

**ANALYTICAL DATA**

**METHODS 26A & OTM-28**

# **GEL Engineering, LLC**

2040 Savage Rd.  
Charleston, SC 29407

City of Greensboro, NC  
Client # CGRB00109/CGRB00109C

## **Analytical Report (0110-96)**

### ***EPA Method 26A***

Hydrogen chloride, Hydrogen fluoride

### ***EPA OTM-28***

Condensible Particulate Matter




### **Enthalpy Analytical, Inc.**

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / [www.enthalpy.com](http://www.enthalpy.com)  
2202 Ellis Road Durham, NC 27703 - 5518

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 73 pages.

  
QA Review Performed by – Bonnie L Evans



# Summary of Results



Company	GEL Engineering, LLC
Analyst	MGB
Parameters	EPA Method 26A
# Samples	3 runs & 1 blank

Client #	CGRB00109
Job #	0110-96
PO #	Verbal
Report Date	2/2/2010

Compound	Sample ID / Catch Weight (ug)		
	<b>Run 1</b>	<b>Run 2</b>	<b>Run 3</b>
Hydrogen Fluoride	103 ND	108 ND	158 ND
Hydrogen Chloride	101 ND	106 ND	154 ND
	<b>H2SO4 Blank</b>		
Hydrogen Fluoride	82.1 ND		
Hydrogen Chloride	80.2 ND		

Company	GEL Engineering
Analyst	ARM / KTH
Parameters	EPA OTM-028
# Samples	3 runs + blanks

Client #	CGR800109C
Job #	0110-96
PO #	Verbal
Report Date	02/02/10

Compound	Sample ID / Condensable Particulate Matter (CPM) Weight (mg)		
	<b>Run 1</b>	<b>Run 2</b>	<b>Run 3</b>
Organic Catch	4.3	4.7	4.5
Inorganic Catch	3.6	3.2	3.7
CPM	7.9	7.9	8.2
	<b>Filter blank</b>		
Organic Catch	1.5		
Inorganic Catch	1.2		
CPM	2.6		

# Results



Company	GEL Engineering, LLC
Analyst	MGB
Parameters	EPA Method 26A
# Samples	3 runs & 1 blank

Client #	CGRB00109
Job #	0110-96
PO #	Verbal
Report Date	2/2/2010

MDL 0.0200 (ug/mL)

LOQ 0.100 (ug/mL)

Lower Curve Limit 0.100 (ug/mL)

Upper Curve Limit 14.6 (ug/mL)

Compound Hydrogen Fluoride as Fluoride

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	CF F → HF	Catch Weight (ug)	Qual
Run 1	011-1101.D	011-1102.D	hplc51p18.M	NA	NA	0.0200	0.0200	0.0	0.0200	20	245	1.053	103	ND
Run 2	014-1401.D	014-1402.D	hplc51p18.M	NA	NA	0.0200	0.0200	0.0	0.0200	20	257	1.053	108	ND
Run 3	015-1501.D	015-1502.D	hplc51p18.M	NA	NA	0.0200	0.0200	0.0	0.0200	20	375	1.053	158	ND
H2SO4 Blank	010-1001.D	010-1002.D	hplc51p18.M	NA	NA	0.0200	0.0200	0.0	0.0200	20	195	1.053	82.1	ND
Reagent Blank	007-0801.D	007-0802.D	hplc51p18.M	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.053	0.0211	ND
DI H2O	008-0901.D	008-0902.D	hplc51p18.M	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.053	0.0211	ND
hplc51pg18 #LCS	006-0701.D	006-0702.D	hplc51p18.M	2.85	2.85	5.33	5.40	0.7	5.37	1	1.00	1.053	5.65	
Tag Amount (ug)														5.27
Recovery (%)														107%
MS / Run 1	012-1201.D	012-1202.D	hplc51p18.M	2.85	2.85	3.55	3.60	0.6	3.58	1	10.0	1.053	37.6	
Spike Amount (ug)														31.6
Native Amount (ug)														0.00
Spike Recovery (%)														119%
MSD / Run 1	013-1301.D	013-1302.D	hplc51p18.M	2.85	2.85	3.55	3.53	0.4	3.54	1	10.0	1.053	37.3	
Spike Amount (ug)														31.6
Native Amount (ug)														0.00
Spike Recovery (%)														118%



Company	GEL Engineering, LLC
Analyst	MGB
Parameters	EPA Method 26A
# Samples	3 runs & 1 blank

Client #	CGRB00109
Job #	0110-96
PO #	Verbal
Report Date	2/2/2010

MDL 0.0200 (ug/mL) Lower Curve Limit 0.100 (ug/mL)  
 LOQ 0.100 (ug/mL) Upper Curve Limit 14.6 (ug/mL)  
 Compound Hydrogen Chloride as Chloride

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	CF Cl → HCl	Catch Weight (ug)	Qual
Run 1	011-1101.D	011-1102.D	hplc51p18.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	20	245	1.028	101	ND
Run 2	014-1401.D	014-1402.D	hplc51p18.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	20	257	1.028	106	ND
Run 3	015-1501.D	015-1502.D	hplc51p18.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	20	375	1.028	154	ND
H2SO4 Blank	010-1001.D	010-1002.D	hplc51p18.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	20	195	1.028	80.2	ND
Reagent Blank	007-0801.D	007-0802.D	hplc51p18.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.028	0.0206	ND
DI H2O	008-0901.D	008-0902.D	hplc51p18.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.028	0.0206	ND
hplc51pg18 #LCS	006-0701.D	006-0702.D	hplc51p18.M	3.87	3.87	0.1	5.00	5.04	0.4	5.02	1	1.00	1.028	5.16	
Tag Amount (ug)														5.14	
Recovery (%)														100%	
MS / Run 1	012-1201.D	012-1202.D	hplc51p18.M	3.88	3.88	0.1	2.82	2.84	0.4	2.83	1	10.0	1.028	29.1	
Spike Amount (ug)														30.8	
Native Amount (ug)														0.00	
Spike Recovery (%)														94.3%	
MSD / Run 1	013-1301.D	013-1302.D	hplc51p18.M	3.88	3.88	0.0	2.81	2.81	0.1	2.81	1	10.0	1.028	28.9	
Spike Amount (ug)														30.8	
Native Amount (ug)														0.00	
Spike Recovery (%)														93.7%	

Company	GEL Engineering
Analyst	ARM / KTH
Parameters	EPA OTM-028
# Samples	3 runs + blanks

Client #	CGRB00109C
Job #	0110-96
PO #	Verbal
Report Date	02/02/10

### Analysis of Condensible Particulate Recovery

Sample ID Number	Run 1	Run 2	Run 3
<i>Organic</i>			
Beaker Number	1559	1560	1561
Initial MeCl2/Acetone Volume, mL	168	152	172
Lab MeCl2 Volume, mL	165	165	165
Final Weight, g	1.9183	1.9200	1.9158
Reweight, Final, g	1.9182	1.9199	1.9158
Beaker Tare, g	1.9140	1.9153	1.9113
Net Organic Catch, mg	4.3	4.7	4.5
<i>Inorganic</i>			
Beaker Number	1567	1568	1569
Final Weight, g	1.9211	1.9235	1.9258
Reweight, Final, g	1.9211	1.9236	1.9258
Beaker Tare, g	1.9171	1.9197	1.9213
H2O FV, mL	238	239	240
Resuspended Volume, mL	100	100	100
Removed Pre-aliquot, mL	0.5	0.5	0.5
Pre-aliquot CF	1.00	1.00	1.00
Removed Post-aliquot, mL	0.5	0.5	0.5
Post-aliquot CF	1.01	1.01	1.01
Net Inorganic, mg	4.1	3.9	4.6
Ammonium Correction, mg	0.5	0.7	0.9
Corrected Inorganic, mg	3.6	3.2	3.7
Condensible Particulate Matter, mg	7.9	7.9	8.2

### Client Blank Analyses

Type Blank	MeCl Blank
Beaker Number	1563
Tare weight, g	1.9187
Dry Residue Weight, g	1.9212
Reweight, Final, g	1.9212
MeCl2 Residue, g	0.0025
MeCl2 Volume, mL	152
Max. MeCl2 Residue, g	0.0030

Type Blank	H2O Blank
Beaker Number	1571
Tare weight, g	1.9234
Dry Residue Weight, g	1.9246
Reweight, Final, g	1.9246
Water Residue, g	0.0012
Water Volume, mL	193
Max. Water Residue, g	0.0019

Type Blank	Acetone
Beaker Number	1565
Tare weight, g	1.9155
Dry Residue Weight, g	1.9162
Reweight, Final, g	1.9162
Acetone Residue, g	0.0007
Acetone Volume, mL	260
Max. Acetone Residue, g	0.0021

### In-House Blank Analyses

Type Blank	MeCl Blank
Beaker Number	1564
Tare weight, g	1.9135
Dry Residue Weight, g	1.9157
Reweight, Final, g	1.9157
MeCl2 Residue, g	0.0021
MeCl2 Volume, mL	225
Max. MeCl2 Residue, g	0.0045

Type Blank	H2O Blank
Beaker Number	1572
Tare weight, g	1.9312
Dry Residue Weight, g	1.9316
Reweight, Final, g	1.9316
Water Residue, g	0.0004
Water Volume, mL	225
Max. Water Residue, g	0.0025

Type Blank	Acetone
Beaker Number	1566
Tare weight, g	1.9190
Dry Residue Weight, g	1.9191
Reweight, Final, g	1.9191
Acetone Residue, g	0.0001
Acetone Volume, mL	200
Max. Acetone Residue, g	0.0016

Company	GEL Engineering
Analyst	ARM / KTH
Parameters	EPA OTM-028
# Samples	3 runs + blanks

Client #	CGRB00109C
Job #	0110-96
PO #	Verbal
Report Date	02/02/10

### Analysis of Condensible Particulate Recovery

Sample ID Number	Filter blank	
Organic		
Beaker Number	1562	
Initial MeCl2/Acetone Volume, mL	0	
Lab MeCl2 Volume, mL	165	Dates
Final Weight, g	1.9166	2/1/10
Reweigh, Final, g	1.9165	2/2/10
Beaker Tare, g	1.9151	1/18/10
Net Organic Catch, mg	1.5	
Inorganic		
Beaker Number	1570	Dates
Final Weight, g	1.9220	2/1/10
Reweigh, Final, g	1.9220	2/2/10
Beaker Tare, g	1.9209	1/18/10
H2O FV, mL	75.0	
Resuspended Volume, mL	100	
Removed Pre-aliquot, mL	0.5	
Pre-aliquot CF	1.01	
Removed Post-aliquot, mL	0.5	
Post-aliquot CF	1.01	
Net Inorganic, mg	1.2	
Ammonium Correction, mg	0.0	
Corrected Inorganic, mg	1.2	
Condensible Particulate Matter, mg	2.6	

### Client Blank Analyses

Type Blank	MeCl Blank
Beaker Number	1563
Tare weight, g	1.9187
Dry Residue Weight, g	1.9212
Reweigh, Final, g	1.9212
MeCl2 Residue, g	0.0025
MeCl2 Volume, mL	152
Max. MeCl2 Residue, g	0.0030

Type Blank	H2O Blank
Beaker Number	1571
Tare weight, g	1.9234
Dry Residue Weight, g	1.9246
Reweigh, Final, g	1.9246
Water Residue, g	0.0012
Water Volume, mL	193
Max. Water Residue, g	0.0019

Type Blank	Acetone
Beaker Number	1565
Tare weight, g	1.9155
Dry Residue Weight, g	1.9162
Reweigh, Final, g	1.9162
Acetone Residue, g	0.0007
Acetone Volume, mL	260
Max. Acetone Residue, g	0.0021

### In-House Blank Analyses

Type Blank	MeCl Blank
Beaker Number	1564
Tare weight, g	1.9135
Dry Residue Weight, g	1.9157
Reweigh, Final, g	1.9157
MeCl2 Residue, g	0.0021
MeCl2 Volume, mL	225
Max. MeCl2 Residue, g	0.0045

Type Blank	H2O Blank
Beaker Number	1572
Tare weight, g	1.9312
Dry Residue Weight, g	1.9316
Reweigh, Final, g	1.9316
Water Residue, g	0.0004
Water Volume, mL	250
Max. Water Residue, g	0.0025

Type Blank	Acetone
Beaker Number	1566
Tare weight, g	1.9190
Dry Residue Weight, g	1.9191
Reweigh, Final, g	1.9191
Acetone Residue, g	0.0001
Acetone Volume, mL	200
Max. Acetone Residue, g	0.0016

Company	GEL Engineering
Analyst	ARM / KTH
Parameters	EPA OTM-028
# Samples	3 runs + blanks

Client #	CGRB00109C
Job #	0110-96
PO #	Verbal
Report Date	02/02/10

MDL 0.09 (mg Ammonium)

MDL 0.26 (mg Sulfate)

Blank titrant amount (Vib) 0.14

NH4OH normality 0.1

Lot # Sigma Aldrich 318620

Sample ID.	Volume Resuspended (mL)	Titration Allquot Vol (mL)	NH <sub>4</sub> OH Titration Vol (mL)	Allquot Factor (mL rec'd/aliqu mL)	SO <sub>4</sub> Catch (mg)	Ammonium equivalent (mg)
Run 1	100	99.5	0.42	1.01	1.35	0.48
Run 2	100	99.5	0.55	1.01	1.98	0.70
Run 3	100	99.5	0.68	1.01	2.61	0.92
Filter Blank	100	99.5	0.07	1.01	0.26 ND	0.09 ND
Blank	100	99.5	0.29	1.01	0.72	0.26
In House	100	99.5	0.14	1.01	0.26 ND	0.09 ND

# Narrative Summary



## Enthalpy Analytical Narrative Summary

<b>Company</b>	GEL Engineering, LLC
<b>Analyst</b>	MGB
<b>Parameters</b>	EPA Method 26A
<b># Samples</b>	3 runs and 1 blank

<b>Client #</b>	CGRB00109
<b>Job #</b>	0110-96
<b>PO #</b>	Verbal
<b>Report Date</b>	February 2, 2010

<b>Custody</b>	Tony Mastrianni received the samples on 1/25/10 after being relinquished by GEL Engineering, LLC. The samples were received at 13.4 °C in good condition. Prior to and during analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
<b>Analysis</b>	<p>The samples were analyzed for hydrogen chloride and hydrogen fluoride using the analytical procedures in EPA Method 26A, Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic Method (40 CFR Part 60, Appendix A).</p> <p>The samples were analyzed following the procedures in Section 11.0, Analytical Procedures. All samples and standards are prepared, stored, and analyzed using high-density polyethylene containers.</p> <p>The Metrohm 861 Compact IC ("Smithers" S/N 1861002007189) was equipped with a Metrohm 861 Conductivity Detector and a Metrosep A Supp 5 - 110/4.0mm column (S/N # 905298).</p>
<b>Calibration</b>	<p>The calibration curves are located in the back of this report and referenced in the Analysis Method column on the Detailed Results page.</p> <p>For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.</p>
<b>Chromatographic Conditions</b>	The acquisition method (METROHM.M) is included in the Calibration Curve Chromatograms section of this report.
<b>QC Notes</b>	<p>As required in Section 7.2.2, Absorbing Solution Blanks, a client-provided reagent blank was analyzed. Additionally, a quality control check sample was analyzed at the same time as the blanks and samples. All method required acceptance criteria were met.</p> <p>All sample preparation and analytical holding times specified in the method were met. Section 13.2, Sample Stability, specifies an analytical holding time of four weeks.</p>



## Enthalpy Analytical Narrative Summary

(continued)

**Reporting Notes** The  $\text{H}_2\text{SO}_4$  matrix samples were analyzed for  $\text{Cl}^-$  and  $\text{F}^-$  and are reported as  $\text{HCl}$  and  $\text{HF}$ , using the correction factors 1.028 and 1.053 respectively to account for the  $\text{H}^+$  mass.

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical, Inc. is accredited to perform this method for compliance purposes by the National Environmental Laboratory Accreditation Conference (NELAC) through the Louisiana Environmental Laboratory Accreditation Program (LELAP), certificate number 04010.



## Enthalpy Analytical Narrative Summary

<b>Company</b>	GEL Engineering, LLC	<b>Client #</b>	CGRB00109C
<b>Analyst</b>	ARM / KTH	<b>Job #</b>	0110-96
<b>Parameters</b>	EPA OTM-028	<b>PO #</b>	Verbal
<b># Samples</b>	3 runs and blanks	<b>Report Date</b>	February 2, 2010

<b>Custody</b>	Tony Mastrianni of Enthalpy Analytical, Inc. received the samples on 1/25/10 at 13.4 °C after being relinquished by GEL Engineering, LLC. The samples arrived in good condition. Prior to and during analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
<b>Analysis</b>	<p>The samples were analyzed for Particulate Matter using the general analytical procedures in EPA Other Test Method (OTM) 28, Dry Impinger Method for Determining Condensable Particulate Emissions from Stationary Sources.</p> <p>All samples were weighed on a Sartorius Model ME 5-F (SN 23104965) certified by Precision Weighing, Inc. through the end of October 2010, (NIST Test Weight # 1481174).</p>
<b>QC Notes</b>	<p>A water blank, acetone blank, filter blank, and a methylene chloride blank were received and analyzed with these samples.</p> <p>The method specifies blank corrections are accomplished by subtracting the particulate mass determined in the 'Train Blank' or 2 mg (whichever is less) from the sample weight. No Train Blank was received with these samples.</p> <p>The inorganic results for the samples were corrected for the ammonium ions used to precipitate the sulfate, per the formula in the Method (Section 12.2.1).</p> <p>When the pH of the samples was measured to be 7.0 or greater with the pH meter, no titrant was added.</p>
<b>Reporting Notes</b>	<p>The results presented in this report are representative of the samples as provided to the laboratory.</p> <p>Enthalpy Analytical, Inc. considers gravimetric analyses for OTM-028 <math>\pm 0.5</math> mg. Therefore, negative catch weights between 0 and <math>-0.5</math> mg are set to zero and no investigation is undertaken. Negative catch weights <math>&lt; -0.5</math> mg are investigated. None of the catch results for this data set were negative.</p>





## General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym **MDL** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym **LOQ** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym **ND** following a value indicates a non-detect or analytical result below the MDL.
- The letter **J** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter **E** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym **DF** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of **MS** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of **MSD** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of **LD** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of **AD** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID **LCS** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.



