler Preserved with		Number of Sample Containers in Cooler	Evidence Tape				Waybill Tracking #
		HNO <sub>3</sub>	Formalin		Present?		*Intact?		
					Yes	No	Yes	No	
2.4				5		X			5225 5546 4490

**COOLER CHECK**

**\*All samples received on ice unless otherwise noted. HNO3 and Formalin preserved samples do NOT have a temperature requirement.**

- If the temperature of a cooler exceeds 6.0 oC (above 10.0 oC for W-1-4-DIOX and microbiology) or received without ice, identify affected samples in an NCR. **NCR#** \_\_\_\_\_
- DOH coolers can exceed 2.0 °C above the standard temperature (6.0 or 10.0 °C for W-1-4-DIOX) without login confirmation from customer for samples requiring ice preservation; identify affected samples in an NCR. **NCR#** \_\_\_\_\_
- If cooler or samples are received with a damaged Evidence Seal; identify the affected samples in an NCR. **NCR#** \_\_\_\_\_
- If coolers or samples are received late; identify the affected samples in an NCR. **NCR#** \_\_\_\_\_

Chain of Custody/ Field Sheet(s) Included? Yes ✓ No \_\_\_\_\_

Micro-Biology Overflow Chain of Custody/ Field Sheet(s) Included? Yes \_\_\_\_\_ No X

**CONTAINER CHECK**

Evidence Tape on Bottles? Yes \_\_\_\_\_ No \_\_\_\_\_ NA X Evidence Tape intact? Yes \_\_\_\_\_ No \_\_\_\_\_

If Criminal, photographs taken? Yes \_\_\_\_\_ No \_\_\_\_\_ Containers intact? Yes ✓ No \_\_\_\_\_

Caps on tight? Yes ✓ No \_\_\_\_\_

Sufficient Sample Volume: Yes ✓ No \_\_\_\_\_

If **NO** is checked above, generate an NCR listing affected sample IDs in its appropriate category. **NCR#** \_\_\_\_\_

**CHLORINE CHECK REQUIRED?** (Blue dot on container) Yes \_\_\_\_\_ No X Init: R

Chlorine detected? (One container checked per Field ID) Yes \_\_\_\_\_ No \_\_\_\_\_ Init: \_\_\_\_\_

If chlorine is detected, generate an NCR listing affected sample IDs . **NCR#** \_\_\_\_\_

**PRESERVATION CHECK (EXCLUDING SAMPLES SENT TO OVERFLOW LABS, "OV-")**

\*\*Acid Preserved Samples: pH < 2.0? Yes ✓ No \_\_\_\_\_ NA \_\_\_\_\_ Init: R

\*\*W-1-4-DIOX (Green dot on container) preserved to pH < 4.0? Yes \_\_\_\_\_ No \_\_\_\_\_ NA X Init: R

If samples were not preserved correctly, generate an NCR listing affected sample IDs . **NCR#** \_\_\_\_\_

Coolers Unpacked/Checked by: MR Date: 05/25/22 Event contains NCRs (Y/N)? N

Event: **Algal Bloom Response -SOROC**  
**WQAP-2022-05-25-04 (BLOOM-RESP)**  
**Date Received: 25-MAY-2022 09:35**

# Login Checklist

Login Preservation Equipment

Lot # & Exp: Date

Additional Comments:

Infrared Thermometer ID:	#4 Temp Gun EXP:10/19/2022
pH Test Strips 0 – 6	223819AV EXP:08/30/2023
pH Paper 0 – 3	N/A
pH Paper 0 – 13	207621 EXP:03/15/2024
Chlorine Test Strips	0070 EXP:02/2023

## ENCORE SAMPLES

**S-VOC-MS samples in Encores must be frozen within 48 hours of collection.**

Were Encore samples received? Yes \_\_\_\_\_ Init: \_\_\_\_\_

Date and time placed in freezer \_\_\_\_\_

Were all samples placed in freezer within 48 hours of collection? Yes \_\_\_\_\_ No \_\_\_\_\_

