

Biological Analysis Report

SO-DIST-2015-06-04-01

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

Event Description: **Algal Bloom Response - As needed**
Request ID: **RQ-2015-06-01-68**
Customer: **SO-DIST**
Project ID: **BLOOM-RESP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Kirby Wolfe

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Certified by: Elizabeth Miller, Environmental Manager

Date Certified: 17-JUN-2015 13:35



Abbreviations and data remark codes

CERT # - NELAP (National Environmental Laboratory Accreditation Program) Certification Number of the laboratory that performed the analysis.

LCS – Laboratory Control Sample; in the QC Failures column, this notation indicates a batch recovery failure.

MS – Matrix Spike; in the QC Failures column, this notation indicates a batch recovery failure.

RPD – Relative Percent Difference; in the QC Failures column, this notation indicates a batch failure for precision.

CCV – Continuing Calibration Verification; in the QC Failures column, this notation indicates a failure of the calibration verification check sample.

SUR – Surrogate; in the QC Failures column, this notation indicates a recovery failure for the associated surrogate.

RSD – Relative Standard Deviation expressed as a percentage.

SMP – Sample.

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

A - Value reported is the mean of two or more determinations

B - Results based on colony counts outside the acceptable range.

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.

T - Value reported is less than the criterion of detection.

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).

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 1.3×10^3 or 1300.

Precision is reported as relative percent difference unless otherwise noted.

Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published test performance acceptance criteria.

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.

All sample collection performed by Bureau of Laboratories staff followed the field Standard Operating Procedures adopted by reference in Rule 62-160 FAC unless otherwise noted.

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.

Results for NELAP accredited tests contained in this report meet the requirements specified by the National Environmental Laboratory Accreditation Conference (NELAC). All samples received were in acceptable condition and met NELAC requirements unless otherwise noted. Results generated in this report pertain to the samples collected and submitted for analysis.

All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Job: TLH-2015-06-04-12
Job: TLH-2015-06-04-13

Group: AlgalBio
Group: Chlorophyll/Grain Size/BOD

Sample Location: Algal 1-Below Franklin Locks

Collection Date/Time: 06/03/2015 13:15

Field ID: Algal 1-Below Franklin Locks

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1708289	SM 10200 H (mod.)	Chlorophyll-a, Corrected	38		ug/L	P286302	
		Phaeophytin-a	3.8		ug/L	P286302	
		Chlorophyll/Phaeophytin Ratio	1.6			P286302	
		Chlorophyll-a, Uncorrected	41		ug/L	P286302	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is unavailable for the Phaeophytin-a component due to the small amount of analyte in the QC sample.

Sample Location: Algal 2-Above Franklin Locks

Collection Date/Time: 06/03/2015 14:40

Field ID: Algal 2-Above Franklin Locks

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1708290	SM 10200 H (mod.)	Chlorophyll-a, Corrected	22		ug/L	P286302	
		Phaeophytin-a	3.6		ug/L	P286302	
		Chlorophyll/Phaeophytin Ratio	1.6			P286302	
		Chlorophyll-a, Uncorrected	25		ug/L	P286302	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is unavailable for the Phaeophytin-a component due to the small amount of analyte in the QC sample.

Sample Location: Algal 1-Below Franklin Locks

Collection Date/Time: 06/03/2015 13:15

Field ID: Algal 1-Below Franklin Locks

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1708285	SOP-AB05	Dominant sample taxon**	No Result				

Ref. Method and Comment:

SOP-AB05: There was no clear dominant taxon in the sample.

Sample Location: Algal 2-Above Franklin Locks

Collection Date/Time: 06/03/2015 14:40

Field ID: Algal 2-Above Franklin Locks

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1708286	SOP-AB05	Dominant sample taxon**	No Result				

Ref. Method and Comment:

SOP-AB05: There was no clear dominant taxon in the sample.

Sample Location: Algal 1-Below Franklin Locks

Collection Date/Time: 06/03/2015 13:15

Field ID: Algal 1-Below Franklin Locks

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1708287	SOP-AB05	Phytoplankton-Quantitative-# Wet Taxa**	30		#Taxa		
	SOP-AB05_1	Phytoplankton-Quantitative-#Diatom Taxa**	30		#Taxa		

Sample Location: Algal 2-Above Franklin Locks

Collection Date/Time: 06/03/2015 14:40

Field ID: Algal 2-Above Franklin Locks

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1708288	SOP-AB05	Phytoplankton-Quantitative-# Wet Taxa**	35		#Taxa		

Field ID: Algal 2-Above Franklin Locks

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1708288	SOP-AB05_1	Phytoplankton-Quantitative-#Diatom Taxa**	25		#Taxa		

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P286302

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.55	U	ug/L
Chlorophyll-a, Uncorrected	0.40	U	ug/L
Phaeophytin-a	0.40	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P286302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	91.9		P	85 - 115

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P286302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1707294	Chlorophyll/Phaeophytin Ratio	0.0	Sample	P	0 - 25
1707294	Chlorophyll-a, Corrected	5.20	Sample	P	0 - 25
1707294	Chlorophyll-a, Uncorrected	6.93	Sample	P	0 - 25

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll/Phaeophytin Ratio				0.0	
	Chlorophyll-a, Corrected	91.9			5.20	
	Chlorophyll-a, Uncorrected				6.93	

Reference Method Descriptions

Method / NELAC Cert. #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry	1708289, 1708290
SOP-AB05 / E31780	Assessment of dominant algal taxa in bloom or mat sample	1708285, 1708286

Reference Method Descriptions

Method / NELAC Cert. #	Description	<u>Associated Samples</u>
SOP-AB05 / E31780	No. of wet taxa of quantitative phytoplankton sample.	1708287, 1708288
SOP-AB05_1 / E31780	No. of diatom taxa of quantitative phytoplankton sample.	1708287, 1708288

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.) SOP-AB05	06/04/2015	06/04/2015 13:35	Jonathan M. Woods	06/08/2015	Jonathan M. Woods	1708289, 1708290
	06/04/2015			06/04/2015	Ashrafi Begum	1708285
	06/04/2015			06/04/2015	Maosen Hua	1708286
	06/04/2015			06/10/2015	Ashrafi Begum	1708287, 1708288
SOP-AB05_1	06/04/2015	06/10/2015	Isaura Lorenzo-Perez	06/16/2015	Isaura Lorenzo-Perez	1708287
	06/04/2015	06/10/2015	Isaura Lorenzo-Perez	06/17/2015	Isaura Lorenzo-Perez	1708288