

Tetra Tech, Inc.

1955 Evergreen Blvd
Bldg 200, Suite 300
Duluth, GA 30096

Hoss-Moore Tank Site
Statesville, NC

Project # 05-001-0149

Analytical Report
(0311-50)

EPA Method 18 Bags
Ethylene oxide



Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / 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 - ' pages.

Report Issued: \$' /%/\$&\$%&



Summary of Results



Company	Tetra Tech, Inc.
Analyst	JBB
Parameters	EPA Method 18 Bags

Client #	05-001-0149
Job #	0311-50
# Samples	5

Compound	Sample ID / Sample Concentration (ppm)		
	A01-Hoss-030811	A02-Hoss-030811	A03-Hoss-030811
	0830	1235	1235
Ethylene Oxide	0.251 ND	0.251 ND	0.785
	A04-Hoss-030811	A05-Hoss-030811	
	1745	MB	
Ethylene Oxide	125	0.251 ND	

Results



Company	Tetra Tech, Inc.
Analyst	JBB
Parameters	EPA Method 18 Bags

Client #	05-001-0149
Job #	0311-50
# Samples	5

MDL 0.251 (ppm)
LOQ 0.500 (ppm)
Compound Ethylene Oxide

Lower Curve Limit 0.500 (ppm)
Upper Curve Limit 250 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
A01-Hoss-030811 0830	026B0301.D	026B0302.D	026B0303.D	GC117P73_0311-50.M	NA	NA	NA	NA	0.251	0.251	0.251	0.0	0.251	1	0.251	ND
A02-Hoss-030811 1235	031B0401.D	031B0402.D	031B0403.D	GC117P73_0311-50.M	NA	NA	NA	NA	0.251	0.251	0.251	0.0	0.251	1	0.251	ND
A03-Hoss-030811 1235	032B0501.D	032B0502.D	032B0503.D	GC117P73_0311-50.M	2.64	2.64	2.64	0.1	0.816	0.785	0.754	4.0	0.785	1	0.785	
A04-Hoss-030811 1745	025B0201.D	025B0202.D	025B0203.D	GC117P73_0311-50.M	2.64	2.64	2.64	0.1	128	126	121	3.0	125	1	125	
A05-Hoss-030811 MB	020B0101.D	020B0102.D	020B0103.D	GC117P73_0311-50.M	NA	NA	NA	NA	0.251	0.251	0.251	0.0	0.251	1	0.251	ND

Narrative Summary



Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	JBB
Parameters	EPA Method 18 Bags

Client #	05-001-0149
Job #	0311-50
# Samples	5

Custody

James Beach received the samples on 3/8/11 after being relinquished by Tetra Tech, Inc. The samples were received at ambient temperature in good condition. The sample **A05-Hoss-030811 MB** was received empty. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for ethylene oxide (EO) using the analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A).

The standards and samples were analyzed following the procedures specified in section 8.2.1, Integrated Bag Sampling and Analysis.

All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. EO was referenced to certified gas phase standards.

Bag sample **A05-Hoss-030811 MB** was filled with house nitrogen prior to analysis as it was received empty and was designated as a blank.

The Agilent Technologies Model 7890A, Gas Chromatograph ("Edith" CN10722006) was equipped with a Flame Ionization Detector and a Restek Rtx-1 30m x 0.32mm x 4.0um column (S/N 920171).

Calibration

The calibration curves are located in the back of this report and referenced in the Analysis Method column on the Detailed Results page.

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.

Chromatographic Conditions

The acquisition methods gc117p73.M and gc117p56.M are included in the Calibration Curve Chromatograms section of this report.



Enthalpy Analytical Narrative Summary (continued)

QC Notes

No recovery study was performed and no adjustments to the results were made. These results are intended for engineering purposes only.

All sample preparation and analytical holding times specified in the method were met.

