



June 25, 2018

Service Request No:R1805293

Mr. Scott Kishbaugh
New York State DEC
Division of Water, 4th Floor
625 Broadway
Albany, NY 12233-3502

Laboratory Results for: LCI - Rockland

Dear Mr.Kishbaugh,

Enclosed are the results of the sample(s) submitted to our laboratory June 08, 2018
For your reference, these analyses have been assigned our service request number **R1805293**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Jason Fagel

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | **FAX** +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



ALS Environmental
ALS Group USA, Corp
1565 Jefferson Road, Building 300, Suite 360
Rochester, NY 14623
T : +1 585 288 5380
F : +1 585 288 8475
www.alsglobal.com

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Narrative Documents

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Client: New York State DEC
Project: LCI - Rockland
Sample Matrix: Water

Service Request: R1805293
Date Received: 06/08/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV, validation deliverables including all summary forms and associated raw data. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Five water samples were received for analysis at ALS Environmental on 06/08/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

General Chemistry:

No significant anomalies were noted with this analysis.



Approved by _____

Date 06/25/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 18PKTP01		Lab ID: R1805293-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Phosphorus, Total	0.0320		0.0020	0.0050	mg/L	365.1
CLIENT ID: 18PKTP02		Lab ID: R1805293-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Nitrate+Nitrite as Nitrogen	0.0130		0.0007	0.0020	mg/L	353.2
Phosphorus, Total	0.51		0.04	0.10	mg/L	365.1
CLIENT ID: 18PKTP05		Lab ID: R1805293-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Nitrate+Nitrite as Nitrogen	0.0412		0.0007	0.0020	mg/L	353.2
Phosphorus, Total	0.126		0.004	0.010	mg/L	365.1
CLIENT ID: 18PKTP02		Lab ID: R1805293-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO ₃	120		1.0	2.0	mg/L	SM 2320 B-1997 (2011)
CLIENT ID: 18PKTP01		Lab ID: R1805293-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO ₃	68.4		1.0	2.0	mg/L	SM 2320 B-1997 (2011)



Sample Receipt Information

ALS Environmental—Rochester Laboratory

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Client: New York State DEC
Project: LCI - Rockland/LCI18

Service Request:R1805293

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R1805293-001	18PKTP01	6/6/2018	1118
R1805293-002	18PKTP02	6/6/2018	1110
R1805293-003	18PKTP05	6/6/2018	1424
R1805293-004	18PKTP02	6/6/2018	1424
R1805293-005	18PKTP01	6/6/2018	1119



Cooler Receipt and Preservation Check Form

R1805293

5

New York State DEC
RocklandProject/Client NYSDEC

Folder Number _____

Cooler received on 6-8-18by: KECOURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>N</u>
2	Custody papers properly completed (ink, signed)?	Y <u>N</u>
3	Did all bottles arrive in good condition (unbroken)?	Y <u>N</u>
4	Circle: Wet Ice Dry Ice Gel packs present?	Y <u>N</u>

5a	Perchlorate samples have required headspace?	Y <u>N</u> <u>NA</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y <u>N</u> <u>NA</u>
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<u>NA</u>

8. Temperature Readings Date: 6-8-18 Time: 09:15 ID: IR#7 IR#9 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>2.9</u>						
Correction Factor (°C)	<u>+1.3</u>						
Corrected Temp (°C)	<u>4.2</u>						
Temp from: Type of bottle	<u>250pk351C</u>						
Within 0-6°C?	<u>Y</u> <u>N</u>	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by KE on 6-8-18 at 09:18
5035 samples placed in storage location: _____ by _____ on _____ at _____Cooler Breakdown/Preservation Check**: Date: 6/8/18 Time: 2:46 by: SLW

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2	<u>204578</u>	H ₂ SO ₄			<u>181A70</u>	<u>6/18</u>				
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 061017-ZAM

Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: SLWPC Secondary Review: SLW 6/18/18

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

ALS Group USA, Corp.
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Internal Chain of Custody Report

Client: New York State DEC
Project: LCI - Rockland/LCI18

Service Request: R1805293

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1805293-001.01	365.1,353.2				
		6/8/2018	2147	SMO / DWARD	
		6/11/2018	1215	RT000130 / DWARD	
		6/11/2018	1215	R-016 / DWARD	
		6/12/2018	2042	R-016 / BBOWE	
R1805293-002.01	365.1,353.2				
		6/8/2018	2147	SMO / DWARD	
		6/11/2018	1215	RT000130 / DWARD	
		6/11/2018	1215	R-016 / DWARD	
		6/12/2018	2042	R-016 / BBOWE	
R1805293-003.01	365.1,353.2				
		6/8/2018	2147	SMO / DWARD	
		6/11/2018	1215	RT000130 / DWARD	
		6/11/2018	1215	R-016 / DWARD	
		6/12/2018	2042	R-016 / BBOWE	
R1805293-004.02	SM 2320 B-1997(2011)				
		6/8/2018	2147	SMO / DWARD	
R1805293-005.02	SM 2320 B-1997(2011)				
		6/8/2018	2147	SMO / DWARD	



Miscellaneous Forms

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the öNotesö column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an öimmediateö hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (×100% Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.



Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID #
Delaware Approved	New Jersey ID # NY004	294100 A/B
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: New York State DEC
Project: LCI - Rockland/LCI18

Service Request: R1805293

Sample Name: 18PKTP01
Lab Code: R1805293-001
Sample Matrix: Water

Date Collected: 06/6/18
Date Received: 06/8/18

Analysis Method

353.2
365.1

Extracted/Digested By

KMENGs

Analyzed By

GNITAJOUPPI
GNITAJOUPPI

Sample Name: 18PKTP02
Lab Code: R1805293-002
Sample Matrix: Water

Date Collected: 06/6/18
Date Received: 06/8/18

Analysis Method

353.2
365.1

Extracted/Digested By

KMENGs

Analyzed By

GNITAJOUPPI
GNITAJOUPPI

Sample Name: 18PKTP05
Lab Code: R1805293-003
Sample Matrix: Water

Date Collected: 06/6/18
Date Received: 06/8/18

Analysis Method

353.2
365.1

Extracted/Digested By

KMENGs

Analyzed By

GNITAJOUPPI
GNITAJOUPPI

Sample Name: 18PKTP02
Lab Code: R1805293-004
Sample Matrix: Water

Date Collected: 06/6/18
Date Received: 06/8/18

Analysis Method

SM 2320 B-1997(2011)

Extracted/Digested By**Analyzed By**

CWOODS

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: New York State DEC
Project: LCI - Rockland/LCI18

Service Request: R1805293

Sample Name: 18PKTP01
Lab Code: R1805293-005
Sample Matrix: Water

Date Collected: 06/6/18
Date Received: 06/8/18

Analysis Method
SM 2320 B-1997(2011)

Extracted/Digested By

Analyzed By
CWOODS



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.



Sample Results

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



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Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: 18PKTP01
Lab Code: R1805293-001

Service Request: R1805293
Date Collected: 06/06/18 11:18
Date Received: 06/08/18 09:10
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Nitrate+Nitrite as Nitrogen	353.2	0.0020 U	mg/L	0.0020	1	06/15/18 15:17	NA	
Phosphorus, Total	365.1	0.0320	mg/L	0.0050	1	06/21/18 15:48	06/19/18	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water

Sample Name: 18PKTP02
Lab Code: R1805293-002

Service Request: R1805293
Date Collected: 06/06/18 11:10
Date Received: 06/08/18 09:10

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Nitrate+Nitrite as Nitrogen	353.2	0.0130	mg/L	0.0020	1	06/15/18 15:18	NA	
Phosphorus, Total	365.1	0.51	mg/L	0.10	20	06/21/18 17:15	06/19/18	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: 18PKTP05
Lab Code: R1805293-003

Service Request: R1805293
Date Collected: 06/06/18 14:24
Date Received: 06/08/18 09:10
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Nitrate+Nitrite as Nitrogen	353.2	0.0412	mg/L	0.0020	1	06/15/18 15:20	NA	
Phosphorus, Total	365.1	0.126	mg/L	0.010	2	06/21/18 17:19	06/19/18	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: 18PKTP02
Lab Code: R1805293-004

Service Request: R1805293
Date Collected: 06/06/18 14:24
Date Received: 06/08/18 09:10
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	120	mg/L	2.0	1	06/13/18 06:04	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: 18PKTP01
Lab Code: R1805293-005

Service Request: R1805293
Date Collected: 06/06/18 11:19
Date Received: 06/08/18 09:10
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	68.4	mg/L	2.0	1	06/13/18 06:10	



QC Summary Forms

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dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1805293-MB

Service Request: R1805293
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	2.0 U	mg/L	2.0	1	06/13/18 04:14	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0020 U	mg/L	0.0020	1	06/15/18 14:33	NA	
Phosphorus, Total	365.1	0.0050 U	mg/L	0.0050	1	06/21/18 15:45	06/19/18	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water

Service Request: R1805293
Date Collected: 06/06/18
Date Received: 06/08/18
Date Analyzed: 06/21/18
Date Extracted: 06/19/18

Duplicate Matrix Spike Summary
Phosphorus, Total

Sample Name: 18PKTP01
Lab Code: R1805293-001
Analysis Method: 365.1
Prep Method: Method

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike		Result	Duplicate Matrix Spike		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
Phosphorus, Total	0.0320	0.0575	0.0250	102	0.0588	0.0250	107	75-125	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water

Service Request: R1805293
Date Analyzed: 06/13/18 - 06/21/18

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R1805293-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity, Total as CaCO ₃	SM 2320 B-1997(2011)	18.8	20.0	94	70-130
Nitrate+Nitrite as Nitrogen	353.2	0.497	0.500	99	70-130
Phosphorus, Total	365.1	0.0231	0.0250	93	70-130

ALS Group USA, Corp.
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QA/QC Report

Client: New York State DEC
Project: LCI - Rockland/LCI18

Service Request:R1805293

Continuing Calibration Blank (CCB) Summary
Nitrate+Nitrite as Nitrogen

Analysis Method: 353.2

Units:mg/L

	Analysis Lot	Lab Code	Date Analyzed	MRL	Result	Q
CCB1	594975	RQ1805887-02	06/15/18 14:33	0.0020	0.0020	U
CCB2	594975	RQ1805887-04	06/15/18 14:51	0.0020	0.0020	U
CCB3	594975	RQ1805887-06	06/15/18 15:07	0.0020	0.0020	U
CCB4	594975	RQ1805887-08	06/15/18 15:24	0.0020	0.0020	U

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QA/QC Report

Client: New York State DEC
Project: LCI - Rockland/LCI18

Service Request:R1805293

Continuing Calibration Blank (CCB) Summary
Phosphorus, Total

Analysis Method: 365.1

Units:mg/L

	Analysis Lot	Lab Code	Date Analyzed	MRL	Result	Q
CCB1	595794	RQ1806186-02	06/21/18 15:44	0.0050	0.0050	U
CCB2	595794	RQ1806186-04	06/21/18 15:57	0.0050	0.0050	U
CCB3	595794	RQ1806186-06	06/21/18 16:11	0.0050	0.0050	U
CCB4	595794	RQ1806186-08	06/21/18 16:24	0.0050	0.0050	U
CCB5	595794	RQ1806186-10	06/21/18 17:04	0.0050	0.0050	U
CCB6	595794	RQ1806186-12	06/21/18 17:18	0.0050	0.0050	U
CCB7	595794	RQ1806186-14	06/21/18 17:23	0.0050	0.0050	U

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QA/QC Report

Client: New York State DEC
Project: LCI - Rockland/LCI18

Service Request: R1805293**Continuing Calibration Verification (CCV) Summary****Nitrate+Nitrite as Nitrogen****Analysis Method:** 353.2**Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	594975	RQ1805887-01	06/15/18 14:32	1.00	1.02	102	90-110
CCV2	594975	RQ1805887-03	06/15/18 14:49	1.00	1.03	103	90-110
CCV3	594975	RQ1805887-05	06/15/18 15:06	1.00	1.03	103	90-110
CCV4	594975	RQ1805887-07	06/15/18 15:22	1.00	1.04	104	90-110

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: New York State DEC
Project: LCI - Rockland/LCI18

Service Request: R1805293**Continuing Calibration Verification (CCV) Summary****Phosphorus, Total****Analysis Method:** 365.1**Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	595794	RQ1806186-01	06/21/18 15:43	0.0500	0.0508	102	90-110
CCV2	595794	RQ1806186-03	06/21/18 15:56	0.0500	0.0502	100	90-110
CCV3	595794	RQ1806186-05	06/21/18 16:09	0.0500	0.0503	101	90-110
CCV4	595794	RQ1806186-07	06/21/18 16:23	0.0500	0.0504	101	90-110
CCV5	595794	RQ1806186-09	06/21/18 17:03	0.0500	0.0506	101	90-110
CCV6	595794	RQ1806186-11	06/21/18 17:17	0.0500	0.0502	100	90-110
CCV7	595794	RQ1806186-13	06/21/18 17:22	0.0500	0.0508	102	90-110



Raw Data

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



General Chemistry

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: 18PKTP01
Lab Code: R1805293-001

Service Request: R1805293
Date Collected: 06/06/18 11:18
Date Received: 06/08/18 09:10
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Nitrate+Nitrite as Nitrogen	353.2	0.0020 U	mg/L	0.0020	1	06/15/18 15:17	NA	
Phosphorus, Total	365.1	0.0320	mg/L	0.0050	1	06/21/18 15:48	06/19/18	

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Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: 18PKTP02
Lab Code: R1805293-002

Service Request: R1805293
Date Collected: 06/06/18 11:10
Date Received: 06/08/18 09:10
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Nitrate+Nitrite as Nitrogen	353.2	0.0130	mg/L	0.0020	1	06/15/18 15:18	NA	
Phosphorus, Total	365.1	0.51	mg/L	0.10	20	06/21/18 17:15	06/19/18	

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Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water

Sample Name: 18PKTP05
Lab Code: R1805293-003

Service Request: R1805293
Date Collected: 06/06/18 14:24
Date Received: 06/08/18 09:10

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Nitrate+Nitrite as Nitrogen	353.2	0.0412	mg/L	0.0020	1	06/15/18 15:20	NA	
Phosphorus, Total	365.1	0.126	mg/L	0.010	2	06/21/18 17:19	06/19/18	

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Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: 18PKTP02
Lab Code: R1805293-004

Service Request: R1805293
Date Collected: 06/06/18 14:24
Date Received: 06/08/18 09:10
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	120	mg/L	2.0	1	06/13/18 06:04	

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Analytical Report

Client: New York State DEC
Project: LCI - Rockland/LCI18
Sample Matrix: Water
Sample Name: 18PKTP01
Lab Code: R1805293-005

Service Request: R1805293
Date Collected: 06/06/18 11:19
Date Received: 06/08/18 09:10
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	68.4	mg/L	2.0	1	06/13/18 06:10	

Analytical Results Summary

Instrument Name: R-Buret-02

Analyst: CWOODS

Analysis Lot: 594512 Method/Testcode: SM 2320 B-1997(2011)/Alkalinity

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805775-04	Alkalinity, Total as CaCO3 MB			Water	-0.80 mg/L ✓		2.0 mg/L U	1	1.0	2.0			6/12/18 18:49	N	IV
RQ1805775-03	Alkalinity, Total as CaCO3 LCS			Water	18.80 mg/L ✓		18.8 mg/L	1	1.0	2.0	94		6/12/18 19:10	N	IV
R1805091-007	Alkalinity, Total as CaCO3 N/A			Water	188.80 mg/L ✓		189 mg/L	1	1.0	2.0			6/12/18 19:16	N	IV
R1805091-008	Alkalinity, Total as CaCO3 N/A			Water	248.00 mg/L ✓		248 mg/L	1	1.0	2.0			6/12/18 19:21	N	IV
RQ1805775-01	Alkalinity, Total as CaCO3 DUP		R1805091-008	Water	252.40 mg/L ✓		252 mg/L	1	1.0	2.0		2	6/12/18 19:27	N	IV
R1805091-009	Alkalinity, Total as CaCO3 N/A			Water	36.40 mg/L ✓		36.4 mg/L	1	1.0	2.0			6/12/18 19:31	N	IV
RQ1805775-02	Alkalinity, Total as CaCO3 DUP		R1805091-009	Water	36.40 mg/L ✓		36.4 mg/L	1	1.0	2.0		<1	6/12/18 19:36	N	IV
R1805091-010	Alkalinity, Total as CaCO3 N/A			Water	105.60 mg/L ✓		106 mg/L	1	1.0	2.0			6/12/18 19:42	N	IV
R1805091-011	Alkalinity, Total as CaCO3 N/A			Water	226.80 mg/L ✓		227 mg/L	1	1.0	2.0			6/12/18 19:57	N	IV
R1805091-012	Alkalinity, Total as CaCO3 N/A			Water	281.20 mg/L ✓		281 mg/L	1	1.0	2.0			6/12/18 20:02	N	IV
R1805091-013	Alkalinity, Total as CaCO3 N/A			Water	259.20 mg/L ✓		259 mg/L	1	1.0	2.0			6/12/18 20:08	N	IV
R1805091-014	Alkalinity, Total as CaCO3 N/A			Water	118.80 mg/L ✓		119 mg/L	1	1.0	2.0			6/12/18 20:14	N	IV
R1805091-015	Alkalinity, Total as CaCO3 N/A			Water	59.20 mg/L ✓		59.2 mg/L	1	1.0	2.0			6/12/18 20:19	N	IV
R1805112-001	Alkalinity, Total as CaCO3 N/A			Water	11.60 mg/L ✓		11.6 mg/L	1	1.0	2.0			6/12/18 20:23	N	IV
R1805112-002	Alkalinity, Total as CaCO3 N/A			Water	108.40 mg/L ✓		108 mg/L	1	1.0	2.0			6/12/18 20:29	N	IV
R1805112-004	Alkalinity, Total as CaCO3 N/A			Water	86.00 mg/L ✓		86.0 mg/L	1	1.0	2.0			6/12/18 20:35	N	IV
R1805149-001	Alkalinity, Total as CaCO3 N/A			Water	189.60 mg/L ✓		190 mg/L	1	1.0	2.0			6/12/18 20:41	N	IV
R1805149-002	Alkalinity, Total as CaCO3 N/A			Water	91.60 mg/L ✓		91.6 mg/L	1	1.0	2.0			6/12/18 20:48	N	IV
R1805149-003	Alkalinity, Total as CaCO3 N/A			Water	222.80 mg/L ✓		223 mg/L	1	1.0	2.0			6/12/18 21:01	N	IV
R1805149-004	Alkalinity, Total as CaCO3 N/A			Water	196.00 mg/L ✓		196 mg/L	1	1.0	2.0			6/12/18 21:07	N	IV
R1805149-005	Alkalinity, Total as CaCO3 N/A			Water	250.00 mg/L ✓		250 mg/L	1	1.0	2.0			6/12/18 21:13	N	IV
R1805149-007	Alkalinity, Total as CaCO3 N/A			Water	320.40 mg/L ✓		320 mg/L	1	1.0	2.0			6/12/18 21:18	N	IV
R1805149-008	Alkalinity, Total as CaCO3 N/A			Water	138.80 mg/L ✓		139 mg/L	1	1.0	2.0			6/12/18 21:24	N	IV
R1805149-009	Alkalinity, Total as CaCO3 N/A			Water	254.40 mg/L ✓		254 mg/L	1	1.0	2.0			6/12/18 21:30	N	IV

Approved: [Signature]
6/14

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02

Analyst: CWOODS

Analysis Lot: 594513 Method/Testcode: SM 2320 B-1997(2011)/Alkalinity

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805776-02	Alkalinity, Total as CaCO3 MB			Water	0.00 mg/L ✓		2.0 mg/L U	1	1.0	2.0			6/12/18 20:56	N	IV
RQ1805776-01	Alkalinity, Total as CaCO3 LCS			Water	18.40 mg/L ✓		18.4 mg/L	1	1.0	2.0	92		6/12/18 21:35	N	IV
R1805149-010	Alkalinity, Total as CaCO3 N/A			Water	341.20 mg/L ✓		341 mg/L	1	1.0	2.0			6/12/18 21:40	N	IV
R1805149-011	Alkalinity, Total as CaCO3 N/A			Water	190.80 mg/L ✓		191 mg/L	1	1.0	2.0			6/12/18 21:46	N	IV
R1805150-002	Alkalinity, Total as CaCO3 N/A			Water	259.20 mg/L ✓		259 mg/L	1	1.0	2.0			6/12/18 21:51	N	IV
R1805150-003	Alkalinity, Total as CaCO3 N/A			Water	146.40 mg/L ✓		146 mg/L	1	1.0	2.0			6/12/18 22:05	N	IV
R1805150-004	Alkalinity, Total as CaCO3 N/A			Water	181.20 mg/L ✓		181 mg/L	1	1.0	2.0			6/12/18 22:11	N	IV
R1805152-001	Alkalinity, Total as CaCO3 N/A			Water	230.80 mg/L ✓		231 mg/L	1	1.0	2.0			6/12/18 22:17	N	II
R1805152-002	Alkalinity, Total as CaCO3 N/A			Water	263.60 mg/L ✓		264 mg/L	1	1.0	2.0			6/12/18 22:23	N	II
R1805152-003	Alkalinity, Total as CaCO3 N/A			Water	74.40 mg/L ✓		74.4 mg/L	1	1.0	2.0			6/12/18 22:28	N	II
R1805152-004	Alkalinity, Total as CaCO3 N/A			Water	-0.80 mg/L ✓		2.0 mg/L U	1	1.0	2.0			6/12/18 22:31	N	II
R1805157-001	Alkalinity, Total as CaCO3 N/A			Water	59.60 mg/L ✓		59.6 mg/L	1	1.0	2.0			6/12/18 22:36	N	IV
RQ1805776-03	Alkalinity, Total as CaCO3 DUP		R1805157-001	Water	57.60 mg/L ✓		57.6 mg/L	1	1.0	2.0		3	6/12/18 22:41	N	IV
R1805157-005	Alkalinity, Total as CaCO3 N/A			Water	27.20 mg/L ✓		27.2 mg/L	1	1.0	2.0			6/12/18 22:46	N	IV
R1805157-009	Alkalinity, Total as CaCO3 N/A			Water	20.80 mg/L ✓		20.8 mg/L	1	1.0	2.0			6/12/18 22:50	N	IV
R1805157-013	Alkalinity, Total as CaCO3 N/A			Water	30.00 mg/L ✓		30.0 mg/L	1	1.0	2.0			6/12/18 23:02	N	IV
RQ1805776-04	Alkalinity, Total as CaCO3 DUP		R1805157-013	Water	29.20 mg/L ✓		29.2 mg/L	1	1.0	2.0		3	6/12/18 23:07	N	IV
R1805182-001	Alkalinity, Total as CaCO3 N/A			Water	130.40 mg/L ✓		130 mg/L	1	1.0	2.0			6/12/18 23:13	N	IV
R1805182-002	Alkalinity, Total as CaCO3 N/A			Water	150.80 mg/L ✓		151 mg/L	1	1.0	2.0			6/12/18 23:19	N	IV
R1805182-003	Alkalinity, Total as CaCO3 N/A			Water	198.80 mg/L ✓		199 mg/L	1	1.0	2.0			6/12/18 23:25	N	IV
R1805202-001	Alkalinity, Total as CaCO3 N/A			Water	493.60 mg/L ✓		494 mg/L	1	1.0	2.0			6/12/18 23:31	N	I
R1805202-002	Alkalinity, Total as CaCO3 N/A			Water	468.00 mg/L ✓		468 mg/L	1	1.0	2.0			6/12/18 23:36	N	I
R1805204-001	Alkalinity, Total as CaCO3 N/A			Water	267.20 mg/L ✓		267 mg/L	1	1.0	2.0			6/12/18 23:42	N	I
R1805204-002	Alkalinity, Total as CaCO3 N/A			Water	20.00 mg/L ✓		20.0 mg/L	1	1.0	2.0			6/12/18 23:46	N	I

Approved: *ctw*
6/14

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02

Analyst: CWOODS

Analysis Lot: 594514 Method/Testcode: SM 2320 B-1997(2011)/Alkalinity

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805777-04	Alkalinity, Total as CaCO3 MB			Water	-1.20 mg/L ✓		2.0 mg/L U	1	1.0	2.0			6/12/18 22:58	N	II
RQ1805777-03	Alkalinity, Total as CaCO3 LCS			Water	18.80 mg/L ✓		18.8 mg/L	1	1.0	2.0	94		6/12/18 23:50	N	II
R1805225-001	Alkalinity, Total as CaCO3 N/A			Drinking Water	57.60 mg/L ✓		57.6 mg/L	1	1.0	2.0			6/13/18 00:04	N	I
R1805271-003	Alkalinity, Total as CaCO3 N/A			Water	402.00 mg/L ✓		402 mg/L	1	1.0	2.0			6/13/18 00:20	N	II
R1805271-004	Alkalinity, Total as CaCO3 N/A			Water	521.60 mg/L ✓		522 mg/L	1	1.0	2.0			6/13/18 00:26	N	II
R1805271-005	Alkalinity, Total as CaCO3 N/A			Water	392.40 mg/L ✓		392 mg/L	1	1.0	2.0			6/13/18 00:31	N	II
R1805271-006	Alkalinity, Total as CaCO3 N/A			Water	189.20 mg/L ✓		189 mg/L	1	1.0	2.0			6/13/18 00:37	N	II
R1805271-007	Alkalinity, Total as CaCO3 N/A			Water	301.60 mg/L ✓		302 mg/L	1	1.0	2.0			6/13/18 00:42	N	II
R1805272-002	Alkalinity, Total as CaCO3 N/A			Water	7140.00 mg/L ✓		7140 mg/L	10	10	20			6/13/18 00:48	N	II
R1805272-003	Alkalinity, Total as CaCO3 N/A			Water	7116.00 mg/L ✓		7120 mg/L	10	10	20			6/13/18 00:53	N	II
R1805272-004	Alkalinity, Total as CaCO3 N/A			Water	6280.00 mg/L ✓		6280 mg/L	10	10	20			6/13/18 01:09	N	II
R1805272-005	Alkalinity, Total as CaCO3 N/A			Water	1237.60 mg/L ✓		1240 mg/L	2	2.0	4.0			6/13/18 01:15	N	II
R1805272-006	Alkalinity, Total as CaCO3 N/A			Water	4812.00 mg/L ✓		4810 mg/L	10	10	20			6/13/18 01:20	N	II
R1805272-007	Alkalinity, Total as CaCO3 N/A			Water	3312.00 mg/L ✓		3310 mg/L	10	10	20			6/13/18 01:26	N	II
R1805284-001	Alkalinity, Total as CaCO3 N/A			Drinking Water	118.40 mg/L ✓		118 mg/L	1	1.0	2.0			6/13/18 01:32	N	II
R1805284-002	Alkalinity, Total as CaCO3 N/A			Drinking Water	112.00 mg/L ✓		112 mg/L	1	1.0	2.0			6/13/18 01:37	N	II
R1805288-001	Alkalinity, Total as CaCO3 N/A			Water	248.40 mg/L ✓		248 mg/L	1	1.0	2.0			6/13/18 01:43	N	IV
R1805288-003	Alkalinity, Total as CaCO3 N/A			Water	326.40 mg/L ✓		326 mg/L	1	1.0	2.0			6/13/18 01:49	N	IV
R1805288-005	Alkalinity, Total as CaCO3 N/A			Water	206.00 mg/L ✓		206 mg/L	1	1.0	2.0			6/13/18 01:54	Y	IV
RQ1805777-02	Alkalinity, Total as CaCO3 DUP		R1805288-005	Water	207.20 mg/L ✓		207 mg/L	1	1.0	2.0		<1	6/13/18 02:00	N	IV
R1805288-007	Alkalinity, Total as CaCO3 N/A			Water	907.20 mg/L ✓		907 mg/L	1	1.0	2.0			6/13/18 02:14	N	IV
R1805288-009	Alkalinity, Total as CaCO3 N/A			Water	410.00 mg/L ✓		410 mg/L	1	1.0	2.0			6/13/18 02:19	N	IV

