

Biological Analysis Report

WQAP-2017-07-07-01

Florida Department of Environmental Protection
Central Laboratory
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DOH Accreditation E31780

Overflow Analyses Performed By:
Advanced Environmental Laboratories - Tampa
9610 Princess Palm Avenue
Tampa, Florida 33619
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Event Description: **run 10**
Request ID: **RQ-2017-07-03-14**
Customer: **WQAP**
Project ID: **SMP**

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Date Certified: 16-FEB-2018 11:44



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: Chlorophyll/Grain Size/BOD, Molecular and Overflow.

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.

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 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.
- 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).

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: Clam Bayou

Collection Date/Time: 07/06/2017 09:55

Field ID: G5SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911738	SM 10200 H (mod.)	Chlorophyll-a, Corrected	8.0	A	ug/L	P328400	
		Phaeophytin-a	1.7		ug/L	P328400	
		Chlorophyll/Phaeophytin Ratio	1.6	A		P328400	
		Chlorophyll-a, Uncorrected	9.1	A	ug/L	P328400	

Ref. Method and Comment:

SM 10200 H (mod.): Lab dup result is 1.2 I for Phaeophytin-a. Precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: Clam Bayou

Collection Date/Time: 07/06/2017 09:55

Field ID: G5SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911748	SM 9230 C	Enterococci-Membrane Filter	400	B	cfu/100 mL		

Sample Location: Clam Bayou

Collection Date/Time: 07/06/2017 09:55

Field ID: G5SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911746	SOP-PCR-1.0	HF183-qPCR**	4.2	T	GEU/100 mL	P328087	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: PP Ditch # 1

Collection Date/Time: 07/06/2017 10:45

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911739	SM 10200 H (mod.)	Chlorophyll-a, Corrected	21		ug/L	P328400	
		Phaeophytin-a	2.9		ug/L	P328400	
		Chlorophyll/Phaeophytin Ratio	1.6			P328400	
		Chlorophyll-a, Uncorrected	23		ug/L	P328400	

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.

Sample Location: PP Ditch # 1

Collection Date/Time: 07/06/2017 10:45

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911749	SM 9230 C	Enterococci-Membrane Filter	150	B	cfu/100 mL		

Sample Location: PP Ditch # 1

Collection Date/Time: 07/06/2017 10:45

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911747	SOP-PCR-1.0	HF183-qPCR**	72	T	GEU/100 mL	P328087	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: McKay Tidal

Collection Date/Time: 07/06/2017 11:25

Field ID: G5SW0126 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911743	SOP-PCR-1.0	HF183-qPCR**	140	I	GEU/100 mL	P330030	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				
1911750	SM 9230 C	Enterococci-Membrane Filter	4200		cfu/100 mL		

Sample Location: Alligator Crk Collection Date/Time: 07/06/2017 12:05

Field ID: G1SW0062 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911744	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P330030	
	SOP-PCR-1.2	GULL2-qPCR**	8.4E+03	U	TSC/100 mL	P330030	
	SOP-PCR-1.3	GFD-purified-qPCR**	170	U	TSC/100 mL	P330301	LCS, MS, RPD
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	UJ	TSC/100 mL	P330030	LCS, MS
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				
1911751	SM 9230 C	Enterococci-Membrane Filter	700	B	cfu/100 mL		

Ref. Method and Comment:
 SOP-PCR-1.0: No amplification of HF183 marker.
 SOP-PCR-1.2: No amplification of GULL2 marker.
 SOP-PCR-1.3: No amplification of GFD marker. Quality control failure(s) observed. See QA report for details.
 SOP-PCR-1.4: No amplification of BACR marker. Quality control failure(s) observed. See QA report for details. Precision data unavailable.

Sample Location: Mullet Crk Tidal Collection Date/Time: 07/06/2017 12:35

Field ID: G5SW0055 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911745	SOP-PCR-1.0	HF183-qPCR**	120	I	GEU/100 mL	P330030	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				
1911752	SM 9230 C	Enterococci-Membrane Filter	2000	B	cfu/100 mL		

Sample Location: Mullet Crk Tidal Collection Date/Time: 07/06/2017 12:35

Field ID: G5SW0055 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1911740	SM 10200 H (mod.)	Chlorophyll-a, Corrected	16		ug/L	P328529	
		Phaeophytin-a	3.2		ug/L	P328529	
		Chlorophyll/Phaeophytin Ratio	1.6			P328529	
		Chlorophyll-a, Uncorrected	18		ug/L	P328529	