Reporting Notes

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

These analytical results are reported on a wet basis. The user of this report should determine the % moisture in the sample and correct the reported value to ppmvd as appropriate.

Enthalpy Analytical, Inc. is nationally accredited to perform Method 18 for compliance purposes by the Louisiana Department of Environmental Quality's Louisiana Environmental Laboratory Accreditation Program (LELAP), certificate number 04010.



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



Enthalpy Analytical, Inc.
2202 Ellis Rd.
Durham, NC 27703

Chain Of Custody

Phone: 919/850-4392
Fax: 919/850-9012
Email: Bryan.Tyler@enthalpy.com

Site/Company: <u>Hoss - Moore Tank</u>	Purchase Order No.: _____	Analytical Methods/Notes: _____	Sampled by: <u>John Steinauer</u>
Address: <u>site</u>	Job No.: <u>05-001-0149</u>	<u>Ethylene Oxide</u>	Company: <u>Tetra Tech E&H Inc</u>
<u>120 Estes Rd</u>	Contact: <u>Jessica Vickers</u>		Custody Seal #: _____

Sample Identification	Date	Start time	Stop time	Media/Vol.	Analytical Parameters	Notes
<u>statesville, NC</u> A01 - Hoss - 030811	030811	0824	0830	6L Air	Ethylene Oxide	Field Blank
A02 - Hoss - 030811	030811	1229	1235	6L Air	"	
A03 - Hoss - 030811	030811	1229	1235	6L Air	"	
A05 ^{JIS} - Hoss - 030811	030811	N/A	1545	N/A	"	Media Blank
A04 - Hoss - 030811	030811	1739	1745	6L Air	"	Run 1 st

Relinquished by:/Company <u>[Signature]</u> / <u>TETRA TECH</u>	Date/Time <u>3-8-11 / 20:49</u>	Received by:/Company <u>[Signature]</u> / <u>Enthalpy</u>	Date/Time <u>3-8-11 / 20:49</u>
Relinquished by:/Company /	Date/Time /	Received by:/Lab /	Date/Time /