If no, were samples shipped on dry ice? Yes \_\_\_\_\_ No \_\_\_\_\_

If S-VOC-MS samples were not preserved correctly, generate an NCR listing affected sample IDs . NCR# \_\_\_\_\_

**FOR CLEAN LAB USE ONLY – Total Mercury Preservation Check(W-HG-AF;W-HG-AF-F):**

Samples preserved within 48 hours? Yes \_\_\_\_\_ No \_\_\_\_\_

Date and time samples preserved: \_\_\_\_\_



# Cyanobacteria Bloom Response Field Data Sheet (2019-12-16 v4)

Email scanned submittal forms to [lab.receiving@FloridaDEP.gov](mailto:lab.receiving@FloridaDEP.gov)

RQ - 2022-03-07-14		Collected By: Nicole Reistal								
Customer: FDEP		Field Report Prepared By: William Miller								
Project ID: HAB-Resp		Sampling Agency: FDEP DEAP SoEoc								
Location: Cosmic Canal - Oklahoma St.		Comments:								
Field ID: HAB-SD-052422-1045		Coordinates:								
WIN ID: HA-SD-069		Collection Equip: Bottle, Pok								
Matrix:		High Tide Time:								
<input checked="" type="checkbox"/> Grab		Low Tide Time:								
		Tide: <input type="checkbox"/> Rising <input type="checkbox"/> Falling <input type="checkbox"/> Slack <input checked="" type="checkbox"/> N/A								
Water Quality										
Date	Time <input checked="" type="checkbox"/> EST <input type="checkbox"/> CEN	D.O. (%)	D.O. (mg/L)	Temp (°C)	pH (SU)	Sample Depth (m)	Total Depth (m)	Secchi Disk (m)	Sp. Cond. (µmho/cm)	Salinity (PPTH)
05/24/22	1045	153.0	11.84	28.5	8.15	0.25	0.5	0.5	1137	0.56
Bloom Observations										
Algal Bloom Observed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										
Water Surface <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Scum <input type="checkbox"/> Globs <input type="checkbox"/> Slick										
Water Clarity <input type="checkbox"/> Clear <input type="checkbox"/> Slightly Turbid <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Opaque										
Bloom Color <input checked="" type="checkbox"/> Green <input type="checkbox"/> Red <input type="checkbox"/> Brown <input type="checkbox"/> Other: _____ <input type="checkbox"/> N/A										
Algae Distribution <input checked="" type="checkbox"/> Suspended in water column <input type="checkbox"/> On surface <input checked="" type="checkbox"/> Other: _____ <input type="checkbox"/> N/A										
Water Odors <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum <input type="checkbox"/> Chemical <input type="checkbox"/> Other: _____										
Parameter Suite	Parameter Methods		Preservation		pH Check	#Bottles Sent to Lab	Bottle Group			
Bloom ID (PT-50mL)	<input checked="" type="checkbox"/> BLOOM-ID		<input checked="" type="checkbox"/> Ice			1	A			
Chlorophyll (BP-1L)	<input checked="" type="checkbox"/> CHLSUITE-W		<input checked="" type="checkbox"/> Ice			1	B			
Toxins (BG-WD250)	<input checked="" type="checkbox"/> W-MCYST-AA		<input checked="" type="checkbox"/> Ice			1	B			
Preserved Nutrients (500mL HDPE)	<input checked="" type="checkbox"/> W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP		<input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H2SO4		<input checked="" type="checkbox"/> <2	1	B			
	Acid Lot: SA1308030		Exp: 12/01/22							
Filtered Nutrients (P125mL)	<input checked="" type="checkbox"/> W-PO4-F		<input checked="" type="checkbox"/> Field Filtered 0.45µm Filter		<input checked="" type="checkbox"/> Ice	1	B			
	Filter Lot # 12232823									
Quantitative Algae	<input type="checkbox"/> DTY-QN-C / PKD-QN-C		<input type="checkbox"/> Ice		Lugols? Y/N					
Relinquished By: William Miller	Date/Time: 05/24/22	Number of Coolers Shipped: 1		Received By: [Signature]	Date/Time: 5-25-2022 9:35					
		1300								