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: P328400

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 Method Blank Results

Reference Method: SM 10200 H (mod.)
 Batch ID: P328529

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

Reference Method: SOP-PCR-1.0
 Batch ID: P328087

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.0
 Batch ID: P330030

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL
HF183-qPCR	280	U	GEU/100 mL
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.2
 Batch ID: P330030

Component	Result	Code	Units
GULL2-qPCR	1.7E+04	U	TSC/100 mL
GULL2-qPCR	1.7E+04	U	TSC/100 mL

Reference Method: SOP-PCR-1.3
 Batch ID: P330301

Component	Result	Code	Units
GFD-purified-qPCR	340	U	TSC/100 mL

Reference Method: SOP-PCR-1.4
 Batch ID: P330030

Component	Result	Code	Units
BacR-qPCR	3.0E+03	U	TSC/100 mL
BacR-qPCR	3.0E+03	U	TSC/100 mL

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
 Batch ID: P328400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	104		P	84 - 116

Reference Method: SM 10200 H (mod.)
 Batch ID: P328529

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P328529

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	104		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P328087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	115	68.8	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P330030

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	107	92.9	P/P	50 - 175
HF183-qPCR	105	95.3	P/P	50 - 175
HF183-qPCR	125	100	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P330030

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	191	77.3	P/P	50 - 300
GULL2-qPCR	73.1	92.9	P/P	50 - 300

Reference Method: SOP-PCR-1.3
Batch ID: P330301

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-purified-qPCR	103	15.1	P/F	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P330030

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	131	40.7	P/F	50 - 175
BacR-qPCR	157	96.6	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P328087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910311	HF183-qPCR	108		P	50 - 175
1911680	HF183-qPCR	130		P	50 - 175
1911681	HF183-qPCR	122	99.5	P/P	50 - 175
1911682	HF183-qPCR	85.1		P	50 - 175
1911683	HF183-qPCR	117		P	50 - 175
1911746	HF183-qPCR	83.3		P	50 - 175
1911747	HF183-qPCR	95.3		P	50 - 175
1912403	HF183-qPCR	95.7		P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P328087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912566	HF183-qPCR	116		P	50 - 175
1912567	HF183-qPCR	98.1		P	50 - 175
1912906	HF183-qPCR	93.4		P	50 - 175
1912908	HF183-qPCR	88.3		P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P330030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911743	HF183-qPCR	95.0		P	50 - 175
1911744	HF183-qPCR	84.6		P	50 - 175
1911745	HF183-qPCR	85.9		P	50 - 175
1912910	HF183-qPCR	89.4		P	50 - 175
1920808	HF183-qPCR	87.2		P	50 - 175
1920809	HF183-qPCR	81.9		P	50 - 175
1920810	HF183-qPCR	82.9		P	50 - 175
1920940	HF183-qPCR	98.2		P	50 - 175
1920941	HF183-qPCR	71.3		P	50 - 175
1920942	HF183-qPCR	69.5		P	50 - 175
1920943	HF183-qPCR	109		P	50 - 175
1921167	HF183-qPCR	89.4	85.9	P/P	50 - 175
1921170	HF183-qPCR	77.6		P	50 - 175
1921171	HF183-qPCR	85.9		P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P330030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911744	GULL2-qPCR	69.9		P	50 - 300
1920810	GULL2-qPCR	66.0		P	50 - 300
1920909	GULL2-qPCR	80.3		P	50 - 300
1920941	GULL2-qPCR	72.8		P	50 - 300
1921167	GULL2-qPCR	74.4	84.8	P/P	50 - 300
1921170	GULL2-qPCR	89.3		P	50 - 300
1921171	GULL2-qPCR	102		P	50 - 300

Reference Method: SOP-PCR-1.3
Batch ID: P330301

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911744	GFD-purified-qPCR	97.0		P	50 - 175
1919955	GFD-purified-qPCR	64.0		P	50 - 175
1921668	GFD-purified-qPCR	36.2		F	50 - 175
1921797	GFD-purified-qPCR	21.2		F	50 - 175
1921799	GFD-purified-qPCR	27.1	35.0	F/F	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P330030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1911744	BacR-qPCR	34.9		F	50 - 175
1920941	BacR-qPCR	74.5		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P328400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911738	Chlorophyll/Phaeophytin Ratio	0.0	Sample	P	0 - 25
1911738	Chlorophyll-a, Corrected	10.9	Sample	P	0 - 25
1911738	Chlorophyll-a, Uncorrected	12.7	Sample	P	0 - 25