## General Reporting Notes

(continued)

- **Significant Figures:** Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration:** The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was *not integrated* by the software "NI", the peak was *integrated incorrectly* by the software "II" or the *wrong peak* was integrated by the software "WP". These codes will accompany the analyst's manual integration stamp placed next to the compound name.



# Sample Custody



Page: _____ of _____ Project #: <u>CGRB00109</u> GEL Quote #: COC Number <sup>(1)</sup> : PO Number:	<h2 style="margin:0;">GEL Chain of Custody and Analytical Request</h2>	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178
GEL Work Order Number:		

Client Name: <u>City of Greensboro</u>		Phone #:		Sample Analysis Requested <sup>(5)</sup> (Fill in the number of containers for each test)													
Project/Site Name:		Fax #:		Should this sample be considered:	Total number of containers											<-- Preservative Type (6)	
Address:																Comments Note: extra sample is required for sample specific QC	
Collected by: <u>Gregg Szymkowski</u> Send Results To: <u>GEL</u>				Radioactive	TSCA Regulated												
Sample ID <small>* For composites - indicate start and stop date/time</small>	* Date Collected (mm-dd-yy)	* Time Collected (Military) (hh:mm)	QC Code <sup>(2)</sup>			Field Filtered <sup>(3)</sup>	Sample Matrix <sup>(4)</sup>										
Run 1	1/24/10					1											Test for HCL
Run 2						1											\$ HF VIA
Run 3						1											Method 26A
1N H <sub>2</sub> SO <sub>4</sub> BLANK	✓					1											

TAT Requested: Normal: <input checked="" type="checkbox"/> Rush: _____ Specify: _____ (Subject to Surcharge)	Fax Results: Yes / No	Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4
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Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards	Sample Collection Time Zone Eastern Pacific Central Other _____ Mountain
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Chain of Custody Signatures				Sample Shipping and Delivery Details	
Retinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 <u>Gregg Szymkowski</u>	1/22/10		1 <u>Anthony Martini</u>	1/25/2010	0935
2			2		
3			3		
				GEL PM: <u>Craig McKenzie</u>	
				Method of Shipment:	
				Date Shipped:	
				Airbill #:	
				Airbill #:	

1) Chain of Custody Number = Client Determined

2) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3) Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal

5) Sample Analysis Requested. Analytical method requested (i.e. 8260B, 8810B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexanoic, ST = Sodium Thiosulfate. If no preservative is added = leave field blank

WHITE = LABORATORY      YELLOW = FILE      PINK = CLIENT

For Lab Receiving Use Only

Custody Seal Intact?

YES      NO

Cooler Temp:

13.4 °C

RayTech Karyon #1

Page: <u>1</u> of <u>2</u> Project #: <u>CGRB001095</u> GEL Quote #: COC Number (1): PO Number:	<h2 style="margin:0;">GEL Chain of Custody and Analytical Request</h2>	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178
GEL Work Order Number:		

Client Name: <u>City of Greensboro</u> Phone #:		Sample Analysis Requested <sup>(5)</sup> (Fill in the number of containers for each test)																																											
Project/Site Name:		Fax #:		Should this sample be considered:		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="12"></td> <td colspan="2" style="text-align: center;">Preservative Type (6)</td> </tr> <tr> <td colspan="14" style="height: 100px; vertical-align: top;">           Comments            Note: extra sample is required for sample specific QC         </td> </tr> </table>																								Preservative Type (6)		Comments Note: extra sample is required for sample specific QC													
																		Preservative Type (6)																											
Comments Note: extra sample is required for sample specific QC																																													
Address:																																													
Collected by: <u>Greg Szymkowicz</u>		Send Results To: <u>GEL</u>																																											
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected/ (M:hr:am)	QC Code <sup>(4)</sup>	Field Filtered <sup>(3)</sup>	Sample Matrix <sup>(4)</sup>	Radioactive	TSCA Regulated	Total number of containers																																					
#1 - R-1	1/21/10							1																																					
#1 - R-2								1																																					
#1 - R-3								1																																					
#2 - R-1								1																																					
#2 - R-2								1																																					
#2 - R-3								1																																					
#3 - R-1								1																																					
#3 - R-2								1																																					
#3 - R-3								1																																					
#6								1																																					

TAT Requested: Normal: <input checked="" type="checkbox"/> Rush:		Specify: (Subject to Surcharge)		Fax Results: Yes / No		Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4											
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards														Sample Collection Time Zone Eastern Pacific Central Other _____ Mountain			

Chain of Custody Signatures						Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time		
<u>[Signature]</u>		1/23/10	<u>[Signature]</u>	1/25/2010	0935	GEL PM: <u>Craig McKenzie</u>	
						Method of Shipment:	
						Date Shipped:	
						Airbill #:	
						Airbill #:	

1.) Chain of Custody Number = Client Determined 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered. 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal 5.) Sample Analysis Requested: Analytical method requested (i.e. 8160B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1). 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, DMS = Dimethyl Sulfoxide. If no preservative is added = leave field blank WHITE = LABORATORY      YELLOW = FILE      PINK = CLIENT		For Lab Receiving Use Only Custody Seal Intact? YES      NO Cooler Temp: <u>13.4</u> C <u>Raytech Ruyner #1</u>
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Page: <u>2 of 2</u> Project #: <u>CGRB 001095</u> GEL Quote #: COC Number <sup>(1)</sup> : PO Number:	<h2 style="margin: 0;">GEL Chain of Custody and Analytical Request</h2>	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178
GEL Work Order Number:		

Client Name: <u>CITY OF GREENSBORO</u>		Phone #:		Sample Analysis Requested <sup>(5)</sup> (Fill in the number of containers for each test)														
Project/Site Name:		Fax #:		Should this sample be considered:	Total number of containers											<-- Preservative Type (6)		
Address:																Comments Note: extra sample is required for sample specific QC		
Collected by: <u>Greg Szymkowitz</u>		Send Results To: <u>GEL</u>																
Sample ID <small>* For composites - Indicate start and stop datetime</small>	* Date Collected (mm-dd-yy)	* Time Collected (Military) (hhmm)	QC Code (4)	Field Filtered <sup>(8)</sup>	Sample Matrix <sup>(4)</sup>	Radioactive	TSCA Regulated											
#7	1/21/10							1										See Page One
#8								1										
1 PM Filter Blank								1										

TAT Requested: Normal: <input checked="" type="checkbox"/> Rush: <input type="checkbox"/> Specify: (Subject to Surcharge)	Fax Results: Yes / No	Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4
---	-----------------------	---

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards	Sample Collection Time Zone Eastern Pacific Central Other _____ Mountain
--	---

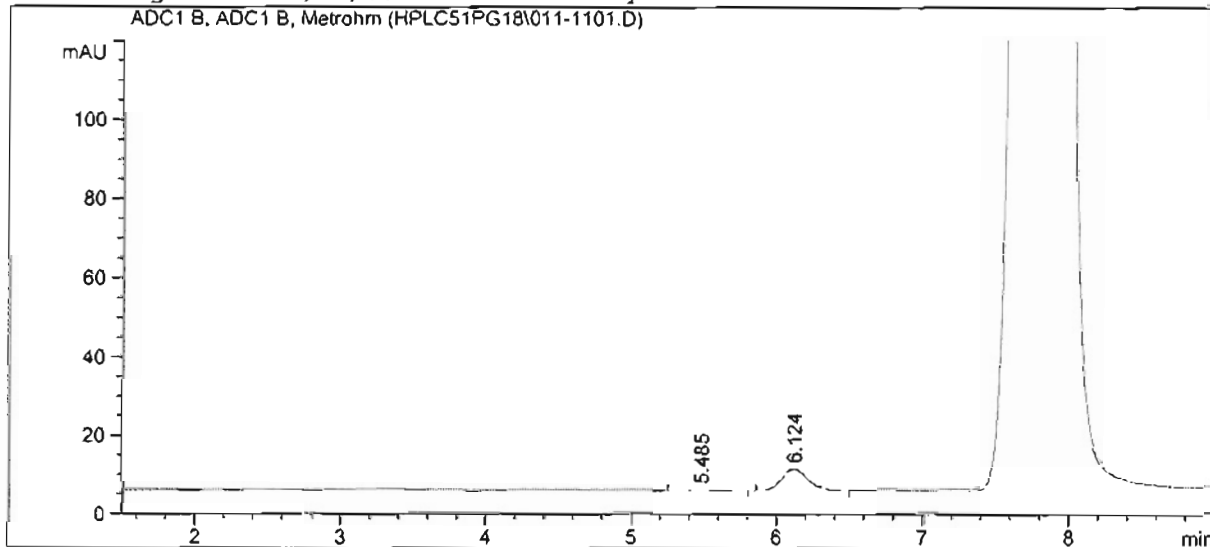
Chain of Custody Signatures						Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time		
<u>[Signature]</u>		1/22/10	<u>[Signature]</u>	1/25/2010	0935	GEL PM: <u>Craig McKenzie</u>	
1			1			Method of Shipment:	
2			2			Date Shipped:	
3			3			Airbill #:	
						Airbill #:	

<p>1.) Chain of Custody Number = Client Determined</p> <p>2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite</p> <p>3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.</p> <p>4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal</p> <p>5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).</p> <p>6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, H2O2 = Hydrogen Peroxide, S2O3 = Sodium Thiosulfate. If no preservative is added = leave field blank</p> <p style="text-align: center;">WHITE = LABORATORY      YELLOW = FILE      PINK = CLIENT</p>	For Lab Receiving Use Only Custody Seal Intact? YES NO Cooler Temp: <u>13.4</u> °C <u>Rytech Rappan</u>
---	--

# Sample Chromatograms



```
=====
Acq. Operator   : mgb                      Seq. Line :   11
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 4:13:30 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
                        External Standard Report
=====
```

```
Sorted By           :      Signal
Calib. Data Modified :      1/29/2010 3:31:23 PM
Multiplier          :      1.0000
Dilution            :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-		Fluoride
3.857	-	-	-	-		Chloride

Totals : 0.00000

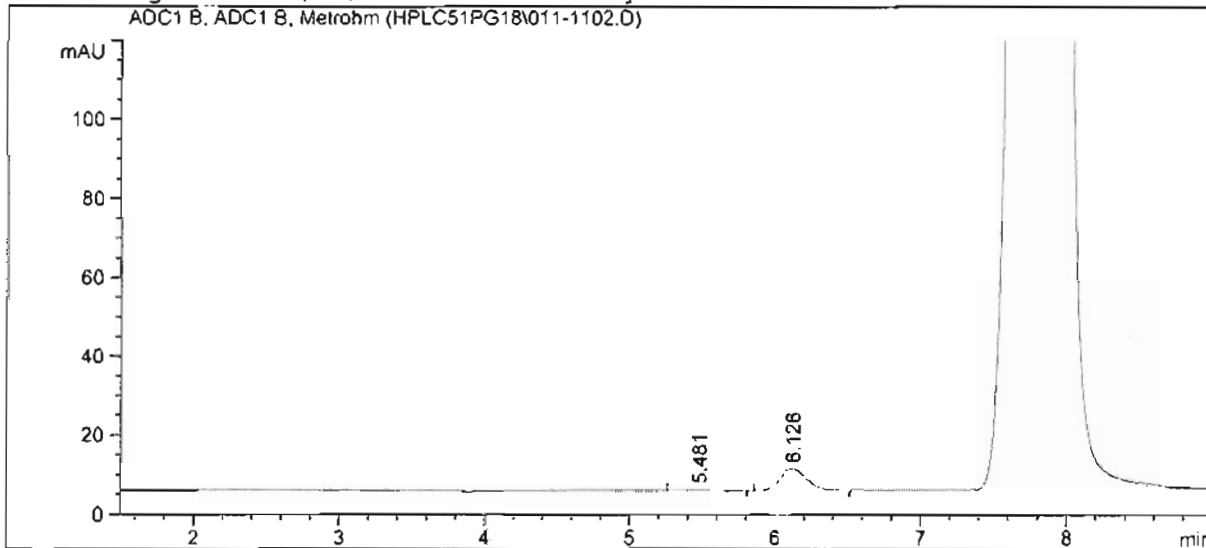
1 Warnings or Errors :

Warning : Calibrated compound(s) not found



Sample Name: Run 1 \*20 0110-96

```
=====
Acq. Operator   : mgb                      Seq. Line :   11
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 4:23:43 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-	-	Fluoride
3.857	-	-	-	-	-	Chloride

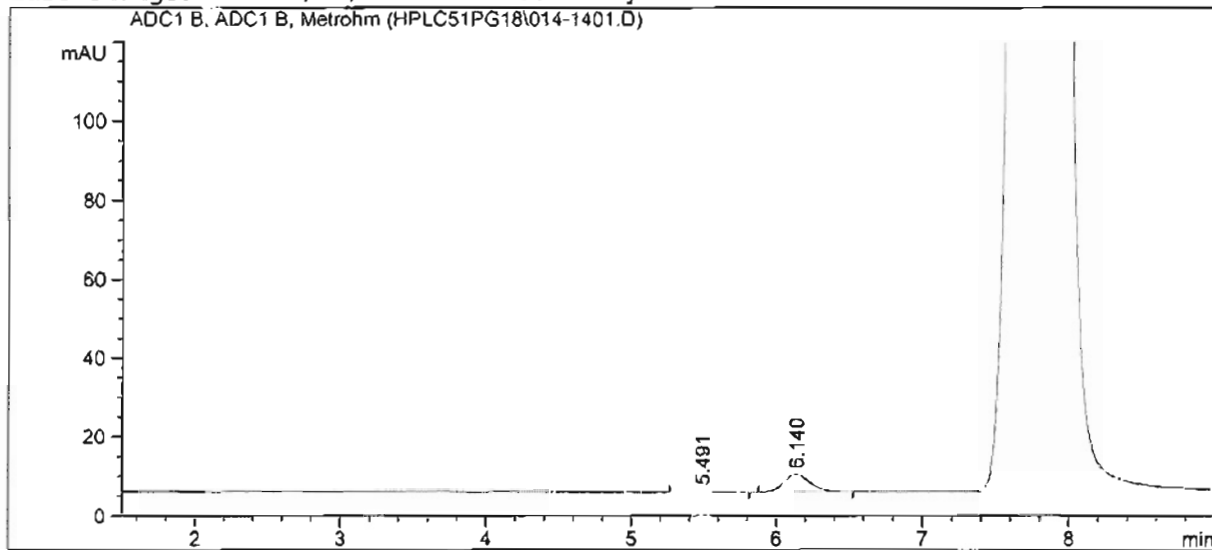
Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Sample Name: Run 2 \*20 0110-96

```
=====
Acq. Operator   : mgb                      Seq. Line :   14
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 5:14:52 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

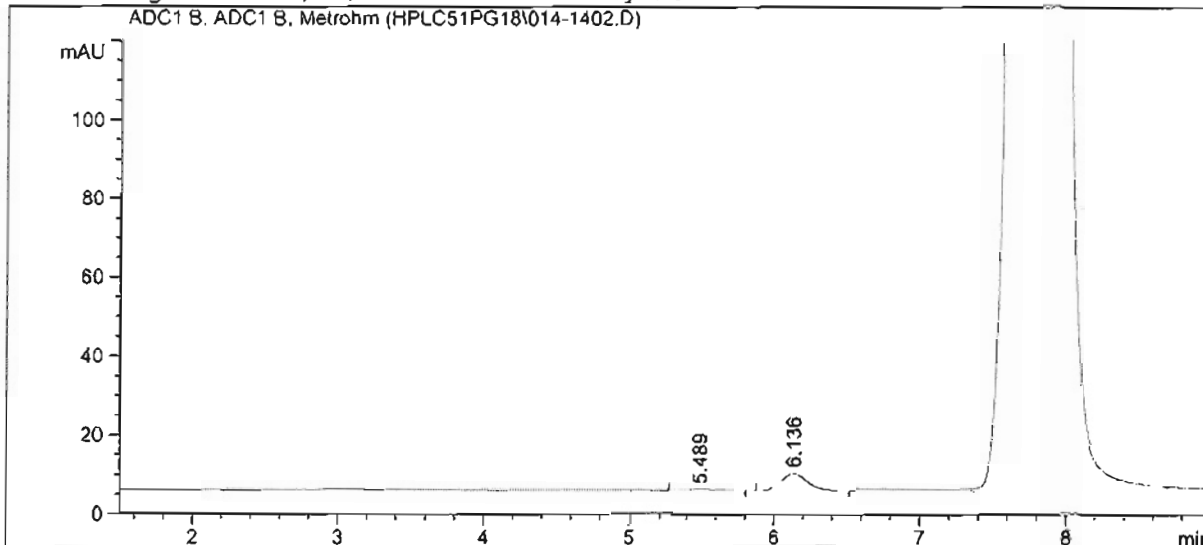
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-	-	Fluoride
3.857	-	-	-	-	-	Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : mgb                      Seq. Line :   14
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 5:25:05 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 B, ADC1 B, Metrohm

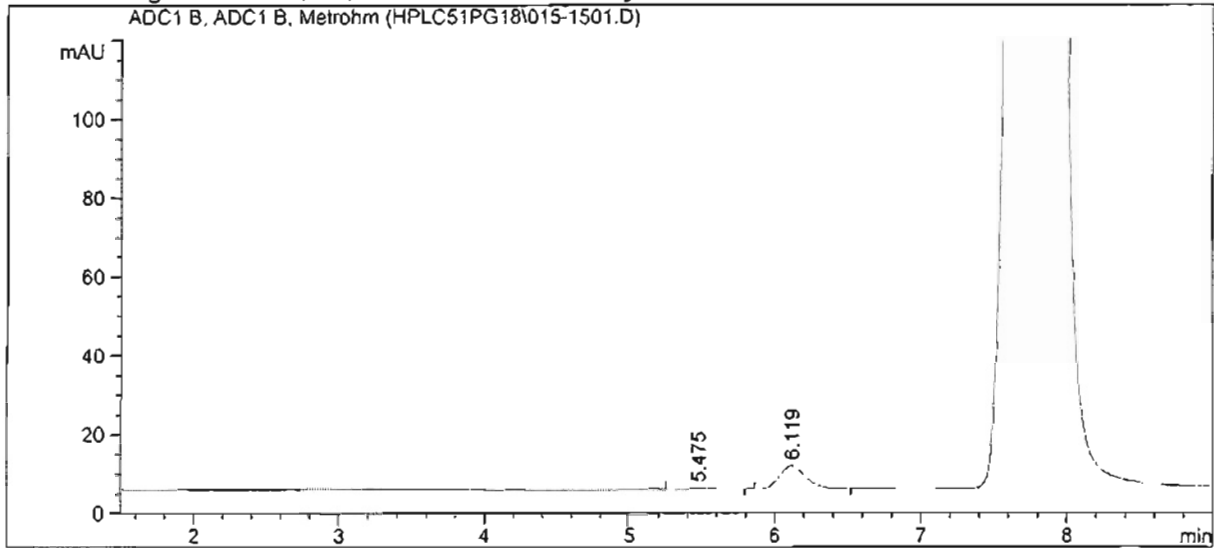
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-		Fluoride
3.857	-	-	-	-		Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : mgb                      Seq. Line :   15
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 5:35:18 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



=====  
External Standard Report  
=====