CNRS.DRAPER@TETRATECH.COM
JESSICA.VICKERS@TETRATECH.COM

Page 1 of 1



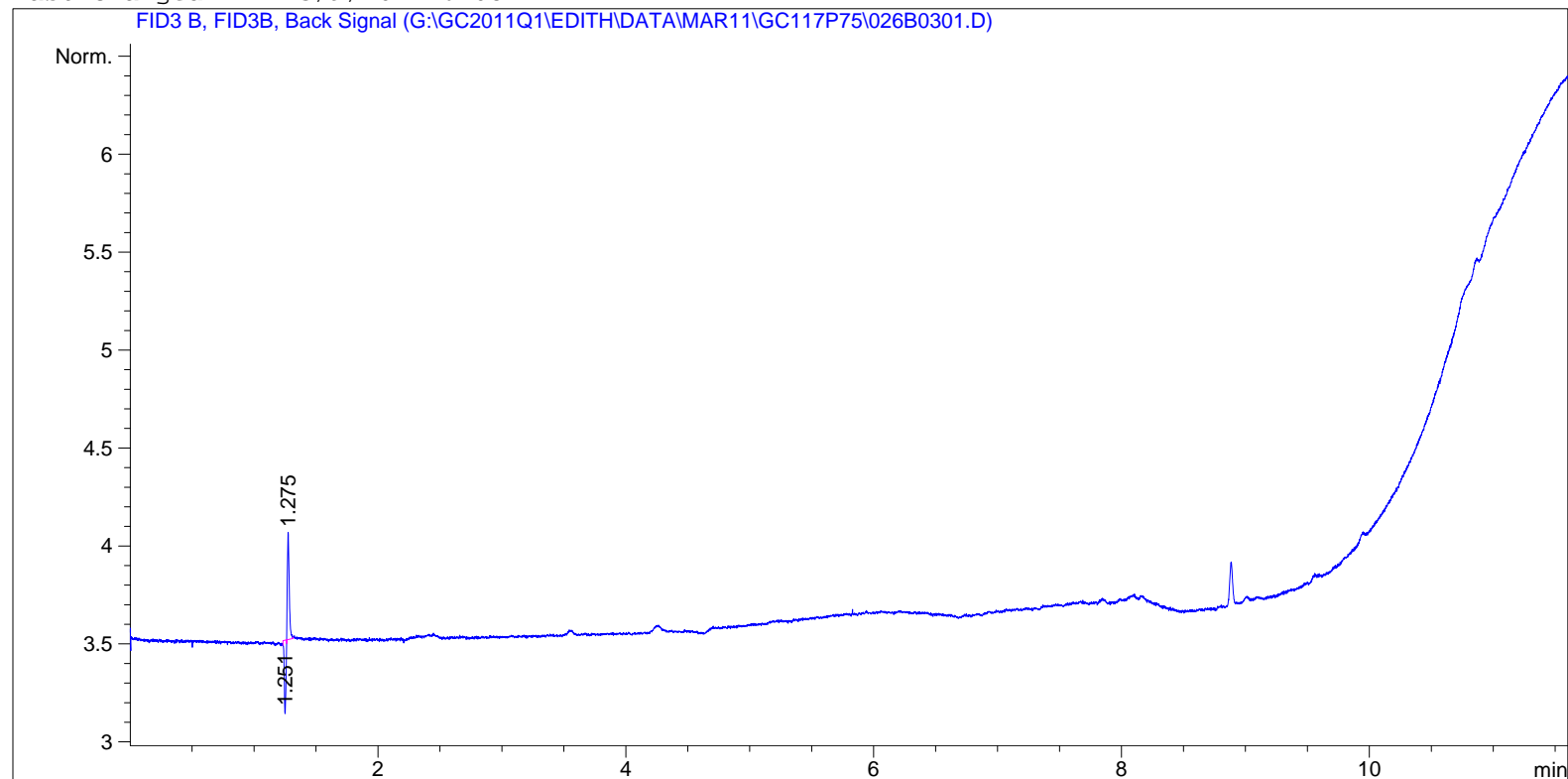
ENTHALPY analytical, inc.