Approved: [Signature]
6/14

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02

Analyst: CWOODS

Analysis Lot: 594515 Method/Testcode: SM 2320 B-1997(2011)/Alk Titr AS

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	POL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805778-04	Alkalinity, Total as CaCO3 MB			Water	0.00 mg/L ✓		2.0 mg/L U	1	1.0	2.0			6/13/18 02:08	N	IV
RQ1805778-04	Alkalinity, Total as CaCO3 MB			Water	0.00 mg/L ✓		2.0 mg/L U	1	1.0	2.0			6/13/18 02:08	N	IV
RQ1805778-03	Alkalinity, Total as CaCO3 LCS			Water	18.40 mg/L ✓		18.4 mg/L	1	1.0	2.0	92		6/13/18 02:23	N	IV
RQ1805778-03	Alkalinity, Total as CaCO3 LCS			Water	18.40 mg/L ✓		18.4 mg/L	1	1.0	2.0	92		6/13/18 02:23	N	IV
R1805288-011	Alkalinity, Total as CaCO3 N/A			Water	226.80 mg/L ✓		227 mg/L	1	1.0	2.0			6/13/18 02:29	N	IV
RQ1805778-01	Alkalinity, Total as CaCO3 DUP		R1805288-011	Water	225.60 mg/L ✓		226 mg/L	1	1.0	2.0		<1	6/13/18 02:34	N	IV
R1805288-013	Alkalinity, Total as CaCO3 N/A			Water	181.20 mg/L ✓		181 mg/L	1	1.0	2.0			6/13/18 02:40	N	IV
R1805288-015	Alkalinity, Total as CaCO3 N/A			Water	249.20 mg/L ✓		249 mg/L	1	1.0	2.0			6/13/18 02:45	N	IV
R1805288-017	Alkalinity, Total as CaCO3 N/A			Water	1622.00 mg/L ✓		1620 mg/L	5	5	10			6/13/18 02:51	N	IV
R1805288-018	Alkalinity, Total as CaCO3 N/A			Water	733.20 mg/L ✓		733 mg/L	1	1.0	2.0			6/13/18 02:57	N	IV
R1805288-019	Alkalinity, Total as CaCO3 N/A			Water	179.20 mg/L ✓		179 mg/L	1	1.0	2.0			6/13/18 03:03	N	IV
R1805369-003	Alkalinity, Total as CaCO3 N/A			Water	387.20 mg/L ✓		387 mg/L	1	1.0	2.0			6/13/18 03:16	N	II
R1805369-004	Alkalinity, Total as CaCO3 N/A			Water	100.00 mg/L ✓		100 mg/L	1	1.0	2.0			6/13/18 03:23	N	II
R1805327-001	Alkalinity, Total as CaCO3 N/A			Water	8608.00 mg/L ✓		8610 mg/L	10	10	20			6/13/18 03:29	N	IV
R1805328-001	Alkalinity, Total as CaCO3 N/A			Water	289.20 mg/L ✓		289 mg/L	1	1.0	2.0			6/13/18 03:34	N	IV
R1805109-001	Alkalinity, Total as CaCO3 N/A			Water	282.40 mg/L ✓		282 mg/L	1	1.0	2.0			6/13/18 03:40	N	IV
R1805109-003	Alkalinity, Total as CaCO3 N/A			Water	268.40 mg/L ✓		268 mg/L	1	1.0	2.0			6/13/18 03:45	N	IV
R1805109-008	Alkalinity, Total as CaCO3 N/A			Water	234.00 mg/L ✓		234 mg/L	1	1.0	2.0			6/13/18 03:50	Y	IV
RQ1805778-02	Alkalinity, Total as CaCO3 DUP		R1805109-008	Water	232.00 mg/L ✓		232 mg/L	1	1.0	2.0		<1	6/13/18 03:56	N	IV
R1805109-010	Alkalinity, Total as CaCO3 N/A			Water	271.60 mg/L ✓		272 mg/L	1	1.0	2.0			6/13/18 04:01	N	IV
R1805109-012	Alkalinity, Total as CaCO3 N/A			Water	271.20 mg/L ✓		271 mg/L	1	1.0	2.0			6/13/18 04:06	N	IV
R1805109-014	Alkalinity, Total as CaCO3 N/A			Water	275.20 mg/L ✓		275 mg/L	1	1.0	2.0			6/13/18 04:19	N	IV
R1805298-005	Alkalinity, Total as CaCO3 N/A			Water	203.60 mg/L ✓		204 mg/L	1	1.0	2.0			6/13/18 04:25	N	IV
R1805298-017	Alkalinity, Total as CaCO3 N/A			Water	221.20 mg/L ✓		221 mg/L	1	1.0	2.0			6/13/18 04:30	N	IV
R1805298-021	Alkalinity, Total as CaCO3 N/A			Water	209.20 mg/L ✓		209 mg/L	1	1.0	2.0			6/13/18 04:35	N	IV
R1805298-026	Alkalinity, Total as CaCO3 N/A			Water	195.20 mg/L ✓		195 mg/L	1	1.0	2.0			6/13/18 04:40	N	IV

Approved: [Signature]
6/14

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02

Analyst: CWOODS

Analysis Lot: 594518 Method/Testcode: SM 2320 B-1997(2011)/Alkalinity

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805779-03	Alkalinity, Total as CaCO3 MB			Water	-0.40 mg/L ✓		2.0 mg/L U	1	1.0	2.0			6/13/18 04:14	N	II
RQ1805779-02	Alkalinity, Total as CaCO3 LCS			Water	18.80 mg/L ✓		18.8 mg/L	1	1.0	2.0	94		6/13/18 04:44	N	II
R1805330-001	Alkalinity, Total as CaCO3 N/A			Water	79.20 mg/L ✓		79.2 mg/L	1	1.0	2.0			6/13/18 04:50	N	IV
R1805330-002	Alkalinity, Total as CaCO3 N/A			Water	134.00 mg/L ✓		134 mg/L	1	1.0	2.0			6/13/18 04:55	N	IV
RQ1805779-01	Alkalinity, Total as CaCO3 DUP		R1805330-002	Water	133.60 mg/L ✓		134 mg/L	1	1.0	2.0		<1	6/13/18 05:01	N	IV
R1805330-003	Alkalinity, Total as CaCO3 N/A			Water	202.40 mg/L ✓		202 mg/L	1	1.0	2.0			6/13/18 05:06	N	IV
R1805330-004	Alkalinity, Total as CaCO3 N/A			Water	191.20 mg/L ✓		191 mg/L	1	1.0	2.0			6/13/18 05:21	N	IV
R1805330-005	Alkalinity, Total as CaCO3 N/A			Water	53.60 mg/L ✓		53.6 mg/L	1	1.0	2.0			6/13/18 05:26	N	IV
R1805330-006	Alkalinity, Total as CaCO3 N/A			Water	128.00 mg/L ✓		128 mg/L	1	1.0	2.0			6/13/18 05:31	N	IV
R1805330-007	Alkalinity, Total as CaCO3 N/A			Water	78.80 mg/L ✓		78.8 mg/L	1	1.0	2.0			6/13/18 05:37	N	IV
R1805332-002	Alkalinity, Total as CaCO3 N/A			Drinking Water	66.80 mg/L ✓		66.8 mg/L	1	1.0	2.0			6/13/18 05:42	N	II
R1805332-003	Alkalinity, Total as CaCO3 N/A			Drinking Water	43.20 mg/L ✓		43.2 mg/L	1	1.0	2.0			6/13/18 05:47	N	II
R1805333-001	Alkalinity, Total as CaCO3 N/A			Water	224.00 mg/L ✓		224 mg/L	1	1.0	2.0			6/13/18 05:52	N	II
R1805333-002	Alkalinity, Total as CaCO3 N/A			Water	162.40 mg/L ✓		162 mg/L	1	1.0	2.0			6/13/18 05:58	N	II
R1805293-004	Alkalinity, Total as CaCO3 N/A			Water	120.40 mg/L ✓		120 mg/L	1	1.0	2.0			6/13/18 06:04	N	IV
R1805293-005	Alkalinity, Total as CaCO3 N/A			Water	68.40 mg/L ✓		68.4 mg/L	1	1.0	2.0			6/13/18 06:10	N	IV
R1805315-001	Alkalinity, Total as CaCO3 N/A			Water	280.00 mg/L ✓		280 mg/L	1	1.0	2.0			6/13/18 06:24	N	IV
R1805315-002	Alkalinity, Total as CaCO3 N/A			Water	277.60 mg/L ✓		278 mg/L	1	1.0	2.0			6/13/18 06:30	N	IV
R1805315-003	Alkalinity, Total as CaCO3 N/A			Water	300.00 mg/L ✓		300 mg/L	1	1.0	2.0			6/13/18 06:35	N	IV
R1805315-006	Alkalinity, Total as CaCO3 N/A			Water	280.80 mg/L ✓		281 mg/L	1	1.0	2.0			6/13/18 06:40	N	IV
R1805315-007	Alkalinity, Total as CaCO3 N/A			Water	278.80 mg/L ✓		279 mg/L	1	1.0	2.0			6/13/18 06:46	N	IV
R1805344-001	Alkalinity, Total as CaCO3 N/A			Water	244.80 mg/L ✓		245 mg/L	1	1.0	2.0			6/13/18 06:51	N	IV
R1805344-003	Alkalinity, Total as CaCO3 N/A			Water	247.20 mg/L ✓		247 mg/L	1	1.0	2.0			6/13/18 06:57	N	IV

Approved: *Am*
6/14

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Sample Dilutions

Final Volume: 30-40mL - TOC

Analyst: Awando/Nsmith
Instrument: Skalar

Date: 6/12/18
Analysis: Alkalinity

Common Dilutions																
Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor
1/2	DI	20	20	1/2												
1/3	DI	10	20	1/3												
1/4	DI	10	30	1/4												
1/6	DI	7	35	1/6												
1/7	DI	6	36	1/7												
1/10	DI	3	27	1/10												
1/10	DI	4	36	1/10												
1/20	DI	2	38	1/20												
1/30	DI	1	29	1/30												
1/40	DI	1	39	1/40												
1/100	DI	0.4	39.6	1/100												
1/200	DI	0.2	39.8	1/200												
1/300	DI	0.1	29.9	1/300												
1/400	DI	0.1	39.9	1/400												
1/1000	DI	1	9	1/10	0.4	39.6	1/1000									
1/2000	DI	1	9	1/10	0.2	39.8	1/2000									
1/4000	DI	1	9	1/10	0.1	39.9	1/4000									
1/10000	DI	0.4	39.6	1/100	0.4	39.6	1/10000									

Special Dilutions																
Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor



Alkalinity Analysis Report

Started	Finished	Application	Description	Operator
6/12/2018 4:27 PM	6/13/2018 7:05 AM	WATERS		Advanced

Analyst: C Woods / N Smith
Pipet: TOC / TOX

Mean Slope	Offsets	Buffer 10 Lot#	Buffer 4 Lot#	Calibration Info	Cal Date Time
98.4	7.145			pH electrode, pH, (Pt1000), CAL_pH2	2018-06-12 16:24:44

Rack	Pos	Identity	pH init	Total Alk (mg/L)	Carb Alk (mg/L)	BiCarb Alk (mg/L)	Dil	Vol EP1	B_EP1_pH	Vol EP1	B_EP2_pH	B_Vol_End	C_EP1_Vol	C_EP2_pH	C_Vol_End	Date / Time
B1	1	CCV	9.624	47.60	34.40	13.20	1	0.086	4.463	0.152	4.189	0.158				6/12/2018 4:38 PM
B1	2	CCB	4.671	0.00	0.00	0.00	1	0	4.194	0	4.189	0				6/12/2018 4:40 PM
B1	3	LCS	7.789	19.20	0.00	19.20	1	0	4.462	0.102	4.156	0.108				6/12/2018 4:45 PM
B1	4	R1805259-001	7.322	87.20	0.00	87.20	1	0	4.466	0.436	4.181	0.454				6/12/2018 4:52 PM
B1	5	R1805259-001D	7.355	87.20	0.00	87.20	1	0	4.461	0.436	4.181	0.454				6/12/2018 4:58 PM
B1	6	R1805085-003	7.149	208.00	0.00	208.00	1	0	-9999	-9999	-9999	0.5	0	4.477	0.54	6/12/2018 5:04 PM
B1	7	R1805085-006	7.005	118.40	0.00	118.40	1	0	-9999	-9999	-9999	0.5	0	4.481	0.092	6/12/2018 5:10 PM
B1	8	R1805090-001	7.471	223.20	0.00	223.20	1	0	-9999	-9999	-9999	0.5	0	4.49	0.616	6/12/2018 5:16 PM
B1	9	R1805090-002	7.378	234.40	0.00	234.40	1	0	-9999	-9999	-9999	0.5	0	4.476	0.672	6/12/2018 5:21 PM
B1	10	R1805090-003	6.609	158.80	0.00	158.80	1	0	-9999	-9999	-9999	0.5	0	4.488	0.294	6/12/2018 5:28 PM
B1	11	R1805090-004	7.514	142.00	0.00	142.00	1	0	-9999	-9999	-9999	0.5	0	4.457	0.21	6/12/2018 5:33 PM
B1	12	R1805090-005	6.658	141.60	0.00	141.60	1	0	-9999	-9999	-9999	0.5	0	4.458	0.208	6/12/2018 5:39 PM
B1	13	CCV	6.048	9.20	0.00	9.20	1	0	4.471	0.054	4.164	0.062				6/12/2018 5:43 PM
B1	14	CCB	4.304	0.00	0.00	0.00	1	0	4.152	0	4.15	0				6/12/2018 5:45 PM
B1	15	R1805090-006	6.565	142.40	0.00	142.40	1	0	-9999	-9999	-9999	0.5	0	4.472	0.212	6/12/2018 5:52 PM
B1	16	R1805090-007	6.668	169.60	0.00	169.60	1	0	-9999	-9999	-9999	0.5	0	4.466	0.348	6/12/2018 5:58 PM
B1	17	R1805090-007D	6.676	168.80	0.00	168.80	1	0	-9999	-9999	-9999	0.5	0	4.468	0.344	6/12/2018 6:03 PM
B1	18	R1805090-008	7.34	314.40	0.00	314.40	1	0	-9999	-9999	-9999	0.5	0	4.493	1.072	6/12/2018 6:09 PM
B1	19	R1805090-009	6.964	289.60	0.00	289.60	1	0	-9999	-9999	-9999	0.5	0	4.483	0.948	6/12/2018 6:15 PM
B1	20	R1805090-010	7.625	246.80	0.00	246.80	1	0	-9999	-9999	-9999	0.5	0	4.457	0.734	6/12/2018 6:21 PM
B1	21	R1805090-011	7.463	154.00	0.00	154.00	1	0	-9999	-9999	-9999	0.5	0	4.459	0.27	6/12/2018 6:26 PM
B1	22	R1805090-012	5.112	-0.40	0.00	-0.40	1	0	4.422	0.004	4.177	0.01				6/12/2018 6:29 PM
B1	23	R1805091-002	7.66	121.60	0.00	121.60	1	0	-9999	-9999	-9999	0.5	0	4.431	0.108	6/12/2018 6:35 PM
B1	24	R1805091-003	6.74	154.00	0.00	154.00	1	0	-9999	-9999	-9999	0.5	0	4.457	0.27	6/12/2018 6:40 PM
B1	25	CCV	9.943	47.60	34.40	13.20	1	0.086	4.464	0.152	4.171	0.16				6/12/2018 6:46 PM
B1	26	CCB	4.973	-0.80	0.00	-0.80	1	0	4.441	0.002	4.165	0.008				6/12/2018 6:49 PM
B1	27	R1805091-004	6.417	81.60	0.00	81.60	1	0	4.479	0.408	4.191	0.42				6/12/2018 6:55 PM
B1	28	R1805091-005	7.386	372.00	0.00	372.00	1	0	-9999	-9999	-9999	0.5	0	4.465	1.36	6/12/2018 7:00 PM
B1	29	R1805091-006	7.35	353.20	0.00	353.20	1	0	-9999	-9999	-9999	0.5	0	4.486	1.266	6/12/2018 7:06 PM
B1	30	LCS	7.654	18.80	0.00	18.80	1	0	4.43	0.1	4.18	0.106				6/12/2018 7:10 PM
B1	31	R1805091-007	7.037	188.80	0.00	188.80	1	0	-9999	-9999	-9999	0.5	0	4.489	0.444	6/12/2018 7:16 PM
B1	32	R1805091-008	7.474	248.00	0.00	248.00	1	0	-9999	-9999	-9999	0.5	0	4.472	0.74	6/12/2018 7:21 PM



Rack	Pos	Identity	pH init	Total Alk (mg/L)	Carb Alk (mg/L)	BiCarb Alk (mg/L)	Dil	vol EP1	B_EP1_pH	Vol EP1	B_EP2_pH	B_Vol_End	C_EP1_Vol	C_EP2_pH	C_Vol_End	Date / Time
B1	33	R1805091-008D	7.47	252.40	0.00	252.40	1	0	-9999	-9999	-9999	0.5	0	4.47	0.762	6/12/2018 7:27 PM
B1	34	R1805091-009	5.888	36.40	0.00	36.40	1	0	4.44	0.182	4.183	0.192				6/12/2018 7:31 PM
B1	35	R1805091-009D	5.857	36.40	0.00	36.40	1	0	4.474	0.182	4.176	0.194				6/12/2018 7:36 PM
B1	36	R1805091-010	6.965	105.60	0.00	105.60	1	0	-9999	-9999	-9999	0.5	0	4.356	0.028	6/12/2018 7:42 PM
B1	37	CCV	9.862	47.20	32.80	14.40	1	0.082	4.423	0.154	4.19	0.16				6/12/2018 7:48 PM
B1	38	CCB	4.835	-1.20	0.00	-1.20	1	0	4.405	0	4.169	0.006				6/12/2018 7:51 PM
B1	39	R1805091-011	7.322	226.80	0.00	226.80	1	0	-9999	-9999	-9999	0.5	0	4.468	0.634	6/12/2018 7:57 PM
B1	40	R1805091-012	7.489	281.20	0.00	281.20	1	0	-9999	-9999	-9999	0.5	0	4.473	0.906	6/12/2018 8:02 PM
B1	41	R1805091-013	7.458	259.20	0.00	259.20	1	0	-9999	-9999	-9999	0.5	0	4.458	0.796	6/12/2018 8:08 PM
B1	42	R1805091-014	7.667	118.80	0.00	118.80	1	0	-9999	-9999	-9999	0.5	0	4.448	0.094	6/12/2018 8:14 PM
B1	43	R1805091-015	7.218	59.20	0.00	59.20	1	0	4.462	0.296	4.175	0.306				6/12/2018 8:19 PM
B1	44	R1805112-001	5.982	11.60	0.00	11.60	1	0	4.453	0.066	4.172	0.074				6/12/2018 8:23 PM
B1	45	R1805112-002	6.33	108.40	0.00	108.40	1	0	-9999	-9999	-9999	0.5	0	4.475	0.042	6/12/2018 8:29 PM
B1	46	R1805112-004	7.963	86.00	0.00	86.00	1	0	4.481	0.43	4.175	0.442				6/12/2018 8:35 PM
B1	47	R1805149-001	7.377	189.60	0.00	189.60	1	0	-9999	-9999	-9999	0.5	0	4.474	0.448	6/12/2018 8:41 PM
B1	48	R1805149-002	8.987	91.60	19.20	72.40	1	0.048	4.457	0.41	4.19	0.42				6/12/2018 8:48 PM
B1	49	CCV	9.784	47.20	31.20	16.00	1	0.078	4.408	0.158	4.149	0.166				6/12/2018 8:54 PM
B1	50	CCB	4.864	0.00	0.00	0.00	1	0	4.342	0.004	4.17	0.008				6/12/2018 8:56 PM
B1	51	R1805149-003	7.776	222.80	0.00	222.80	1	0	-9999	-9999	-9999	0.5	0	4.446	0.614	6/12/2018 9:01 PM
B1	52	R1805149-004	7.239	196.00	0.00	196.00	1	0	-9999	-9999	-9999	0.5	0	4.485	0.48	6/12/2018 9:07 PM
B1	53	R1805149-005	7.549	250.00	0.00	250.00	1	0	-9999	-9999	-9999	0.5	0	4.46	0.75	6/12/2018 9:13 PM
B1	54	R1805149-007	7.701	320.40	0.00	320.40	1	0	-9999	-9999	-9999	0.5	0	4.482	1.102	6/12/2018 9:18 PM
B1	55	R1805149-008	6.843	138.80	0.00	138.80	1	0	-9999	-9999	-9999	0.5	0	4.467	0.194	6/12/2018 9:24 PM
B1	56	R1805149-009	7.434	254.40	0.00	254.40	1	0	-9999	-9999	-9999	0.5	0	4.483	0.772	6/12/2018 9:30 PM
B1	57	LCS	7.479	18.40	0.00	18.40	1	0	4.447	0.098	4.191	0.104				6/12/2018 9:35 PM
B1	58	R1805149-010	7.357	341.20	0.00	341.20	1	0	-9999	-9999	-9999	0.5	0	4.461	1.206	6/12/2018 9:40 PM
B1	59	R1805149-011	7.577	190.80	0.00	190.80	1	0	-9999	-9999	-9999	0.5	0	4.488	0.454	6/12/2018 9:46 PM
B1	60	R1805150-002	8.194	259.20	0.00	259.20	1	0	-9999	-9999	-9999	0.5	0	4.487	0.796	6/12/2018 9:51 PM
B2	1	CCV	9.754	46.80	27.20	19.60	1	0.068	4.412	0.166	4.189	0.172				6/12/2018 9:57 PM
B2	2	CCB	4.984	0.00	0.00	0.00	1	0	4.342	0.004	4.172	0.008				6/12/2018 10:00 PM
B2	3	R1805150-003	7.499	146.40	0.00	146.40	1	0	-9999	-9999	-9999	0.5	0	4.456	0.232	6/12/2018 10:05 PM
B2	4	R1805150-004	8.214	181.20	0.00	181.20	1	0	-9999	-9999	-9999	0.5	0	4.465	0.406	6/12/2018 10:11 PM
B2	5	R1805152-001	6.591	230.80	0.00	230.80	1	0	-9999	-9999	-9999	0.5	0	4.486	0.654	6/12/2018 10:17 PM
B2	6	R1805152-002	7.192	263.60	0.00	263.60	1	0	-9999	-9999	-9999	0.5	0	4.482	0.818	6/12/2018 10:23 PM
B2	7	R1805152-003	7.453	74.40	0.00	74.40	1	0	4.444	0.372	4.19	0.382				6/12/2018 10:28 PM
B2	8	R1805152-004	4.98	-0.80	0.00	-0.80	1	0	4.397	0.004	4.163	0.012				6/12/2018 10:31 PM
B2	9	R1805157-001	7.633	59.60	0.00	59.60	1	0	4.468	0.298	4.182	0.31				6/12/2018 10:36 PM
B2	10	R1805157-001D	7.632	57.60	0.00	57.60	1	0	4.441	0.288	4.184	0.298				6/12/2018 10:41 PM
B2	11	R1805157-005	7.229	27.20	0.00	27.20	1	0	4.439	0.136	4.185	0.144				6/12/2018 10:46 PM
B2	12	R1805157-009	7.034	20.80	0.00	20.80	1	0	4.467	0.104	4.179	0.112				6/12/2018 10:50 PM
B2	13	CCV	9.653	46.40	26.40	20.00	1	0.066	4.42	0.166	4.189	0.172				6/12/2018 10:55 PM
B2	14	CCB	4.924	-1.20	0.00	-1.20	1	0	4.455	0	4.186	0.006				6/12/2018 10:58 PM
B2	15	R1805157-013	7.144	30.00	0.00	30.00	1	0	4.44	0.15	4.184	0.158				6/12/2018 11:02 PM
B2	16	R1805157-013D	7.205	29.20	0.00	29.20	1	0	4.441	0.146	4.187	0.154				6/12/2018 11:07 PM
B2	17	R1805182-001	7.901	130.40	0.00	130.40	1	0	-9999	-9999	-9999	0.5	0	4.455	0.152	6/12/2018 11:13 PM
B2	18	R1805182-002	7.843	150.80	0.00	150.80	1	0	-9999	-9999	-9999	0.5	0	4.479	0.254	6/12/2018 11:19 PM
B2	19	R1805182-003	8.707	198.80	36.80	162.00	1	0.092	-9999	-9999	-9999	0.5	0	4.486	0.402	6/12/2018 11:25 PM
B2	20	R1805202-001	7.339	493.60	0.00	493.60	1	0	-9999	-9999	-9999	0.5	0	4.496	1.968	6/12/2018 11:31 PM



Rack	Pos	Identity	pH init	Total Alk (mg/L)	Carb Alk (mg/L)	BiCarb Alk (mg/L)	Dil	vol EP1	B_EP1_pH	Vol EP1	B_EP2_pH	B_Vol_End	C_EP1_Vol	C_EP2_pH	C_Vol_End	Date / Time
B2	21	R1805202-002	7.895	468.00	0.00	468.00	1	0	-9999	-9999	-9999	0.5	0	4.478	1.84	6/12/2018 11:36 PM
B2	22	R1805204-001	7.813	267.20	0.00	267.20	1	0	-9999	-9999	-9999	0.5	0	4.473	0.836	6/12/2018 11:42 PM
B2	23	R1805204-002	6.146	20.00	0.00	20.00	1	0	4.477	0.1	4.186	0.146				6/12/2018 11:46 PM
B2	24	LCS	7.543	18.80	0.00	18.80	1	0	4.401	0.1	4.175	0.106				6/12/2018 11:50 PM
B2	25	CCV	9.623	46.80	25.60	21.20	1	0.064	4.458	0.17	4.178	0.178				6/12/2018 11:56 PM
B2	26	CCB	4.914	-1.20	0.00	-1.20	1	0	4.431	0	4.185	0.006				6/12/2018 11:59 PM
B2	27	R1805225-001	7.59	57.60	0.00	57.60	1	0	4.424	0.288	4.191	0.296				6/13/2018 12:04 AM
B2	28	R1805271-002	6.382	345.60	0.00	345.60	6	0	4.47	0.288	4.171	0.3				6/13/2018 12:09 AM
B2	29	R1805271-002D	6.401	66.80	0.00	66.80	1	0	4.482	0.334	4.191	0.346				6/13/2018 12:14 AM
B2	30	R1805271-003	7.347	402.00	0.00	402.00	1	0	-9999	-9999	-9999	0.5	0	4.489	1.51	6/13/2018 12:20 AM
B2	31	R1855271-004	7.123	521.60	0.00	521.60	1	0	-9999	-9999	-9999	0.5	0	4.478	2.108	6/13/2018 12:26 AM
B2	32	R1805271-005	8.005	392.40	0.00	392.40	1	0	-9999	-9999	-9999	0.5	0	4.473	1.462	6/13/2018 12:31 AM
B2	33	R1805271-006	8.446	189.20	8.80	180.40	1	0.022	-9999	-9999	-9999	0.5	0	4.466	0.424	6/13/2018 12:37 AM
B2	34	R1805271-007	7.956	301.60	0.00	301.60	1	0	-9999	-9999	-9999	0.5	0	4.484	1.008	6/13/2018 12:42 AM
B2	35	R1805272-002	7.954	7,140.00	0.00	7,140.00	10	0	-9999	-9999	-9999	0.5	0	4.491	3.07	6/13/2018 12:48 AM
B2	36	R1805272-003	8.016	7,116.00	0.00	7,116.00	10	0	-9999	-9999	-9999	0.5	0	4.494	3.058	6/13/2018 12:53 AM
B2	37	CCV	9.475	46.40	21.60	24.80	1	0.054	4.462	0.178	4.18	0.186				6/13/2018 12:59 AM
B2	38	CCB	4.744	-0.80	0.00	-0.80	1	0	4.294	0	4.179	0.004				6/13/2018 1:02 AM
B2	39	R1805272-004	6.802	6,280.00	0.00	6,280.00	10	0	-9999	-9999	-9999	0.5	0	4.495	2.64	6/13/2018 1:09 AM
B2	40	R1805272-005	7.491	1,237.60	0.00	1,237.60	2	0	-9999	-9999	-9999	0.5	0	4.482	2.594	6/13/2018 1:15 AM
B2	41	R1805272-006	7.823	4,812.00	0.00	4,812.00	10	0	-9999	-9999	-9999	0.5	0	4.478	1.906	6/13/2018 1:20 AM
B2	42	R1805272-007	7.756	3,312.00	0.00	3,312.00	10	0	-9999	-9999	-9999	0.5	0	4.486	1.156	6/13/2018 1:26 AM
B2	43	R1805284-001	8.17	118.40	0.00	118.40	1	0	-9999	-9999	-9999	0.5	0	4.458	0.092	6/13/2018 1:32 AM
B2	44	R1805284-002	7.78	112.00	0.00	112.00	1	0	-9999	-9999	-9999	0.5	0	4.451	0.06	6/13/2018 1:37 AM
B2	45	R1805288-001	7.646	248.40	0.00	248.40	1	0	-9999	-9999	-9999	0.5	0	4.471	0.742	6/13/2018 1:43 AM
B2	46	R1805288-003	8.432	326.40	13.60	312.80	1	0.034	-9999	-9999	-9999	0.5	0	4.488	1.098	6/13/2018 1:49 AM
B2	47	R1805288-005	7.811	206.00	0.00	206.00	1	0	-9999	-9999	-9999	0.5	0	4.465	0.53	6/13/2018 1:54 AM
B2	48	R1805288-005D	7.806	207.20	0.00	207.20	1	0	-9999	-9999	-9999	0.5	0	4.467	0.536	6/13/2018 2:00 AM
B2	49	CCB	9.612	46.80	21.60	25.20	1	0.054	4.451	0.18	4.185	0.188				6/13/2018 2:05 AM
B2	50	CCB	4.953	0.00	0.00	0.00	1	0	4.33	0.006	4.149	0.012				6/13/2018 2:08 AM
B2	51	R1805288-007	7.568	907.20	0.00	907.20	1	0	-9999	-9999	-9999	0.5	0	4.485	4.036	6/13/2018 2:14 AM
B2	52	R1805288-009	7.657	410.00	0.00	410.00	1	0	-9999	-9999	-9999	0.5	0	4.478	1.55	6/13/2018 2:19 AM
B2	53	LCS	7.418	18.40	0.00	18.40	1	0	4.437	0.1	4.172	0.108				6/13/2018 2:23 AM
B2	54	R1805288-011	8.166	226.80	0.00	226.80	1	0	-9999	-9999	-9999	0.5	0	4.48	0.634	6/13/2018 2:29 AM
B2	55	R1805288-011D	8.181	225.60	0.00	225.60	1	0	-9999	-9999	-9999	0.5	0	4.475	0.628	6/13/2018 2:34 AM
B2	56	R1805288-013	8.093	181.20	0.00	181.20	1	0	-9999	-9999	-9999	0.5	0	4.451	0.406	6/13/2018 2:40 AM
B2	57	R1805288-015	8.046	249.20	0.00	249.20	1	0	-9999	-9999	-9999	0.5	0	4.467	0.746	6/13/2018 2:45 AM
B2	58	R1805288-017	7.566	1,622.00	0.00	1,622.00	5	0	-9999	-9999	-9999	0.5	0	4.487	1.122	6/13/2018 2:51 AM
B2	59	R1805288-018	7.661	733.20	0.00	733.20	1	0	-9999	-9999	-9999	0.5	0	4.497	3.166	6/13/2018 2:57 AM
B2	60	R1805288-019	8.129	179.20	0.00	179.20	1	0	-9999	-9999	-9999	0.5	0	4.447	0.396	6/13/2018 3:03 AM
B3	1	CCV	9.521	47.60	20.00	27.60	1	0.05	4.43	0.188	4.174	0.196				6/13/2018 3:09 AM
B3	2	CCB	4.89	-0.40	0.00	-0.40	1	0	4.357	0.004	4.156	0.01				6/13/2018 3:11 AM
B3	3	R1805369-003	8.081	387.20	0.00	387.20	1	0	-9999	-9999	-9999	0.5	0	4.482	1.436	6/13/2018 3:16 AM
B3	4	R1805369-004	7.981	100.00	0.00	100.00	1	0	-9999	-9999	-9999	0.5	0	4.473	0	6/13/2018 3:23 AM
B3	5	R1805327-001	8.189	8,608.00	0.00	8,608.00	10	0	-9999	-9999	-9999	0.5	0	4.498	3.804	6/13/2018 3:29 AM
B3	6	R1805328-001	7.998	289.20	0.00	289.20	1	0	-9999	-9999	-9999	0.5	0	4.482	0.946	6/13/2018 3:34 AM
B3	7	R1805109-001	7.996	282.40	0.00	282.40	1	0	-9999	-9999	-9999	0.5	0	4.468	0.912	6/13/2018 3:40 AM
B3	8	R1805109-003	8.014	268.40	0.00	268.40	1	0	-9999	-9999	-9999	0.5	0	4.474	0.842	6/13/2018 3:45 AM