```
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

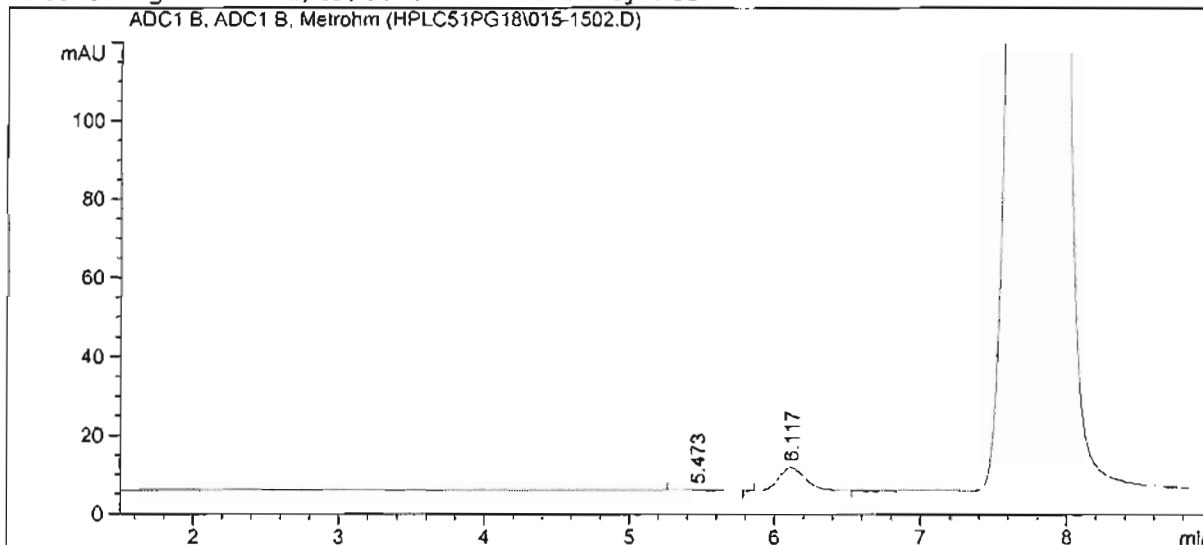
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-		Fluoride
3.857	-	-	-	-		Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : mgb                      Seq. Line :   15
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 5:45:32 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
                        External Standard Report
=====
```

```
Sorted By           :      Signal
Calib. Data Modified :      1/29/2010 3:31:23 PM
Multiplier          :      1.0000
Dilution            :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-		Fluoride
3.857	-	-	-	-		Chloride

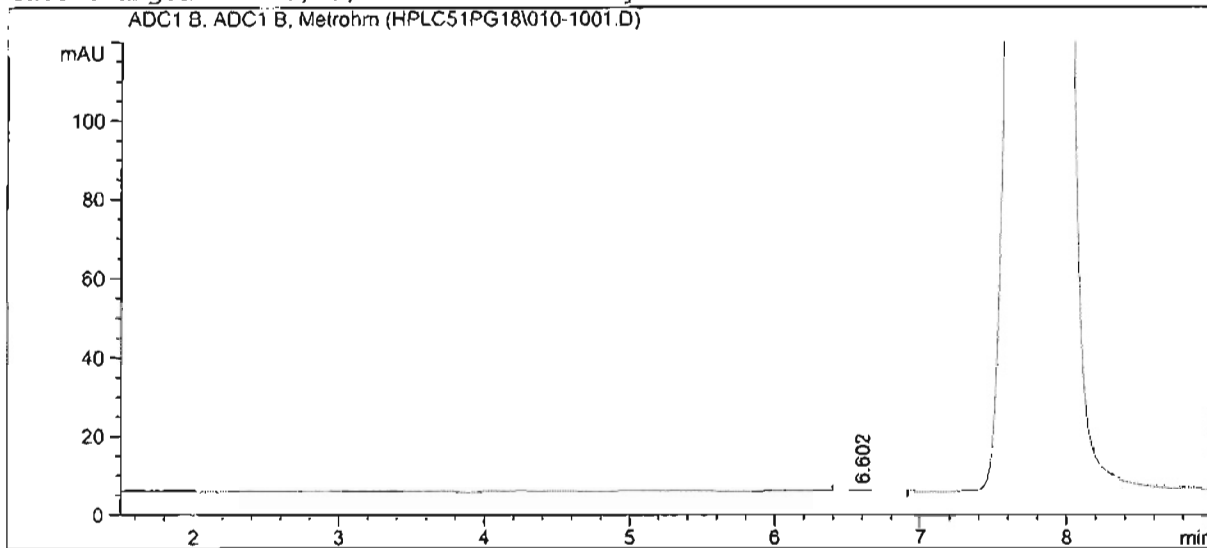
Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Sample Name: H2SO4 Blank \*20 0110-96

```
=====
Acq. Operator   : mgb                      Seq. Line :   10
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 3:53:02 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-	-	Fluoride
3.857	-	-	-	-	-	Chloride

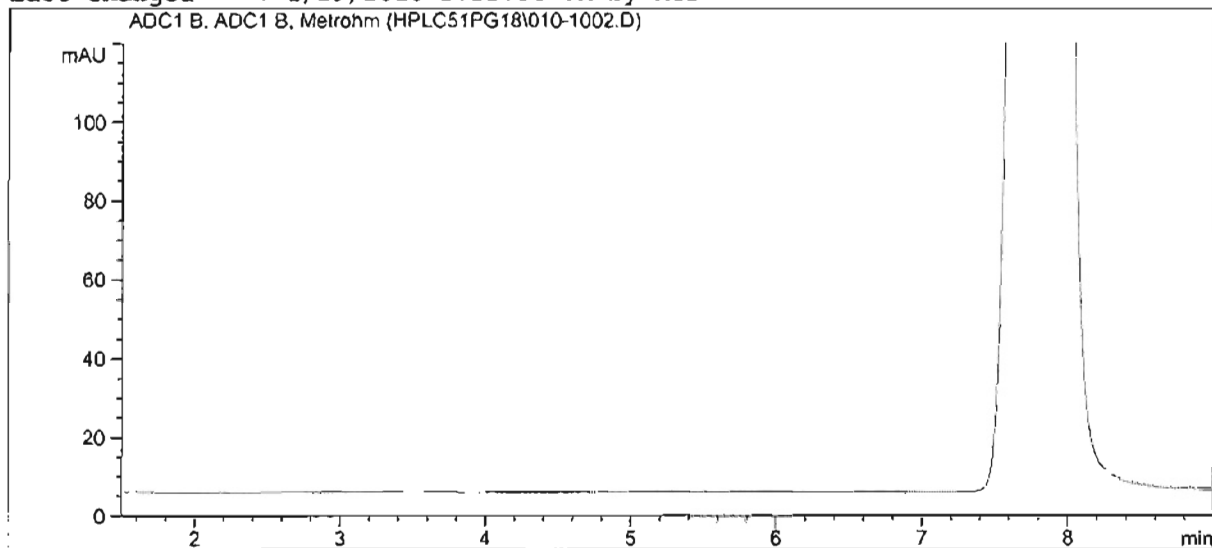
Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Sample Name: H2SO4 Blank \*20 0110-96

```
=====
Acq. Operator   : mgb                      Seq. Line :   10
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 4:03:16 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
                        External Standard Report
=====
```

```
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-	-	Fluoride
3.857	-	-	-	-	-	Chloride

Totals : 0.00000

1 Warnings or Errors :

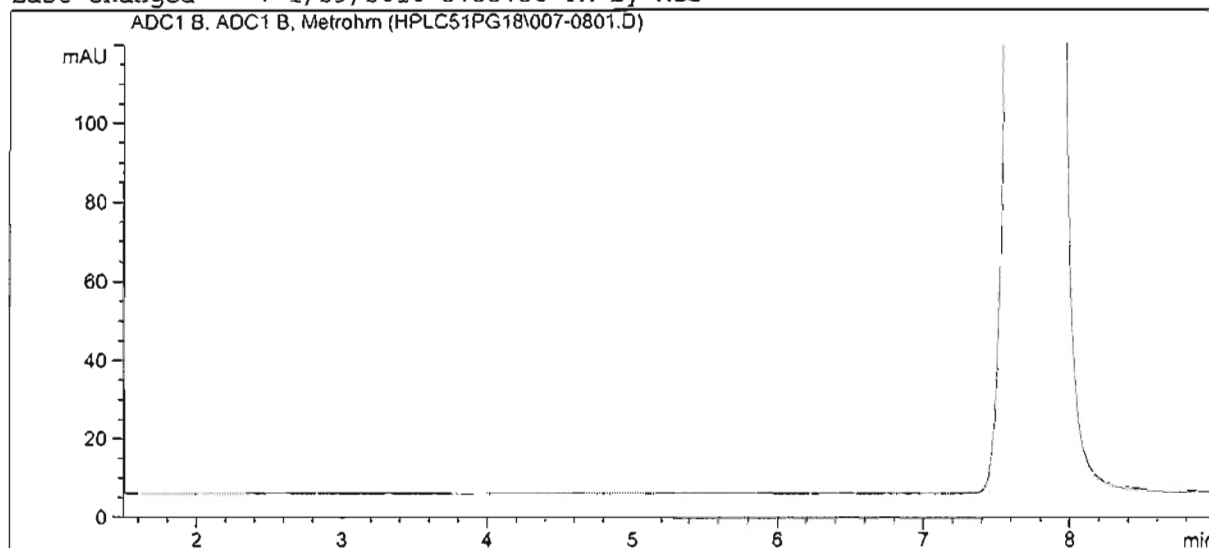
Warning : Calibrated compound(s) not found

Sample Name: Reagent Blank

```

=====
Acq. Operator   : mgb                      Seq. Line :    8
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 3:12:08 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
External Standard Report
=====

```

```

Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-		Fluoride
3.857	-	-	-	-		Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

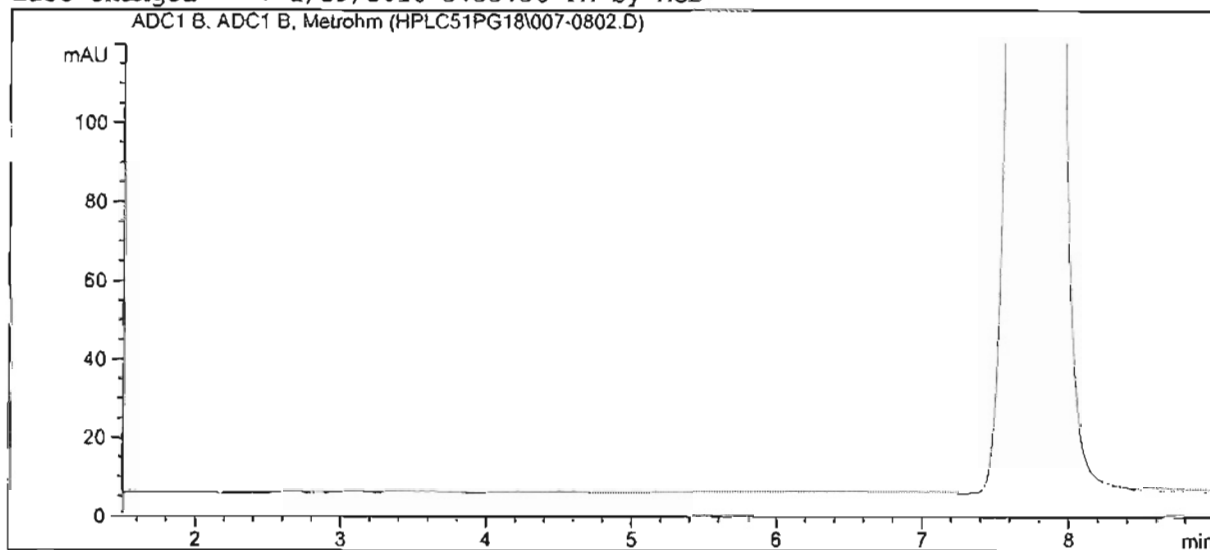


Sample Name: Reagent Blank

```

=====
Acq. Operator   : mgb                      Seq. Line :    8
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 3:22:21 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
                        External Standard Report
=====

```

```

Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

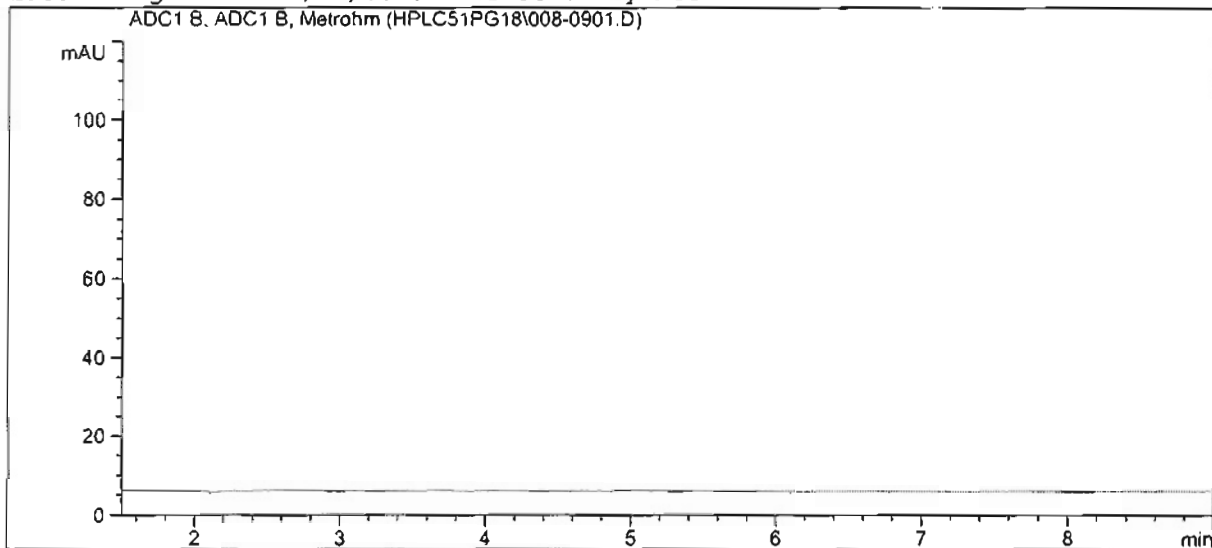
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-		Fluoride
3.857	-	-	-	-		Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : mgb                      Seq. Line :    9
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 3:32:35 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
                        External Standard Report
=====
```

```
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-	-	Fluoride
3.857	-	-	-	-	-	Chloride

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

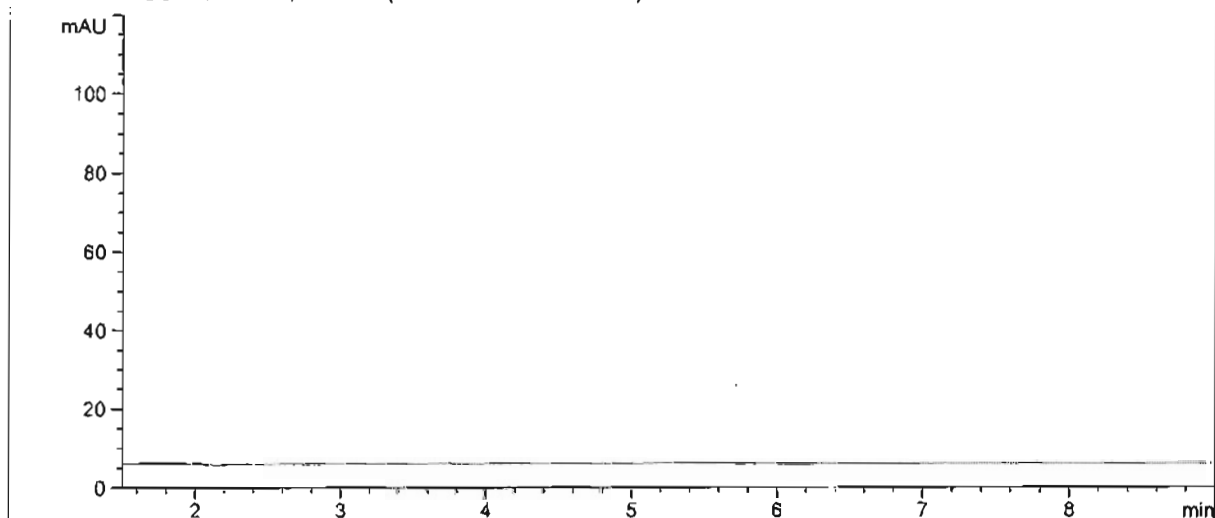
Sample Name: DI H2O

```

=====
Acq. Operator   : mgb                      Seq. Line :    9
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 3:42:49 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```

ADC1 B, ADC1 B, Metrohm (HPLC51PG18\008-0902.D)