Sample Chromatograms



```
=====
Acq. Operator   : JBB                      Seq. Line :    3
Acq. Instrument : Edith online              Location  : Vial 26
Injection Date  : 3/8/2011 11:19:52 PM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

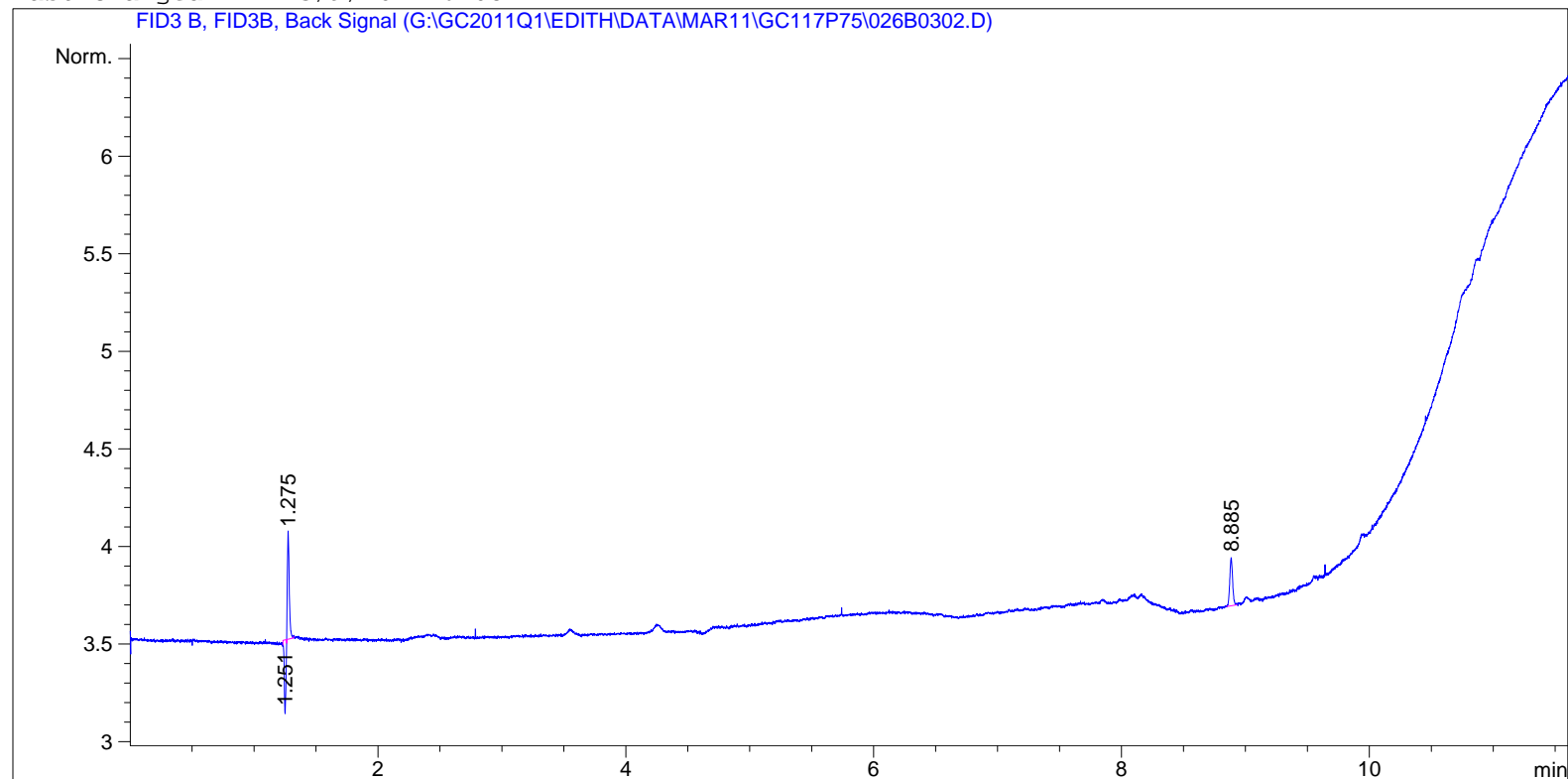
Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : JBB                      Seq. Line :    3
Acq. Instrument : Edith online              Location  : Vial 26
Injection Date  : 3/8/2011 11:37:22 PM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
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External Standard Report
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```