Date of Request: 25-JAN-2022  
 Created By: WOLFE\_K On: 25-JAN-2022  
 Modified By: JASROTIA\_P On: 16-FEB-2022  
 Customer: WQAP  
 Project: BLOOM-RESP  
 Division: Division of Environmental Assessment and Restoration  
 District: SROC  
 Event Description: Algal Bloom Response -SOROC

**Send Coolers To:**

Phone: 850-245-8416  
 2295 Victoria AVE  
 Suite 364  
 Fort Myers, FL 33901  
 Attn: Kirby Wolfe  
 Cooler Ship EMail: kirby.wolfe@dep.state.fl.us

Priority: 1  
 Event Status: S  
 Criminal Investigation: NO  
 Chemistry Request Reviewed By: AYRES\_J On: 15-FEB-2022  
 Biology Request Reviewed By: JASROTIA\_P On: 16-FEB-2022  
 Sampling Kit Required: YES Ship on: 25-FEB-2022  
 Sampling Kit Shipped: YES On: 23-FEB-2022  
 Sampling Kit Packed By: SHAIK\_A  
 Preservatives Needed: NO  
 Date to Receive Samples: 07-MAR-2022  
 Logged In By:

**Send Final Report To:**

2295 Victoria AVE  
 Suite 364  
 Fort Myers, FL 33901  
 Attn: Kirby Wolfe  
 Report Notification EMail:  
 kirby.wolfe@floridadep.gov;kalina.warren@dep.state.fl.us;Cheryl.  
 Swanson@dep.state.fl.us;Nicole.Reistad@floridadep.gov;John.B  
 arrington@floridadep.gov;Gary.Snorek@dep.state.fl.us

Comments: Unless peak algal bloom season, may analyze toxin after consultation with Biology's Taxonomy Manager.

Bottle Group A - Priority 1  
 For algal dominant taxon.

Bottle Group B - Priority 1  
 For toxins, nutrients, chlorophyll,

There are multiple bottles per Group in case multiple sample targets or sample locations are needed. Samplers use best professional judgement to decide which samples are appropriate to collect for a particular response. All sets of bottles do not have to be filled at one time.

Please print two copies of algal job labels at login

**Bottle Group A (Biological) With 2 Samples:**

Bottle Type: PT-50ML Number of Bottles: 2 Preserved With: ICE  
 BLOOM-ID Template: DEFAULT (SOP-AB05) Assessment of dominant algal taxa in bloom or mat sample

**Bottle Group B (Water) With 2 Samples:**

Bottle Type: BP-1L Number of Bottles: 2 Preserved With: ICE  
 CHLSUITE-W Template: DEFAULT (SM 10200 H (mod.)) Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry

Bottle Type: BG-250ML-WDMTH Number of Bottles: 2 Preserved With: ICE  
 W-MCYST-AA Template: (EPA 8321B) Microcystins in water matrices by HPLC/MS/MS

Bottle Type: P-500ML Number of Bottles: 2 Preserved With: ICE And H2SO4  
 W-NH3 Template: DEFAULT (EPA 350.1 Rev. 2.0) Ammonia in aqueous matrices as mg N/L  
 W-NO2NO3 Template: DEFAULT (EPA 353.2 Rev. 2.0) Nitrite/Nitrate in aqueous matrices as mg N/L  
 W-S-A-TP Template: DEFAULT (EPA 365.1 Rev. 2.0) Total Phosphorus in aqueous matrices as mg P/L  
 W-TKN Template: DEFAULT (EPA 351.2 Rev. 2.0) Total Kjeldahl Nitrogen in aqueous matrices

Bottle Type: P-125ML Number of Bottles: 2 Preserved With: FILTER-ICE  
 W-PO4-F Template: DEFAULT (EPA 365.1 Rev. 2.0) Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

\* - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.