```

=====
External Standard Report
=====

```

```

Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

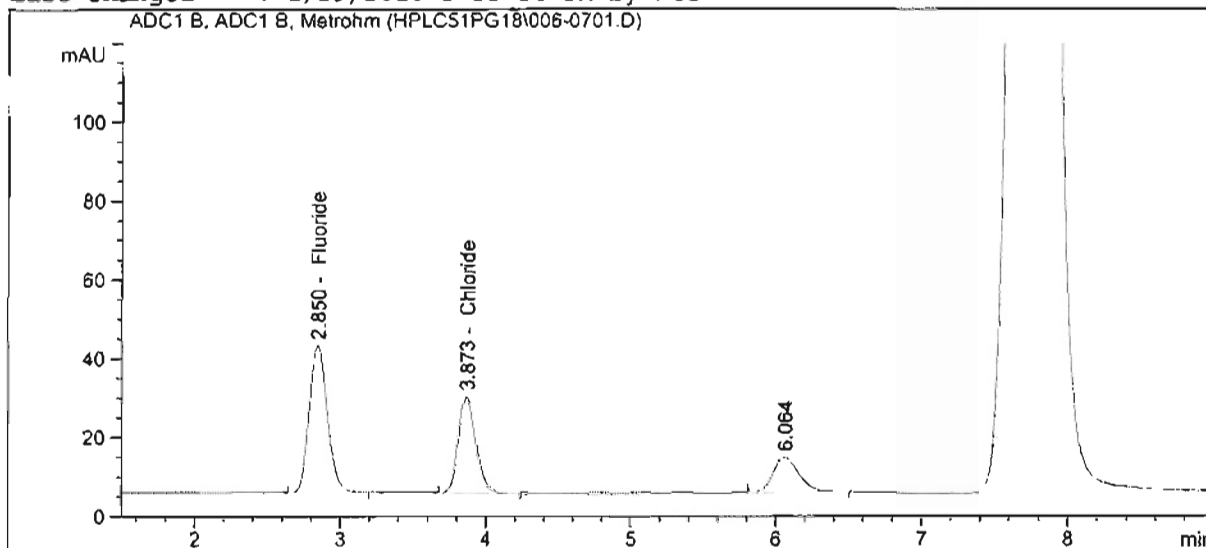
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	-	-	-	-		Fluoride
3.857	-	-	-	-		Chloride

```
Totals :                                0.00000
```

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : mgb                               Seq. Line :    7
Acq. Instrument : Smithers                           Location  :    -
Injection Date  : 1/26/2010 2:51:41 PM                Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

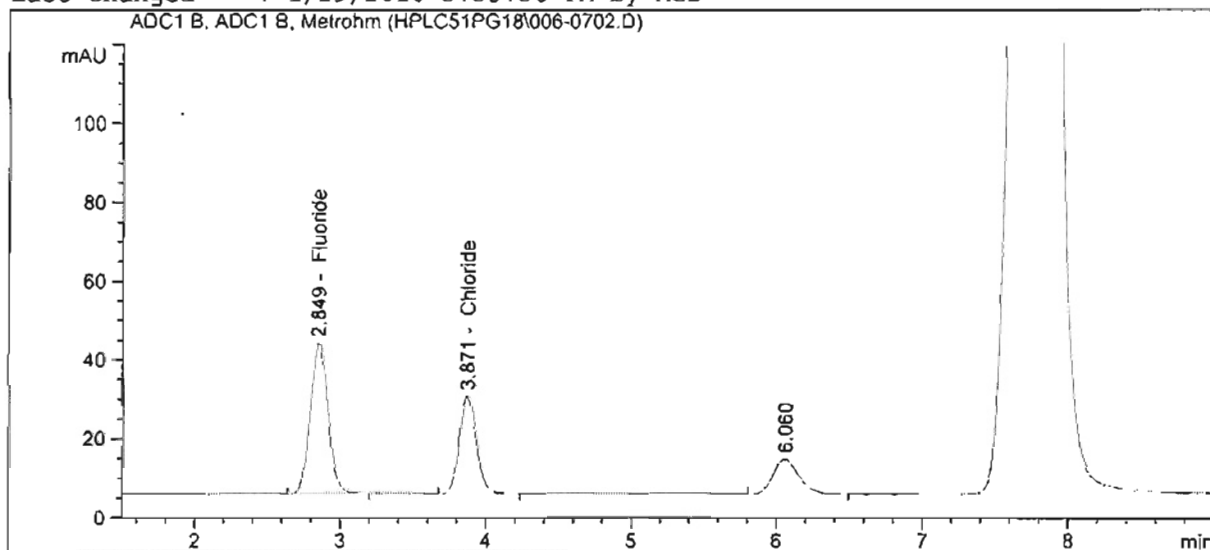
RetTime (min)	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.850	BB	322.99426	1.65013e-2	5.32982		Fluoride
3.873	BB	201.40439	2.48028e-2	4.99539		Chloride

Totals : 10.32521

\*\*\* End of Report \*\*\*

Sample Name: hplc51pg18 #LCS

```
=====
Acq. Operator   : mgb                      Seq. Line :    7
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 3:01:54 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

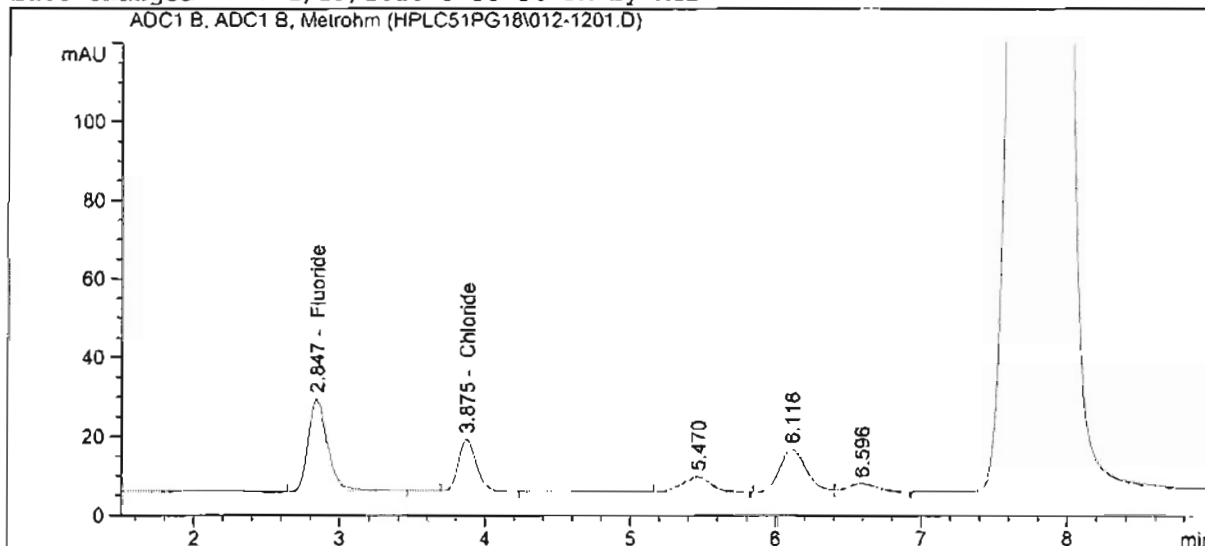
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.849	BB	327.40506	1.65013e-2	5.40261		Fluoride
3.871	BB	203.08517	2.48001e-2	5.03653		Chloride

Totals : 10.43914

```
=====
*** End of Report ***
```

```
=====
Acq. Operator   : mgb                      Seq. Line :   12
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 4:33:57 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

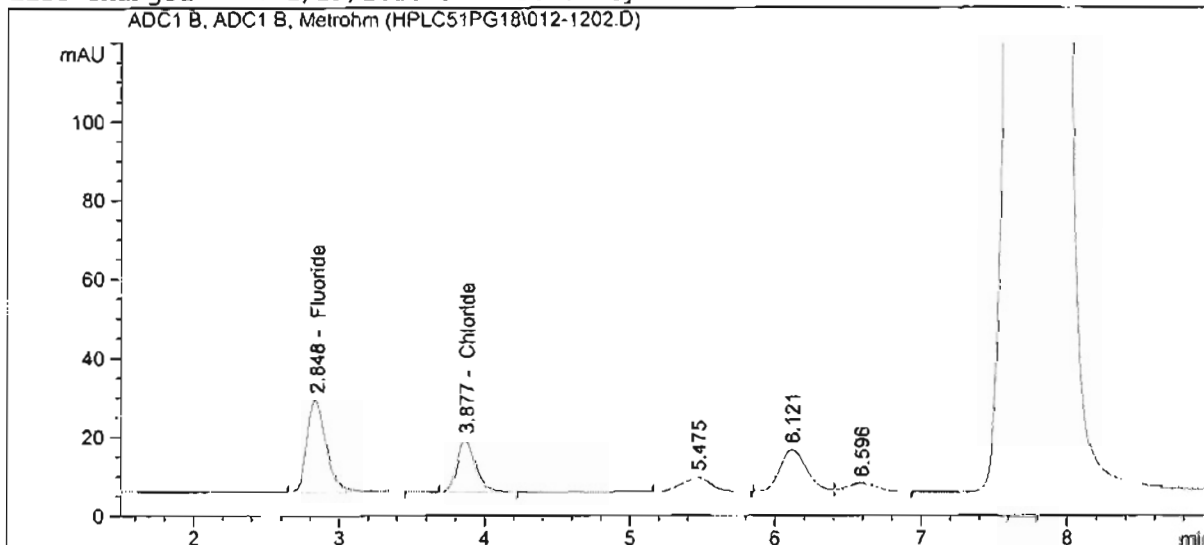
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.847	BB	215.40579	1.64998e-2	3.55415		Fluoride
3.875	BB	112.40441	2.50627e-2	2.81716		Chloride

Totals : 6.37130

\*\*\* End of Report \*\*\*

```
=====
Acq. Operator   : mgb                      Seq. Line :   12
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 4:44:11 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed     : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

Sorted By : Signal  
Calib. Data Modified : 1/29/2010 3:31:23 PM  
Multiplier : 1.0000  
Dilution : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime (min)	Type	Area (mAU*s)	Amt/Area	Amount [ug/mL]	Grp	Name
2.848	BB	217.99139	1.64998e-2	3.59682		Fluoride
3.877	BB	113.41026	2.50575e-2	2.84178		Chloride

Totals : 6.43860

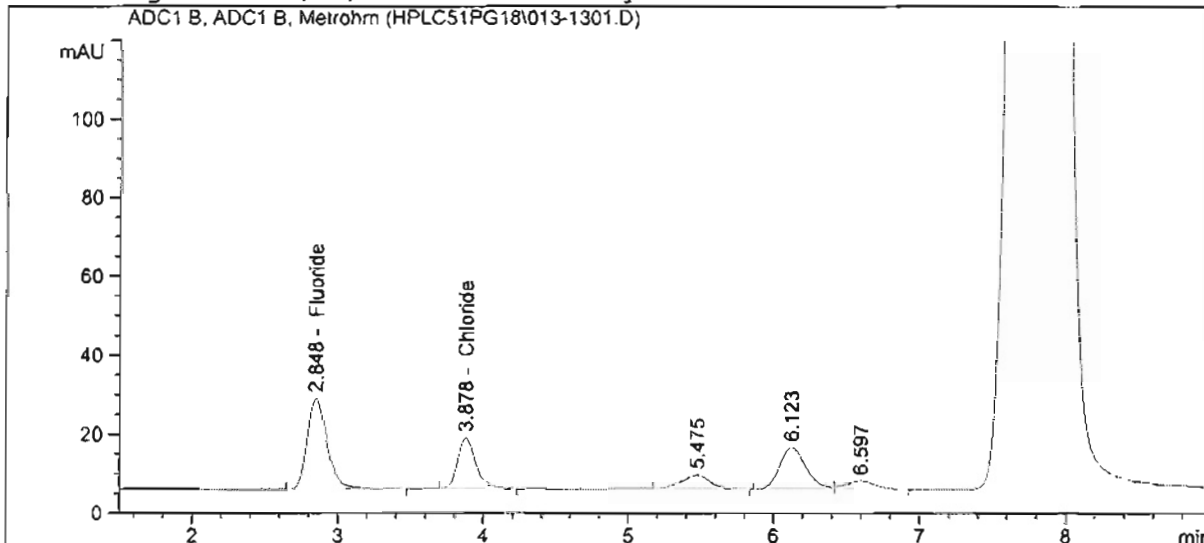
```
=====
*** End of Report ***
=====
```

Sample Name: MSD Run 1 \*20 0110-96

```

=====
Acq. Operator   : mgb                      Seq. Line :   13
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 4:54:24 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
External Standard Report
=====

```

```

Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.848	BB	215.44858	1.64998e-2	3.55485		Fluoride
3.878	BB	112.29011	2.50633e-2	2.81436		Chloride