Rack	Pos	Identity	pH init	Total Alk (mg/L)	Carb Alk (mg/L)	BiCarb Alk (mg/L)	Dil	vol EP1	B_EP1_pH	Vol EP1	B_EP2_pH	B_Vol_End	C_EP1_Vol	C_EP2_pH	C_Vol_End	Date / Time
B3	9	R1805109-008	8.009	234.00	0.00	234.00	1	0	-9999	-9999	-9999	0.5	0	4.468	0.67	6/13/2018 3:50 AM
B3	10	R1805109-008D	7.997	232.00	0.00	232.00	1	0	-9999	-9999	-9999	0.5	0	4.48	0.66	6/13/2018 3:56 AM
B3	11	R1805109-010	8.186	271.60	0.00	271.60	1	0	-9999	-9999	-9999	0.5	0	4.454	0.858	6/13/2018 4:01 AM
B3	12	R1805109-012	8.159	271.20	0.00	271.20	1	0	-9999	-9999	-9999	0.5	0	4.461	0.856	6/13/2018 4:06 AM
B3	13	CCV	9.535	47.60	19.20	28.40	1	0.048	4.461	0.19	4.189	0.198				6/13/2018 4:11 AM
B3	14	CCB	4.913	-0.40	0.00	-0.40	1	0	4.375	0.004	4.163	0.01				6/13/2018 4:14 AM
B3	15	R1805109-014	8.152	275.20	0.00	275.20	1	0	-9999	-9999	-9999	0.5	0	4.469	0.876	6/13/2018 4:19 AM
B3	16	R1805298-005	7.842	203.60	0.00	203.60	1	0	-9999	-9999	-9999	0.5	0	4.471	0.518	6/13/2018 4:25 AM
B3	17	R1805298-017	7.549	221.20	0.00	221.20	1	0	-9999	-9999	-9999	0.5	0	4.488	0.606	6/13/2018 4:30 AM
B3	18	R1805298-021	7.681	209.20	0.00	209.20	1	0	-9999	-9999	-9999	0.5	0	4.463	0.546	6/13/2018 4:35 AM
B3	19	R1805298-026	7.839	195.20	0.00	195.20	1	0	-9999	-9999	-9999	0.5	0	4.467	0.476	6/13/2018 4:40 AM
B3	20	LCS	7.37	18.80	0.00	18.80	1	0	4.406	0.1	4.187	0.106				6/13/2018 4:44 AM
B3	21	R1805330-001	7.515	79.20	0.00	79.20	1	0	4.466	0.396	4.189	0.408				6/13/2018 4:50 AM
B3	22	R1805330-002	8.092	134.00	0.00	134.00	1	0	-9999	-9999	-9999	0.5	0	4.473	0.17	6/13/2018 4:55 AM
B3	23	R1805330-002D	8.096	133.60	0.00	133.60	1	0	-9999	-9999	-9999	0.5	0	4.437	0.168	6/13/2018 5:01 AM
B3	24	R1805330-003	8.345	202.40	5.60	196.80	1	0.014	-9999	-9999	-9999	0.5	0	4.471	0.498	6/13/2018 5:06 AM
B3	25	CCV	9.462	47.20	17.60	29.60	1	0.044	4.459	0.192	4.193	0.2				6/13/2018 5:12 AM
B3	26	CCB	4.812	-1.60	0.00	-1.60	1	0	4.405	0	4.163	0.008				6/13/2018 5:15 AM
B3	27	R1805330-004	8.249	191.20	0.00	191.20	1	0	-9999	-9999	-9999	0.5	0	4.461	0.456	6/13/2018 5:21 AM
B3	28	R1805330-005	7.807	53.60	0.00	53.60	1	0	4.465	0.268	4.175	0.28				6/13/2018 5:26 AM
B3	29	R1805330-006	8.288	128.00	0.00	128.00	1	0	-9999	-9999	-9999	0.5	0	4.484	0.14	6/13/2018 5:31 AM
B3	30	R1805330-007	8.466	78.80	4.80	74.00	1	0.012	4.443	0.382	4.183	0.394				6/13/2018 5:37 AM
B3	31	R1805332-002	7.66	66.80	0.00	66.80	1	0	4.445	0.334	4.183	0.344				6/13/2018 5:42 AM
B3	32	R1805332-003	6.846	43.20	0.00	43.20	1	0	4.463	0.216	4.181	0.226				6/13/2018 5:47 AM
B3	33	R1805333-001	8.095	224.00	0.00	224.00	1	0	-9999	-9999	-9999	0.5	0	4.461	0.62	6/13/2018 5:52 AM
B3	34	R1805333-002	8.211	162.40	0.00	162.40	1	0	-9999	-9999	-9999	0.5	0	4.477	0.312	6/13/2018 5:58 AM
B3	35	R1805293-004	7.654	120.40	0.00	120.40	1	0	-9999	-9999	-9999	0.5	0	4.476	0.102	6/13/2018 6:04 AM
B3	36	R1805293-005	8.657	68.40	7.20	61.20	1	0.018	4.462	0.324	4.178	0.336				6/13/2018 6:10 AM
B3	37	CCV	9.378	47.20	16.00	31.20	1	0.04	4.463	0.196	4.19	0.204				6/13/2018 6:16 AM
B3	38	CCB	4.78	-1.60	0.00	-1.60	1	0	4.436	0	4.168	0.008				6/13/2018 6:18 AM
B3	39	R1805315-001	7.912	280.00	0.00	280.00	1	0	-9999	-9999	-9999	0.5	0	4.482	0.9	6/13/2018 6:24 AM
B3	40	R1805315-002	7.952	277.60	0.00	277.60	1	0	-9999	-9999	-9999	0.5	0	4.46	0.888	6/13/2018 6:30 AM
B3	41	R1805315-003	7.934	300.00	0.00	300.00	1	0	-9999	-9999	-9999	0.5	0	4.472	1	6/13/2018 6:35 AM
B3	42	R1805315-006	7.845	280.80	0.00	280.80	1	0	-9999	-9999	-9999	0.5	0	4.469	0.904	6/13/2018 6:40 AM
B3	43	R1805315-007	7.967	278.80	0.00	278.80	1	0	-9999	-9999	-9999	0.5	0	4.475	0.894	6/13/2018 6:46 AM
B3	44	R1805344-001	8.174	244.80	0.00	244.80	1	0	-9999	-9999	-9999	0.5	0	4.465	0.724	6/13/2018 6:51 AM
B3	45	R1805344-003	8.124	247.20	0.00	247.20	1	0	-9999	-9999	-9999	0.5	0	4.466	0.736	6/13/2018 6:57 AM
B3	46	CCV	9.413	47.60	15.20	32.40	1	0.038	4.418	0.2	4.176	0.208				6/13/2018 7:02 AM
B3	47	CCB	4.777	-1.60	0.00	-1.60	1	0	4.424	0	4.172	0.008				6/13/2018 7:05 AM
B3	48				0.00	0.00	1									
B3	49				0.00	0.00	1									
B3	50				0.00	0.00	1									
B3	51				0.00	0.00	1									
B3	52				0.00	0.00	1									
B3	53				0.00	0.00	1									
B3	54				0.00	0.00	1									
B3	55				0.00	0.00	1									
B3	56				0.00	0.00	1									



Rack	Pos	Identity	pH init	Total Alk (mg/L)	Carb Alk (mg/L)	BiCarb Alk (mg/L)	Dil	vol EP1	B_EP1_pH	Vol EP1	B_EP2_pH	B_Vol_End	C_EP1_Vol	C_EP2_pH	C_Vol_End	Date / Time
B3	57				0.00	0.00	1									
B3	58				0.00	0.00	1									
B3	59				0.00	0.00	1									
B3	60				0.00	0.00	1									

ALS Environmental
1565 Jefferson Rd., Rochester, NY 14623

General Chemistry Analytical Run Cover Sheet

Analyst: C Woods / N Smith Date: 6/12/18

Analysis: Alkalinity Instrument: SKALAR R-Buret-02 and R-pH-08

STOCK SOLN'S	Log #	Reagent	weight (g)	Final Vol. (mLs)	Conc. (mg/L)
	Prep/Exp. Dates				
Reference Stock	SEE BELOW	Na2CO3 WC126110E Exp: 11/18/2018	5.3	1000	5000 (A)
Working Ref Stock	SEE BELOW	Prep: 10 mL of 5000 mg/L (A) diluted to 1000 mL w/DI TV=50 mg/L			
LCS	SEE BELOW	Na2CO3 64390 Exp: 11/18/2018	1.0589	1000	1000

QUALITY CONTROL	Vol. (mLs)	Conc. (mg/L)	Final Vol. (mLs)	TV
Water LCS	20	1000	1000	20mg/L
Soil LCS	2	1000	100	2000mg/L
ICV/CCV	10	5000	1000	5000mg/L

REAGENTS	Log Book #, Exp. Dates	Comments
Purchased Titrant	0.100 N H2SO4	187313, Exp 06/30/19
pH 4 Buffer	185412	Exp 8/31/19
pH 7 Buffer	182551	Exp 5/31/19
pH 10 Buffer	185413	Exp 9/30/19

COMMENTS:

25 mL of sample is used by the instrument during titration

1000 mg/L Std Sol'n: 182002 (Exp: 6/13/18)

50 mg/L Ref Sol'n: 186502 (Exp: 06/15/18)

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot:

594964

Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805885-01	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.02 mg/L	10 mL	1.02 mg/L	1					6/15/18 12:58:37	N	I
RQ1805885-02	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:00:00	N	I
RQ1805885-09	Nitrate+Nitrite as Nitrogen	MB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:00:00	N	I
RQ1805885-10	Nitrate+Nitrite as Nitrogen	LCS		Drinking Water	0.50 mg/L	10 mL	0.499 mg/L	1	0.0007	0.050	100		6/15/18 13:01:22	N	I
R1805502-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.01 mg/L	10 mL	0.006 mg/L J	1	0.0007	0.050			6/15/18 13:02:45	N	I
R1805039-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.25 mg/L U	5	0.004	0.25			6/15/18 13:04:08	N	II
R1805039-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.50 mg/L U	10	0.007	0.50			6/15/18 13:05:30	N	II
R1805042-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.68 mg/L	10 mL	0.675 mg/L	1	0.0007	0.0020			6/15/18 13:06:53	N	IV
RQ1805885-11	Nitrate+Nitrite as Nitrogen	MS	R1805042-001	Water	1.12 mg/L	10 mL	1.12 mg/L	1	0.0007	0.050	88*		6/15/18 13:08:15	N	IV
RQ1805885-12	Nitrate+Nitrite as Nitrogen	DMS	R1805042-001	Water	1.12 mg/L	10 mL	1.12 mg/L	1	0.0007	0.050	88*	<1	6/15/18 13:09:37	N	IV
R1805042-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.74 mg/L	10 mL	0.737 mg/L	1	0.0007	0.0020			6/15/18 13:10:59	N	IV
R1805183-001	Nitrate+Nitrite as Nitrogen	N/A		Water	1.33 mg/L	10 mL	1.33 mg/L	1	0.0007	0.050			6/15/18 13:12:21	N	II
R1805183-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.97 mg/L	10 mL	9.70 mg/L	10	0.007	0.50			6/15/18 13:13:43	N	II
RQ1805885-03	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.02 mg/L	10 mL	1.02 mg/L	1					6/15/18 13:15:04	N	I
RQ1805885-04	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:16:27	N	I
R1805059-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.30 mg/L	10 mL	0.296 mg/L	1	0.0007	0.050			6/15/18 13:17:49	N	I
R1805100-002	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.59 mg/L	10 mL	0.587 mg/L	1	0.0007	0.050			6/15/18 13:19:10	N	I
R1805101-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.005 mg/L J	1	0.0007	0.050			6/15/18 13:20:32	N	I
R1805154-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	1.51 mg/L	10 mL	1.51 mg/L	1	0.0007	0.050			6/15/18 13:21:53	N	I
R1805155-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:23:15	N	I
R1805156-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.19 mg/L	10 mL	0.186 mg/L	1	0.0007	0.050			6/15/18 13:24:37	N	I
R1805157-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.0050 mg/L	1	0.0007	0.0020			6/15/18 13:26:00	N	IV
RQ1805885-13	Nitrate+Nitrite as Nitrogen	MS	R1805157-001	Water	0.50 mg/L	10 mL	0.501 mg/L	1	0.0007	0.050	99		6/15/18 13:27:23	N	IV
RQ1805885-14	Nitrate+Nitrite as Nitrogen	DMS	R1805157-001	Water	0.50 mg/L	10 mL	0.500 mg/L	1	0.0007	0.050	99	<1	6/15/18 13:28:45	N	IV
R1805157-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.0225 mg/L	1	0.0007	0.0020			6/15/18 13:30:08	N	IV
RQ1805885-05	Nitrate+Nitrite as Nitrogen	CCV		Water	1.03 mg/L	10 mL	1.03 mg/L	1					6/15/18 13:31:29	N	IV
RQ1805885-06	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:32:51	N	IV
R1805157-005	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0024 mg/L	1	0.0007	0.0020			6/15/18 13:34:14	N	IV
R1805157-007	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.0139 mg/L	1	0.0007	0.0020			6/15/18 13:35:36	N	IV
R1805157-009	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L U	1	0.0007	0.0020			6/15/18 13:36:58	N	IV
R1805157-011	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0024 mg/L	1	0.0007	0.0020			6/15/18 13:38:20	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot: 594964 Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
R1805157-013	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L U	1	0.0007	0.0020			6/15/18 13:39:42	N	IV
RQ1805885-07	Nitrate+Nitrite as Nitrogen	CCV		Water	1.00 mg/L	10 mL	0.997 mg/L	1					6/15/18 13:47:50	N	IV
RQ1805885-08	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:49:13	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Printed 6/15/18 16:35

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot: 594971 Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805886-01	Nitrate+Nitrite as Nitrogen	CCV		Water	1.03 mg/L	10 mL	1.03 mg/L	1					6/15/18 13:31:29	N	IV
RQ1805886-02	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:32:51	N	IV
RQ1805886-11	Nitrate+Nitrite as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:32:51	N	IV
RQ1805886-12	Nitrate+Nitrite as Nitrogen	LCS		Water	0.50 mg/L	10 mL	0.501 mg/L	1	0.0007	0.050	100		6/15/18 13:41:03	N	IV
R1805157-015	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L U	1	0.0007	0.0020			6/15/18 13:42:25	N	IV
RQ1805886-13	Nitrate+Nitrite as Nitrogen	MS	R1805157-015	Water	0.49 mg/L	10 mL	0.488 mg/L	1	0.0007	0.050	98		6/15/18 13:43:46	N	IV
RQ1805886-14	Nitrate+Nitrite as Nitrogen	DMS	R1805157-015	Water	0.49 mg/L	10 mL	0.485 mg/L	1	0.0007	0.050	97	<1	6/15/18 13:45:08	N	IV
R1805175-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.27 mg/L	10 mL	0.265 mg/L	1	0.0007	0.050			6/15/18 13:46:29	N	I
RQ1805886-03	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.00 mg/L	10 mL	0.997 mg/L	1					6/15/18 13:47:50	N	I
RQ1805886-04	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 13:49:13	N	I
R1805200-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	1.20 mg/L	10 mL	1.20 mg/L	1	0.0007	0.050			6/15/18 13:50:35	N	I
R1805201-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.005 mg/L J	1	0.0007	0.050			6/15/18 13:51:58	N	I
R1805204-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.60 mg/L	10 mL	2.98 mg/L	5	0.004	0.25			6/15/18 13:53:21	N	I
R1805204-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.55 mg/L	10 mL	54.6 mg/L	100	0.07	5.0			6/15/18 13:54:43	N	I
R1805298-015	Nitrate+Nitrite as Nitrogen	N/A		Water	1.56 mg/L	10 mL	1.56 mg/L	1	0.0007	0.050			6/15/18 13:57:28	N	IV
R1805298-020	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.01 mg/L J	1	0.0007	0.050			6/15/18 13:58:50	N	IV
R1805298-024	Nitrate+Nitrite as Nitrogen	N/A		Water	0.35 mg/L	10 mL	0.345 mg/L	1	0.0007	0.050			6/15/18 14:00:12	N	IV
R1805298-028	Nitrate+Nitrite as Nitrogen	N/A		Water	0.90 mg/L	10 mL	0.897 mg/L	1	0.0007	0.050			6/15/18 14:01:34	N	IV
R1805332-002	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.01 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:02:56	N	II
RQ1805886-05	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.01 mg/L	10 mL	1.01 mg/L	1					6/15/18 14:04:17	N	II
RQ1805886-06	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.0008 mg/L J	1	0.0007	0.050			6/15/18 14:05:39	N	II
RQ1805886-07	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.02 mg/L	10 mL	1.02 mg/L	1					6/15/18 14:32:28	N	II
RQ1805886-08	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:33:50	N	II
R1805332-003	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.98 mg/L	10 mL	4.92 mg/L	5	0.004	0.25			6/15/18 14:36:19	N	II
R1805333-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:37:40	N	II
R1805333-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.05 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:39:02	N	II
R1805348-001	Nitrate+Nitrite as Nitrogen	N/A		Water	1.08 mg/L	10 mL	1.08 mg/L	1	0.0007	0.050			6/15/18 14:43:07	N	II
RQ1805886-09	Nitrate+Nitrite as Nitrogen	CCV		Water	1.03 mg/L	10 mL	1.03 mg/L	1					6/15/18 14:49:59	N	II
RQ1805886-10	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:51:21	N	II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot: 594975 Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805887-01	Nitrate+Nitrite as Nitrogen	CCV		Water	1.02 mg/L	10 mL	1.02 mg/L	1					6/15/18 14:32:28	N	II
RQ1805887-02	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:33:50	N	II
RQ1805887-09	Nitrate+Nitrite as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:33:50	N	II
RQ1805887-10	Nitrate+Nitrite as Nitrogen	LCS		Water	0.50 mg/L	10 mL	0.497 mg/L	1	0.0007	0.050	99		6/15/18 14:44:30	N	II
R1805349-001	Nitrate+Nitrite as Nitrogen	N/A		Water	1.02 mg/L	10 mL	1.02 mg/L	1	0.0007	0.050			6/15/18 14:45:52	N	II
RQ1805887-11	Nitrate+Nitrite as Nitrogen	MS	R1805349-001	Water	1.42 mg/L	10 mL	1.42 mg/L	1	0.0007	0.050	80*		6/15/18 14:47:15	N	II
RQ1805887-12	Nitrate+Nitrite as Nitrogen	DMS	R1805349-001	Water	1.43 mg/L	10 mL	1.43 mg/L	1	0.0007	0.050	80*	<1	6/15/18 14:48:37	N	II
RQ1805887-03	Nitrate+Nitrite as Nitrogen	CCV		Water	1.03 mg/L	10 mL	1.03 mg/L	1					6/15/18 14:49:59	N	IV
RQ1805887-04	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:51:21	N	IV
R1805387-022	Nitrate+Nitrite as Nitrogen	N/A		Water	0.70 mg/L	10 mL	0.699 mg/L	1	0.0007	0.050			6/15/18 14:54:05	N	IV
R1805387-026	Nitrate+Nitrite as Nitrogen	N/A		Water	0.68 mg/L	10 mL	0.677 mg/L	1	0.0007	0.050			6/15/18 14:55:27	N	IV
R1805401-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.03 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 14:56:49	N	I
RQ1805887-13	Nitrate+Nitrite as Nitrogen	MS	R1805401-001	Water	0.31 mg/L	10 mL	0.305 mg/L	1	0.0007	0.050	61*		6/15/18 14:58:11	N	I
RQ1805887-14	Nitrate+Nitrite as Nitrogen	DMS	R1805401-001	Water	0.30 mg/L	10 mL	0.304 mg/L	1	0.0007	0.050	61*	<1	6/15/18 14:59:32	N	I
R1805401-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:00:54	N	I
R1805401-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.14 mg/L	10 mL	0.135 mg/L	1	0.0007	0.050			6/15/18 15:02:15	N	I
R1805401-004	Nitrate+Nitrite as Nitrogen	N/A		Water	0.03 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:03:37	N	I
R1805401-005	Nitrate+Nitrite as Nitrogen	N/A		Water	0.04 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:04:58	N	I
RQ1805887-05	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.03 mg/L	10 mL	1.03 mg/L	1					6/15/18 15:06:20	N	I
RQ1805887-06	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:07:42	N	I
R1805412-002	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.27 mg/L	10 mL	0.268 mg/L	1	0.0007	0.050			6/15/18 15:10:28	N	I
R1805437-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	1.48 mg/L	10 mL	1.48 mg/L	1	0.0007	0.050			6/15/18 15:11:50	N	II
R1805481-002	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:14:35	N	I
R1805513-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.02 mg/L	10 mL	0.018 mg/L J	1	0.0007	0.050			6/15/18 15:15:57	N	I
R1805293-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L U	1	0.0007	0.0020			6/15/18 15:17:20	N	IV
R1805293-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.0130 mg/L	1	0.0007	0.0020			6/15/18 15:18:42	N	IV
R1805293-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.04 mg/L	10 mL	0.0412 mg/L	1	0.0007	0.0020			6/15/18 15:20:04	N	IV
RQ1805887-07	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					6/15/18 15:22:46	N	IV
RQ1805887-08	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:24:09	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot: 594977 Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805888-01	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.03 mg/L	10 mL	1.03 mg/L	1					6/15/18 15:06:20	N	I
RQ1805888-02	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:07:42	N	I
RQ1805888-11	Nitrate+Nitrite as Nitrogen	MB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:07:42	N	I
RQ1805888-12	Nitrate+Nitrite as Nitrogen	LCS		Drinking Water	0.51 mg/L	10 mL	0.507 mg/L	1	0.0007	0.050	101		6/15/18 15:21:25	N	I
RQ1805888-03	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					6/15/18 15:22:46	N	I
RQ1805888-04	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:24:09	N	I
R1805198-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.10 mg/L	10 mL	0.102 mg/L	1	0.0007	0.050			6/15/18 15:25:31	N	I
R1805199-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.18 mg/L	10 mL	0.179 mg/L	1	0.0007	0.050			6/15/18 15:26:52	N	I
R1805401-007	Nitrate+Nitrite as Nitrogen	N/A		Water	0.05 mg/L	10 mL	0.050 mg/L	1	0.0007	0.050			6/15/18 15:28:13	N	I
R1805411-002	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:29:35	N	I
RQ1805888-13	Nitrate+Nitrite as Nitrogen	MS	R1805411-002	Drinking Water	0.51 mg/L	10 mL	0.508 mg/L	1	0.0007	0.050	102		6/15/18 15:30:57	N	I
RQ1805888-14	Nitrate+Nitrite as Nitrogen	DMS	R1805411-002	Drinking Water	0.51 mg/L	10 mL	0.508 mg/L	1	0.0007	0.050	102	<1	6/15/18 15:32:19	N	I
R1805290-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.87 mg/L	10 mL	4.36 mg/L	5	0.004	0.25			6/15/18 15:33:42	N	II
R1805510-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.93 mg/L	10 mL	0.935 mg/L	1	0.0007	0.050			6/15/18 15:35:05	N	I
R1805512-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.26 mg/L	10 mL	0.257 mg/L	1	0.0007	0.050			6/15/18 15:36:28	N	I
R1805545-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.46 mg/L	10 mL	0.459 mg/L	1	0.0007	0.050			6/15/18 15:37:50	N	I
RQ1805888-05	Nitrate+Nitrite as Nitrogen	CCV		Water	1.03 mg/L	10 mL	1.03 mg/L	1					6/15/18 15:39:11	N	IV
RQ1805888-06	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:40:33	N	IV
R1805521-001	Nitrate+Nitrite as Nitrogen	N/A		Water	1.13 mg/L	10 mL	5.66 mg/L	5	0.004	0.25			6/15/18 15:41:56	N	I
R1805521-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.51 mg/L	10 mL	50.6 mg/L	100	0.07	5.0			6/15/18 15:43:18	N	I
R1805477-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.67 mg/L	10 mL	3.36 mg/L	5	0.004	0.25			6/15/18 15:44:40	N	II
R1805477-002	Nitrate+Nitrite as Nitrogen	N/A		Water	1.30 mg/L	10 mL	13.0 mg/L	10	0.007	0.50			6/15/18 15:46:02	N	II
R1805352-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.56 mg/L	10 mL	0.561 mg/L	1	0.0007	0.0020			6/15/18 15:47:24	N	IV
RQ1805888-15	Nitrate+Nitrite as Nitrogen	MS	R1805352-001	Water	1.03 mg/L	10 mL	1.03 mg/L	1	0.0007	0.050	94		6/15/18 15:48:45	N	IV
RQ1805888-16	Nitrate+Nitrite as Nitrogen	DMS	R1805352-001	Water	1.03 mg/L	10 mL	1.03 mg/L	1	0.0007	0.050	94	<1	6/15/18 15:50:07	N	IV
R1805352-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.91 mg/L	10 mL	0.913 mg/L	1	0.0007	0.0020			6/15/18 15:51:29	N	IV
R1805352-005	Nitrate+Nitrite as Nitrogen	N/A		Water	1.18 mg/L	10 mL	1.18 mg/L	1	0.0007	0.0020			6/15/18 15:52:50	N	IV
R1805387-018	Nitrate+Nitrite as Nitrogen	N/A		Water	0.69 mg/L	10 mL	3.44 mg/L	5	0.004	0.25			6/15/18 15:54:12	N	IV
RQ1805888-07	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					6/15/18 15:55:33	N	IV
RQ1805888-08	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:56:55	N	IV
R1805374-001	Nitrate+Nitrite as Nitrogen	N/A		Water	1.04 mg/L	10 mL	1.04 mg/L	1	0.0007	0.0020			6/15/18 15:58:18	N	IV
R1805374-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.71 mg/L	10 mL	0.705 mg/L	1	0.0007	0.0020			6/15/18 15:59:41	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot: 594977 Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805888-09	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					6/15/18 16:13:35	N	IV
RQ1805888-10	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 16:14:57	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot: 594980 Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1805889-01	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					6/15/18 15:55:33	N	IV
RQ1805889-02	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:56:55	N	IV
RQ1805889-07	Nitrate+Nitrite as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 15:56:55	N	IV
RQ1805889-08	Nitrate+Nitrite as Nitrogen	LCS		Water	0.51 mg/L	10 mL	0.510 mg/L	1	0.0007	0.050	102		6/15/18 16:01:03	N	IV
R1805374-005	Nitrate+Nitrite as Nitrogen	N/A		Water	0.15 mg/L	10 mL	0.149 mg/L	1	0.0007	0.0020			6/15/18 16:02:26	N	IV
RQ1805889-09	Nitrate+Nitrite as Nitrogen	MS	R1805374-005	Water	0.65 mg/L	10 mL	0.654 mg/L	1	0.0007	0.050	101		6/15/18 16:03:48	N	IV
RQ1805889-10	Nitrate+Nitrite as Nitrogen	DMS	R1805374-005	Water	0.66 mg/L	10 mL	0.655 mg/L	1	0.0007	0.050	101	<1	6/15/18 16:05:11	N	IV
R1805374-007	Nitrate+Nitrite as Nitrogen	N/A		Water	1.28 mg/L	10 mL	1.28 mg/L	1	0.0007	0.0020			6/15/18 16:06:33	N	IV
R1805374-009	Nitrate+Nitrite as Nitrogen	N/A		Water	0.42 mg/L	10 mL	0.425 mg/L	1	0.0007	0.0020			6/15/18 16:07:55	N	IV
R1805480-002	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.41 mg/L	10 mL	4.12 mg/L	10	0.007	0.50			6/15/18 16:10:39	N	I
RQ1805889-03	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					6/15/18 16:13:35	N	I
RQ1805889-04	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 16:14:57	N	I
R1805401-006	Nitrate+Nitrite as Nitrogen	N/A		Water	1.41 mg/L	10 mL	28.2 mg/L	20	0.02	1.0			6/15/18 16:16:19	N	I
RQ1805889-05	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					6/15/18 16:17:40	N	I
RQ1805889-06	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			6/15/18 16:19:03	N	I