```
Sorted By      : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

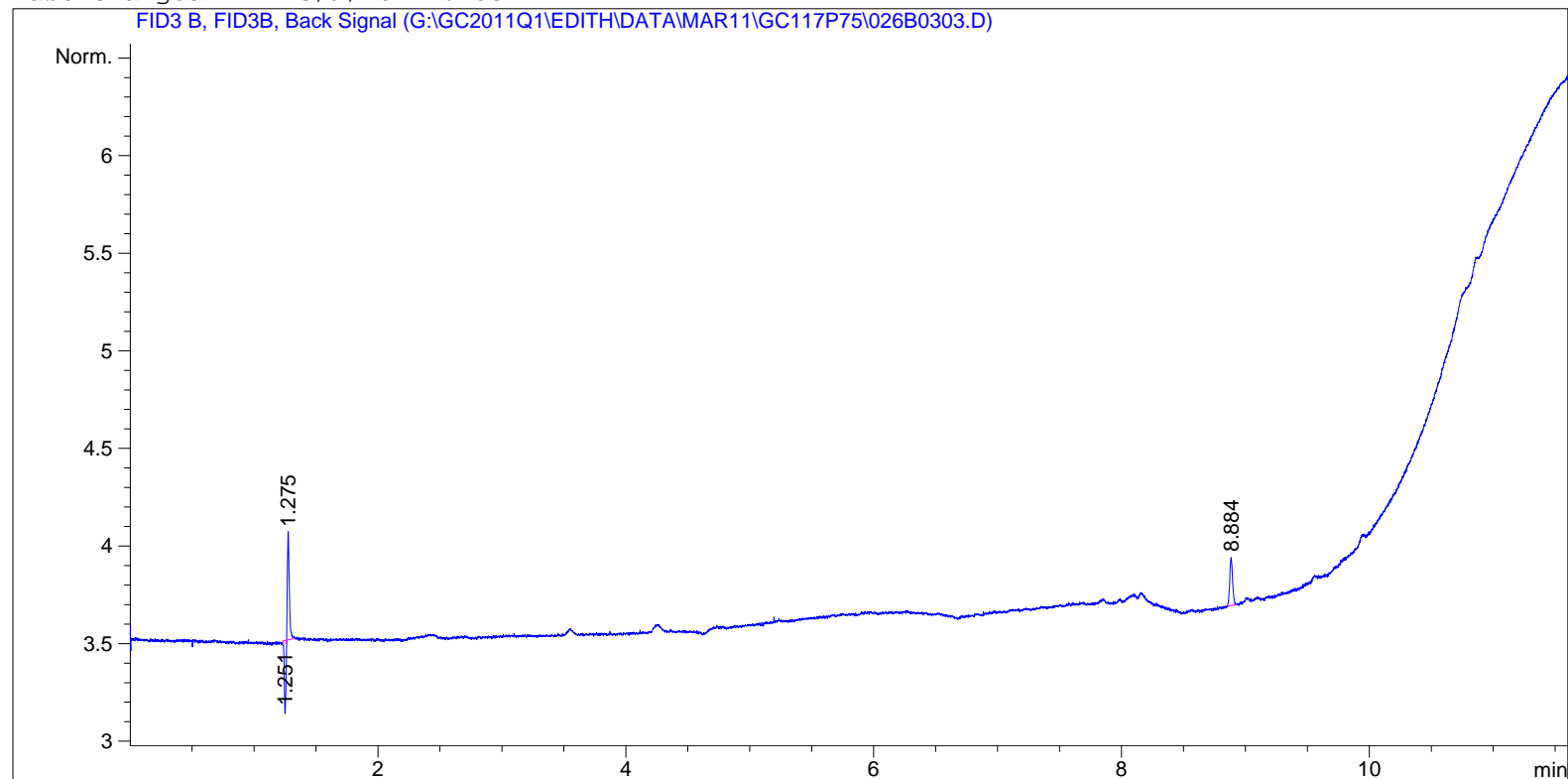
Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found


```
=====
Acq. Operator   : JBB                               Seq. Line :    3
Acq. Instrument : Edith online                       Location  : Vial 26
Injection Date  : 3/8/2011 11:54:50 PM              Inj       :    3
                                                    Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
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                        External Standard Report