Totals : 6.36921

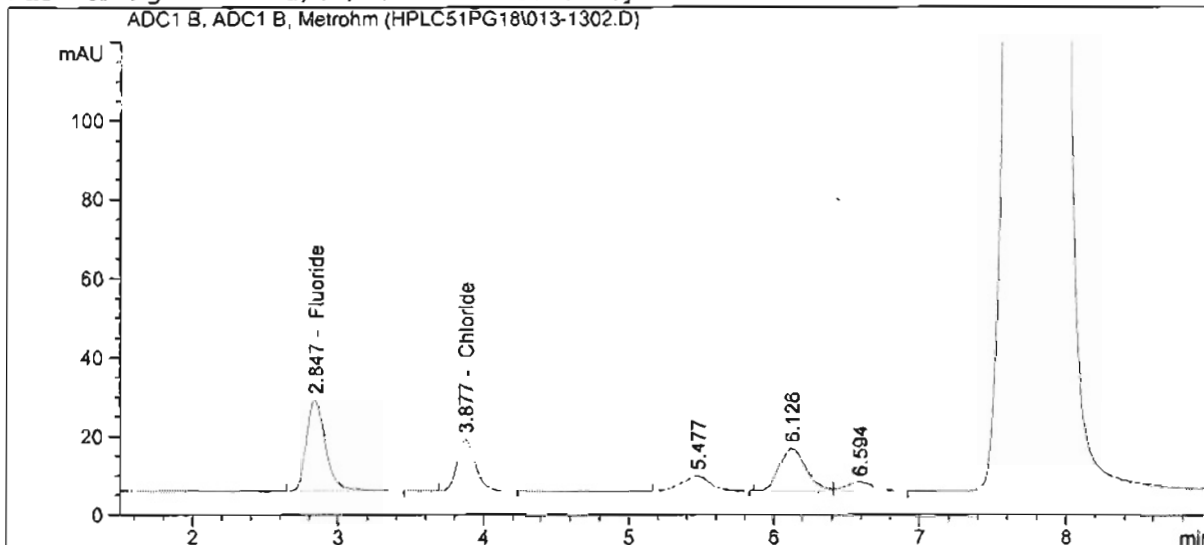
```

=====
*** End of Report ***
=====

```



```
=====
Acq. Operator   : mgb                      Seq. Line :   13
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 5:04:38 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.847	BB	213.80035	1.64997e-2	3.52765		Fluoride
3.877	BB	112.05492	2.50646e-2	2.80861		Chloride

Totals : 6.33625

\*\*\* End of Report \*\*\*

# **Calibration Curve Chromatograms**



=====

Calibration Table

=====

Calib. Data Modified : 1/29/2010 3:31:23 PM

Calculate : External Standard  
Based on : Peak Area

Rel. Reference Window : 20.000 %  
Abs. Reference Window : 0.000 min  
Rel. Non-ref. Window : 20.000 %  
Abs. Non-ref. Window : 0.000 min  
Use Multiplier & Dilution Factor with ISTDs  
Uncalibrated Peaks : not reported  
Partial Calibration : Yes, identified peaks are recalibrated  
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear  
Origin : Ignored  
Weight : Linear (Resp)

Recalibration Settings:  
Average Response : Average all calibrations  
Average Retention Time: Floating Average New 75%

Calibration Report Options :  
Printout of recalibrations within a sequence:  
Calibration Table after Recalibration  
Normal Report after Recalibration  
If the sequence is done with bracketing:  
Results of first cycle (ending previous bracket)

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Lvl Sig	Amount [ug/mL]	Area	Amt/Area	Ref Grp Name
2.868	1	1.00000e-1	5.57610	1.79337e-2	Fluoride
	2	9.98000e-1	63.90797	1.56162e-2	
	3	4.95000	317.19438	1.56056e-2	
	4	8.84100	551.79465	1.60223e-2	
	5	14.56300	849.25714	1.71479e-2	
3.857	1	1.00000e-1	1.46042	6.84735e-2	Chloride
	2	9.98000e-1	36.34517	2.74589e-2	
	3	4.95000	193.50674	2.55805e-2	
	4	8.84100	371.08949	2.38244e-2	
	5	14.56300	588.19423	2.47588e-2	

=====

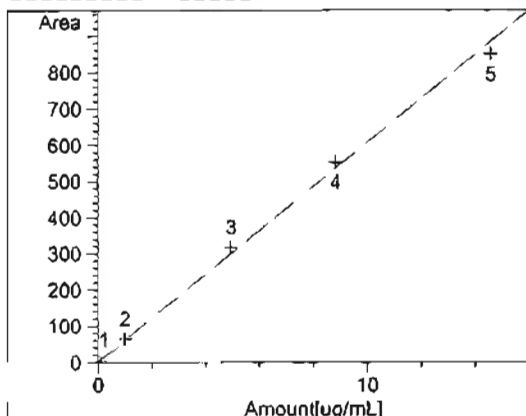
Peak Sum Table

=====

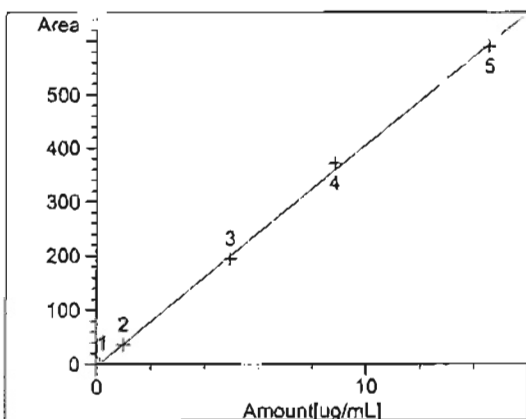
\*\*\*No Entries in table\*\*\*

=====

# Calibration Curves



Fluoride at exp. RT: 2.868  
 ADC1 B, ADC1 B, Metrohm  
 Correlation: 0.99912  
 Residual Std. Dev.: 23.57018  
 Formula:  $y = mx + b$   
 m: 60.59033  
 b: 5.89768e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.087252  
 Level 3 : 0.017579  
 Level 4 : 0.010105  
 Level 5 : 0.006566



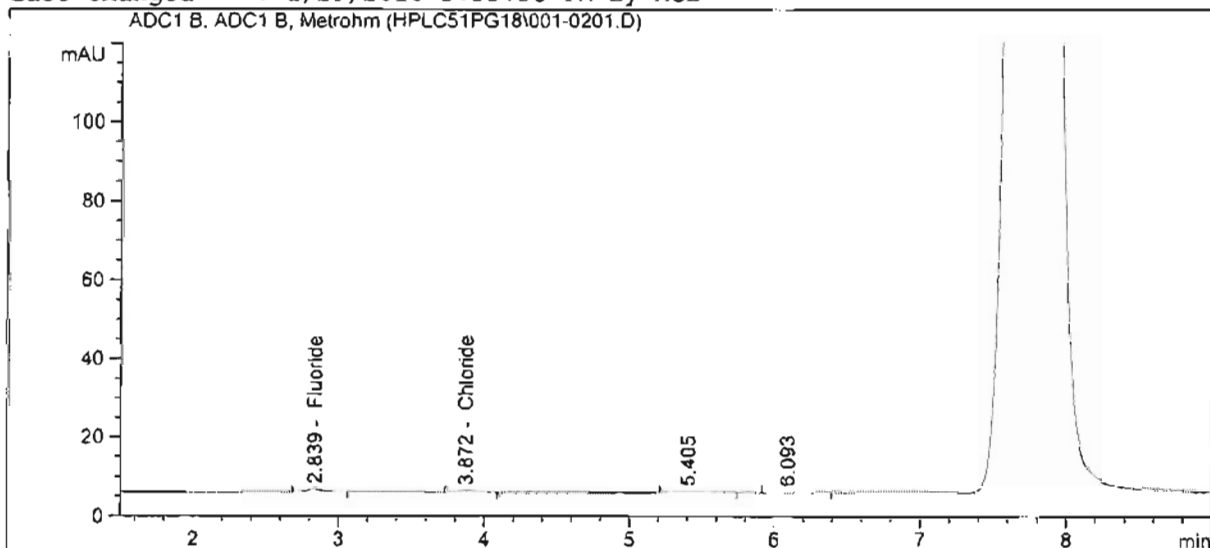
Chloride at exp. RT: 3.857  
 ADC1 B, ADC1 B, Metrohm  
 Correlation: 0.99968  
 Residual Std. Dev.: 8.45165  
 Formula:  $y = mx + b$   
 m: 40.85883  
 b: -2.70144  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.040182  
 Level 3 : 0.007547  
 Level 4 : 0.003935  
 Level 5 : 0.002483

Sample Name: hplc51pg18 #1

```

=====
Acq. Operator   : mgb                      Seq. Line :    2
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 1:09:24 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
External Standard Report
=====

```

```

Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.839	BB	5.53537	1.63284e-2	9.03839e-2		Fluoride
3.872	BB	1.46275	6.96745e-2	1.01917e-1		Chloride

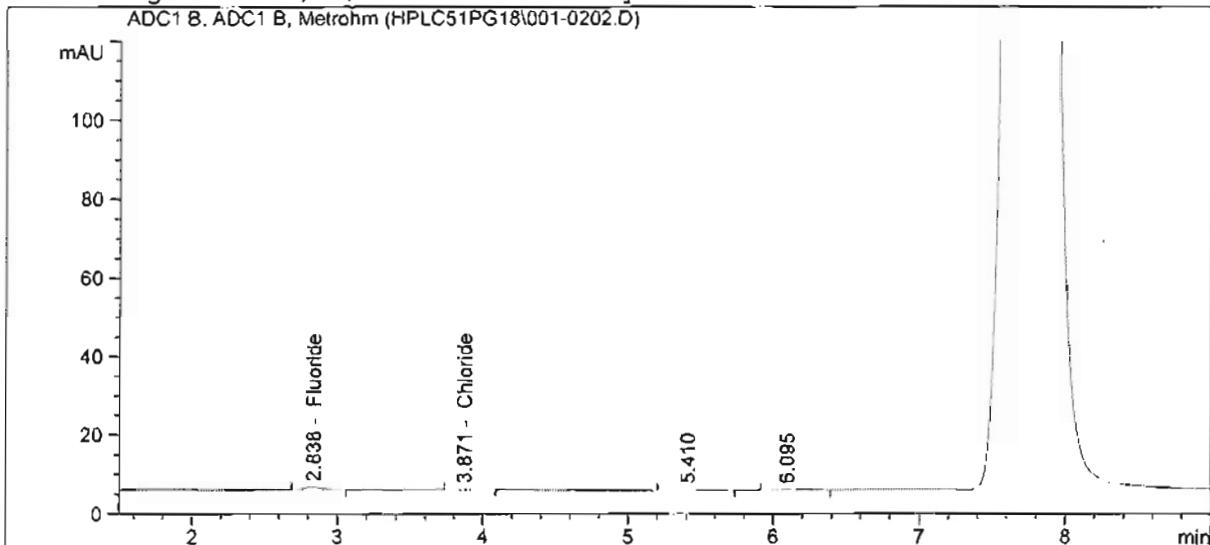
Totals : 1.92301e-1

```

=====
*** End of Report ***
=====

```

```
=====
Acq. Operator   : mgb                      Seq. Line :    2
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 1:19:37 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
                        External Standard Report
=====
```

```
Sorted By           :      Signal
Calib. Data Modified :      1/29/2010 3:31:23 PM
Multiplier          :      1.0000
Dilution            :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.838	BB	5.54927	1.63289e-2	9.06134e-2		Fluoride
3.871	BB	1.45743	6.98397e-2	1.01786e-1		Chloride

Totals : 1.92400e-1

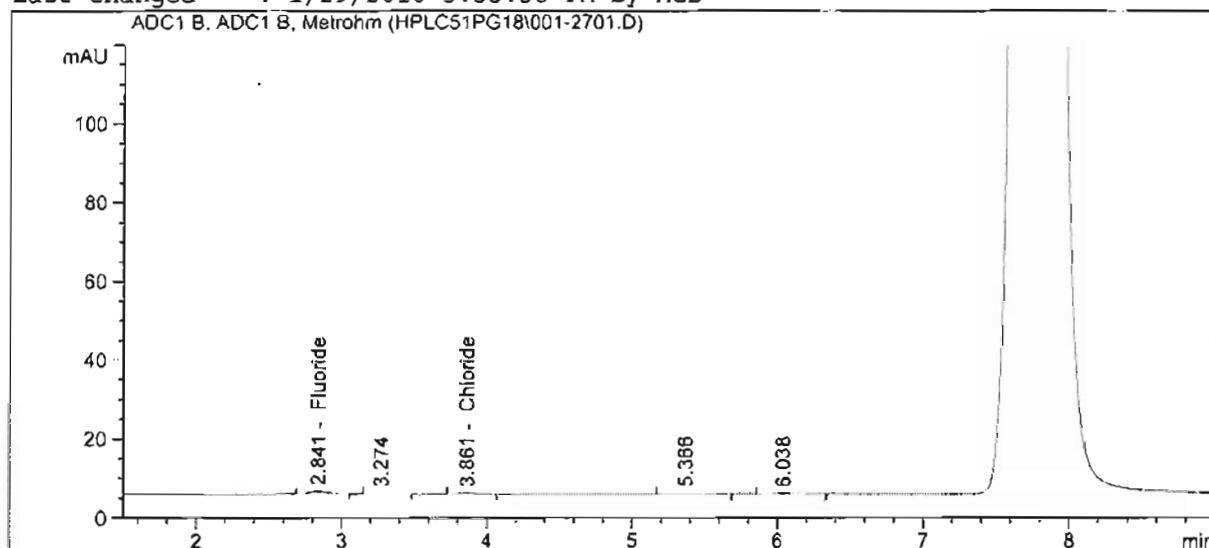
```
=====
                        *** End of Report ***
=====
```

Sample Name: hplc51pg18 #1

```

=====
Acq. Operator   : mgb                      Seq. Line :   27
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 9:40:45 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
External Standard Report
=====

```

```

Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.841	BB	5.48039	1.63267e-2	8.94765e-2		Fluoride
3.861	BB	1.41954	7.10504e-2	1.00859e-1		Chloride

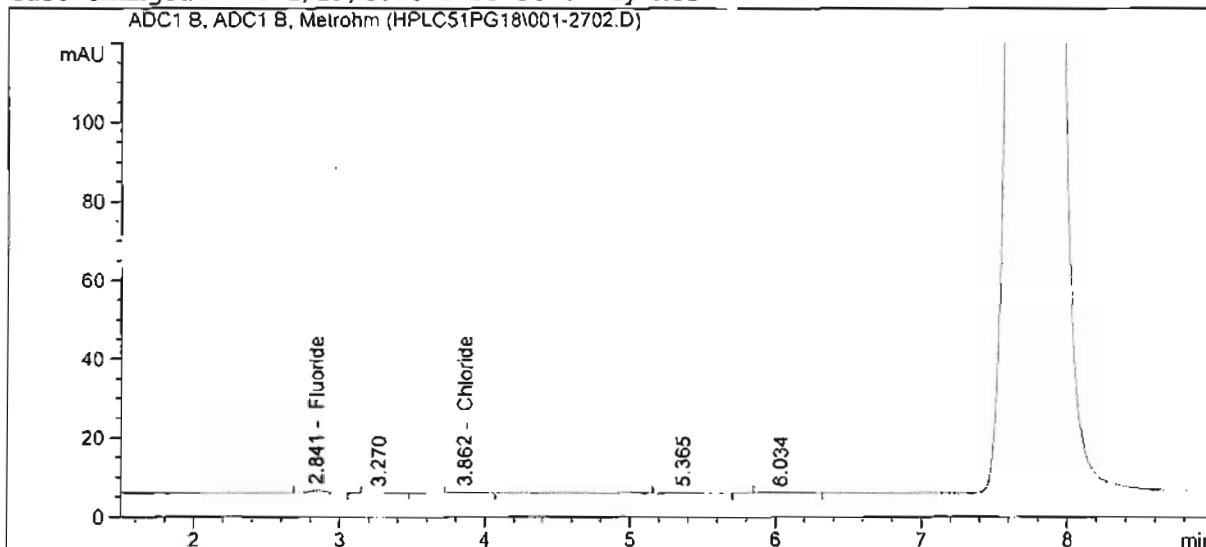
Totals : 1.90336e-1

```

=====
*** End of Report ***
=====

```

```
=====
Acq. Operator   : mgb                      Seq. Line :   27
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 9:50:58 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 B, ADC1 B, Metrohm

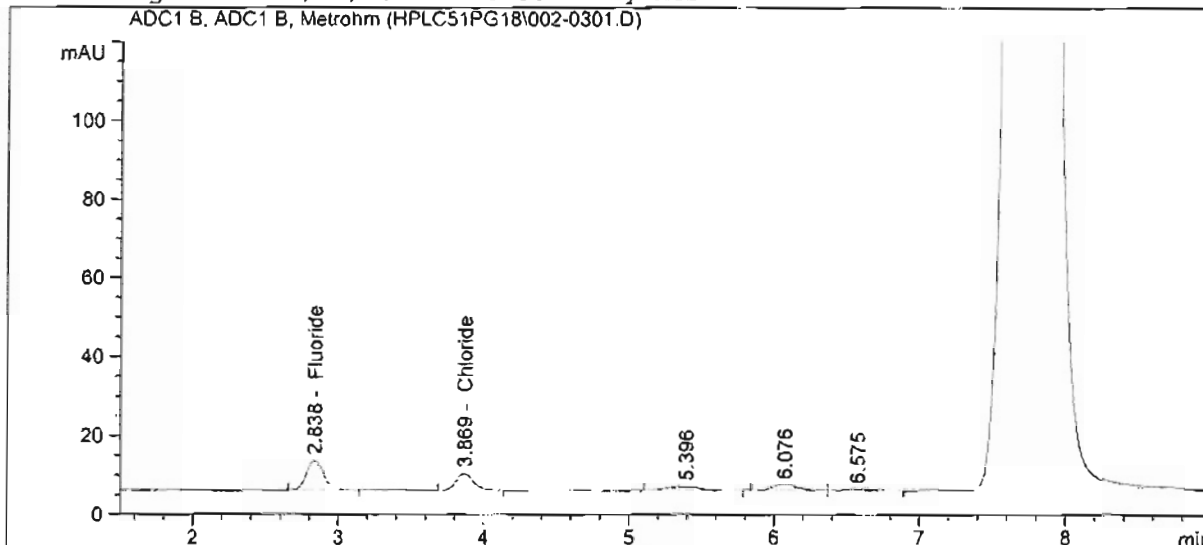
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.841	BB	5.73938	1.63347e-2	9.37510e-2		Fluoride
3.862	BB	1.50195	6.84949e-2	1.02876e-1		Chloride

Totals : 1.96627e-1

\*\*\* End of Report \*\*\*



```
=====
Acq. Operator   : mgb                      Seq. Line :    3
Acq. Instrument : Smithers                  Location  :    -
Injection Date  : 1/26/2010 1:29:52 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

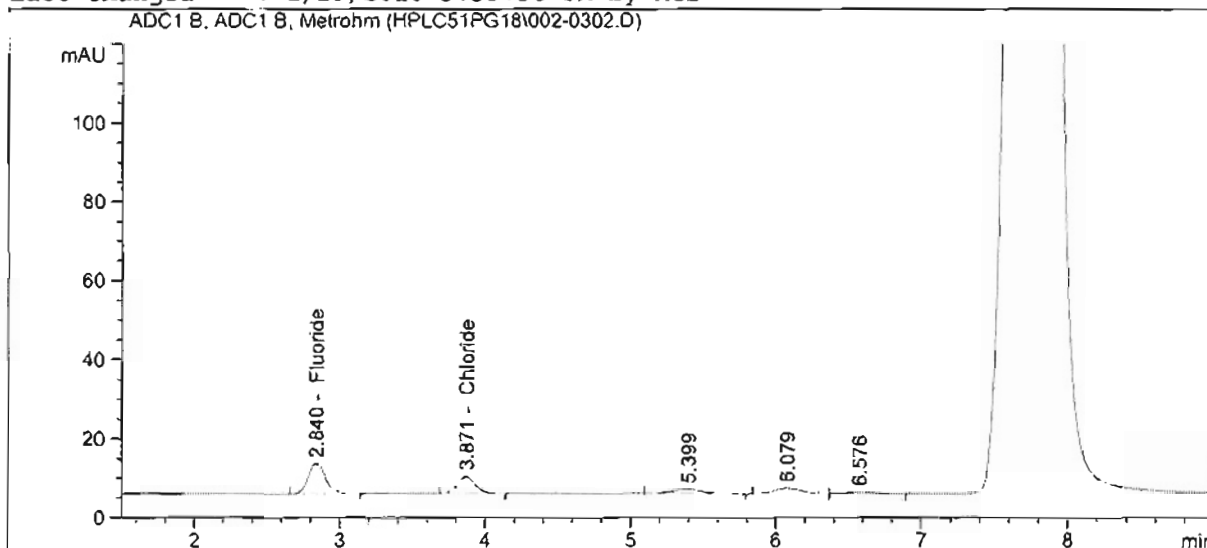
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.838	BB	63.13004	1.64889e-2	1.04094		Fluoride
3.869	BB	35.99594	2.63113e-2	9.47100e-1		Chloride

Totals : 1.98804

\*\*\* End of Report \*\*\*

```
=====
Acq. Operator   : mgb                      Seq. Line :    3
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 1:40:05 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 B, ADC1 B, Metrohm

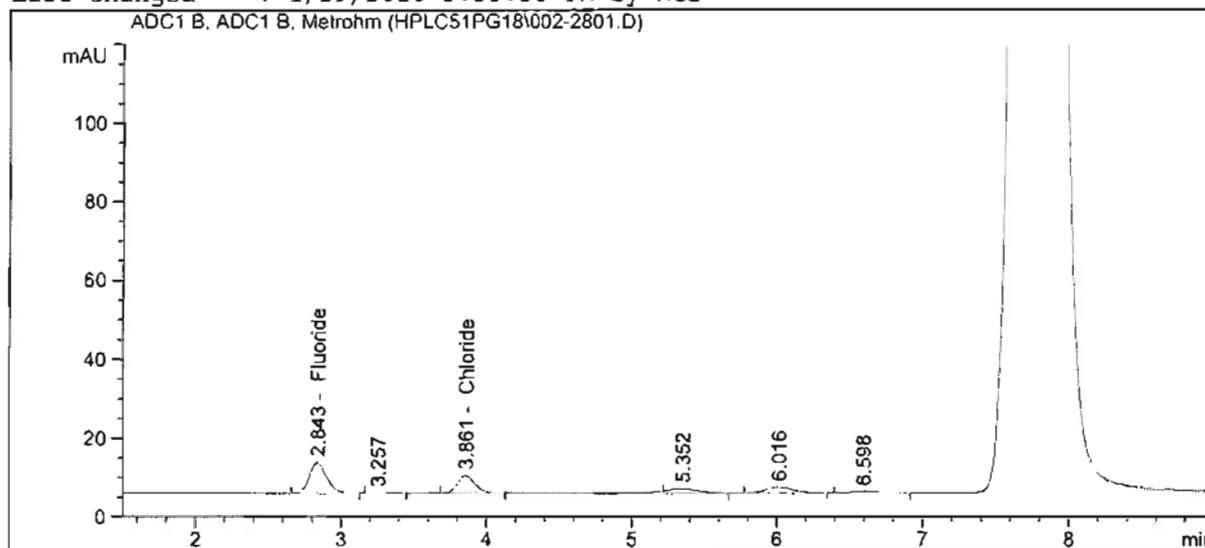
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.840	BB	63.69026	1.64890e-2	1.05019		Fluoride
3.871	BB	36.15936	2.63030e-2	9.51099e-1		Chloride

Totals : 2.00129

\*\*\* End of Report \*\*\*

Sample Name: hplc51pg18 #2