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Creator : GABRIELA NITA-JOUPPI

Creation Date : 6/15/2018 12:32:29 PM

Last Modified : 6/15/2018 2:20:16 PM

Description :

Cup	Sample ID	MDF	Weight	Sample Type	Comments
S1	STD 2.000			Calibration Standard	
S2	STD 1.000			Calibration Standard	
S3	STD 0.500			Calibration Standard	
S4	STD 0.200			Calibration Standard	
S5	STD 0.100			Calibration Standard	
S6	STD 0.050			Calibration Standard	
S7	STD 0.010			Calibration Standard	
S8	STD 0.005			Calibration Standard	
S9	STD 0.002			Calibration Standard	
S10	STD 0.000			Calibration Standard	
89	1.000 NO3			Unknown	
90	1.000 NO2			Unknown	
S1	ICV TV= 1.0			Unknown	
S10	ICB			Unknown	
S7	CRDL 0.01			Unknown	
S8	CRDL 0.005			Unknown	
S9	CRDL 0.002			Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
1	LCS			Unknown	
2	R1805502-001			Unknown	
3	R1805039-001	5.00000		Unknown	
4	R1805039-002	10.0000		Unknown	
5	R1805042-001			Unknown	
6	R1805042-001 MS			Unknown	
7	R1805042-001 MSD			Unknown	
8	R1805042-002			Unknown	
9	R1805183-001			Unknown	
10	R1805183-002	10.0000		Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
11	R1805059-001			Unknown	
12	R1805100-002			Unknown	
13	R1805101-001			Unknown	
14	R1805154-001			Unknown	
15	R1805155-001			Unknown	
16	R1805156-001			Unknown	
17	R1805157-001			Unknown	
18	R1805157-001 MS			Unknown	
19	R1805157-001 MSD			Unknown	

Creator : GABRIELA NITA-JOUPPI

Creation Date : 6/15/2018 2:31:28 PM

Last Modified : 6/15/2018 4:21:21 PM

Description :

Cup	Sample ID	MDF	Weight	Sample Type	Comments
S1	CCV			Unknown	
S10	CCB			Unknown	
41	R1805332-003	5.00000		Unknown	
42	R1805333-001			Unknown	
43	R1805333-002			Unknown	
44	R1805477-001			Unknown	
45	R1805477-002			Unknown	
46	R1805348-001			Unknown	
47	LCS			Unknown	
48	R1805349-001			Unknown	
49	R1805349-001 MS			Unknown	
50	R1805349-001 MSD			Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
51	R1805387-018			Unknown	
52	R1805387-022			Unknown	
53	R1805387-026			Unknown	
54	R1805401-001			Unknown	
55	R1805401-001 MS			Unknown	
56	R1805401-001 MSD			Unknown	
57	R1805401-002			Unknown	
58	R1805401-003			Unknown	
59	R1805401-004			Unknown	
60	R1805401-005			Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
61	R1805401-006			Unknown	
62	R1805412-002			Unknown	
63	R1805437-001			Unknown	
64	R1805480-002			Unknown	
65	R1805481-002			Unknown	
66	R1805513-001			Unknown	
67	R1805293-001			Unknown	
68	R1805293-002			Unknown	
69	R1805293-003			Unknown	
70	LCS			Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
71	R1805198-001			Unknown	
72	R1805199-001			Unknown	

73	R1805401-007		Unknown	
74	R1805411-002		Unknown	
75	R1805411-002MS		Unknown	
76	R1805411-002 MSD		Unknown	
77	R1805290-001 RPT	5.00000	Unknown	
78	R1805510-001		Unknown	
79	R1805512-001		Unknown	
80	R1805545-001		Unknown	
S1	CCV		Unknown	
S10	CCB		Unknown	
81	R1805521-001	5.00000	Unknown	
82	R1805521-002	100.000	Unknown	
83	R1805477-001 RPT	5.00000	Unknown	
84	R1805477-002 RPT	10.0000	Unknown	
85	R1805352-001		Unknown	
86	R1805352-001 MS		Unknown	
87	R1805352-001 MSD		Unknown	
88	R1805352-003		Unknown	
89	R1805352-005		Unknown	
90	R1805387-018 RPT	5.00000	Unknown	
S1	CCV		Unknown	
S10	CCB		Unknown	
91	R1805374-001		Unknown	
92	R1805374-003		Unknown	
93	LCS		Unknown	
94	R1805374-005		Unknown	
95	R1805374-005 MS		Unknown	
96	R1805374-005 MSD		Unknown	
97	R1805374-007		Unknown	
98	R1805374-009		Unknown	
99	R1805401-006 RPT	10.0000	Unknown	
100	R1805480-002 RPT	10.0000	Unknown	
S1	CCV		Unknown	
S10	CCB		Unknown	
101	R1805401-006 RPT	20.0000	Unknown	
S1	CCV		Unknown	
S10	CCB		Unknown	

Analyte Table

QC8500 353.2 NO3+N
(mg/L)

Date 6/15/18
Analysis NO₂ NO_x

Common Dilutions

Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor
1/2	D1	4	4	1/2												
1/3		3	6	1/3												
1/4		2	6	1/4												
1/5		2	8	1/5												
1/10		1	9	1/10												
1/20		1	1	1/2	1	9	1/20									
1/30		3	6	1/3	1	9	1/30									
1/40		1	3	1/4	1	9	1/40									
1/50		1	4	1/5	1	9	1/50									
1/100		1	9	1/10	1	9	1/100									
1/200		1	1	1/2	1	9	1/20	1	9	1/200						
1/300		3	6	1/3	1	9	1/30	1	9	1/300						
1/400		1	3	1/4	1	9	1/40	1	9	1/400						
1/500		1	4	1/5	1	9	1/50	1	9	1/500						
1/1000		1	9	1/10	1	9	1/100	1	9	1/1000						
1/2000		1	1	1/2	1	9	1/20	1	9	1/200	1	9	1/2000			
1/3000		3	6	1/3	1	9	1/30	1	9	1/300	1	9	1/3000			
1/4000		1	3	1/4	1	9	1/40	1	9	1/400	1	9	1/4000			
1/10000		1	9	1/10	1	9	1/100	1	9	1/1000	1	9	1/10000			
1/20000		1	1	1/2	1	9	1/20	1	9	1/200	1	9	1/2000	1	9	1/20000
1/40000		1	3	1/4	1	9	1/40	1	9	1/400	1	9	1/4000	1	9	1/40000
1/100000		1	9	1/10	1	9	1/100	1	9	1/1000	1	9	1/10000	1	9	1/100000

Special Dilutions

[illegible]

Original Run Filename: OM_6-15-2018_12-32-29PM.OMN Created: 6/15/2018 12:32:29 PM

Original Run Author's Signature: [GABRIELA NITA-JOUPPI]

Current Run Filename: OM_6-15-2018_12-32-29PM.OMN Last Modified: 6/15/2018 2:20:16 PM

Current Run Author's Signature: [GABRIELA NITA-JOUPPI]

Description: Default New Run

Sample	Cup No.	Channel 1		Detection Time	MDF
		QC8500 353.2 NO3+NO2 (TOTN)			
		Conc. (mg/L)	Area (V.s)		
STD 2.000	S1	2.00000	65.55153	6/15/2018@12:33:31 PM	
STD 1.000	S2	1.00000	34.94037	6/15/2018@12:34:52 PM	
STD 0.500	S3	0.50000	17.89067	6/15/2018@12:36:14 PM	
STD 0.200	S4	0.20000	7.23066	6/15/2018@12:37:36 PM	
STD 0.100	S5	0.10000	3.59075	6/15/2018@12:38:59 PM	
STD 0.050	S6	0.05000	1.80512	6/15/2018@12:40:20 PM	
STD 0.010	S7	0.01000	0.36876	6/15/2018@12:41:42 PM	
STD 0.005	S8	0.00500	0.18121	6/15/2018@12:43:03 PM	
STD 0.002	S9	0.00200	0.07691	6/15/2018@12:44:26 PM	
STD 0.000	S10	0.00000	-0.03109	6/15/2018@12:45:48 PM	
DQM Test: Minimum Correlation Coefficient					
Result:		0.99998 > 0.99700			
Message		Pass			
Action		Continue			
1.000 NO3	89	1.03341	35.23712	6/15/2018@12:49:05 PM	
1.000 NO2	90	1.06952	36.46840	6/15/2018@12:50:27 PM	
ICV TV= 1.0	S1	1.01966	34.76810	6/15/2018@12:51:48 PM	
ICB	S10	-0.00100	-0.03362	6/15/2018@12:53:11 PM	
CRDL 0.01	S7	0.01132	0.38646	6/15/2018@12:54:33 PM	
CRDL 0.005	S8	0.00542	0.18544	6/15/2018@12:55:54 PM	
CRDL 0.002	S9	0.00235	0.08089	6/15/2018@12:57:16 PM	
CCV	S1	1.01921	34.75288	6/15/2018@12:58:37 PM	
CCB	S10	-0.00106	-0.03560	6/15/2018@1:00:00 PM	
LCS	1	0.49893	17.01265	6/15/2018@1:01:22 PM	
R1805502-001	2	0.00563	0.19257	6/15/2018@1:02:45 PM	
R1805039-001	3	0.06305	0.43055	6/15/2018@1:04:08 PM	5.00
R1805039-002	4	0.13959	0.47656	6/15/2018@1:05:30 PM	10.00
R1805042-001	5	0.67495	23.01446	6/15/2018@1:06:53 PM	
R1805042-001 MS	6	1.11588	38.04906	6/15/2018@1:08:15 PM	
R1805042-001 MSD	7	1.11633	38.06443	6/15/2018@1:09:37 PM	
R1805042-002	8	0.73688	25.12618	6/15/2018@1:10:59 PM	
R1805183-001	9	1.33269	45.44167	6/15/2018@1:12:21 PM	
R1805183-002	10	9.70010	33.07523	6/15/2018@1:13:43 PM	10.00
CCV	S1	1.02028	34.78923	6/15/2018@1:15:04 PM	
CCB	S10	-0.00009	-0.00232	6/15/2018@1:16:27 PM	
R1805059-001	11	0.29633	10.10465	6/15/2018@1:17:49 PM	
R1805100-002	12	0.58652	19.99942	6/15/2018@1:19:10 PM	
R1805101-001	13	0.00465	0.15903	6/15/2018@1:20:32 PM	
R1805154-001	14	1.50702	51.38567	6/15/2018@1:21:53 PM	
R1805155-001	15	-0.00204	-0.06883	6/15/2018@1:23:15 PM	
R1805156-001	16	0.18588	6.33863	6/15/2018@1:24:37 PM	
R1805157-001	17	0.00495	0.16942	6/15/2018@1:26:00 PM	
R1805157-001 MS	18	0.50091	17.08033	6/15/2018@1:27:23 PM	
R1805157-001 MSD	19	0.49990	17.04588	6/15/2018@1:28:45 PM	
R1805157-003	20	0.02249	0.76740	6/15/2018@1:30:08 PM	
CCV	S1	1.03280	35.21606	6/15/2018@1:31:29 PM	
CCB	S10	-0.00076	-0.02538	6/15/2018@1:32:51 PM	
R1805157-005	21	0.00240	0.08246	6/15/2018@1:34:14 PM	
R1805157-007	22	0.01390	0.47453	6/15/2018@1:35:36 PM	
R1805157-009	23	0.00154	0.05298	6/15/2018@1:36:58 PM	
R1805157-011	24	0.00244	0.08377	6/15/2018@1:38:20 PM	
R1805157-013	25	0.00139	0.04800	6/15/2018@1:39:42 PM	
LCS	26	0.50088	17.07911	6/15/2018@1:41:03 PM	
R1805157-015	27	0.00197	0.06792	6/15/2018@1:42:25 PM	
R1805157-015 MS	28	0.48762	16.62713	6/15/2018@1:43:46 PM	
R1805157-015 MSD	29	0.48549	16.55456	6/15/2018@1:45:08 PM	
R1805175-001	30	0.26539	9.04957	6/15/2018@1:46:29 PM	
CCV	S1	0.99667	33.98442	6/15/2018@1:47:50 PM	

CCB	S10	-0.00045	-0.01474	6/15/2018@1:49:13 PM	
R1805200-001	31	1.20483	41.08194	6/15/2018@1:50:35 PM	
R1805201-001	32	0.00476	0.16283	6/15/2018@1:51:58 PM	
R1805204-001	33	2.98165	20.33378	6/15/2018@1:53:21 PM	5.00
R1805204-002	34	54.58805	18.61361	6/15/2018@1:54:43 PM	100.00
R1805290-001	35	3.02928	103.29067	6/15/2018@1:56:06 PM	--
R1805298-015	36	1.55693	53.08772	6/15/2018@1:57:28 PM	
Calibration:		Table/Fig. : 1			
R1805298-020	37	0.00974	0.33259	6/15/2018@1:58:50 PM	
R1805298-024	38	0.34495	11.76253	6/15/2018@2:00:12 PM	
R1805298-028	39	0.89679	30.57870	6/15/2018@2:01:34 PM	
R1805332-002	40	0.00805	0.27498	6/15/2018@2:02:56 PM	
CCV	S1	1.00813	34.37510	6/15/2018@2:04:17 PM	
CCB	S10	0.00075	0.02629	6/15/2018@2:05:39 PM	
R1805332-003	41	3.21959	109.77959	6/15/2018@2:07:01 PM	
R1805333-001	42	0.00476	0.16305	6/15/2018@2:08:23 PM	
R1805333-002	43	0.04735	1.61515	6/15/2018@2:09:44 PM	
R1805477-001	44	0.75533	25.75540	6/15/2018@2:11:06 PM	
R1805477-002	45	0.03734	0.12792	6/15/2018@2:12:27 PM	10.00
R1805348-001	46	0.10211	3.48221	6/15/2018@2:13:50 PM	
LCS	47	0.00073	0.02548	6/15/2018@2:15:13 PM	
R1805349-001	48	0.36145	12.32506	6/15/2018@2:16:35 PM	
R1805349-001 MS	49	0.66108	22.54160	6/15/2018@2:17:58 PM	

overrange, RPT 1/5 at = 77

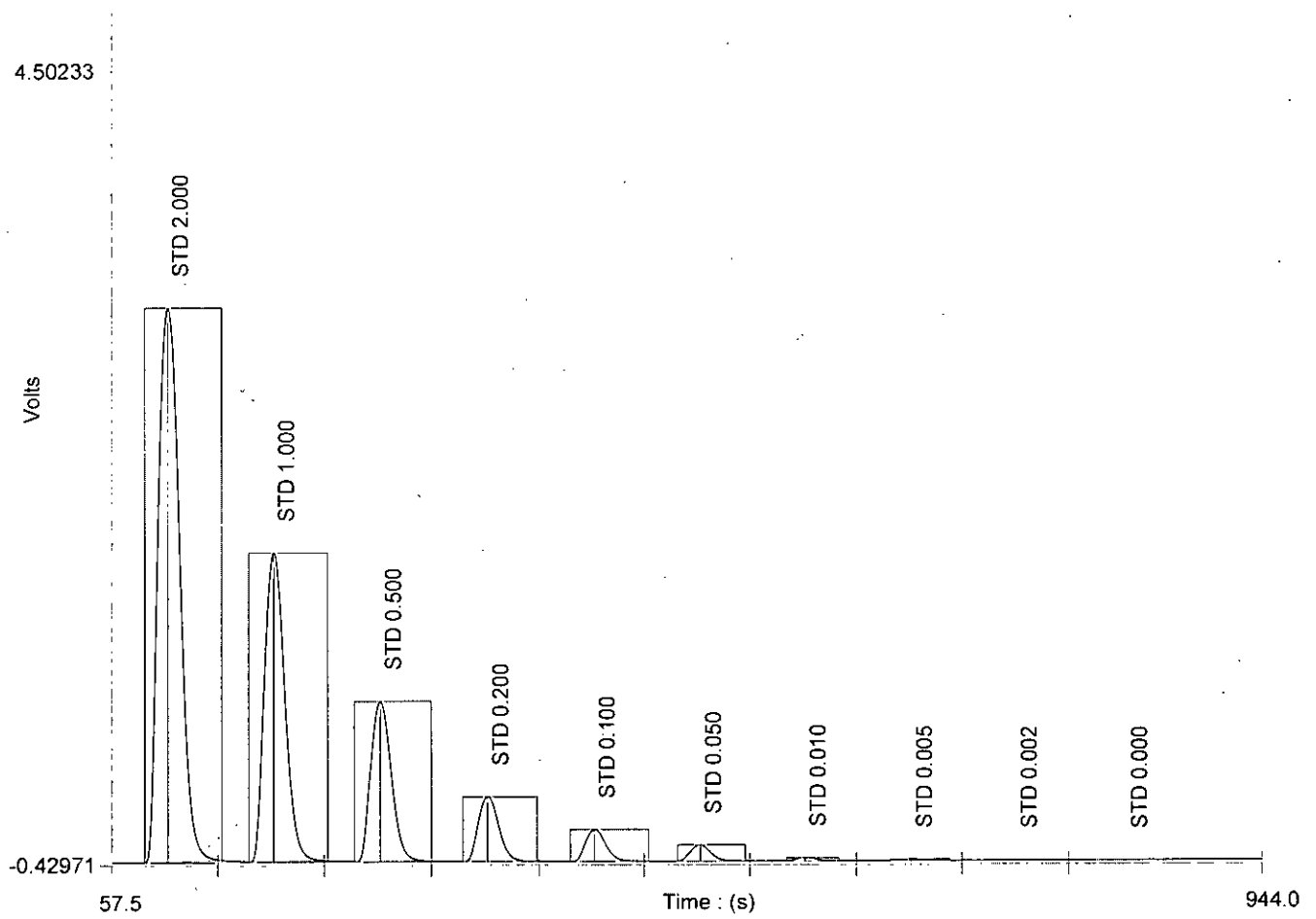
And reported
Restart at 14:31:78
x/CCV, CCB at p 41

Analyte Properties Table for : OM_6-15-2018_12-32-29PM.OMN

Property	Channel 1
	QC8500 353.2 NO3+NO2 (TOTN)
Concentration Units	mg/L
Calibration Fit Type	First Order
Clear Calibration	Yes
Force through Zero	No
Calibration Weighting	1/x
Auto Dilution Trigger	No
% of High Standard	110
Quik Chem Method	10-107-04-1-C
Chemistry	Direct/Bipolar
Calibration by Height	No
Inject to Peak Start	17
Peak Base Width	68

Channel 1 - Set: 1 / 8

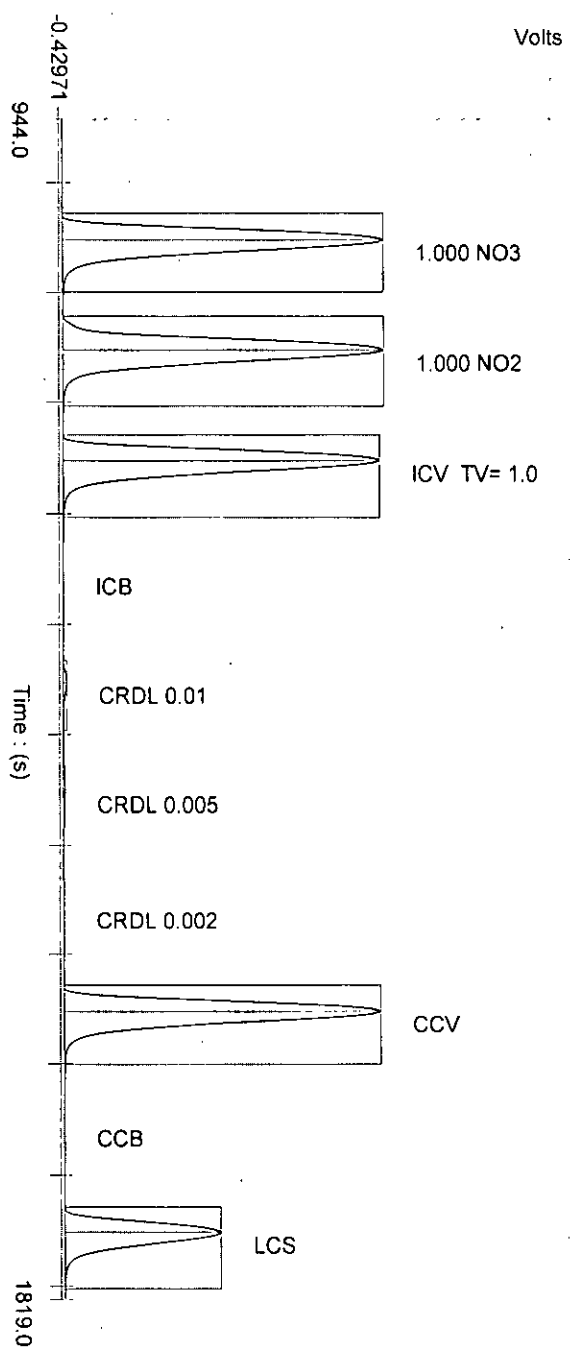
5.36271



Channel 1 - Set: 2 / 8

5.36271

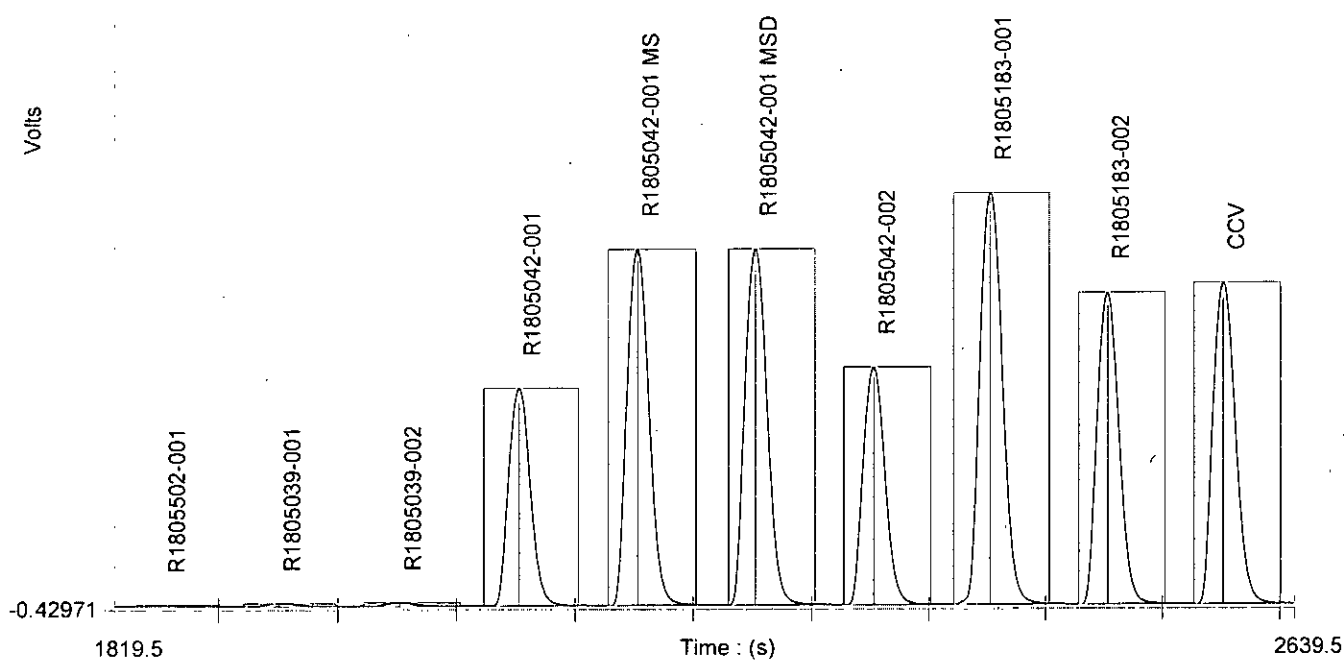
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Channel 1 - Set: 3 / 8

5.36271

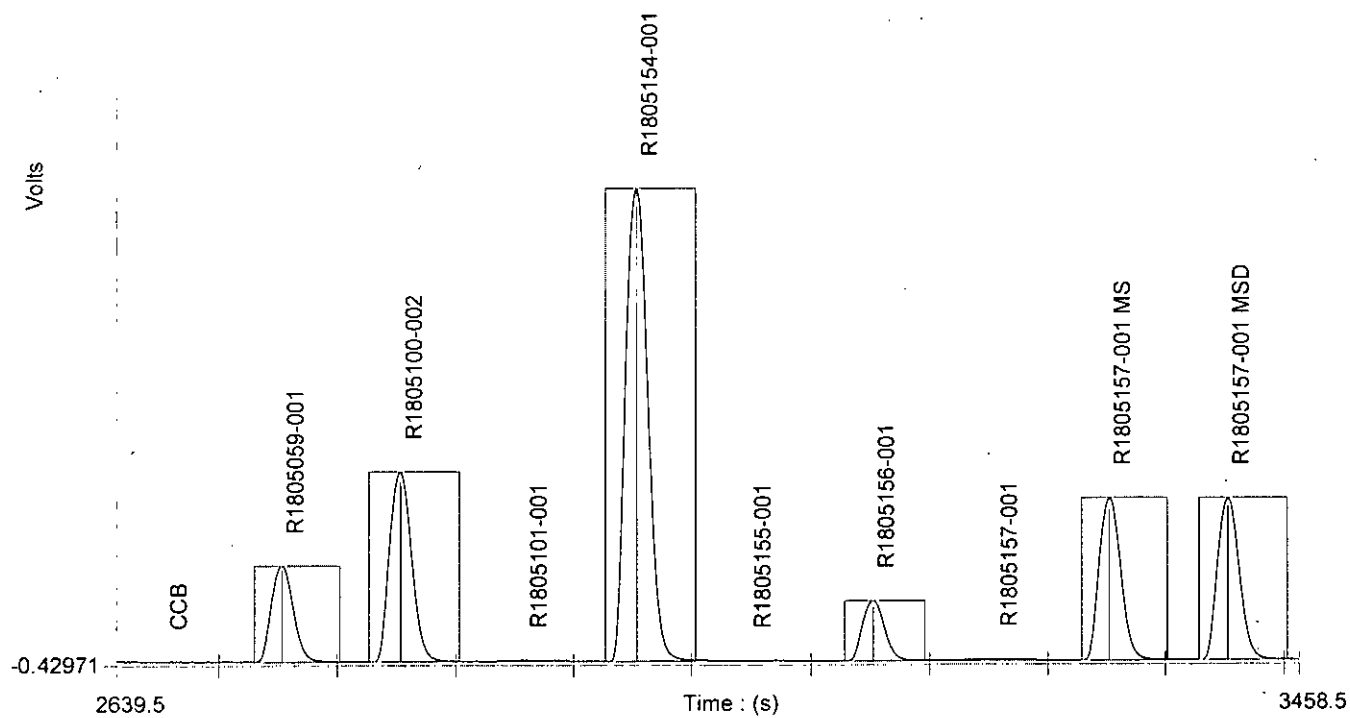
4.50233



Channel 1 - Set: 4 / 8

5.36271

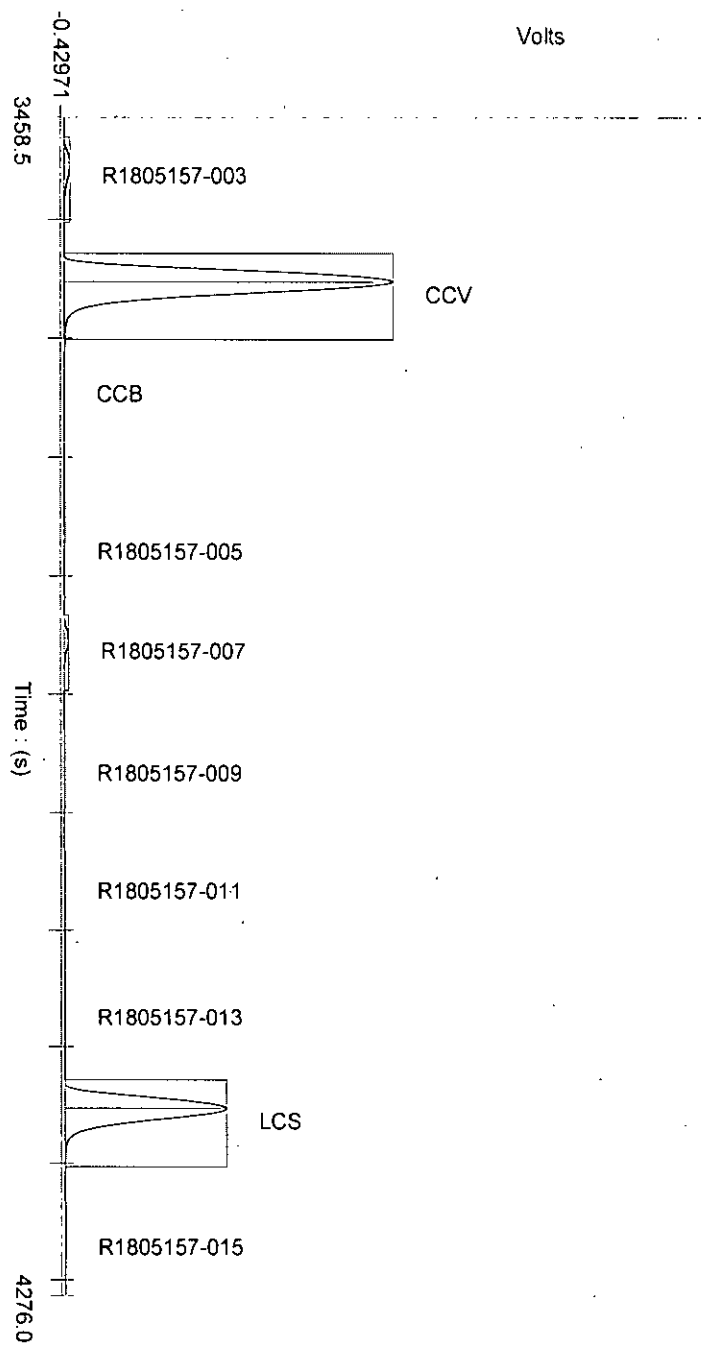
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Channel 1 - Set 5 / 8