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Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

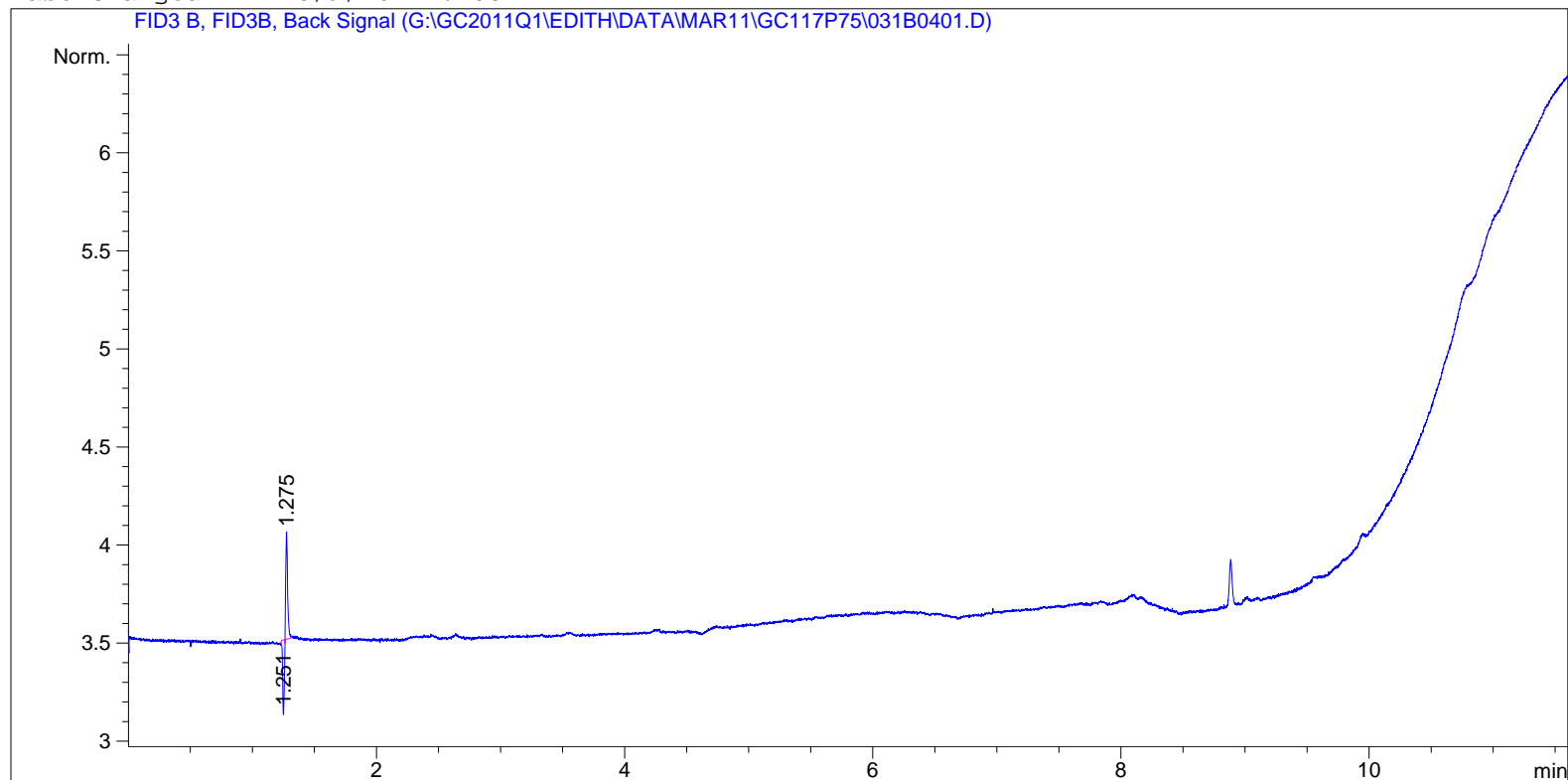
Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : JBB                      Seq. Line :    4
Acq. Instrument : Edith online              Location  : Vial 31
Injection Date  : 3/9/2011 12:12:18 AM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
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                        External Standard Report