```
=====
Acq. Operator   : mgb                      Seq. Line :   28
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 10:01:11 PM    Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

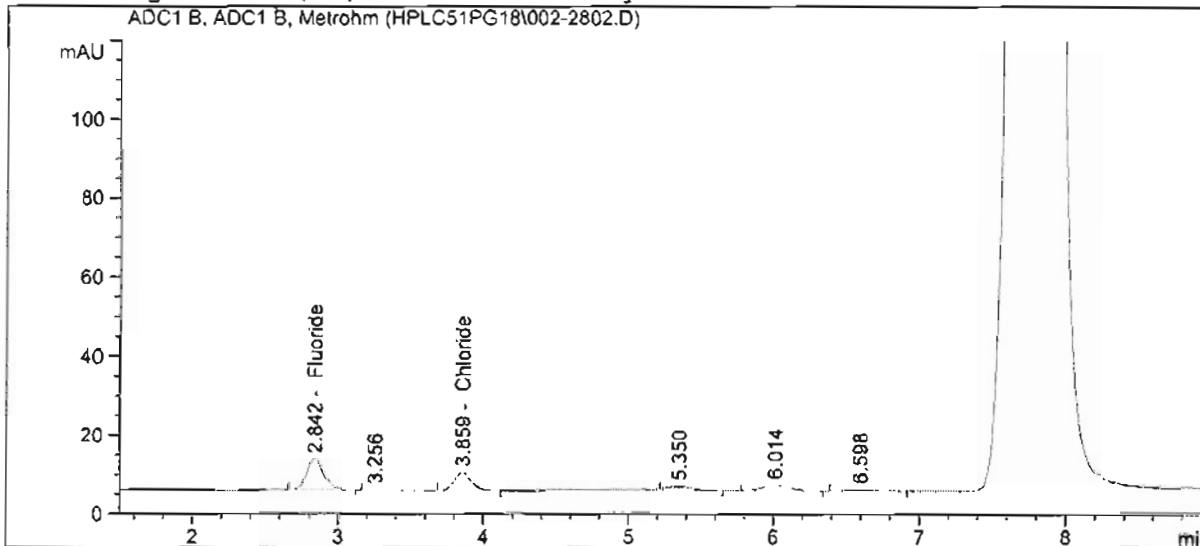
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.843	BB	64.29736	1.64891e-2	1.06021		Fluoride
3.861	BB	36.53683	2.62841e-2	9.60338e-1		Chloride

Totals : 2.02055

```
=====
*** End of Report ***
=====
```

```
=====
Acq. Operator   : mgb                      Seq. Line :   28
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 10:11:26 PM    Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

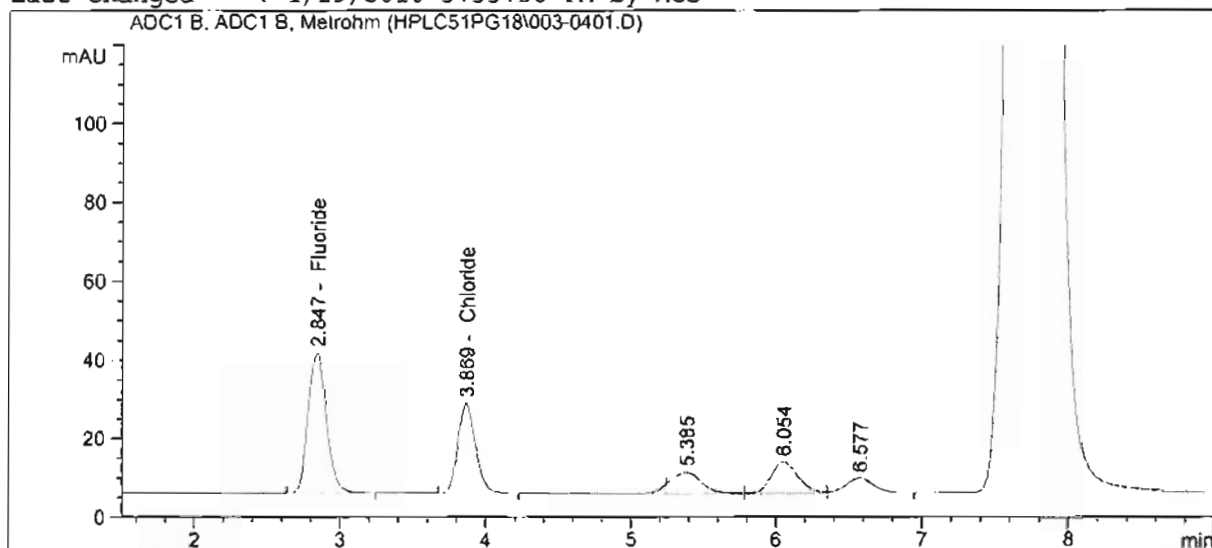
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.842	BB	64.51421	1.64892e-2	1.06379		Fluoride
3.859	BB	36.68856	2.62766e-2	9.64051e-1		Chloride

Totals : 2.02784

\*\*\* End of Report \*\*\*

```
=====
Acq. Operator   : mgb                      Seq. Line :    4
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 1:50:19 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 B, ADC1 B, Metrohm

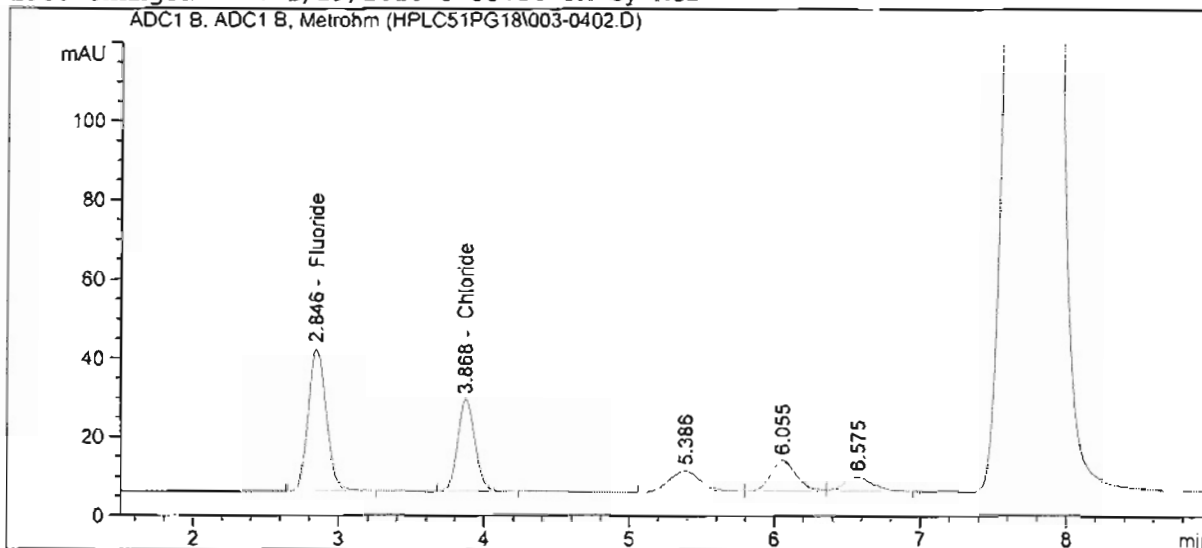
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.847	BB	313.80133	1.65012e-2	5.17809		Fluoride
3.869	BB	190.99130	2.48207e-2	4.74054		Chloride

Totals : 9.91863

\*\*\* End of Report \*\*\*

Sample Name: hplc51pg18 #3

```
=====
Acq. Operator   : mgb                      Seq. Line :    4
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 2:00:32 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

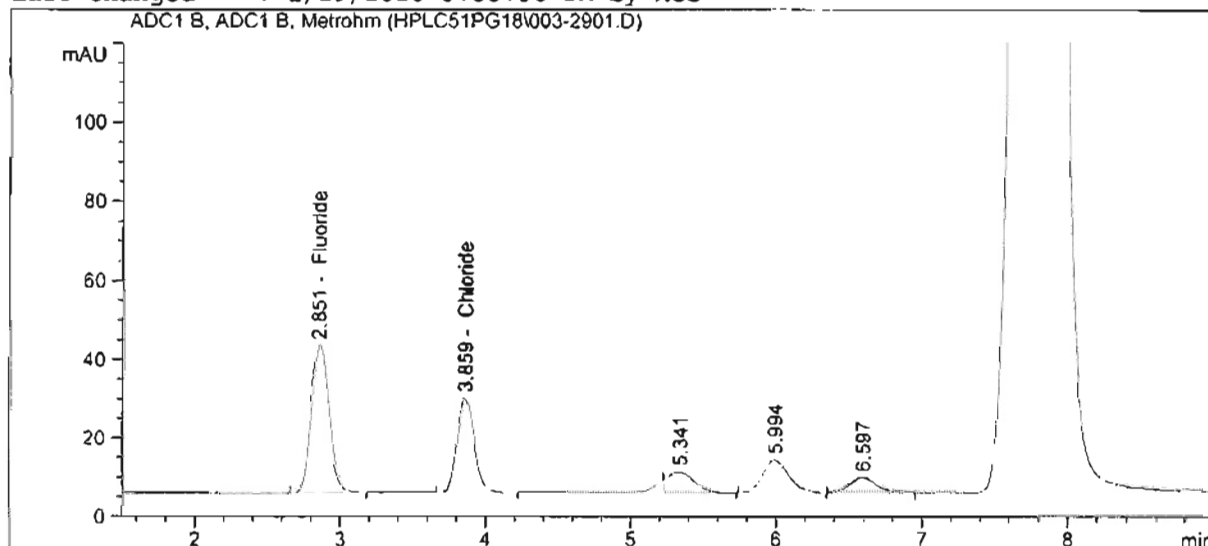
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.846	BB	314.51764	1.65012e-2	5.18992		Fluoride
3.868	BB	191.90550	2.48190e-2	4.76291		Chloride

Totals : 9.95283

```
=====
*** End of Report ***
=====
```

```
=====
Acq. Operator   : mgb                      Seq. Line :   29
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 10:21:40 PM    Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

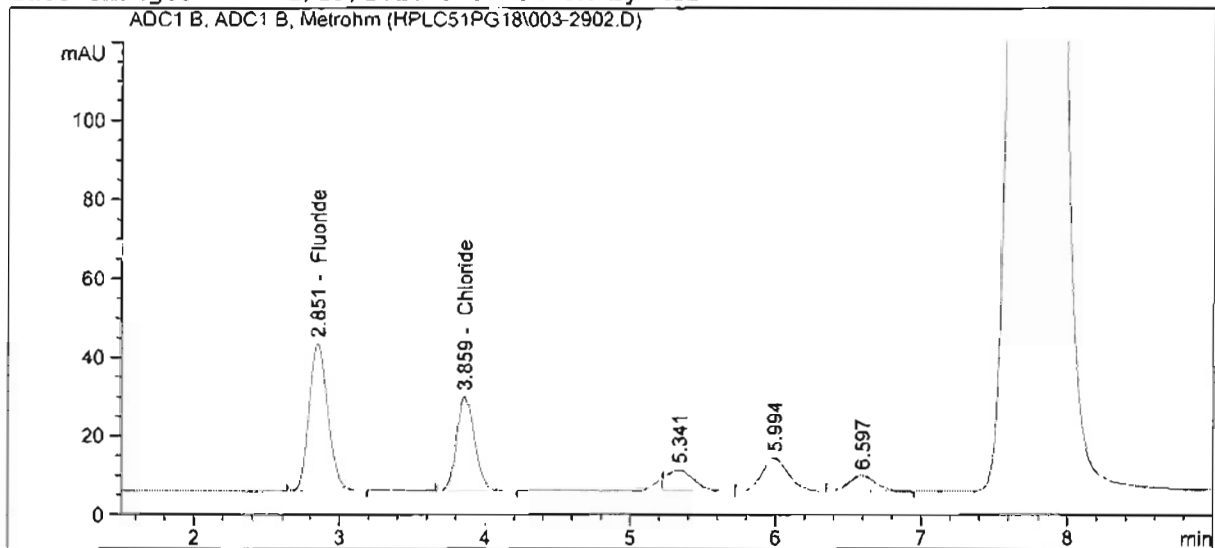
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.851	BB	319.67340	1.65012e-2	5.27501		Fluoride
3.859	BB	195.53230	2.48127e-2	4.85167		Chloride

Totals : 10.12668

\*\*\* End of Report \*\*\*

```
=====
Acq. Operator   : mgb                               Seq. Line :   29
Acq. Instrument : Smithers                           Location  :    -
Injection Date  : 1/26/2010 10:31:52 PM              Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.851	BB	320.78516	1.65012e-2	5.29336		Fluoride
3.859	BB	195.59785	2.48125e-2	4.85328		Chloride

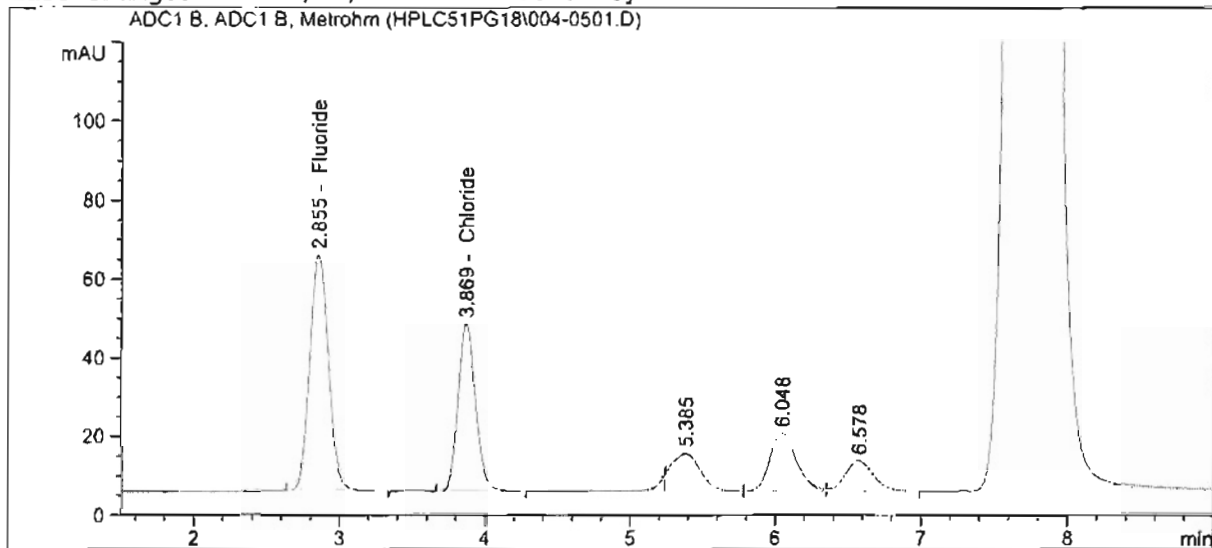
Totals : 10.14664

\*\*\* End of Report \*\*\*



Sample Name: hplc51pg18 #4

```
=====
Acq. Operator   : mgb                      Seq. Line :    5
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 2:10:46 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

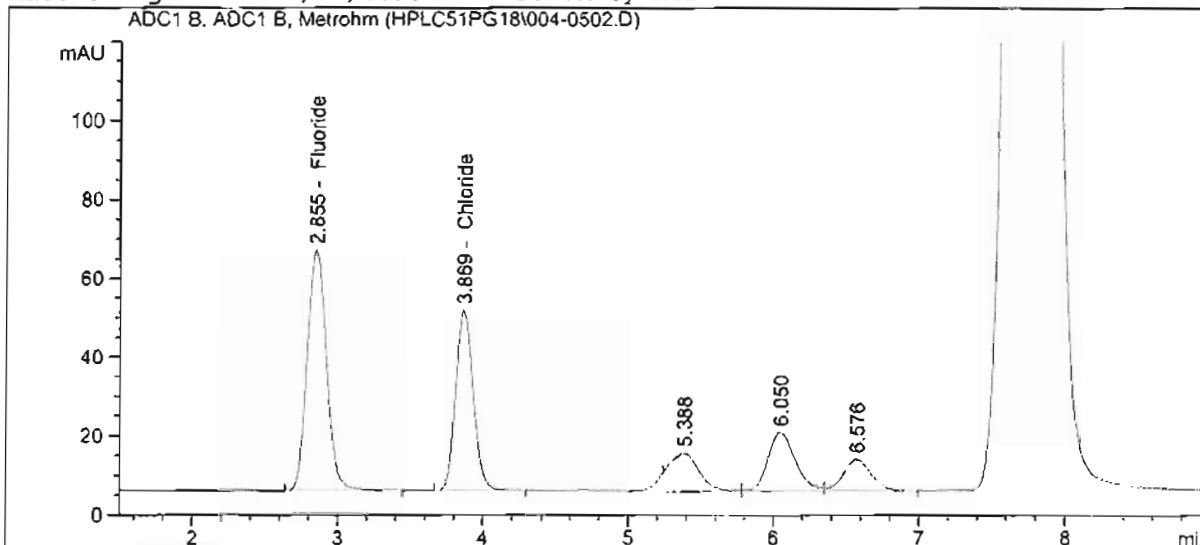
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.855	BB	539.16504	1.65025e-2	8.89756		Fluoride
3.869	BB	353.49655	2.46616e-2	8.71777		Chloride