5.36271

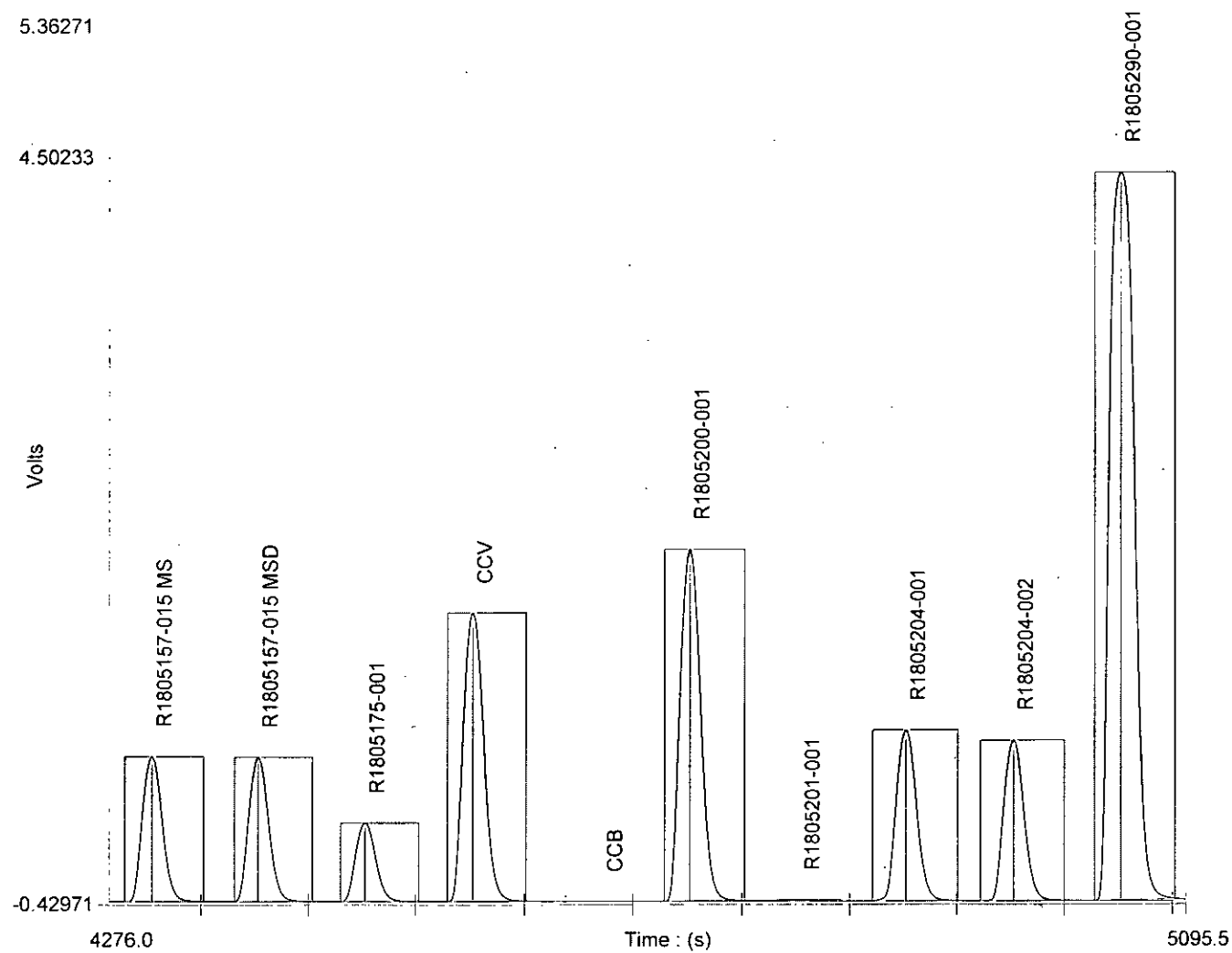
4.50233



Channel 1 - Set: 6 / 8

5.36271

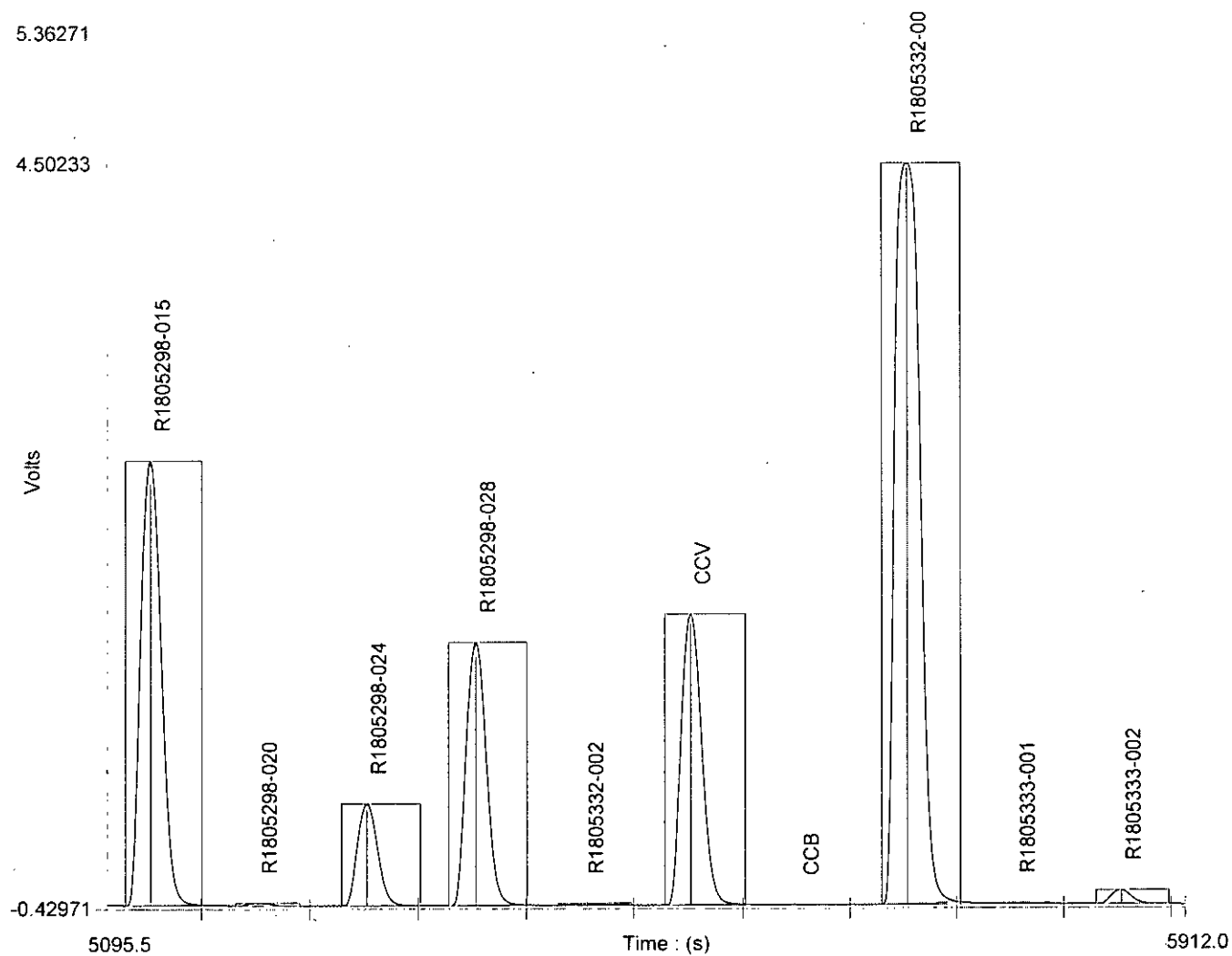
4.50233



Channel 1 - Set: 7 / 8

5.36271

4.50233



Channel 1 - Set: 8 / 8

5.36271

4.50233

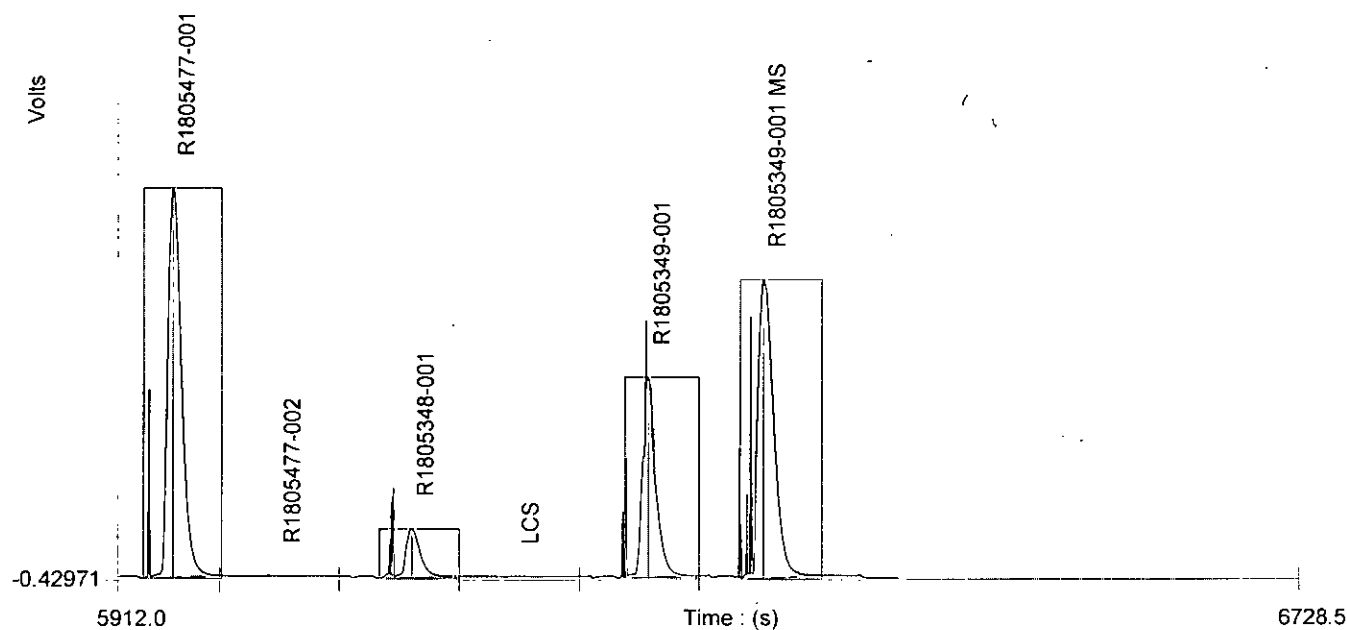
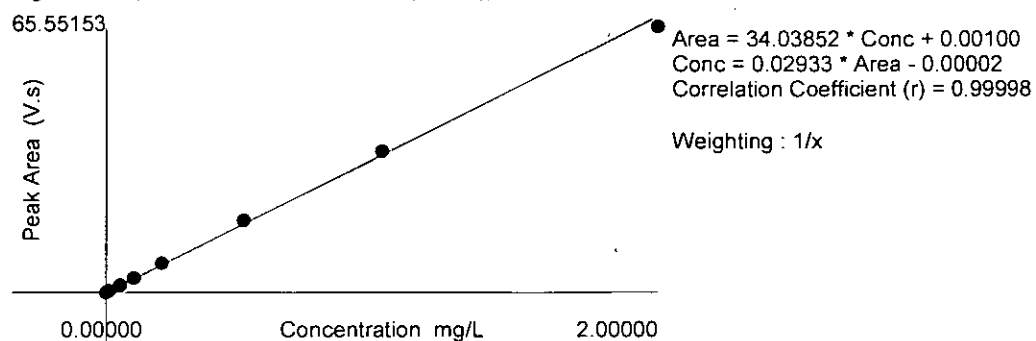


Table : 1 (QC8500 353.2 NO3+NO2 (TOTN))

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	2.00000	1	65.55153	3.44896	0.0	3.7	1.92247	6/15/2018	12:33:31 PM
2	1.00000	1	34.94037	1.92067	0.0	-2.6	1.02471	6/15/2018	12:34:52 PM
3	0.50000	1	17.89067	0.99690	0.0	-5.1	0.52468	6/15/2018	12:36:14 PM
4	0.20000	1	7.23066	0.40364	0.0	-6.2	0.21204	6/15/2018	12:37:36 PM
5	0.10000	1	3.59075	0.19953	0.0	-5.5	0.10529	6/15/2018	12:38:59 PM
6	0.05000	1	1.80512	0.10111	0.0	-6.0	0.05292	6/15/2018	12:40:20 PM
7	0.01000	1	0.36876	0.02012	0.0	-8.0	0.01080	6/15/2018	12:41:42 PM
8	0.00500	1	0.18121	0.00981	0.0	-5.9	0.00530	6/15/2018	12:43:03 PM
9	0.00200	1	0.07691	0.00417	0.0	-11.3	0.00224	6/15/2018	12:44:26 PM
10	0.00000	1	-0.03109	-0.00103			-0.00093	6/15/2018	12:45:48 PM

Figure : 1 (QC8500 353.2 NO3+NO2 (TOTN))



Original Run Filename: OM_6-15-2018_02-31-28PM.OMN Created: 6/15/2018 2:31:28 PM

Original Run Author's Signature: [GABRIELA NITA-JOUPPI]

Current Run Filename: OM_6-15-2018_02-31-28PM.OMN Last Modified: 6/15/2018 4:21:21 PM

Current Run Author's Signature: [GABRIELA NITA-JOUPPI]

Description: Default New Run

Sample	Cup No.	Channel 1 QC8500 353.2 NO3+NO2 (TOTN)		Detection Time	MDF
		Conc. (mg/L)	Area (V.s)		
CCV	S1	1.02245	34.86330	6/15/2018@2:32:28 PM	
CCB	S10	-0.00028	-0.00892	6/15/2018@2:33:50 PM	
Calibration: Table/Fig.: 1					
R1805332-003	41	4.91501	33.51821	6/15/2018@2:36:19 PM	5.00
R1805333-001	42	0.00319	0.10951	6/15/2018@2:37:40 PM	
R1805333-002	43	0.04890	1.66788	6/15/2018@2:39:02 PM	
R1805477-001	44	2.64092	90.04855	6/15/2018@2:40:23 PM	
R1805477-002	45	4.23643	144.45114	6/15/2018@2:41:44 PM	
R1805348-001	46	1.07959	36.81166	6/15/2018@2:43:07 PM	
LCS	47	0.49747	16.96301	6/15/2018@2:44:30 PM	
R1805349-001	48	1.02472	34.94062	6/15/2018@2:45:52 PM	
R1805349-001 MS	49	1.42338	48.53395	6/15/2018@2:47:15 PM	
R1805349-001 MSD	50	1.42690	48.65392	6/15/2018@2:48:37 PM	
CCV	S1	1.03195	35.18734	6/15/2018@2:49:59 PM	
CCB	S10	-0.00050	-0.01627	6/15/2018@2:51:21 PM	
R1805387-018	51	2.71853	92.69501	6/15/2018@2:52:43 PM	
R1805387-022	52	0.69942	23.84892	6/15/2018@2:54:05 PM	
R1805387-026	53	0.67697	23.08349	6/15/2018@2:55:27 PM	
R1805401-001	54	0.02898	0.98865	6/15/2018@2:56:49 PM	
R1805401-001 MS	55	0.30531	10.41091	6/15/2018@2:58:11 PM	
R1805401-001 MSD	56	0.30431	10.37670	6/15/2018@2:59:32 PM	
R1805401-002	57	0.01559	0.53204	6/15/2018@3:00:54 PM	
R1805401-003	58	0.13542	4.61807	6/15/2018@3:02:15 PM	
R1805401-004	59	0.03476	1.18573	6/15/2018@3:03:37 PM	
R1805401-005	60	0.04393	1.49841	6/15/2018@3:04:58 PM	
CCV	S1	1.03084	35.14939	6/15/2018@3:06:20 PM	
CCB	S10	-0.00041	-0.01346	6/15/2018@3:07:42 PM	
R1805401-006	61	4.85182	165.43398	6/15/2018@3:09:05 PM	
R1805412-002	62	0.26802	9.13931	6/15/2018@3:10:28 PM	
R1805437-001	63	1.47735	50.37396	6/15/2018@3:11:50 PM	
R1805480-002	64	2.95138	100.63434	6/15/2018@3:13:13 PM	
R1805481-002	65	-0.00279	-0.09450	6/15/2018@3:14:35 PM	
R1805513-001	66	0.01784	0.60881	6/15/2018@3:15:57 PM	
R1805293-001	67	0.00142	0.04908	6/15/2018@3:17:20 PM	
R1805293-002	68	0.01304	0.44511	6/15/2018@3:18:42 PM	
R1805293-003	69	0.04115	1.40360	6/15/2018@3:20:04 PM	
LCS	70	0.50653	17.27201	6/15/2018@3:21:25 PM	
CCV	S1	1.03606	35.32739	6/15/2018@3:22:46 PM	
CCB	S10	-0.00047	-0.01539	6/15/2018@3:24:09 PM	
R1805198-001	71	0.10167	3.46739	6/15/2018@3:25:31 PM	
R1805199-001	72	0.17893	6.10167	6/15/2018@3:26:52 PM	
R1805401-007	73	0.05045	1.72067	6/15/2018@3:28:13 PM	
R1805411-002	74	-0.00235	-0.07956	6/15/2018@3:29:35 PM	
R1805411-002MS	75	0.50804	17.32331	6/15/2018@3:30:57 PM	
R1805411-002 MSD	76	0.50777	17.31430	6/15/2018@3:32:19 PM	
R1805290-001 RPT	77	4.35635	29.70845	6/15/2018@3:33:42 PM	5.00
R1805510-001	78	0.93483	31.87582	6/15/2018@3:35:05 PM	
R1805512-001	79	0.25693	8.76124	6/15/2018@3:36:28 PM	
R1805545-001	80	0.45905	15.65299	6/15/2018@3:37:50 PM	
CCV	S1	1.03407	35.25936	6/15/2018@3:39:11 PM	
CCB	S10	-0.00028	-0.00881	6/15/2018@3:40:33 PM	
R1805521-001	81	5.66276	38.61746	6/15/2018@3:41:56 PM	5.00
R1805521-002	82	50.56818	17.24294	6/15/2018@3:43:18 PM	100.00
R1805477-001 RPT	83	3.36334	22.93674	6/15/2018@3:44:40 PM	5.00
R1805477-002 RPT	84	13.04266	44.47242	6/15/2018@3:46:02 PM	10.00
R1805352-001	85	0.56092	19.12653	6/15/2018@3:47:24 PM	
R1805352-001 MS	86	1.02946	35.10219	6/15/2018@3:48:45 PM	
R1805352-001 MSD	87	1.02912	35.09067	6/15/2018@3:50:07 PM	

→ RPT 1/10 at #83
- 1/10 at #84

- RPT 1/10 at #90

- RPT 1/10 at #99

- RPT 1/10 at 100

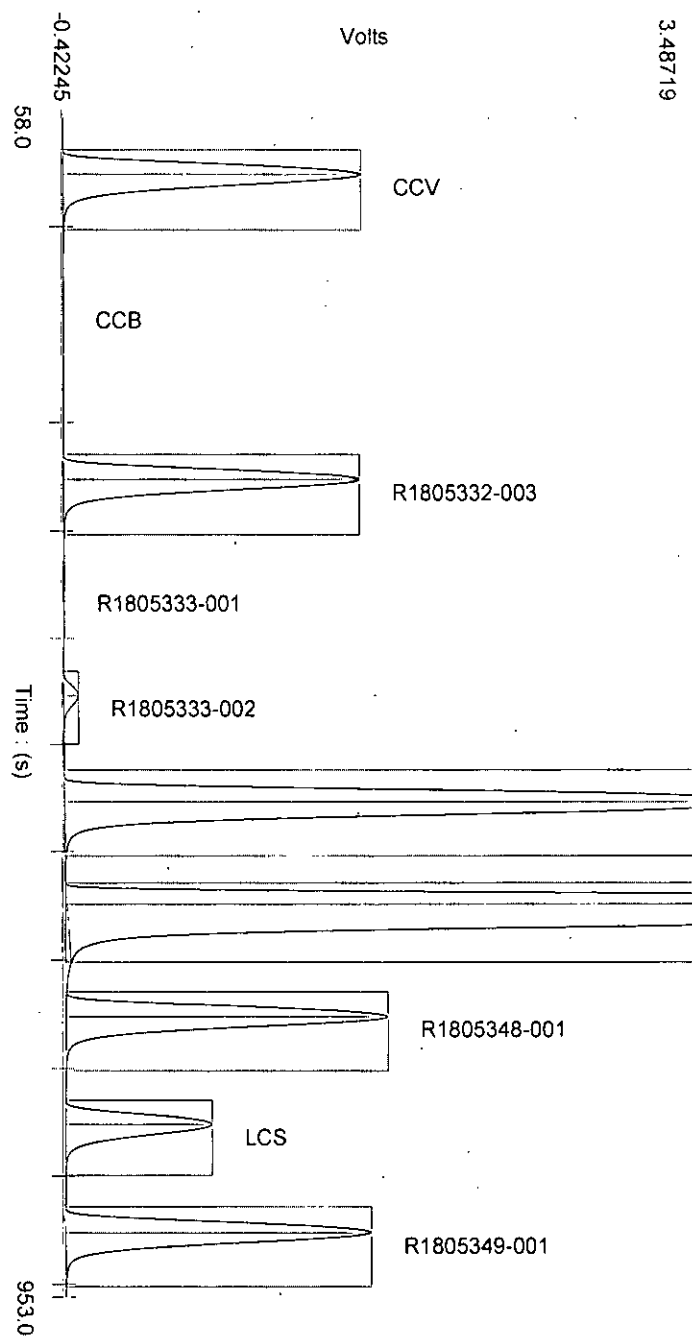
R1805352-003	88	0.91349	31.14810	6/15/2018@3:51:29 PM	
R1805352-005	89	1.17605	40.10065	6/15/2018@3:52:50 PM	
R1805387-018 RPT	90	3.44357	23.48380	6/15/2018@3:54:12 PM	5.00
CCV	S1	1.03848	35.40990	6/15/2018@3:55:33 PM	
CCB	S10	-0.00003	-0.00040	6/15/2018@3:56:55 PM	
R1805374-001	91	1.03978	35.45435	6/15/2018@3:58:18 PM	
R1805374-003	92	0.70514	24.04385	6/15/2018@3:59:41 PM	
LCS	93	0.50958	17.37595	6/15/2018@4:01:03 PM	
R1805374-005	94	0.14901	5.08150	6/15/2018@4:02:26 PM	
R1805374-005 MS	95	0.65428	22.30970	6/15/2018@4:03:48 PM	
R1805374-005 MSD	96	0.65543	22.34892	6/15/2018@4:05:11 PM	
R1805374-007	97	1.28275	43.73883	6/15/2018@4:06:33 PM	
R1805374-009	98	0.42483	14.48606	6/15/2018@4:07:55 PM	
R1805401-006 RPT	99	24.77102	84.46285	6/15/2018@4:09:17 PM	10.00
R1805480-002 RPT	100	4.11764	14.04059	6/15/2018@4:10:39 PM	10.00
CCV	S1	1.03844	35.40847	6/15/2018@4:13:35 PM	
CCB	S10	-0.00033	-0.01068	6/15/2018@4:14:57 PM	
R1805401-006 RPT	101	28.18580	48.05345	6/15/2018@4:16:19 PM	20.00
CCV	S1	1.04001	35.46191	6/15/2018@4:17:40 PM	
CCB	S10	-0.00011	-0.00300	6/15/2018@4:19:03 PM	

Analyte Properties Table for : OM_6-15-2018_02-31-28PM.OMN

Property	Channel 1
	QC8500 353.2 NO3+NO2 (TOTN)
Concentration Units	mg/L
Calibration Fit Type	First Order
Clear Calibration	Yes
Force through Zero	No
Calibration Weighting	1/x
Auto Dilution Trigger	No
% of High Standard	110
Quik Chem Method	10-107-04-1-C
Chemistry	Direct/Bipolar
Calibration by Height	No
Inject to Peak Start	17
Peak Base Width	68