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```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

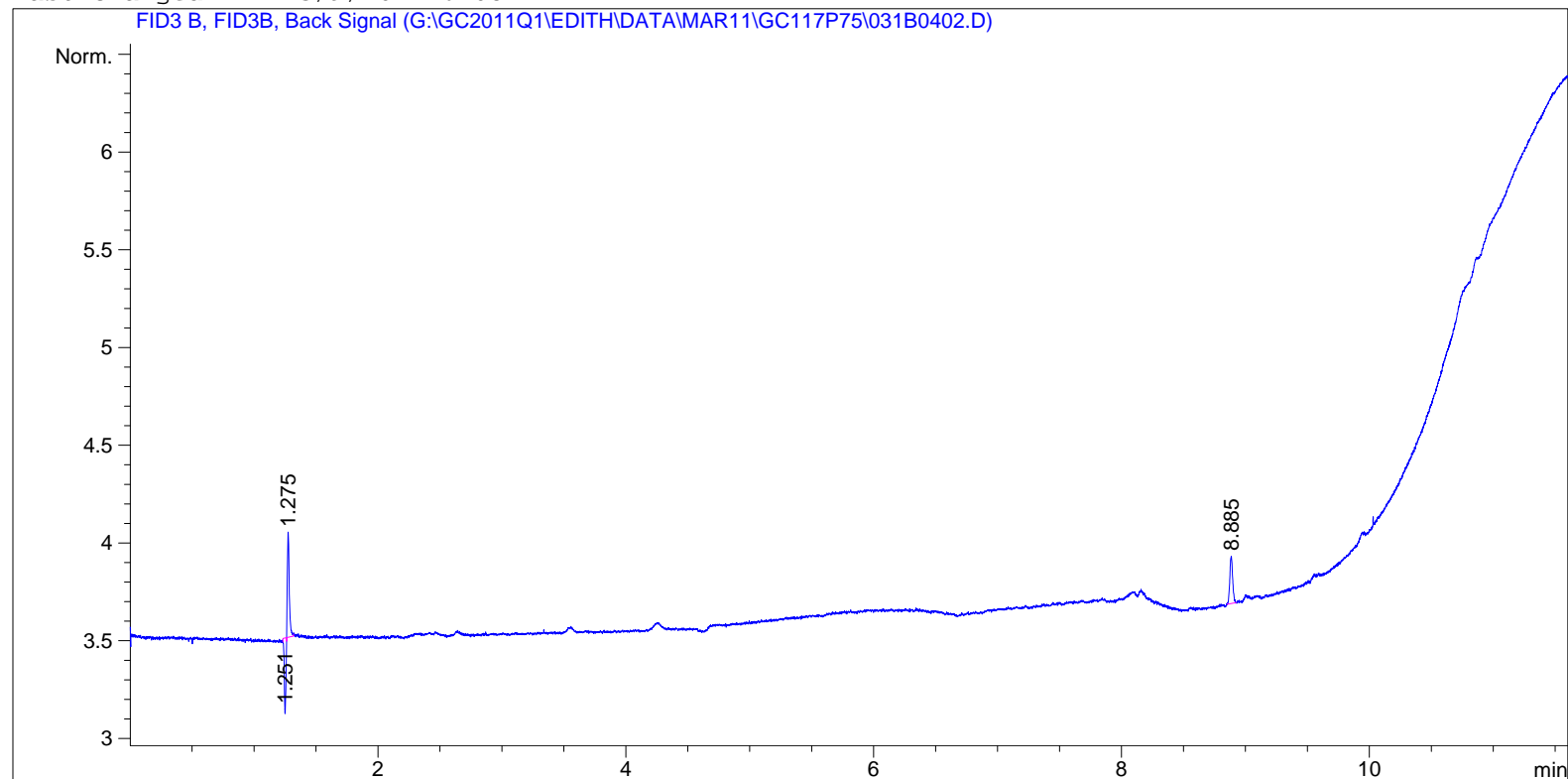
Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : JBB                      Seq. Line :    4
Acq. Instrument : Edith online              Location  : Vial 31
Injection Date  : 3/9/2011 12:29:43 AM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
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=====
                        External Standard Report
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```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