Totals : 17.61533

```
=====
*** End of Report ***
=====
```

```
=====
Acq. Operator   : mgb                      Seq. Line :    5
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 2:21:00 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



=====

External Standard Report

=====

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.855	BB	562.38391	1.65026e-2	9.28077		Fluoride
3.869	BB	383.34592	2.46470e-2	9.44832		Chloride

Totals : 18.72909

=====

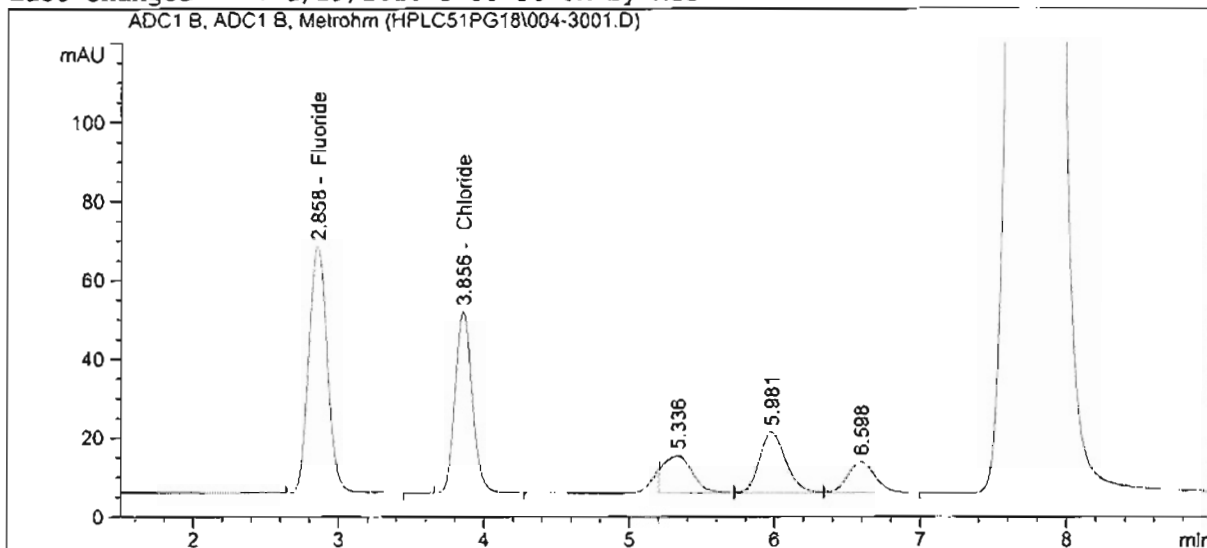
\*\*\* End of Report \*\*\*

Sample Name: hplc51pg18 #4

```

=====
Acq. Operator   : mgb                      Seq. Line :   30
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 10:42:06 PM    Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
External Standard Report
=====

```

```

Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.858	BB	555.17407	1.65025e-2	9.16178		Fluoride
3.856	BB	373.48172	2.46515e-2	9.20690		Chloride

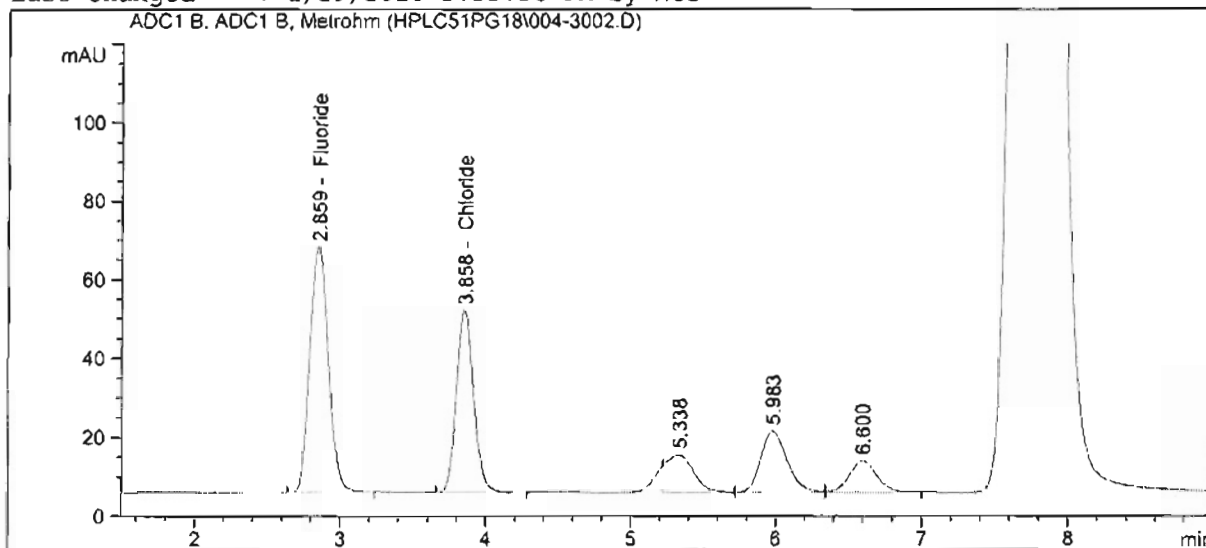
Totals : 18.36868

```

=====
*** End of Report ***
=====

```

```
=====
Acq. Operator   : mgb                      Seq. Line :   30
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 10:52:20 PM    Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime (min)	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.859	BB	550.45557	1.65025e-2	9.08390		Fluoride
3.858	BB	374.03375	2.46513e-2	9.22041		Chloride

Totals : 18.30431

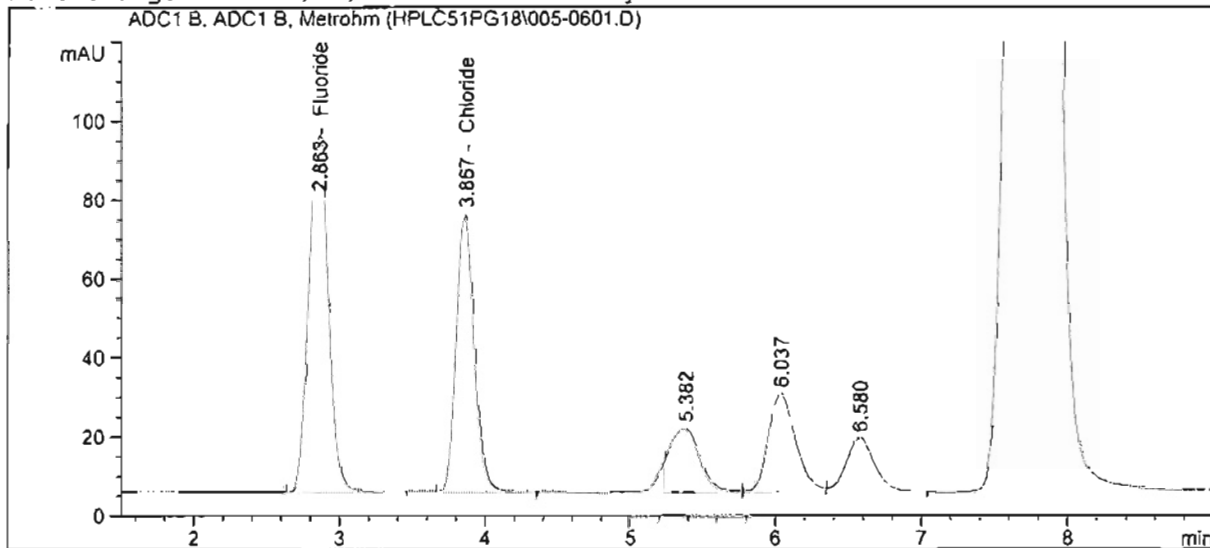
\*\*\* End of Report \*\*\*

Sample Name: hplc51pg18 #5

```

=====
Acq. Operator   : mgb                      Seq. Line :    6
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 2:31:14 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
External Standard Report
=====

```

```

Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.863	BB	842.30792	1.65031e-2	13.90072		Fluoride
3.867	BB	583.68719	2.45878e-2	14.35158		Chloride

Totals : 28.25229

```

=====
*** End of Report ***
=====

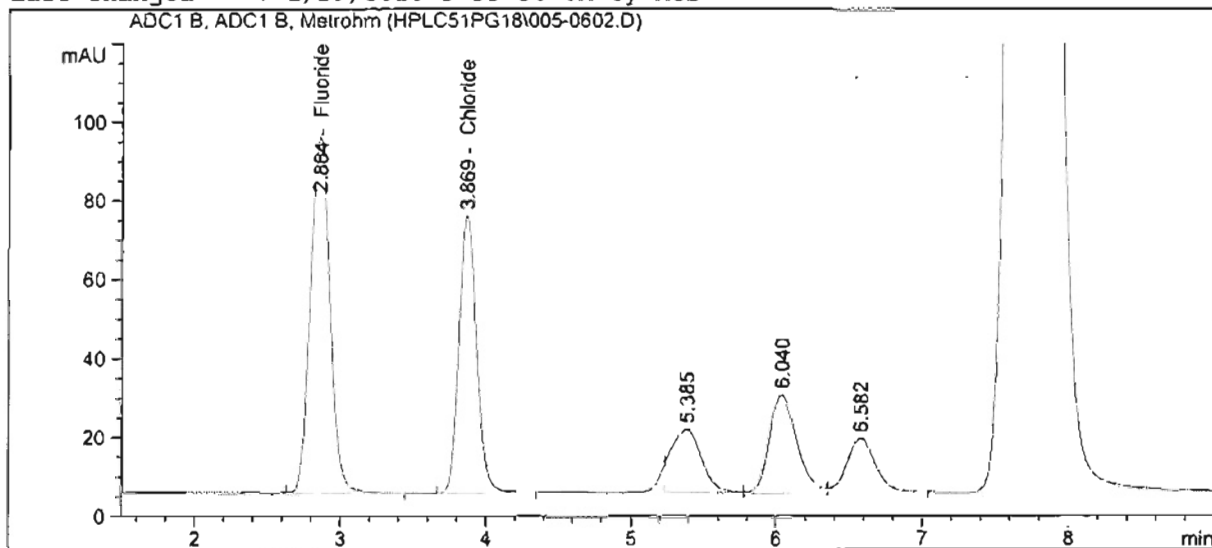
```

Sample Name: hplc51pg18 #5

```

=====
Acq. Operator   : mgb                      Seq. Line :    6
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 2:41:28 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
External Standard Report
=====

```

```

Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.864	BB	840.37970	1.65031e-2	13.86889		Fluoride
3.869	BB	583.19635	2.45879e-2	14.33956		Chloride

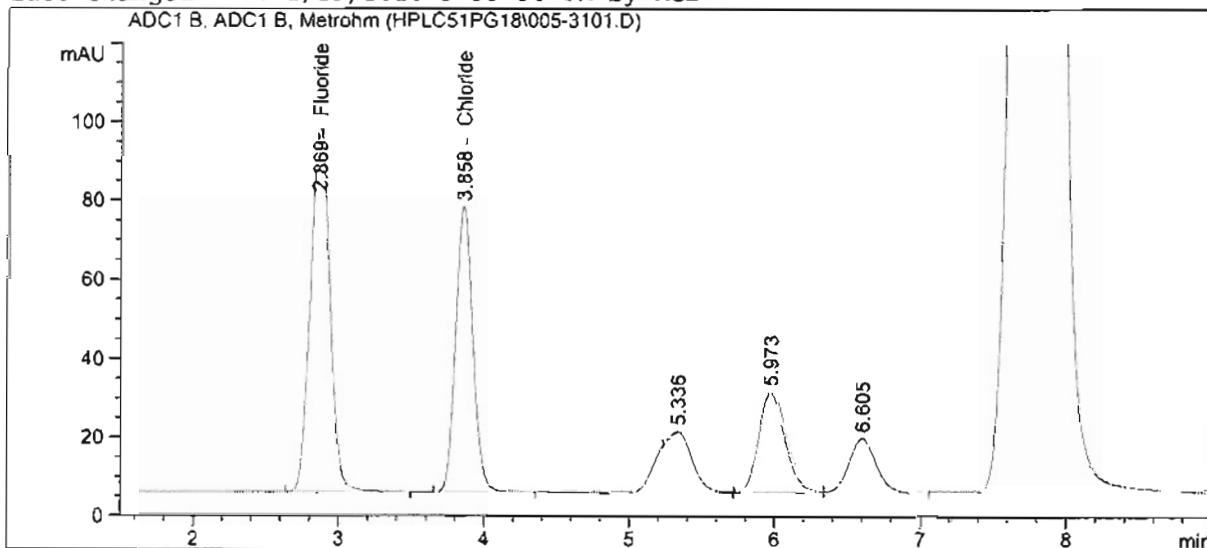
Totals : 28.20846

```

=====
*** End of Report ***
=====

```

```
=====
Acq. Operator   : mgb                      Seq. Line :   31
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 11:02:33 PM    Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

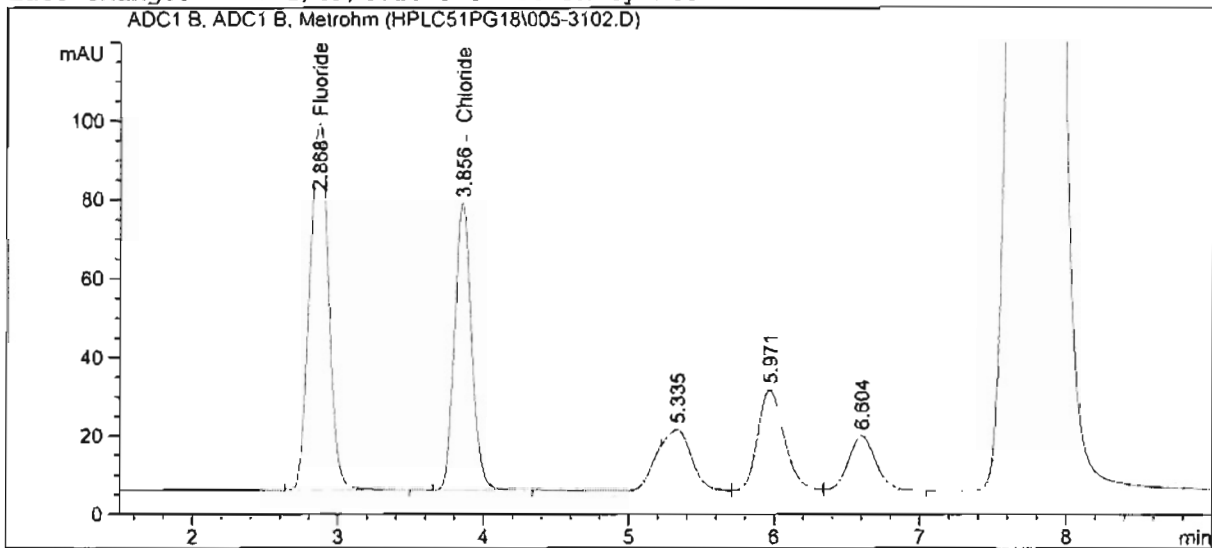
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.869	BB	857.81378	1.65031e-2	14.15663		Fluoride
3.858	BB	592.85498	2.45860e-2	14.57595		Chloride

Totals : 28.73258

\*\*\* End of Report \*\*\*

Sample Name: hplc51pg18 #5

```
=====
Acq. Operator   : mgb                      Seq. Line :   31
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 11:12:47 PM    Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

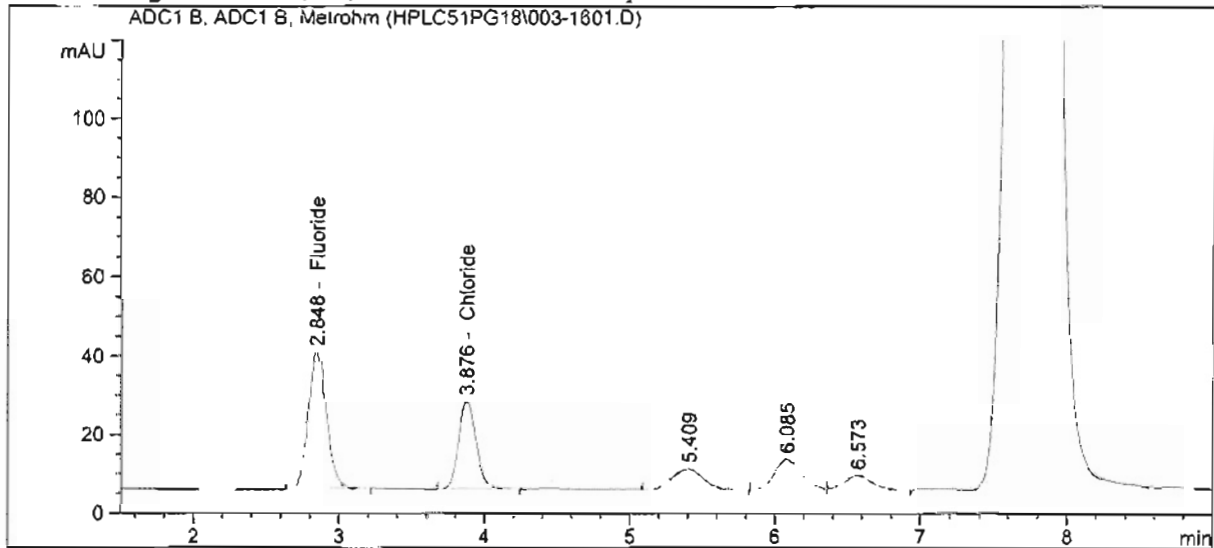
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.868	BB	856.52716	1.65031e-2	14.13539		Fluoride
3.856	BB	593.03839	2.45860e-2	14.58044		Chloride

```
Totals :                               28.71584
```

```
=====
*** End of Report ***
```



```
=====
Acq. Operator   : mgb                               Seq. Line :   16
Acq. Instrument : Smithers                           Location  :    -
Injection Date  : 1/26/2010 5:55:46 PM                Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