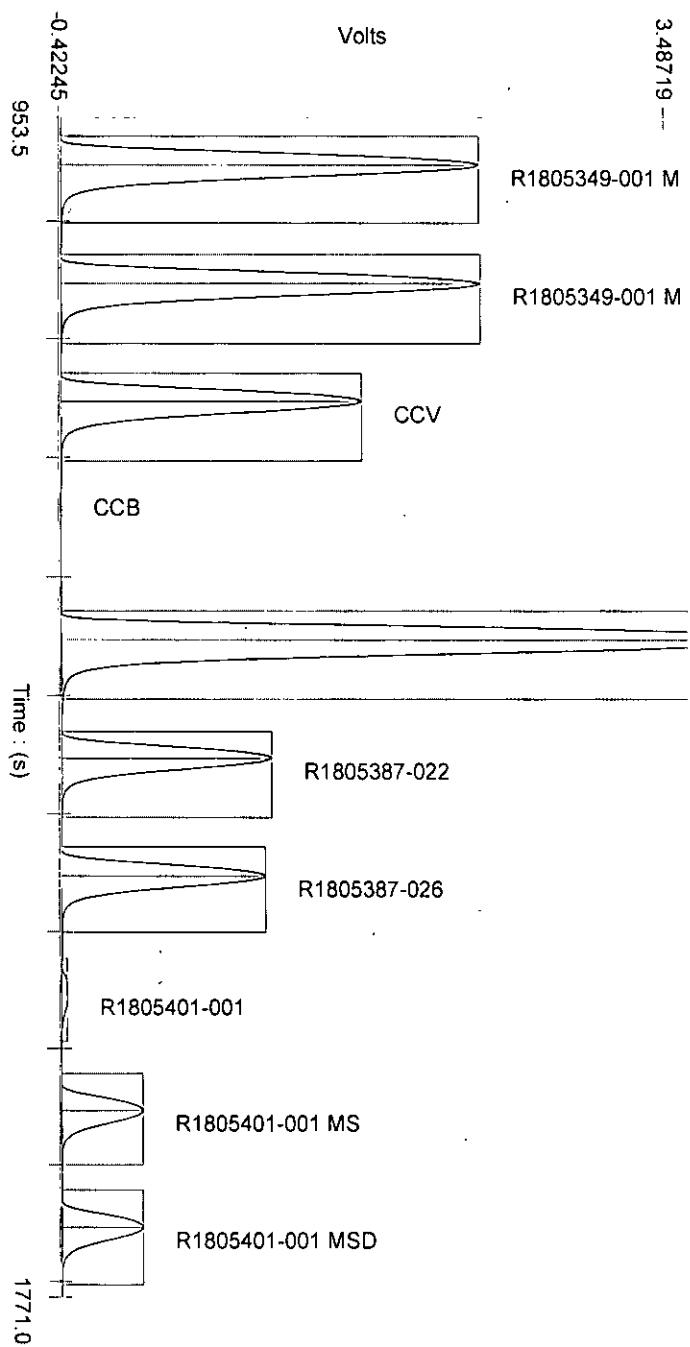
Channel 1 - Set 1 / 8

3.48719



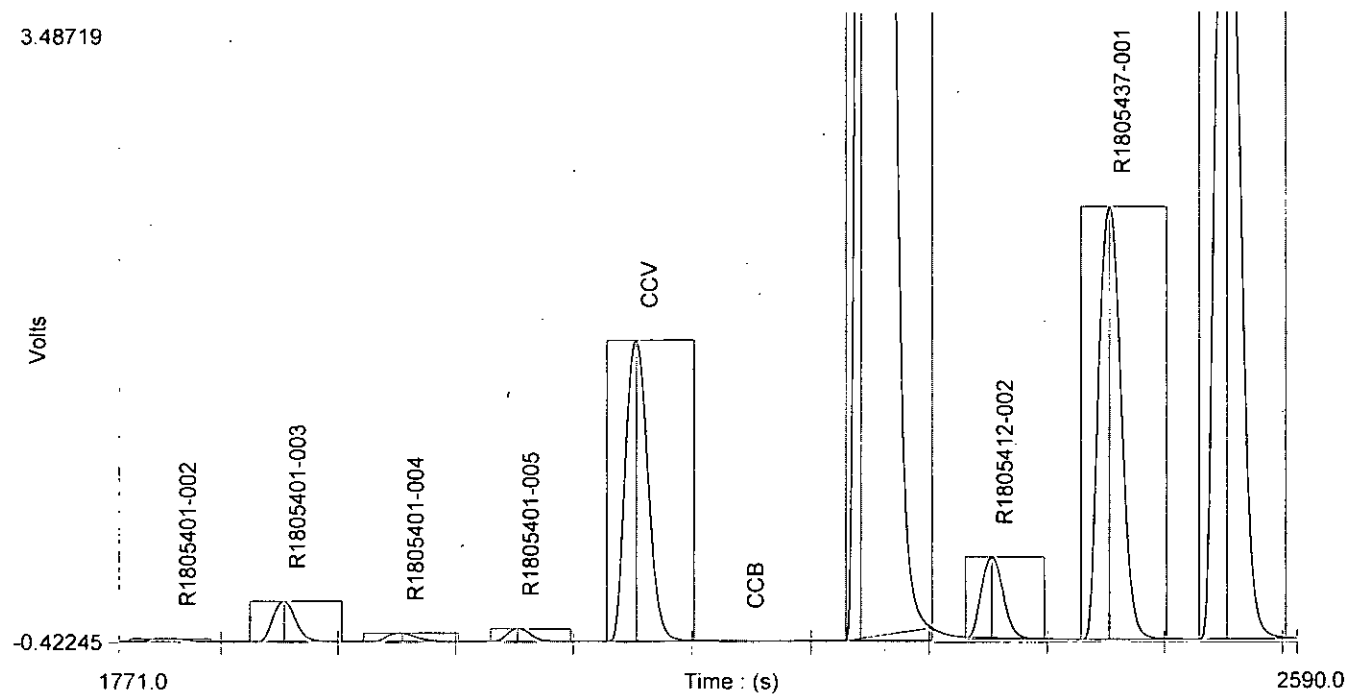
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3.48719



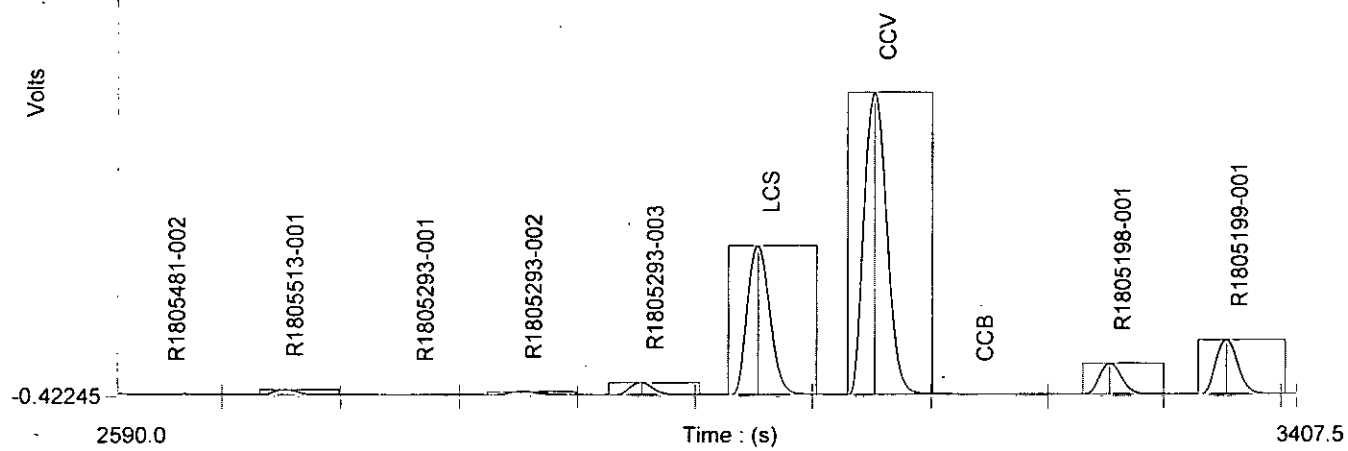
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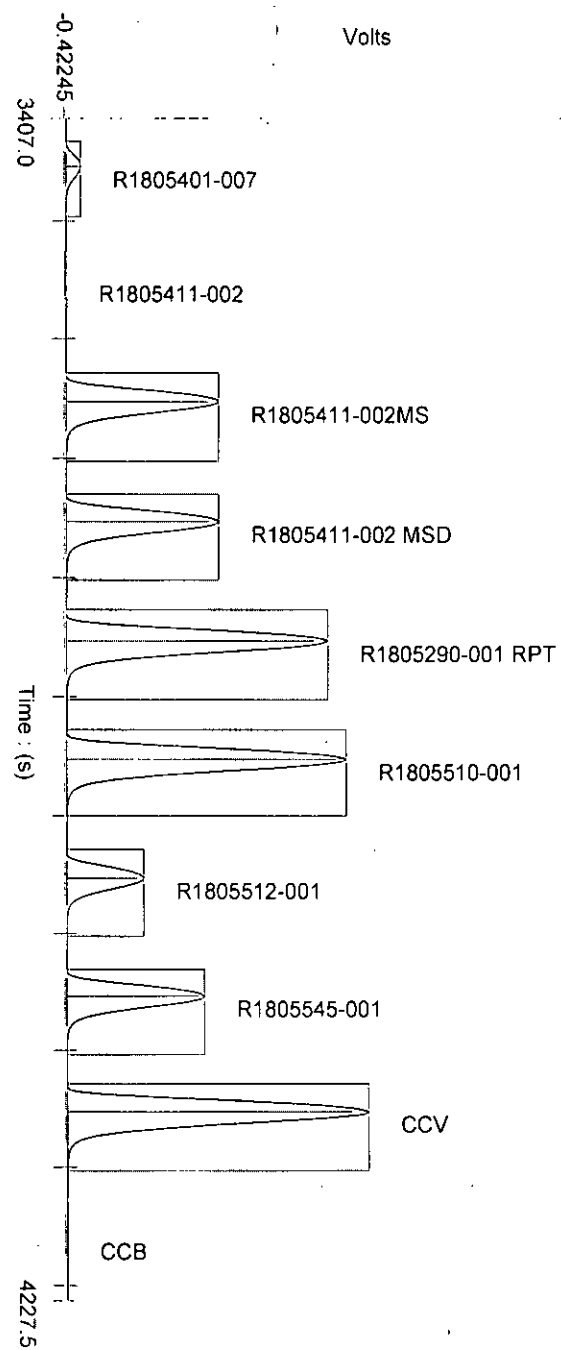
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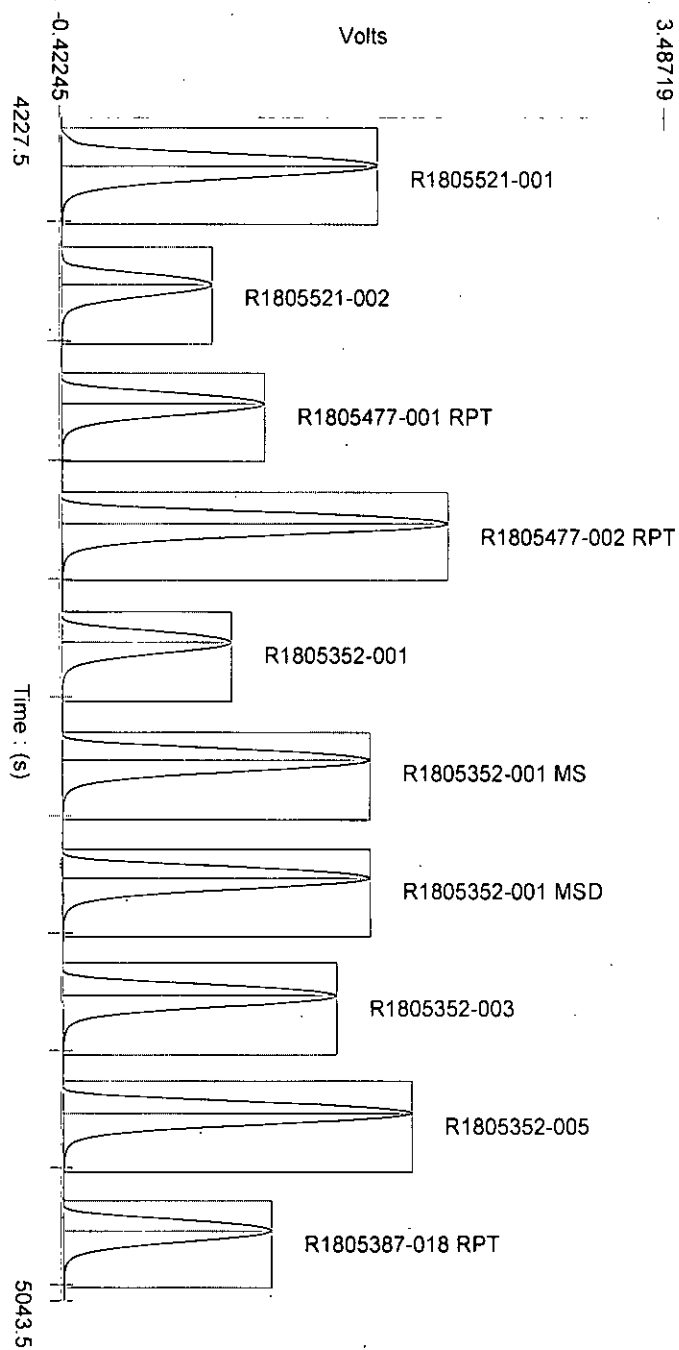
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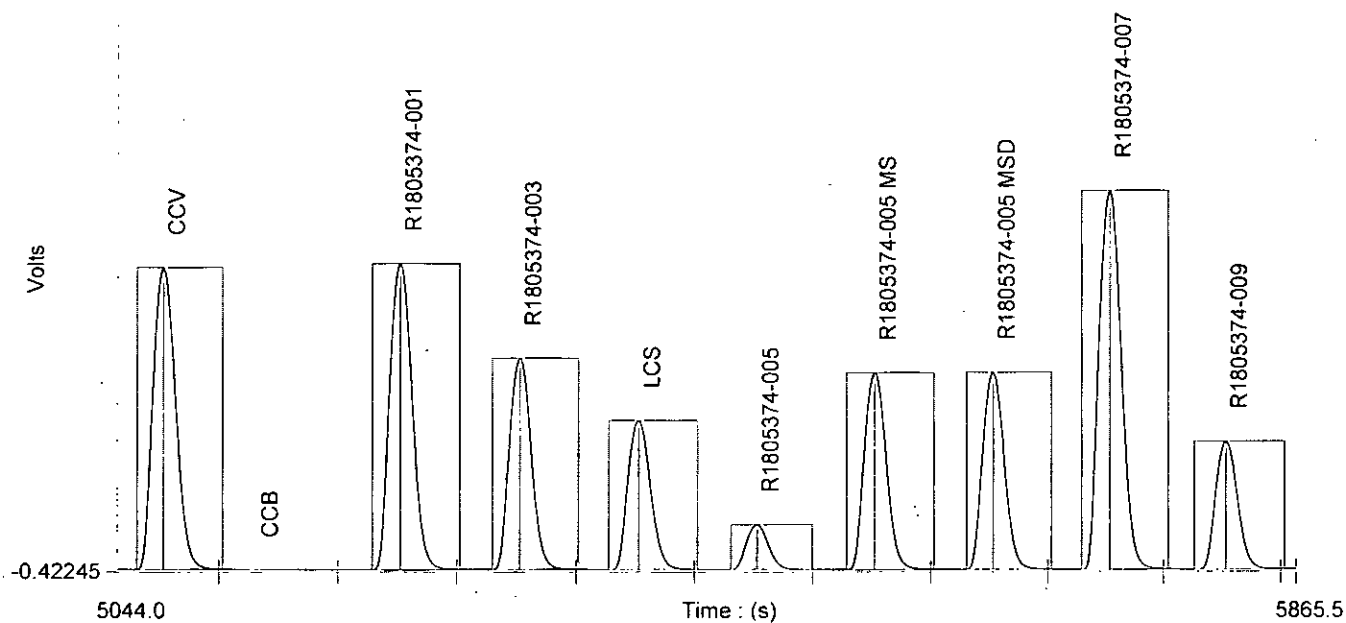
Channel 1 - Set 6 / 8

3.48719



Channel 1 - Set: 7 / 8

3.48719



Channel 1 - Set: 8 / 8

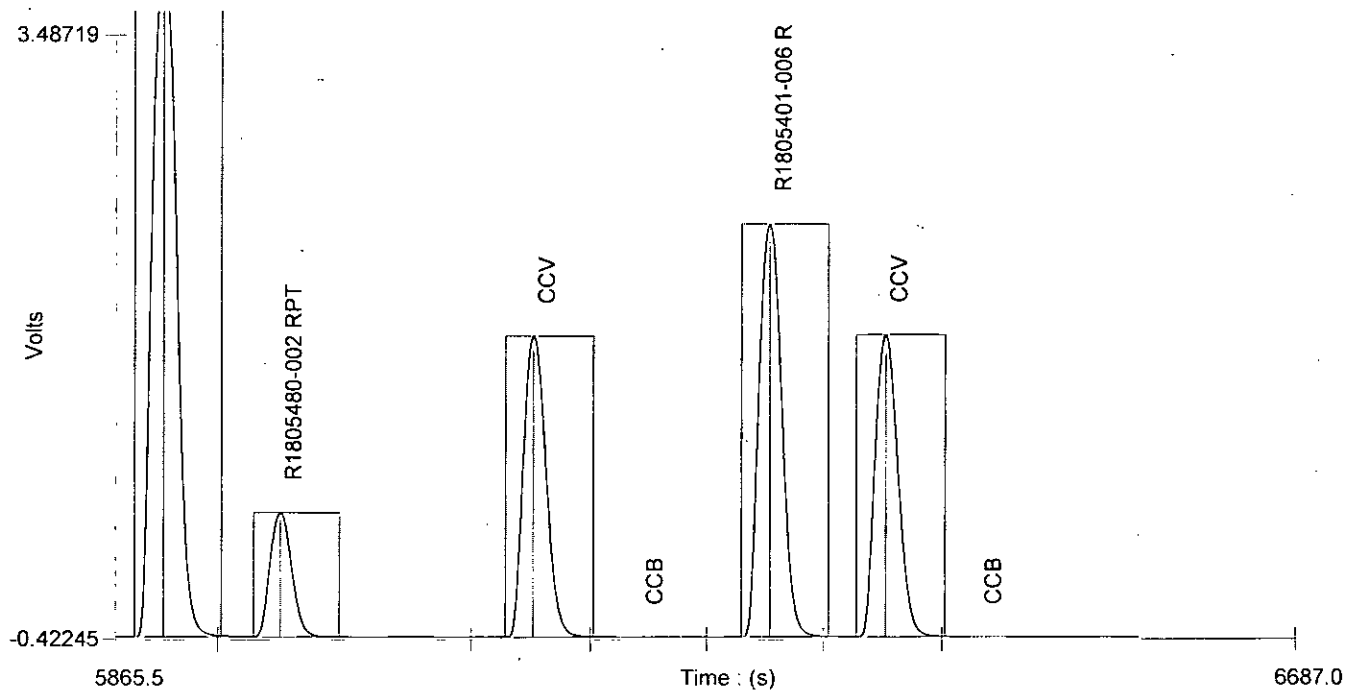
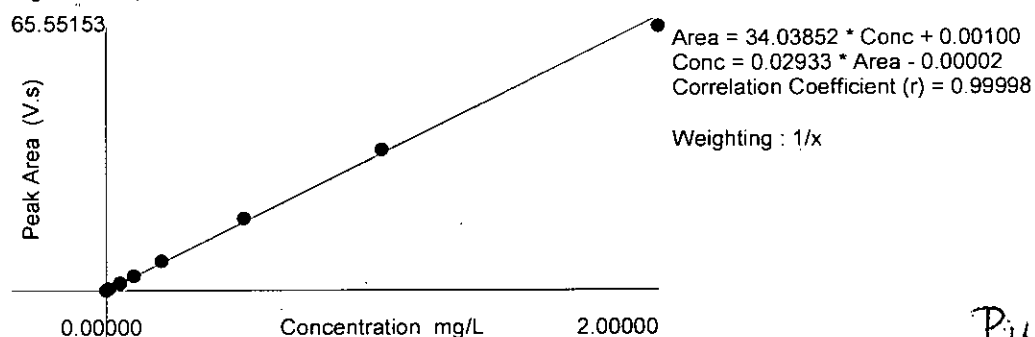


Table : 1 (QC8500 353.2 NO3+NO2 (TOTN))

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	2.00000	1	65.55153	3.44896	0.0	3.7	1.92247	6/15/2018	12:33:31 PM
2	1.00000	1	34.94037	1.92067	0.0	-2.6	1.02471	6/15/2018	12:34:52 PM
3	0.50000	1	17.89067	0.99690	0.0	-5.1	0.52468	6/15/2018	12:36:14 PM
4	0.20000	1	7.23066	0.40364	0.0	-6.2	0.21204	6/15/2018	12:37:36 PM
5	0.10000	1	3.59075	0.19953	0.0	-5.5	0.10529	6/15/2018	12:38:59 PM
6	0.05000	1	1.80512	0.10111	0.0	-6.0	0.05292	6/15/2018	12:40:20 PM
7	0.01000	1	0.36876	0.02012	0.0	-8.0	0.01080	6/15/2018	12:41:42 PM
8	0.00500	1	0.18121	0.00981	0.0	-5.9	0.00530	6/15/2018	12:43:03 PM
9	0.00200	1	0.07691	0.00417	0.0	-11.3	0.00224	6/15/2018	12:44:26 PM
10	0.00000	1	-0.03109	-0.00103			-0.00093	6/15/2018	12:45:48 PM

Figure : 1 (QC8500 353.2 NO3+NO2 (TOTN))



Pipet used: Beta

General Chemistry Analytical Run Cover Sheet

Analyst: GNITA

Date: 6/15/18

Analysis: NO3 + NO2 (Combined Levels 0.002 - 2.0ppm)

Instrument: Lachat 8500

		Working Stock Prep, Serial Dilutions			
PRIMARY STOCKS	Log ID Receipt/Exp. Dates	Stock Soln (mLs)	Stock Soln (mg/L)	Final Volume (mLs)	True Value (mg/L)
Standards	ID: 179986	1.0	1000	10	100 (A)
	Received: 03/20/2017 Expires: 09/08/2018	1.0	100	10	10 (B)
Reference	ID: 179285	1.0	1000	10	100
	Received: 02/13/2017 Expires: 02/28/2021	1.0	100	10	10 (C)
Column Check, NO2	ID: 190283	1.0	1000	10	100 (D)
	Received: 5/16/18 Expires: 10/31/18	1.0	100	10	10 (E)
Quality Control					
Column Check, NO3 (1.0 mg/L Std.)		1.0	10 (B)	10	1.00
Column Check, NO2 (1.0 mg/L Ref.)		1.0	10 (E)	10	1.00
I/CCV		1.00	10.0 (C)	10	1.00
LCS/MS		0.05	100 (A)	10	0.50

Standard Curve Prep			
Concentration (mg/L)	mLs UPDI	mLs 10 mg/L Working Stock (B)	
2.00	8.00	2.00	
1.00	9.00	1.00	
0.50	9.50	0.50	
0.20	9.80	0.20	
0.10	1/10 dil'n of 1.00		
0.050	1/10 dil'n of 0.50		
0.010	1/10 dil'n of 0.10		
0.005	1/10 dil'n of 0.050		
0.002	1/100 dil'n of 0.20		
0.000	10.00	0.00	

REAGENTS	Log ID	Expiration Date
Ammonium Hydroxide Buff.	190466	5/24/2019
Sulfanilamide Color Rgt.	190256	6/16/2018

COMMENTS

Instrument Log filled in? (Y) (N)

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot:

595794

Method/Testcode: 365.1/Tot Phos T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	POL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1806186-01	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0508 mg/L	1 ✓					6/21/18 15:43:04	N	IV
RQ1806186-02	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 15:44:11	N	IV
RQ1806008-01	Phosphorus, Total	MB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 15:45:18	N	IV
RQ1806008-02	Phosphorus, Total	LCS		Water	0.02 mg/L	20 mL	0.0231 mg/L	1 ✓	0.0020	0.0050	93		6/21/18 15:46:26	N	IV
R1805293-001	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.0320 mg/L	1 ✓	0.0020	0.0050			6/21/18 15:48:41	N	IV
RQ1806008-03	Phosphorus, Total	MS	R1805293-001	Water	0.06 mg/L	20 mL	0.0575 mg/L	1 ✓	0.0020	0.0050	102		6/21/18 15:49:49	N	IV
RQ1806008-04	Phosphorus, Total	DMS	R1805293-001	Water	0.06 mg/L	20 mL	0.0588 mg/L	1 ✓	0.0020	0.0050	107	2	6/21/18 15:50:57	N	IV
R1805440-001	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0428 mg/L	1 ✓	0.0020	0.0050			6/21/18 15:54:18	N	IV
R1805440-002	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0435 mg/L	1 ✓	0.0020	0.0050			6/21/18 15:55:25	N	IV
RQ1806186-03	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0502 mg/L	1 ✓					6/21/18 15:56:32	N	IV
RQ1806186-04	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 15:57:39	N	IV
R1805352-001	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.0576 mg/L	1 ✓	0.0020	0.0050			6/21/18 15:58:46	N	IV
R1805352-003	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0380 mg/L	1 ✓	0.0020	0.0050			6/21/18 15:59:52	N	IV
R1805352-005	Phosphorus, Total	N/A		Water	0.07 mg/L	20 mL	0.0705 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:00:59	N	IV
R1805352-007	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0240 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:02:05	N	IV
R1805352-009	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0213 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:03:12	N	IV
R1805352-011	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0389 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:04:19	N	IV
R1805374-001	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0176 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:05:27	N	IV
R1805374-003	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0359 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:06:34	N	IV
R1805374-005	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0094 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:07:42	N	IV
R1805374-007	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0412 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:08:49	N	IV
RQ1806186-05	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0503 mg/L	1 ✓					6/21/18 16:09:57	N	IV
RQ1806186-06	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:11:04	N	IV
R1805374-009	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0488 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:12:11	N	IV
R1805461-001	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.0601 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:13:19	N	IV
RQ1806008-05	Phosphorus, Total	MS	R1805461-001	Water	0.09 mg/L	20 mL	0.0854 mg/L	1 ✓	0.0020	0.0050	101		6/21/18 16:14:26	N	IV
RQ1806008-06	Phosphorus, Total	DMS	R1805461-001	Water	0.09 mg/L	20 mL	0.0850 mg/L	1 ✓	0.0020	0.0050	100	<1	6/21/18 16:15:33	N	IV
R1805461-002	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0469 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:16:40	N	IV
R1805461-003	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0435 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:17:46	N	IV
R1805462-001	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0204 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:18:53	N	IV
RQ1806186-07	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0504 mg/L	1 ✓					6/21/18 16:23:19	N	IV
RQ1806186-08	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:24:26	N	IV
RQ1806186-09	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0506 mg/L	1 ✓					6/21/18 17:03:34	N	IV
RQ1806186-10	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 17:04:41	N	IV
R1805293-002	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.51 mg/L	20 ✓	0.04	0.10			6/21/18 17:15:53	N	IV
RQ1806186-11	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0502 mg/L	1 ✓					6/21/18 17:17:01	N	IV

U indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot:

595794

Method/Testcode: 365.1/Tot Phos T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1806186-12	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 17:18:08	N	IV
R1805293-003	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.126 mg/L	2 ✓	0.004	0.010			6/21/18 17:19:15	N	IV
RQ1806186-13	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0508 mg/L	1 ✓					6/21/18 17:22:35	N	IV
RQ1806186-14	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1	0.0020	0.0050			6/21/18 17:23:42	N	IV

† Indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Printed 6/22/18 11:52

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot:

595798

Method/Testcode: 365.1/Tot Phos T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	POL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1806187-01	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0503 mg/L	1 ✓					6/21/18 16:09:57	N	IV
RQ1806187-02	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:11:04	N	IV
RQ1806009-01	Phosphorus, Total	MB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:19:59	N	IV
RQ1806009-02	Phosphorus, Total	LCS		Water	0.02 mg/L	20 mL	0.0239 mg/L	1 ✓	0.0020	0.0050	96		6/21/18 16:21:06	N	IV
RQ1806187-03	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0504 mg/L	1 ✓					6/21/18 16:23:19	N	IV
RQ1806187-04	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:24:26	N	IV
R1805462-005	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0093 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:26:41	N	IV
R1805462-007	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0192 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:27:49	N	IV
R1805464-001	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.0349 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:28:56	Y	IV
RQ1806009-03	Phosphorus, Total	MS	R1805464-001	Water	0.06 mg/L	20 mL	0.0583 mg/L	1 ✓	0.0020	0.0050	94		6/21/18 16:30:04	N	IV
RQ1806009-04	Phosphorus, Total	DMS	R1805464-001	Water	0.06 mg/L	20 mL	0.0617 mg/L	1 ✓	0.0020	0.0050	107	6	6/21/18 16:31:11	N	IV
R1805464-003	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0352 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:32:18	N	IV
R1805464-005	Phosphorus, Total	N/A		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:33:26	N	IV
R1805464-007	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0387 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:34:32	N	IV
R1805464-009	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0178 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:35:39	N	IV
RQ1806187-05	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0504 mg/L	1 ✓					6/21/18 16:36:47	N	IV
RQ1806187-06	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:37:53	N	IV
R1805464-011	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0190 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:39:00	N	IV
R1805464-013	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0112 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:40:07	N	IV
R1805466-001	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0104 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:41:13	N	IV
R1805466-003	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0152 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:42:20	N	IV
R1805466-005	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0195 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:43:26	N	IV
R1805466-007	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0064 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:44:34	N	IV
R1805466-009	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.0295 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:45:41	Y	IV
RQ1806009-05	Phosphorus, Total	MS	R1805466-009	Water	0.06 mg/L	20 mL	0.0550 mg/L	1 ✓	0.0020	0.0050	102		6/21/18 16:46:49	N	IV
RQ1806009-06	Phosphorus, Total	DMS	R1805466-009	Water	0.06 mg/L	20 mL	0.0554 mg/L	1 ✓	0.0020	0.0050	104	<1	6/21/18 16:47:56	N	IV
R1805466-011	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.0289 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:49:04	N	IV
RQ1806187-07	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0510 mg/L	1 ✓					6/21/18 16:50:12	N	IV
RQ1806187-08	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:51:19	N	IV
R1805466-013	Phosphorus, Total	N/A		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:52:26	N	IV
R1805468-001	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0136 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:53:33	N	IV
R1805468-003	Phosphorus, Total	N/A		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:54:40	N	IV
R1805468-005	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0208 mg/L	1 ✓	0.0020	0.0050			6/21/18 16:55:47	N	IV
RQ1806187-09	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0506 mg/L	1 ✓					6/21/18 17:03:34	N	IV
RQ1806187-10	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 17:04:41	N	IV
RQ1806187-11	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0502 mg/L	1 ✓					6/21/18 17:17:01	N	IV

† indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot:

595798

Method/Testcode: 365.1/Tot Phos T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1806187-12	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 17:18:08	N	IV
R1805462-003	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.113 mg/L	2 ✓	0.004	0.010			6/21/18 17:20:21	N	IV
RQ1806187-13	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0508 mg/L	1 ✓					6/21/18 17:22:35	N	IV
RQ1806187-14	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1	0.0020	0.0050			6/21/18 17:23:42	N	IV

† indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: GNITAJOUPPI

Analysis Lot:

595804

Method/Testcode: 365.1/Tot Phos T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1806188-01	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0510 mg/L	1 ✓					6/21/18 16:50:12	N	IV
RQ1806188-02	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:51:19	N	IV
RQ1806010-01	Phosphorus, Total	MB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 16:56:54	N	IV
RQ1806010-02	Phosphorus, Total	LCS		Water	0.02 mg/L	20 mL	0.0237 mg/L	1 ✓	0.0020	0.0050	95		6/21/18 16:58:01	N	IV
R1805468-007	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0206 mg/L	1 ✓	0.0020	0.0050			6/21/18 17:00:14	N	IV
R1805468-009	Phosphorus, Total	N/A		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 17:01:20	Y	IV
RQ1806010-03	Phosphorus, Total	MS	R1805468-009	Water	0.02 mg/L	20 mL	0.0239 mg/L	1 ✓	0.0020	0.0050	95		6/21/18 17:02:27	N	IV
RQ1806188-03	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0506 mg/L	1 ✓					6/21/18 17:03:34	N	IV
RQ1806188-04	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 17:04:41	N	IV
RQ1806010-04	Phosphorus, Total	DMS	R1805468-009	Water	0.02 mg/L	20 mL	0.0244 mg/L	1 ✓	0.0020	0.0050	97	2	6/21/18 17:05:48	N	IV
R1805573-001	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.0615 mg/L	1 ✓	0.0020	0.0050			6/21/18 17:06:55	N	IV
R1805573-003	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0111 mg/L	1 ✓	0.0020	0.0050			6/21/18 17:08:03	N	IV
R1805585-003	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0412 mg/L	1 ✓	0.0020	0.0050			6/21/18 17:10:18	N	IV
R1805585-005	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0120 mg/L	1 ✓	0.0020	0.0050			6/21/18 17:11:26	N	IV
R1805585-007	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0499 mg/L	1 ✓	0.0020	0.0050			6/21/18 17:12:33	N	IV
R1805585-009	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0219 mg/L	1 ✓	0.0020	0.0050			6/21/18 17:13:40	N	IV
R1805585-011	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0380 mg/L	1 ✓	0.0020	0.0050			6/21/18 17:14:46	N	IV
RQ1806188-05	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0502 mg/L	1 ✓					6/21/18 17:17:01	N	IV
RQ1806188-06	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 17:18:08	N	IV
R1805585-001	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.163 mg/L	10 ✓	0.020	0.050			6/21/18 17:21:28	N	IV
RQ1806188-07	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0508 mg/L	1 ✓					6/21/18 17:22:35	N	IV
RQ1806188-08	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.0050 mg/L U	1 ✓	0.0020	0.0050			6/21/18 17:23:42	N	IV

U indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Creator : GABRIELA NITA-JOUPPI

Creation Date : 6/21/2018 3:27:40 PM

Last Modified : 6/21/2018 5:25:13 PM

Description :

Cup	Sample ID	MDF	Weight	Sample Type	Comments
S1	STD 0.100			Calibration Standard	
S2	STD 0.070			Calibration Standard	
S3	STD 0.050			Calibration Standard	
S4	STD 0.030			Calibration Standard	
S5	STD 0.010			Calibration Standard	
S6	STD 0.005			Calibration Standard	
S7	STD 0.003			Calibration Standard	
S8	STD 0.00			Calibration Standard	
S10	ICV TV= 0.050			Unknown	
S8	ICB			Unknown	
S6	CRDL 0.005			Unknown	
S7	CRDL 0.003			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
1	PB 1 LL			Unknown	
2	LCS 1 LL TV=0.025			Unknown	
3	LCS 1 ORG LL			Unknown	
4	R1805293-001			Unknown	
5	R1805293-001 MS			Unknown	
6	R1805293-001 MSD			Unknown	
7	R1805293-002			Unknown	
8	R1805293-003			Unknown	
9	R1805440-001			Unknown	
10	R1805440-002			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
11	R1805352-001			Unknown	
12	R1805352-003			Unknown	
13	R1805352-005			Unknown	
14	R1805352-007			Unknown	
15	R1805352-009			Unknown	
16	R1805352-011			Unknown	
17	R1805374-001			Unknown	
18	R1805374-003			Unknown	
19	R1805374-005			Unknown	
20	R1805374-007			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
21	R1805374-009			Unknown	
22	R1805461-001			Unknown	

23	R1805461-001 MS			Unknown	
24	R1805461-001 MSD			Unknown	
25	R1805461-002			Unknown	
26	R1805461-003			Unknown	
27	R1805462-001			Unknown	
28	PB 2			Unknown	
29	LCS 2 INORG			Unknown	
30	LCS 2 ORG			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
31	R1805462-003			Unknown	
32	R1805462-005			Unknown	
33	R1805462-007			Unknown	
34	R1805464-001			Unknown	
35	R1805464-001 MS			Unknown	
36	R1805464-001 MSD			Unknown	
37	R1806464-003			Unknown	
38	R1805464-005			Unknown	
39	R1805464-007			Unknown	
40	R1805464-009			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
41	R1805464-011			Unknown	
42	R1805464-013			Unknown	
43	R1805466-001			Unknown	
44	R1805466-003			Unknown	
45	R1805466-005			Unknown	
46	R1805466-007			Unknown	
47	R1805466-009			Unknown	
48	R1805466-009 MS			Unknown	
49	R1805466-009 MSD			Unknown	
50	R1805466-011			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
51	R1805466-013			Unknown	
52	R1805468-001			Unknown	
53	R1805468-003			Unknown	
54	R1805468-005			Unknown	
55	PB 3			Unknown	
56	LCS 3 INORG			Unknown	
57	LCS 3 ORG			Unknown	
58	R1805468-007			Unknown	
59	R1805468-009			Unknown	
60	R1805468-009 MS			Unknown	
S10	CCV			Unknown	

S8	CCB			Unknown	
61	R185468-009 MSD			Unknown	
62	R1805573-001			Unknown	
63	R1805573-003			Unknown	
64	R1805585-001			Unknown	
65	R1805585-003			Unknown	
66	R1805585-005			Unknown	
67	R1805585-007			Unknown	
68	R1805585-009			Unknown	
69	R1805585-011			Unknown	
70	R1805293-002 RPT	20.0000		Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
71	R1805293-003 RPT	2.00000		Unknown	
72	R1805462-003 RPT	2.00000		Unknown	
73	R1805585-001 RPT	10.0000		Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	

Analyte Table

QC8500 365.1 TPO4-L	
(mg/L)	
STD 0.100	0.10000
STD 0.070	0.07000
STD 0.050	0.05000
STD 0.030	0.03000
STD 0.010	0.01000
STD 0.005	0.00500
STD 0.003	0.00300
STD 0.00	0.00000

Preparation Information Benchsheet

Prep Run#: 316244

Team: GenChem/KMENGs

Prep Workflow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 6/19/18 03:05 PM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1806008-01	MB		20mL	365.1/Tot Phos T				20.00mL			
2	RQ1806008-02	LCS		20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
3	R1805293-001	18PKTP01	.01	20mL	365.1/Tot Phos T				20.00mL			
4	RQ1806008-03	R1805293-001 MS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
5	RQ1806008-04	R1805293-001 DMS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
6	R1805293-002	18PKTP02	.01	20mL	365.1/Tot Phos T				20.00mL			
7	R1805293-003	18PKTP05	.01	20mL	365.1/Tot Phos T				20.00mL			
8	R1805440-001	Outfall 003	.02	20mL	365.1/Tot Phos T				20.00mL			
9	R1805440-002	Outfall 004	.02	20mL	365.1/Tot Phos T				20.00mL			
10	R1805352-001	03-NRUP-3.1-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
11	R1805352-003	04-GENS-2.6-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
12	R1805352-005	04-RAGA-1.4-06122018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
13	R1805352-007	07-KEUK-0.3-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
14	R1805352-009	05-CDEA-1.8-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
15	R1805352-011	05-CHEM-5.4-061318-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
16	R1805374-001	07-ONON-1.0-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
17	R1805374-003	07-OSWE-5.2-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
18	R1805374-005	03-SALM-12.0-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
19	R1805374-007	06-TOGH-32.8-06122018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
20	R1805374-009	06-SUSQ-31.4-06122018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
21	R1805461-001	17780-2,3,6,7	.04	20mL	365.1/Tot Phos T				20.00mL			
22	RQ1806008-05	R1805461-001 MS	.04	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
23	RQ1806008-06	R1805461-001 DMS	.04	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
24	R1805461-002	17780-10,11,14,15	.04	20mL	365.1/Tot Phos T				20.00mL			
25	R1805461-003	17780-18,19,22,23	.04	20mL	365.1/Tot Phos T				20.00mL			

Preparation Information Benchsheet

Prep Run#: 316244

Team: GenChem/KMENGs

Prep Workflow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 6/19/18 03:05 PM

26R1805462-001	13-ROND-9.9-06122018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
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Spiking Solutions

Name: Phosphate (Total and Ortho) 10 ug/ml as Inventory ID 185711

Logbook Ref: Standard

Expires On: 03/07/2020

Preparation Steps

Step: Digestion

Started: 6/19/18 15:05

Finished: 6/19/18 16:05

By: GNITAJOUPPI

Comments

Comments:

Reviewed By: _____ Date: _____ Spike Witness: AFELSER Date: _____

Chain of Custody

Relinquished By: K Mengs Date: 6/19/18
Received By: [Signature] Date: 6/20/18

Extracts Examined

Yes No

Preparation Information Benchsheet

Prep Run#: 316245

Team: GenChem/KMENGs

Prep Workflow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 6/19/18 03:05 PM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1806009-01	MB		20mL	365.1/Tot Phos T				20.00mL			
2	RQ1806009-02	LCS		20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
3	R1805462-003	13-WALK-18.6-06122018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
4	R1805462-005	14-DELA-1.3-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
5	R1805462-007	14-NEVR-8.9-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
6	R1805464-001	11-HOOS-20.8-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
7	RQ1806009-03	R1805464-001 MS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
8	RQ1806009-04	R1805464-001 DMS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
9	R1805464-003	11-HOOS-20.8-06112018-WS-DUP	.01	20mL	365.1/Tot Phos T				20.00mL			
10	R1805464-005	11-HOOS-20.8-06112018-WS-EB	.01	20mL	365.1/Tot Phos T				20.00mL			
11	R1805464-007	13-LHUD-125.8-06122018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
12	R1805464-009	12-SCHO-14.6-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
13	R1805464-011	06-DILA-5.4-06142018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
14	R1805464-013	14-WDEL-16.2-06142018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
15	R1805466-001	08-BLCK-8.0-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
16	R1805466-003	09-GTCH-17.7-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
17	R1805466-005	09-GRAS-7.8-06112018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
18	R1805466-007	08-BLCK-84.5-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
19	R1805466-009	12-MOHK-79.5-061318-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
20	RQ1806009-05	R1805466-009 MS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	

Preparation Information Benchsheet

Prep Run#: 316245

Prep Workflow: Gen Dig Phos

Status: Prepped

Team: GenChem/KMENGs

Prep Method: Method

Prep Date/Time: 6/19/18 03:05 PM

21	RQ1806009-06	R1805466-009 DMS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
22	R1805466-011	12-MOHK-79.5-061318-W S-DUP	.01	20mL	365.1/Tot Phos T				20.00mL			
23	R1805466-013	12-MOHK-79.5-061318-W S-EB	.01	20mL	365.1/Tot Phos T				20.00mL			
24	R1805468-001	12-MOHK-1.5-06112018- WS	.01	20mL	365.1/Tot Phos T				20.00mL			
25	R1805468-003	11-UHUD-267.8-0612201 8-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
26	R1805468-005	11-UHUD-42.5-06122018- WS	.01	20mL	365.1/Tot Phos T				20.00mL			

Spiking Solutions

Name: Phosphate (Total and Ortho) 10 ug/ml as Inventory ID 185711

Logbook Ref: Standard

Expires On: 03/07/2020

Preparation Steps

Step: Digestion

Started: 6/19/18 15:05

Finished: 6/19/18 16:05

By: GNITAJOUPI

Comments

Comments: _____

Reviewed By: _____ Date: _____ Spike Witness: AFELSER Date: _____

Chain of Custody

Relinquished By: K Menges

Date: 6/19/18

Extracts Examined

Received By: [Signature]

Date: 6/21/18

Yes No

Preparation Information Benchsheet

Prep Run#: 316246
Team: GenChem/KMENGs

Prep Workflow: Gen Dig Phos
Prep Method: Method

Status: Prepped
Prep Date/Time: 6/19/18 03:05 PM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1806010-01	MB		20mL	365.1/Tot Phos T				20.00mL			
2	RQ1806010-02	LCS		20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
3	R1805468-007	11-UHUD-42.5-06122018-WS-DUP	.01	20mL	365.1/Tot Phos T				20.00mL			
4	R1805468-009	11-UHUD-42.5-06122018-WS-EB	.01	20mL	365.1/Tot Phos T				20.00mL			
5	RQ1806010-03	R1805468-009 MS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
6	RQ1806010-04	R1805468-009 DMS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/185711	
7	R1805573-001	17-BRNx-5.6-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
8	R1805573-003	17-CARM-9.0-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
9	R1805585-001	03-EMIL-5.1-06122018-WS	.02	20mL	365.1/Tot Phos T				20.00mL			
10	R1805585-003	01-TONA-19.4-06122018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
11	R1805585-005	01-BUFF-1.7-06122018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
12	R1805585-007	02-CHAD-2.2-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
13	R1805585-009	02-ALGY-20.3-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			
14	R1805585-011	04-UGNS-137.8-06132018-WS	.01	20mL	365.1/Tot Phos T				20.00mL			

Spiking Solutions

Name: Phosphate (Total and Ortho) 10 ug/ml as Inventory ID 185711

Logbook Ref: Standard

Expires On: 03/07/2020

Preparation Steps

Step: Digestion
Started: 6/19/18 15:05
Finished: 6/19/18 16:05
By: GNITAJOUPI
Comments

Preparation Information Benchsheet

Prep Run#: 316246
Team: GenChem/KMENGs

Prep Workflow: Gen Dig Phos
Prep Method: Method

Status: Prepped
Prep Date/Time: 6/19/18 03:05 PM

Comments: _____

Reviewed By: _____ Date: _____ Spike Witness: AFELSER Date: _____

Chain of Custody

Relinquished By: <u>K Mengs</u>	Date: <u>6/19/18</u>	<u>Extracts Examined</u> Yes No
Received By: <u>[Signature]</u>	Date: <u>6/21/18</u>	

ALS Environmental

Analyte: TPO4 Digest

Low Level / Regular Level

Time on: 1585

Analyst: KM

Date: 6/19/18

Time off: 1605

Pipet ID: Corly, Hubbes

Spk Witness: AF

psi reached: 21.0

DOD pipet cal: -

Org. LCS ID: 190673

Temp(°C) reached: 119.0

Balance ID: -

Prep: 6/14/18

Exp: 6/14/19

ID: 398

Sample

#	Misc.	Order #	Amt	Dilution	Spk Amount	Comments
1		PB 1 LL	20	1		
x 2		LCS 1 INORG LL	20	1	0.05 mL	10 ppm
3		LCS 1 ORG LL	20	1	0.05 mL	10 ppm
4		R1805293-001	20	1		
y 5		5293-001 MS	20	1	0.05 mL	10 ppm
y 6		5293-001 MSD	20	1	0.05 mL	10 ppm
7		R1805293-002	20	1		
8		R1805293-003	20	1		
9		R1805440-001	20	1		
10		R1805440-002	20	1		
11		R1805352-001	20	1		
12		R1805352-003	20	1		
13		R1805352-005	20	1		
14		R1805352-007	20	1		
15		R1805352-009	20	1		
16		R1805352-011	20	1		
17		R1805374-001	20	1		
18		R1805374-003	20	1		
19		R1805374-005	20	1		
20		R1805374-007	20	1		
21		R1805374-009	20	1		
22		R1805461-001	20	1		
x 23		5461-001 MS	20	1	0.05 mL	10 ppm
x 24		5461-001 MSD	20	1	0.05 mL	10 ppm
25		R1805461-002	20	1		
26		R1805461-003	20	1		
27		R1805462-001	20	1		
28		PB 2 LL	20	1		
x 29		LCS 2 INORG LL	20	1	0.05 mL	10 ppm
30		LCS 2 ORG LL	20	1	0.05 mL	10 ppm
31		R1805462-003	20	1		
32		R1805462-005	20	1		
33		R1805462-007	20	1		
34		R1805464-001	20	1		
y 35		5464-001 MS	20	1	0.05 mL	10 ppm
x 36		5464-001 MSD	20	1	0.05 mL	10 ppm
37		R1805466-003	20	1		
38		R1805466-005	20	1		
39		R1805466-007	20	1		
40		R1805466-009	20	1		
41		R1805466-011	20	1		
42		R1805466-013	20	1		
43	5466-001	R1805466-001	20	1		
44		R1805466-003	20	1		
45		R1805466-005	20	1		
46		R1805466-007	20	1		
47		R1805466-009	20	1		
x 48		5466-009 MS	20	1	0.05 mL	10 ppm
x 49		5466-009 MSD	20	1	0.05 mL	10 ppm
50		R1805466-011	20	1		

ALS Environmental

Analyte: TPO4 Digest

Low Level Regular Level

Time on: 1505

Analyst: KM

Date: 6/19/18

Time off: 1608

Pipet ID: Corly, 6/19/18

Spk Witness: AF

psi reached: 21.0

DOD pipet cal: -

Org. LCS ID: 190673

Temp(°C) reached: 119.0

Balance ID: -

Prep: 6/4/18

Exp: 6/4/19

ID: 398

Sample

#	Misc.	Order #	Amt	Dilution	Spk Amount	Comments
5		R1805466-013	20	1		
6		R1805468-001	20	1		
7		R1805468-003	20	1		
8		R1805468-005	20	1		
9		PB 1 LL 6/19/18	20	1		
10		LCS 1 INORG LL	20	1	0.05 mL	10 ppm
11		LCS 1 ORG LL	20	1	0.05 mL	10 ppm
12		R1805468-007	20	1		
13		R1805468-009	20	1		
14		5468-009 MS	20	1		
15		5468-009 MSD	20	1		
16		R1805573-001	20	1		
17		R1805573-003	20	1		
18		R1805585-001	20	1		
19		R1805585-003	20	1		
20		R1805585-005	20	1		
21		R1805585-007	20	1		
22		R1805585-009	20	1		
23		R1805585-011	20	1		
24			20	1		
25			20	1		
26			20	1		
27			20	1		
28			20	1		
29			20	1		
30			20	1		
31			20	1		
32			20	1		
33			20	1		
34			20	1		
35			20	1		
36			20	1		
37			20	1		
38			20	1		
39			20	1		
40			20	1		
41			20	1		
42			20	1		
43			20	1		
44			20	1		
45			20	1		
46			20	1		
47			20	1		
48			20	1		
49			20	1		
50			20	1		

[illegible]

Original Run Filename: OM_6-21-2018_03-27-40PM.OMN Created: 6/21/2018 3:27:40 PM

Original Run Author's Signature: [GABRIELA NITA-JOUPPI]

Current Run Filename: OM_6-21-2018_03-27-40PM.OMN Last Modified: 6/21/2018 5:25:13 PM

Current Run Author's Signature: [GABRIELA NITA-JOUPPI]

Description: Default New Run

Sample	Cup No.	Channel 2		Detection Time	MDF
		QC8500 365.1 TPO4-LL	Area (V.s)		
STD 0.100	S1	0.10000	2.10666	6/21/2018@3:28:29 PM	
STD 0.070	S2	0.07000	1.43168	6/21/2018@3:29:36 PM	
STD 0.050	S3	0.05000	1.05448	6/21/2018@3:30:43 PM	
STD 0.030	S4	0.03000	0.62893	6/21/2018@3:31:50 PM	
STD 0.010	S5	0.01000	0.23521	6/21/2018@3:32:57 PM	
STD 0.005	S6	0.00500	0.14369	6/21/2018@3:34:04 PM	
STD 0.003	S7	0.00300	0.10375	6/21/2018@3:35:10 PM	
STD 0.00	S8	0.00000	0.01456	6/21/2018@3:36:17 PM	
DQM Test: Minimum Correlation Coefficient					
Result:		0.99968 > 0.99700			
Message		Pass			
Action		Continue			
ICV TV= 0.050	S10	0.04953	1.04438	6/21/2018@3:38:37 PM	
Calibration:		Table/Fig. : 1			
ICB	S8	-0.00055	0.01491	6/21/2018@3:39:44 PM	
CRDL 0.005	S6	0.00565	0.14237	6/21/2018@3:40:50 PM	
CRDL 0.003	S7	0.00366	0.10149	6/21/2018@3:41:57 PM	
CCV	S10	0.05077	1.06985	6/21/2018@3:43:04 PM	
CCB	S8	-0.00057	0.01439	6/21/2018@3:44:11 PM	
PB 1 LL	1	0.00004	0.02700	6/21/2018@3:45:18 PM	
LCS 1 LL TV=0.025	2	0.02313	0.50162	6/21/2018@3:46:26 PM	
LCS 1 ORG LL	3	0.02299	0.49886	6/21/2018@3:47:34 PM	
R1805293-001	4	0.03196	0.68320	6/21/2018@3:48:41 PM	
R1805293-001 MS	5	0.05749	1.20812	6/21/2018@3:49:49 PM	
R1805293-001 MSD	6	0.05876	1.23406	6/21/2018@3:50:57 PM	
R1805293-002	7	0.54320	11.19327	6/21/2018@3:52:04 PM	
R1805293-003	8	0.13204	2.74058	6/21/2018@3:53:11 PM	
R1805440-001	9	0.04279	0.90580	6/21/2018@3:54:18 PM	
R1805440-002	10	0.04345	0.91941	6/21/2018@3:55:25 PM	
CCV	S10	0.05022	1.05854	6/21/2018@3:56:32 PM	
CCB	S8	-0.00065	0.01278	6/21/2018@3:57:39 PM	
R1805352-001	11	0.05758	1.20985	6/21/2018@3:58:46 PM	
R1805352-003	12	0.03800	0.80730	6/21/2018@3:59:52 PM	
R1805352-005	13	0.07054	1.47639	6/21/2018@4:00:59 PM	
R1805352-007	14	0.02396	0.51871	6/21/2018@4:02:05 PM	
R1805352-009	15	0.02126	0.46321	6/21/2018@4:03:12 PM	
R1805352-011	16	0.03885	0.82487	6/21/2018@4:04:19 PM	
R1805374-001	17	0.01760	0.38792	6/21/2018@4:05:27 PM	
R1805374-003	18	0.03587	0.76349	6/21/2018@4:06:34 PM	
R1805374-005	19	0.00940	0.21950	6/21/2018@4:07:42 PM	
R1805374-007	20	0.04118	0.87271	6/21/2018@4:08:49 PM	
CCV	S10	0.05025	1.05914	6/21/2018@4:09:57 PM	
CCB	S8	-0.00038	0.01831	6/21/2018@4:11:04 PM	
R1805374-009	21	0.04879	1.02927	6/21/2018@4:12:11 PM	
R1805461-001	22	0.06012	1.26203	6/21/2018@4:13:19 PM	
R1805461-001 MS	23	0.08537	1.78123	6/21/2018@4:14:26 PM	
R1805461-001 MSD	24	0.08500	1.77355	6/21/2018@4:15:33 PM	
R1805461-002	25	0.04685	0.98930	6/21/2018@4:16:40 PM	
R1805461-003	26	0.04353	0.92097	6/21/2018@4:17:46 PM	
R1805462-001	27	0.02039	0.44543	6/21/2018@4:18:53 PM	
PB 2	28	0.00029	0.03218	6/21/2018@4:19:59 PM	
LCS 2 INORG	29	0.02392	0.51797	6/21/2018@4:21:06 PM	
LCS 2 ORG	30	0.02223	0.48315	6/21/2018@4:22:12 PM	
CCV	S10	0.05042	1.06277	6/21/2018@4:23:19 PM	
CCB	S8	-0.00067	0.01243	6/21/2018@4:24:26 PM	
R1805462-003	31	0.11558	2.40223	6/21/2018@4:25:33 PM	
R1805462-005	32	0.00932	0.21769	6/21/2018@4:26:41 PM	
R1805462-007	33	0.01919	0.42060	6/21/2018@4:27:49 PM	

new rpic
not integrated

- RPT 1/20 at +70
- RPT 1/2 at +71

- RPT 1/2 at +72

5464-003
6/21/18

R1805464-001	34	0.03490	0.74359	6/21/2018@4:28:56 PM	
R1805464-001 MS	35	0.05834	1.22553	6/21/2018@4:30:04 PM	
R1805464-001 MSD	36	0.06166	1.29369	6/21/2018@4:31:11 PM	
R1805464-003	37	0.03515	0.74881	6/21/2018@4:32:18 PM	
R1805464-005	38	0.00105	0.04774	6/21/2018@4:33:26 PM	
R1805464-007	39	0.03870	0.82177	6/21/2018@4:34:32 PM	
R1805464-009	40	0.01775	0.39108	6/21/2018@4:35:39 PM	
CCV	S10	0.05037	1.06174	6/21/2018@4:36:47 PM	
CCB	S8	-0.00072	0.01129	6/21/2018@4:37:53 PM	
R1805464-011	41	0.01897	0.41623	6/21/2018@4:39:00 PM	
R1805464-013	42	0.01119	0.25628	6/21/2018@4:40:07 PM	
R1805466-001	43	0.01042	0.24037	6/21/2018@4:41:13 PM	
R1805466-003	44	0.01518	0.33821	6/21/2018@4:42:20 PM	
R1805466-005	45	0.01950	0.42707	6/21/2018@4:43:26 PM	
R1805466-007	46	0.00635	0.15667	6/21/2018@4:44:34 PM	
R1805466-009	47	0.02949	0.63251	6/21/2018@4:45:41 PM	
R1805466-009 MS	48	0.05495	1.15593	6/21/2018@4:46:49 PM	
R1805466-009 MSD	49	0.05543	1.16575	6/21/2018@4:47:56 PM	
R1805466-011	50	0.02893	0.62091	6/21/2018@4:49:04 PM	
CCV	S10	0.05096	1.07384	6/21/2018@4:50:12 PM	
CCB	S8	-0.00046	0.01673	6/21/2018@4:51:19 PM	
R1805466-013	51	-0.00180	-0.01091	6/21/2018@4:52:26 PM	
R1805468-001	52	0.01361	0.30592	6/21/2018@4:53:33 PM	
R1805468-003	53	0.00484	0.12564	6/21/2018@4:54:40 PM	
R1805468-005	54	0.02083	0.45434	6/21/2018@4:55:47 PM	
PB 3	55	-0.00010	0.02406	6/21/2018@4:56:54 PM	
LCS 3 INORG	56	0.02370	0.51346	6/21/2018@4:58:01 PM	
LCS 3 ORG	57	0.02305	0.50006	6/21/2018@4:59:07 PM	
R1805468-007	58	0.02063	0.45031	6/21/2018@5:00:14 PM	
R1805468-009	59	0.00141	0.05509	6/21/2018@5:01:20 PM	
R1805468-009 MS	60	0.02386	0.51678	6/21/2018@5:02:27 PM	
CCV	S10	0.05055	1.06529	6/21/2018@5:03:34 PM	
CCB	S8	-0.00107	0.00425	6/21/2018@5:04:41 PM	
R185468-009 MSD	61	0.02435	0.52686	6/21/2018@5:05:48 PM	
R1805573-001	62	0.06153	1.29113	6/21/2018@5:06:55 PM	
R1805573-003	63	0.01107	0.25366	6/21/2018@5:08:03 PM	
R1805585-001	64	0.17919	3.70996	6/21/2018@5:09:10 PM	
R1805585-003	65	0.04119	0.87291	6/21/2018@5:10:18 PM	
R1805585-005	66	0.01203	0.27343	6/21/2018@5:11:26 PM	
R1805585-007	67	0.04994	1.05283	6/21/2018@5:12:33 PM	
R1805585-009	68	0.02187	0.47571	6/21/2018@5:13:40 PM	
R1805585-011	69	0.03797	0.80678	6/21/2018@5:14:46 PM	
R1805293-002 RPT	70	0.51169	0.55215	6/21/2018@5:15:53 PM	20.00
CCV	S10	0.05022	1.05851	6/21/2018@5:17:01 PM	
CCB	S8	-0.00120	0.00147	6/21/2018@5:18:08 PM	
R1805293-003 RPT	71	0.12616	1.32299	6/21/2018@5:19:15 PM	2.00
R1805462-003 RPT	72	0.11343	1.19209	6/21/2018@5:20:21 PM	2.00
R1805585-001 RPT	73	0.16275	0.36076	6/21/2018@5:21:28 PM	10.00
CCV	S10	0.05079	1.07033	6/21/2018@5:22:35 PM	
CCB	S8	-0.00103	0.00495	6/21/2018@5:23:42 PM	