Reference Method: SM 10200 H (mod.)
Batch ID: P328529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911840	Chlorophyll/Phaeophytin Ratio	0.0	Sample	P	0 - 25
1911840	Chlorophyll-a, Corrected	6.38	Sample	P	0 - 25
1911840	Chlorophyll-a, Uncorrected	6.23	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P328087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1911681	HF183-qPCR	20.4	Spike	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P330030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921167	HF183-qPCR	4.00	Spike	P	0 - 25
1928531	HF183-qPCR	4.48	Spike	P	0 - 25

Reference Method: SOP-PCR-1.2
Batch ID: P330030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921167	GULL2-qPCR	13.1	Spike	P	0 - 25
1928531	GULL2-qPCR	3.61	Spike	P	0 - 25

Reference Method: SOP-PCR-1.3
Batch ID: P330301

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921799	GFD-purified-qPCR	25.3	Spike	F	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P330030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928532	BacR-qPCR	8.98	Spike	P	0 - 25

Quality Assurance Report Precision

* 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 Surrogates

Lab Sample ID: 1911743
Field Sample ID: G5SW0126

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	95.0	P	50 - 300

Lab Sample ID: 1911744
Field Sample ID: G1SW0062

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	93.9	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	98.6	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	99.9	P	50 - 300

Lab Sample ID: 1911745
Field Sample ID: G5SW0055

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	89.0	P	50 - 300

Lab Sample ID: 1911746
Field Sample ID: G5SW0135

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	85.1	P	50 - 300

Lab Sample ID: 1911747
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	98.3	P	50 - 300

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/Phaeophytin Ratio				0.0	
	Chlorophyll-a, Corrected	104			10.9	
	Chlorophyll-a, Corrected	104			6.38	
	Chlorophyll-a, Uncorrected				12.7	
	Chlorophyll-a, Uncorrected				6.23	
SOP-PCR-1.0	HF183-qPCR	68.8 115	108 130 122			20.4
	HF183-qPCR	107 92.9 100	77.6 87.2 81.9			4.00 4.48
		95.3	82.9			
SOP-PCR-1.2	GULL2-qPCR	191 92.9 73.1	69.9 66.0 80.3			13.1 3.61
		77.3	74.4			

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery			MS % Recovery			LCS	Precision SMP	MS
SOP-PCR-1.3	GFD-purified-qPCR	15.1	103		36.2	21.2	27.1			25.3
SOP-PCR-1.4	BacR-qPCR	131	96.6	157	74.5	34.9				8.98
		40.7								

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry	1911738, 1911739, 1911740
SM 9230 C / E84589	Enterococci by membrane filter method by Advanced Environmental Overflow Laboratories for SWD	1911748, 1911749, 1911750, 1911751, 1911752
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	1911743, 1911744, 1911745, 1911746, 1911747
SOP-PCR-1.2 / E31780	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	1911744
SOP-PCR-1.3 / E31780	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	1911744
SOP-PCR-1.4 / E31780	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	1911744
SOP-PCR-4.0 / E31780	Preparation of Samples by Filtration and held for qPCR Analysis	1911743, 1911744, 1911745, 1911746, 1911747

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	07/07/2017	07/07/2017 14:00	Morgan Lane	07/12/2017	Jennifer Mihalic	1911738, 1911739, 1911740
SM 9230 C	07/06/2017	07/06/2017 15:25		07/07/2017	AEL - Tampa	1911748, 1911749, 1911750, 1911751, 1911752
SOP-PCR-1.0	07/07/2017	07/07/2017 12:30	Avril Wood	08/15/2017	Puja Jasrotia	1911743, 1911744, 1911745
	07/07/2017	07/07/2017 12:30	Puja Jasrotia	07/20/2017	Puja Jasrotia	1911746, 1911747
SOP-PCR-1.2	07/07/2017	07/07/2017 12:30	Avril Wood	08/17/2017	Sarah Menz	1911744
SOP-PCR-1.3	07/07/2017	07/07/2017 12:30	Avril Wood	08/18/2017	Sarah Menz	1911744
SOP-PCR-1.4	07/07/2017	07/07/2017 12:30	Avril Wood	08/16/2017	Sarah Menz	1911744
SOP-PCR-4.0	07/07/2017	07/07/2017 12:30	Sarah Menz	08/14/2017	Puja Jasrotia	1911743, 1911744, 1911745, 1911746, 1911747