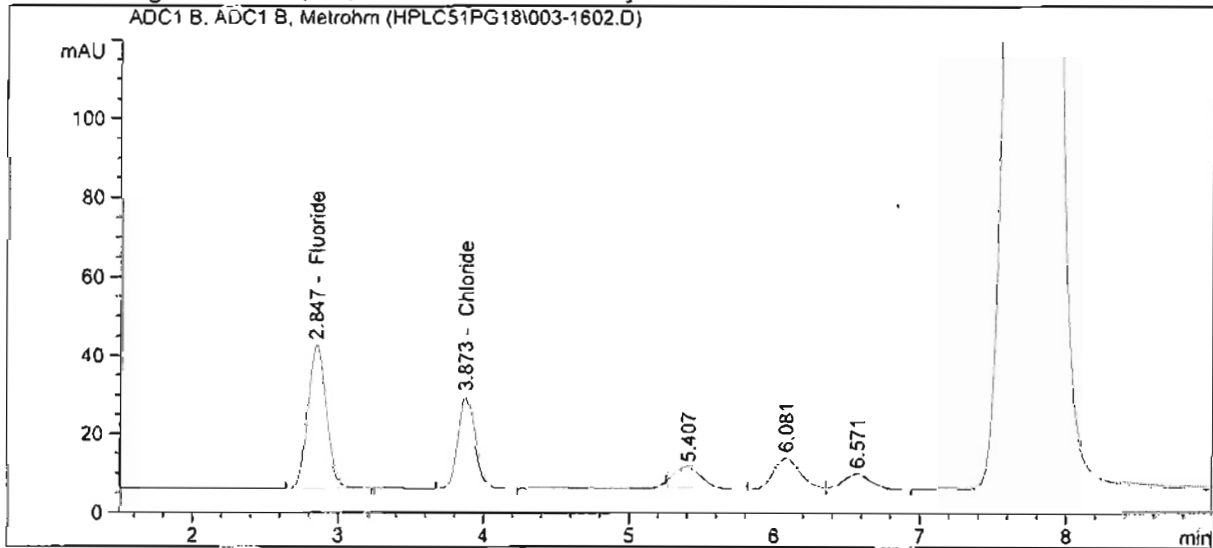
Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.848	BB	303.78668	1.65011e-2	5.01281		Fluoride
3.876	BB	185.86223	2.48302e-2	4.61500		Chloride

Totals : 9.62781

\*\*\* End of Report \*\*\*

```
=====
Acq. Operator   : mgb                               Seq. Line :   16
Acq. Instrument : Smithers                           Location  :    -
Injection Date  : 1/26/2010 6:05:59 PM                Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



```
=====
External Standard Report
=====
```

```
Sorted By      :      Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     :      1.0000
Dilution       :      1.0000
```

Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.847	BB	313.71295	1.65012e-2	5.17663		Fluoride
3.873	BB	191.63756	2.48195e-2	4.75635		Chloride

```
Totals :                               9.93299
```

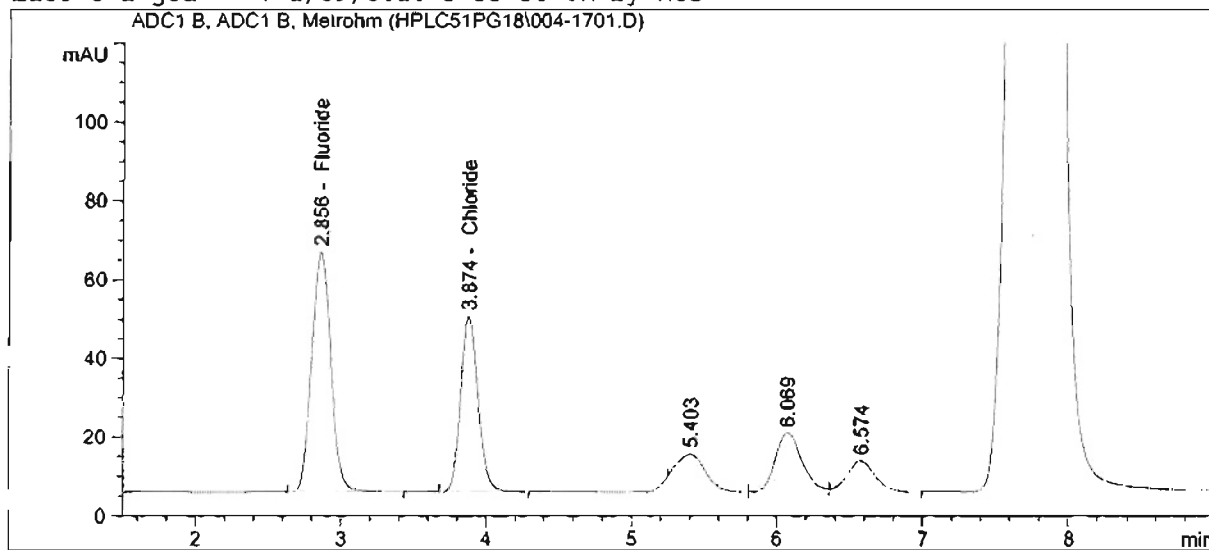
```
=====
*** End of Report ***
```

Sample Name: hplc51pg18 #4

```

=====
Acq. Operator   : mgb                      Seq. Line :   17
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 6:16:12 PM      Inj       :    1
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====

```



```

=====
External Standard Report
=====

```

```

Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.856	BB	547.53754	1.65025e-2	9.03574		Fluoride
3.874	BB	368.72687	2.46538e-2	9.09053		Chloride

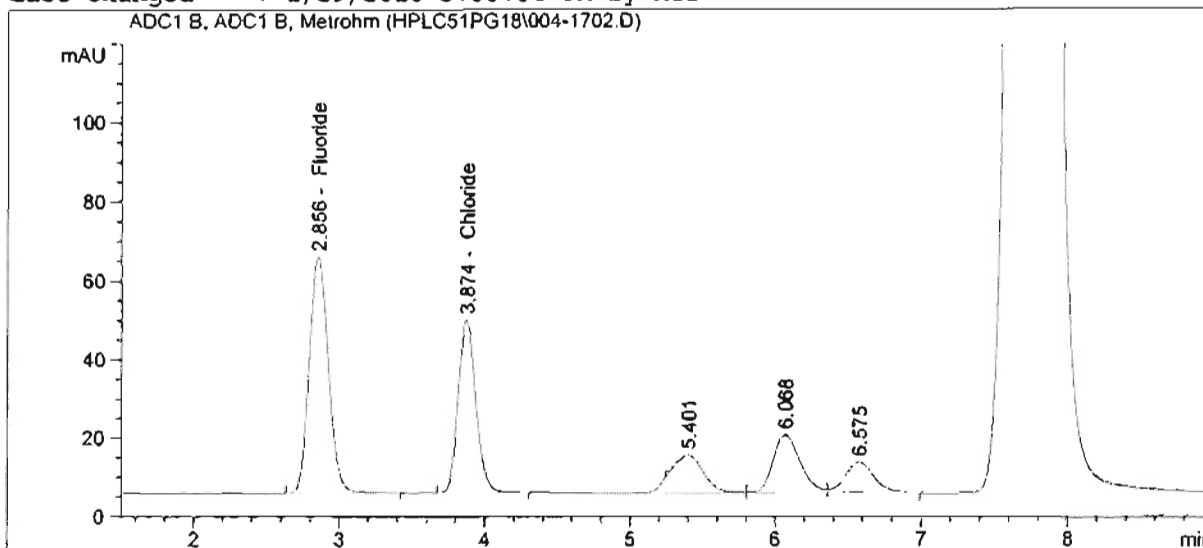
Totals : 18.12627

```

=====
*** End of Report ***
=====

```

```
=====
Acq. Operator   : mgb                      Seq. Line :   17
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 1/26/2010 6:26:26 PM      Inj       :    2
Sequence File   : Z:\HPLC2010Q1\SMITHERS\SEQUENCE\HPLC51PG18.S
Acq. Method     : U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M
Last changed    : 1/13/2010 7:06:26 AM by mgb
Analysis Method : Z:\HPLC2010Q1\SMITHERS\METHODS\HPLC51PG18.M
Last changed    : 1/29/2010 3:33:36 PM by MGB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/29/2010 3:31:23 PM
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1 B, Metrohm

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.856	BB	544.11255	1.65025e-2	8.97921		Fluoride
3.874	BB	366.02124	2.46552e-2	9.02431		Chloride

Totals : 18.00352

\*\*\* End of Report \*\*\*

method: U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M  
Modified on: 1/13/2010 at 7:06:26 AM

# Method Information

Method: U:\HPLC2010Q1\SMITHERS\METHODS\METROHM.M  
Modified: 1/13/2010 at 7:06:26 AM

## ANALOG DIGITAL CONVERTER

Signal 1

Description: ADC1 B, Metrohm  
Source: Signal  
Unit: mA  
Units/Volt: 100.000  
Peakwidth (Data Rate): 0.027 Min (10.00 Hz)  
Stop Time: No Limit  
Data Storage: All

Start Signal Source: External Device Will Start 35900

Timed Event Table:  
<no events>

Report date: 18-01-2010 07:27:37

Printed by: enthalpy

System: C:\Program Files\Metrohm\IC Net 2.3\IC Net\System\IC\Anions.smt

STARTUP HARDWARE:

RECORDER	METHOD	Anions.mtw
RECORDER	DATA	Data acquisition channel[Cond]
861 Advanced Compact IC	Unit version 4	
861 Advanced Compact IC	Polarity +	
861 Advanced Compact IC	Suppressor autostep	yes
861 Advanced Compact IC	Autostep with	Fill
861 Advanced Compact IC	Use Peristaltic pump	yes
861 Advanced Compact IC	Flow	0.70 mL/min
861 Advanced Compact IC	PMax	10.0 MPa
861 Advanced Compact IC	PMin	1.0 MPa
861 Advanced Compact IC	FullScale	50 uS/cm
861 Advanced Compact IC	Remote	00001000
861 Advanced Compact IC	Use CO2 Suppressor	yes
838 Advanced Sample Processor	Rotate angle	5.00 °
838 Advanced Sample Processor	Swing angle	5.00 °
838 Advanced Sample Processor	Mixing volume	10.000 mL
838 Advanced Sample Processor	Reagent volume	0.000 mL
838 Advanced Sample Processor	Peristaltic pump speed	3
838 Advanced Sample Processor	The named positions of vials :	
838 Advanced Sample Processor	- Rinse 1	128
838 Advanced Sample Processor	- Rinse 2	129
838 Advanced Sample Processor	Extern 1	30.00 °
838 Advanced Sample Processor	Extern 2	42.00 °
838 Advanced Sample Processor	Extern 3	54.00 °
838 Advanced Sample Processor	Extern 4	66.00 °
838 Advanced Sample Processor	The named positions of needle :	
838 Advanced Sample Processor	- Work	120
838 Advanced Sample Processor	- Rinse	125
838 Advanced Sample Processor	Lift rate	25 mm/s
838 Advanced Sample Processor	Maximum lift way	125 mm
838 Advanced Sample Processor	Maximum swing angle	117.00 °
838 Advanced Sample Processor	The remote control aliases :	
838 Advanced Sample Processor	- No method defined ones	
838 Advanced Sample Processor	The scan lines aliases :	
838 Advanced Sample Processor	- No method defined ones	
838 Advanced Sample Processor	---- Dosino MSB1 settings ---	
838 Advanced Sample Processor	Alias	Dosino MSB1
838 Advanced Sample Processor	Dos port	1
838 Advanced Sample Processor	Fill port	2
838 Advanced Sample Processor	Port 1 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 2 Rate	2.00 mL/min
838 Advanced Sample Processor	Port 3 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 4 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 1 Tube length	1000 mm
838 Advanced Sample Processor	Port 2 Tube length	1000 mm
838 Advanced Sample Processor	Port 3 Tube length	1000 mm
838 Advanced Sample Processor	Port 4 Tube length	1000 mm

838 Advanced Sample Processor mm	Port 1 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 2 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 3 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 4 Tube diameter	2.0
838 Advanced Sample Processor	---- Dosino MSB2 settings ---	
838 Advanced Sample Processor	Alias	Dosino MSB2
838 Advanced Sample Processor	Dos port	1
838 Advanced Sample Processor	Fill port	2
838 Advanced Sample Processor	Port 1 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 2 Rate	2.00 mL/min
838 Advanced Sample Processor	Port 3 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 4 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 1 Tube length	1000 mm
838 Advanced Sample Processor	Port 2 Tube length	1000 mm
838 Advanced Sample Processor	Port 3 Tube length	1000 mm
838 Advanced Sample Processor	Port 4 Tube length	1000 mm
838 Advanced Sample Processor mm	Port 1 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 2 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 3 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 4 Tube diameter	2.0
838 Advanced Sample Processor	---- Dosino MSB3 settings ---	
838 Advanced Sample Processor	Alias	Dosino MSB3
838 Advanced Sample Processor	Dos port	1
838 Advanced Sample Processor	Fill port	2
838 Advanced Sample Processor	Port 1 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 2 Rate	2.00 mL/min
838 Advanced Sample Processor	Port 3 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 4 Rate	1.00 mL/min
838 Advanced Sample Processor	Port 1 Tube length	1000 mm
838 Advanced Sample Processor	Port 2 Tube length	1000 mm
838 Advanced Sample Processor	Port 3 Tube length	1000 mm
838 Advanced Sample Processor	Port 4 Tube length	1000 mm
838 Advanced Sample Processor mm	Port 1 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 2 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 3 Tube diameter	2.0
838 Advanced Sample Processor mm	Port 4 Tube diameter	2.0
838 Advanced Sample Processor	---- Stirrer MSB1 settings --	
838 Advanced Sample Processor	Alias	Stirrer MSB1
838 Advanced Sample Processor	Rate	3
838 Advanced Sample Processor	---- Stirrer MSB2 settings --	
838 Advanced Sample Processor	Alias	Stirrer MSB2
838 Advanced Sample Processor	Rate	3

838 Advanced Sample Processor	----	Stirrer MSB3 settings	--
--			
838 Advanced Sample Processor	Alias	Stirrer MSB3	
838 Advanced Sample Processor	Rate	3	
838 Advanced Sample Processor	----	Tower Stirrer settings	-
---			
838 Advanced Sample Processor	Alias	Tower Stirrer	
838 Advanced Sample Processor	Rate	3	
838 Advanced Sample Processor	----	Membrane pumps' settings	
----			
838 Advanced Sample Processor	Pump 1 alias	Membrane pump 1	
838 Advanced Sample Processor	Pump 2 alias	Membrane pump 2	

START WITH DETERMINATION:

0.00	861 Advanced Compact IC	Remote	****1***	
0.00	861 Advanced Compact IC	Valve	Fill	
1.10	861 Advanced Compact IC	Valve	Inject	
1.10	861 Advanced Compact IC	Remote	*****p**	
10.10	861 Advanced Compact IC	Remote	*****p*	
	838 Advanced Sample Processor	- Move	sample	
	838 Advanced Sample Processor	- Lift	Work	
	838 Advanced Sample Processor	- Pump	60	
	838 Advanced Sample Processor	- Move	Rinse 1	
	838 Advanced Sample Processor	- Lift	Rinse	
	838 Advanced Sample Processor	- Pump	120	
	838 Advanced Sample Processor	- Move	Rinse 2	
	838 Advanced Sample Processor	- Lift	Rinse	
	838 Advanced Sample Processor	- Pump	120	
	838 Advanced Sample Processor	- Move	sample+1	

START WITH INJECT:

0.0	RECORDER	START
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Sequence: C:\HPCHEM\1\SEQUENCE\hplc51pg18.txt

Line	Vial	Sample Name	Method	Inj
1	Vial 1	hplc51pg18 #1	METROHM	2
2	Vial 1	hplc51pg18 #1	METROHM	2
3	Vial 2	hplc51pg18 #2	METROHM	2
4	Vial 3	hplc51pg18 #3	METROHM	2
5	Vial 4	hplc51pg18 #4	METROHM	2
6	Vial 5	hplc51pg18 #5	METROHM	2
7	Vial 6	hplc51pg18 #LCS	METROHM	2
8	Vial 7	Reagent Blank	METROHM	2
9	Vial 8	DI H2O	METROHM	2
10	Vial 10	H2SO4 Blank *20 0110-96	METROHM	2
11	Vial 11	Run 1 *20 0110-96	METROHM	2
12	Vial 12	MS Run 1 *20 0110-96	METROHM	2
13	Vial 13	MSD Run 1 *20 0110-96	METROHM	2
14	Vial 14	Run 2 *20 0110-96	METROHM	2
15	Vial 15	Run 3 *20 0110-96	METROHM	2
16	Vial 3	hplc51pg18 #3	METROHM	2
17	Vial 4	hplc51pg18 #4	METROHM	2
18	Vial 20	Blank *20 0110-66	METROHM	2
19	Vial 21	SN 2-10 Run 1 *20 0110-66	METROHM	2
20	Vial 22	MS SN 2-10 Run 1 *20 0110-66	METROHM	2
21	Vial 23	MSD SN 2-10 Run 1 *20 0110-66	METROHM	2
22	Vial 24	SN 2-10 Run 2 *20 0110-66	METROHM	2
23	Vial 25	SN 2-10 Run 3 *20 0110-66	METROHM	2
24	Vial 26	SN 2-16 Run 1 *20 0110-66	METROHM	2
25	Vial 27	SN 2-16 Run 2 *20 0110-66	METROHM	2
26	Vial 28	SN 2-16 Run 3 *20 0110-66	METROHM	2
27	Vial 1	hplc51pg18 #1	METROHM	2
28	Vial 2	hplc51pg18 #2	METROHM	2
29	Vial 3	hplc51pg18 #3	METROHM	2
30	Vial 4	hplc51pg18 #4	METROHM	2
31	Vial 5	hplc51pg18 #5	METROHM	2

**This Is The Last Page  
Of This Report.**