5468
6/21/18

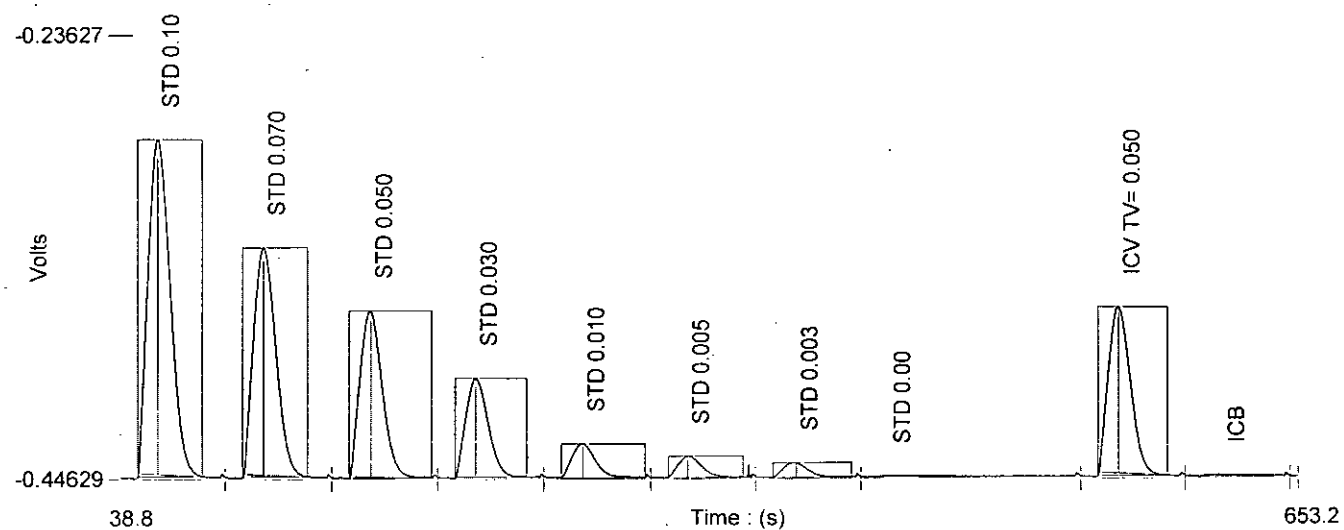
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Analyte Properties Table for : OM_6-21-2018_03-27-40PM.OMN

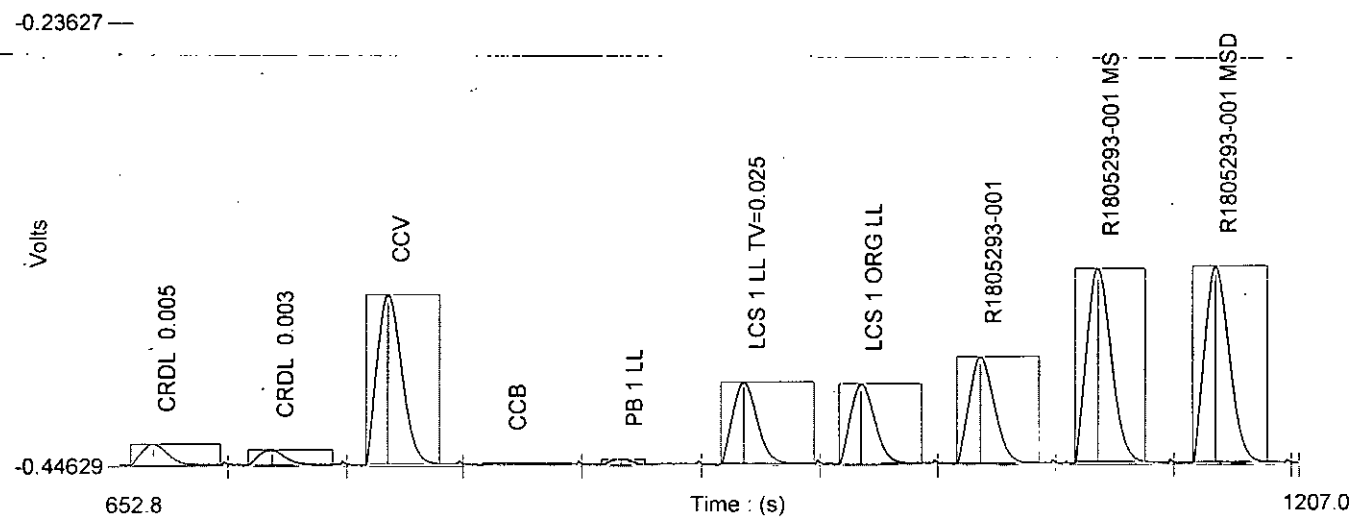
Property	Channel 2
	QC8500 365.1 TPO4- LL
Concentration Units	mg/L
Calibration Fit Type	First Order
Clear Calibration	No
Force through Zero	No
Calibration Weighting	None
Auto Dilution Trigger	No
% of High Standard	110
Quik Chem Method	
Chemistry	Direct/Bipolar
Calibration by Height	No
Inject to Peak Start	9

Peak Base Width	46
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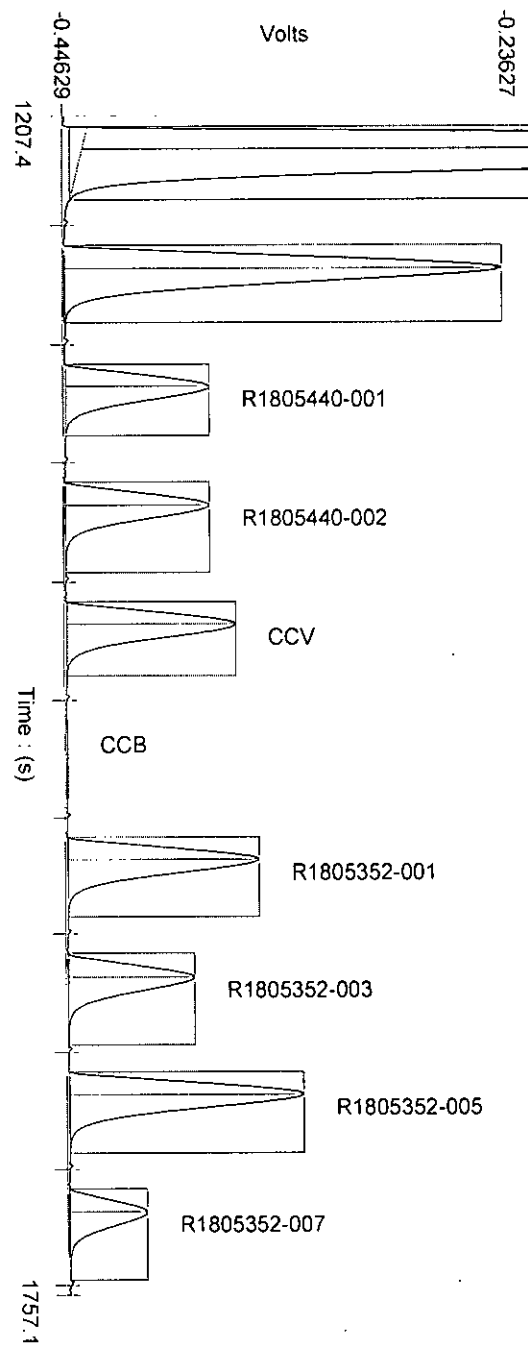
Channel 2 - Set: 1 / 11



Channel 2 - Set: 2 / 11

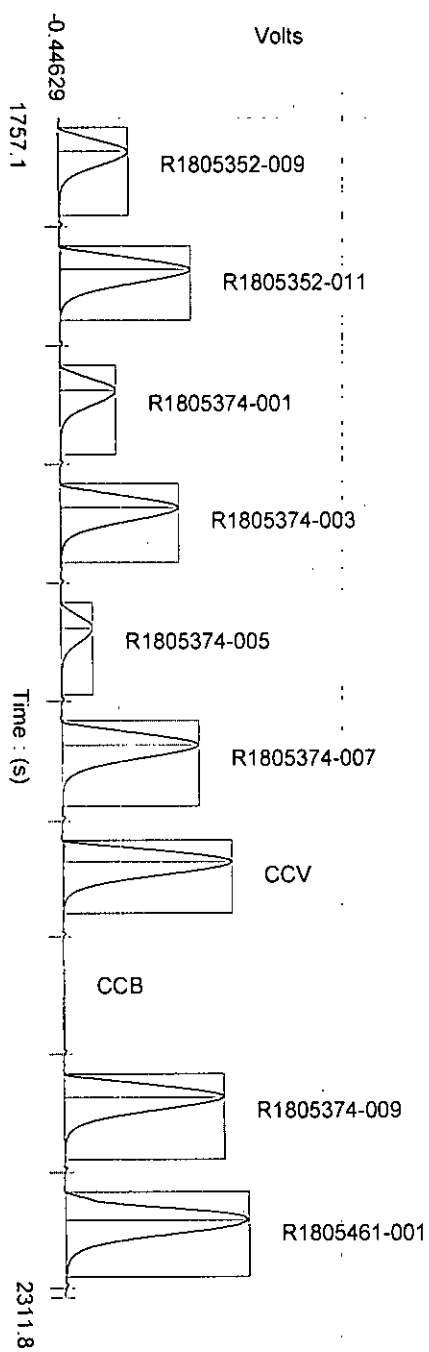


Channel 2 - Set: 3 / 11

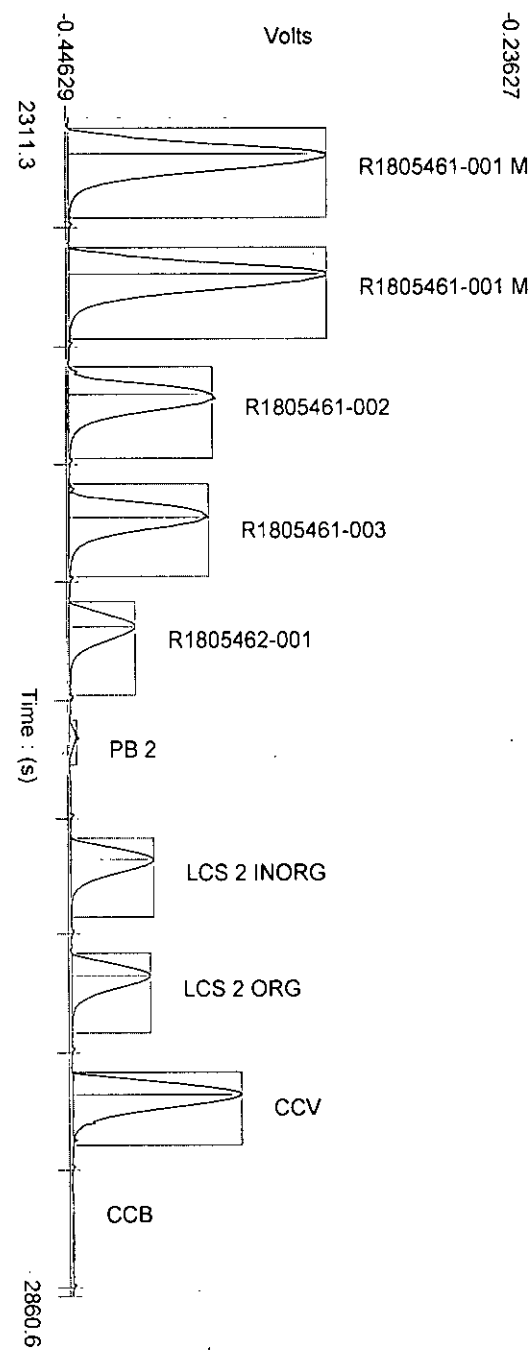


Channel 2 - Set: 4 / 11

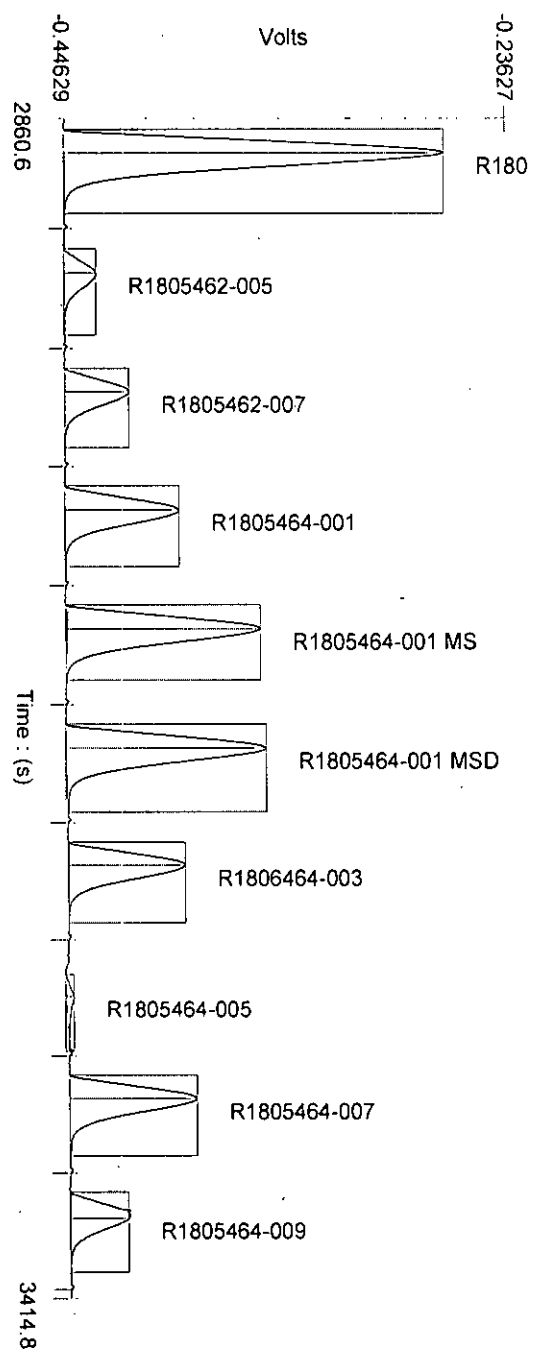
-0.23627



Channel 2 - Set: 5 / 11

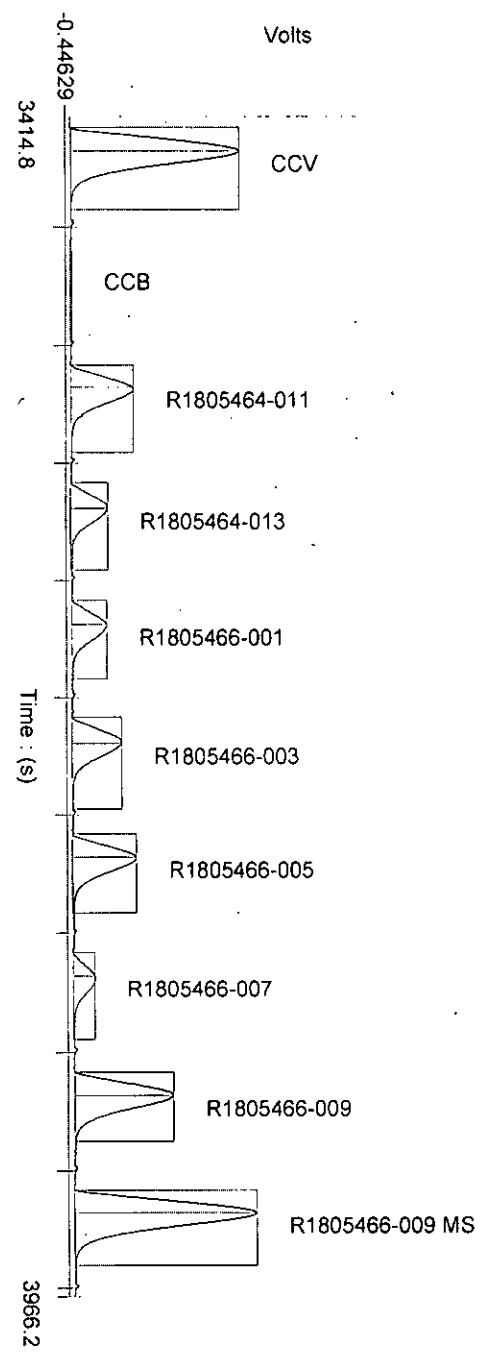


Channel 2 - Set: 6 / 11



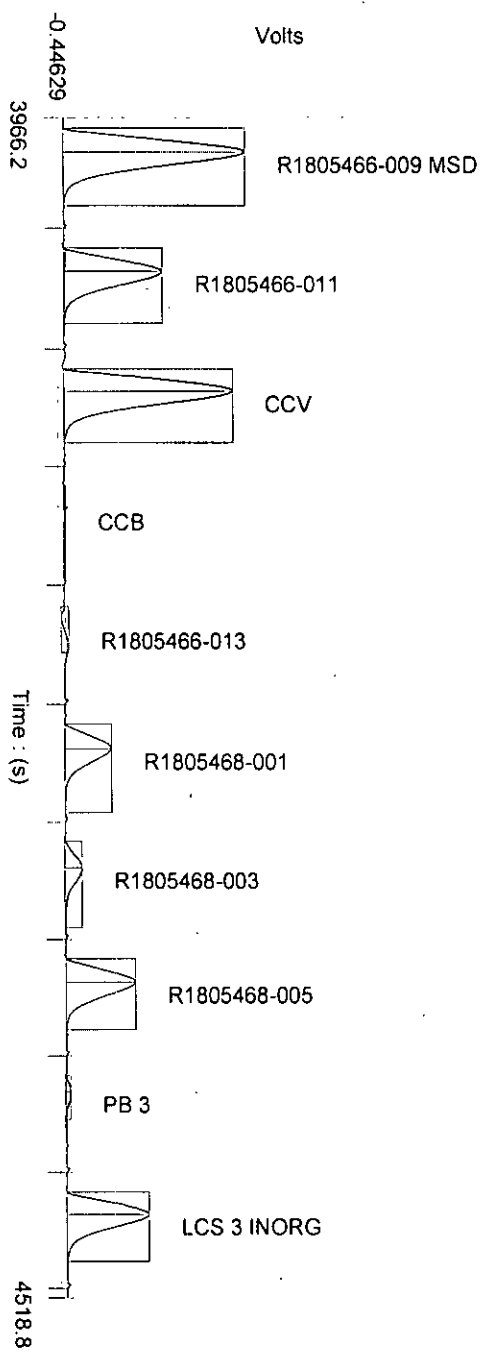
Channel 2 - Set 7 / 11

-0.23627



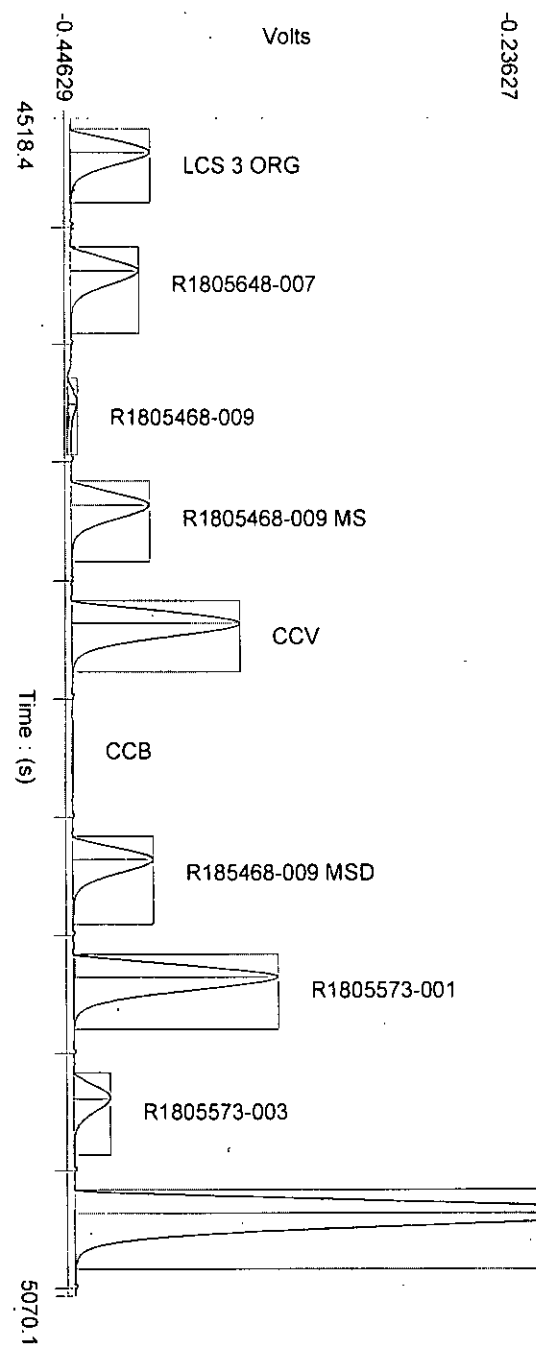
Channel 2 - Set 8 / 11

-0.23627



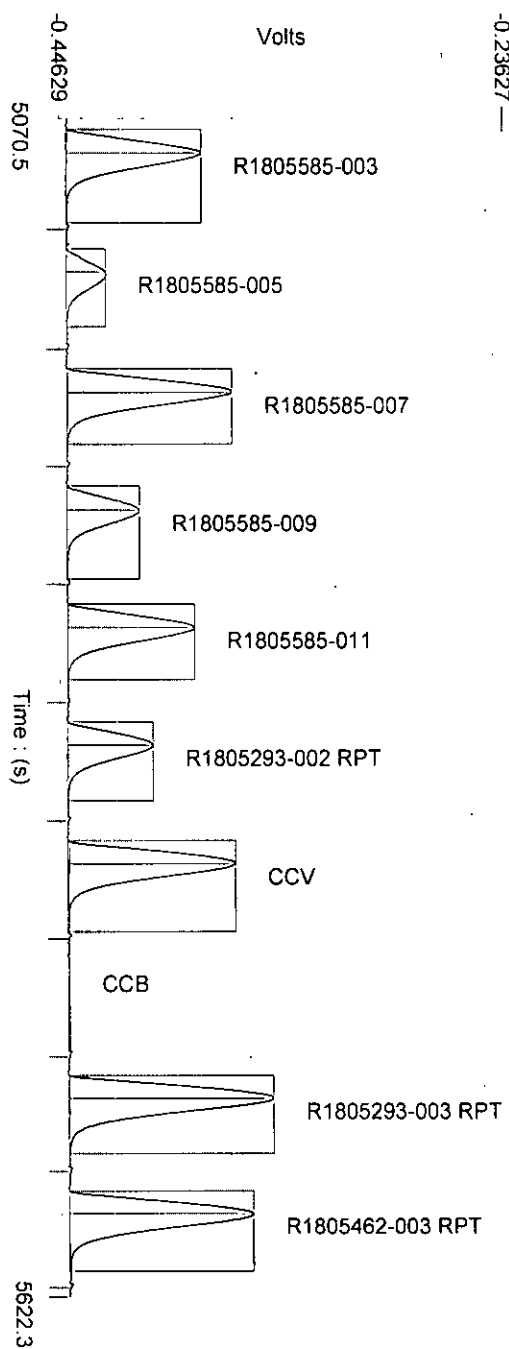
Channel 2 - Set: 9 / 11

-0.23627



Channel 2 - Set: 10 / 11

-0.23627



Channel 2 - Set: 11 / 11

-0.23627

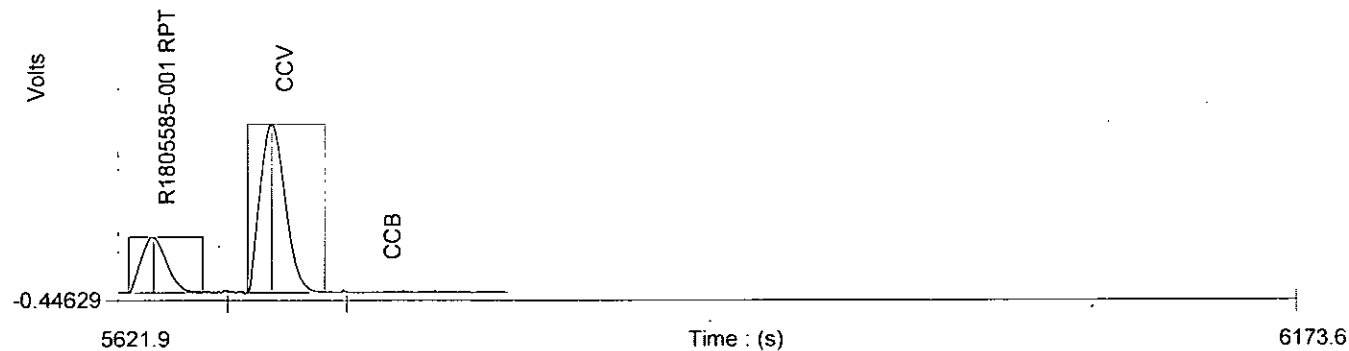
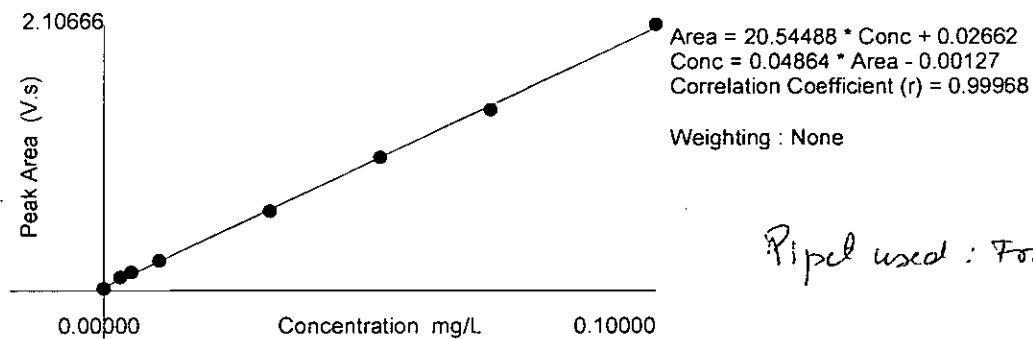


Table : 1 (QC8500 365.1 TPO4-LL)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	0.10000	1	2.10666	0.15854	0.0	-1.2	0.10120	6/21/2018	3:28:29 PM
2	0.07000	1	1.43168	0.10771	0.0	2.3	0.06837	6/21/2018	3:29:36 PM
3	0.05000	1	1.05448	0.07869	0.0	-0.1	0.05002	6/21/2018	3:30:43 PM
4	0.03000	1	0.62893	0.04689	0.0	2.2	0.02932	6/21/2018	3:31:50 PM
5	0.01000	1	0.23521	0.01621	0.0	-1.4	0.01017	6/21/2018	3:32:57 PM
6	0.00500	1	0.14369	0.01017	0.0	-11.1	0.00572	6/21/2018	3:34:04 PM
7	0.00300	1	0.10375	0.00703	0.0	-17.6	0.00377	6/21/2018	3:35:10 PM
8	0.00000	1	0.01456	0.00079			-0.00057	6/21/2018	3:36:17 PM

Figure : 1 (QC8500 365.1 TPO4-LL)



General Chemistry Analytical Run Cover Sheet

Analyst: GW ITA

Date: 6/21/18

Analysis: Total Phosphorus, Low Level, EPA 365.1

Instrument: Lachat

PRIMARY STOCKS	Log # Prep/Exp. Dates	Reagent	Weight (g)	Final Vol. (mLs)	Conc. (mg/L)
Standards *	184818 Received: Expires: 9/30/18				
Reference *	185400 Received: Expires: 7/31/20				
Organic LCS	See Digest Sheet	*** 181751 Exp: 6/06/2022	0.9885	1000	100
*** Disodium B-Glycerophosphate Pentahydrate					

Working Stock Prep	Fresh daily	Serial Dilutions**			True Value (mg/L)
		Stock Soln (mLs)	Stock Soln (mg/L)	Final Volume (mLs)	
Standard		1	1000	10	100
		1	100	10	10 (A)
		1	10	10	1 (B)
Reference		1	1000	10	100
		1	100	10	10
		1	10	10	1 (C)
Organic LCS		1	100	10	10 (D)
Quality Control	spiked at prep				
LCS/MS		0.05	10 (A)	20	0.025
Organic LCS		0.05	10 (D)	20	0.025

Standard Curve Prep	Fresh daily		
Pipet ID:	THOR, curly	Graduated Disposable Pipet Lot:	N/A
DOD pipet Verification	N/A		
	Concentration (mg/L)	mLs Carrier Sol'n	mLs 1 mg/L Working Stock (B)
	0.100	9.00	1.00
	0.070	9.30	0.70
	0.050	9.50	0.50
	0.030	9.70	0.30
	0.010	1/10 dil'n of 0.100	
	0.005	1/10 dil'n of 0.050	
	0.003	1/10 dil'n of 0.030	
	0.000	10	0.00
			mL 1 mg/L Ref Stock (C)
I/CCV	0.050	9.5	0.50

REAGENTS	Log ID	Expiration Date
Carrier/ Diluent **	fresh daily	
Ascorbic Acid	190984	6/27/2018
Molybdate Reagent	190985	12/5/2018

COMMENTS

Instrument Log filled in? (Y) (N)