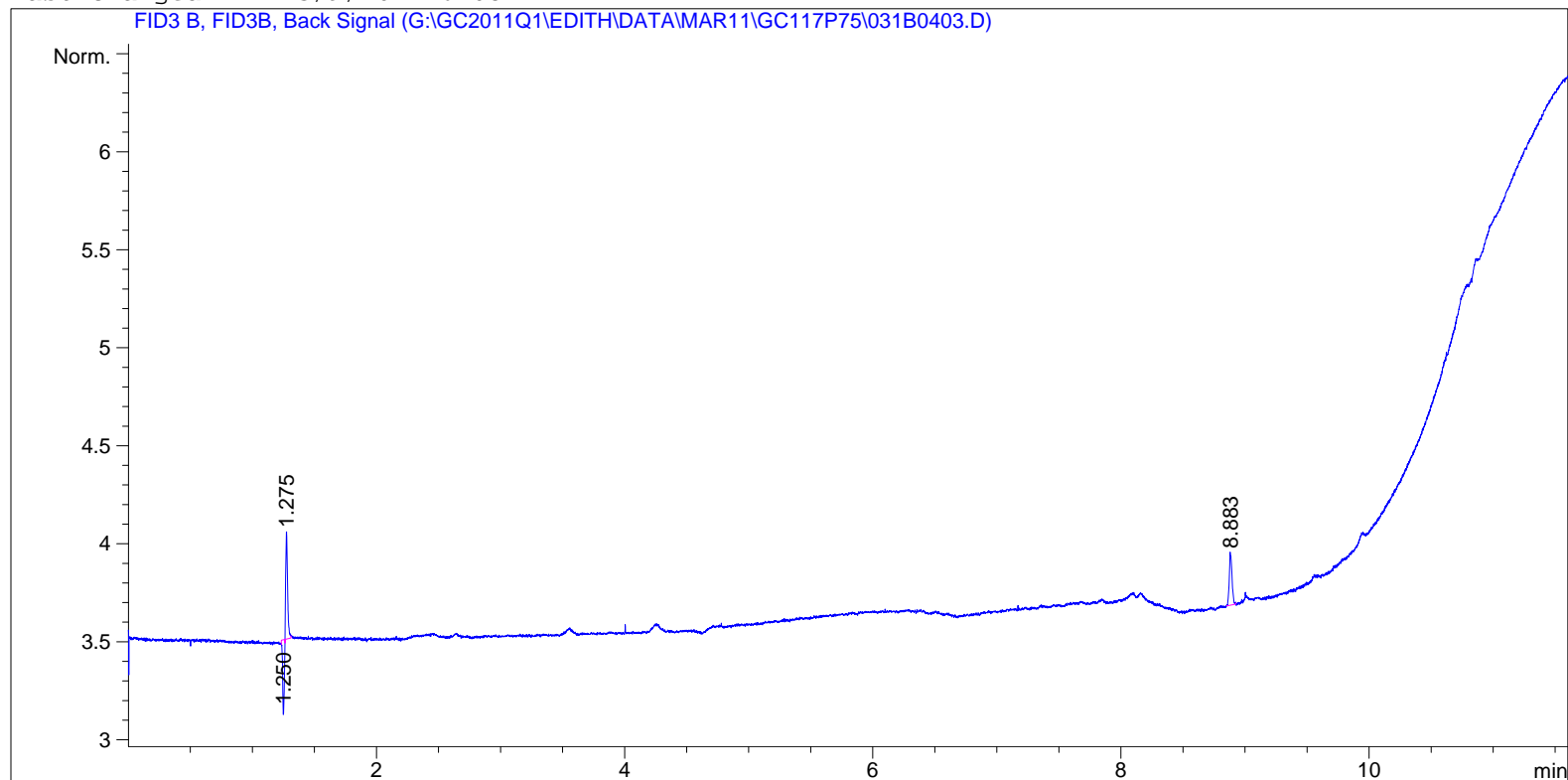
Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : JBB                      Seq. Line :    4
Acq. Instrument : Edith online              Location  : Vial 31
Injection Date  : 3/9/2011 12:47:06 AM      Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
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                        External Standard Report
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```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

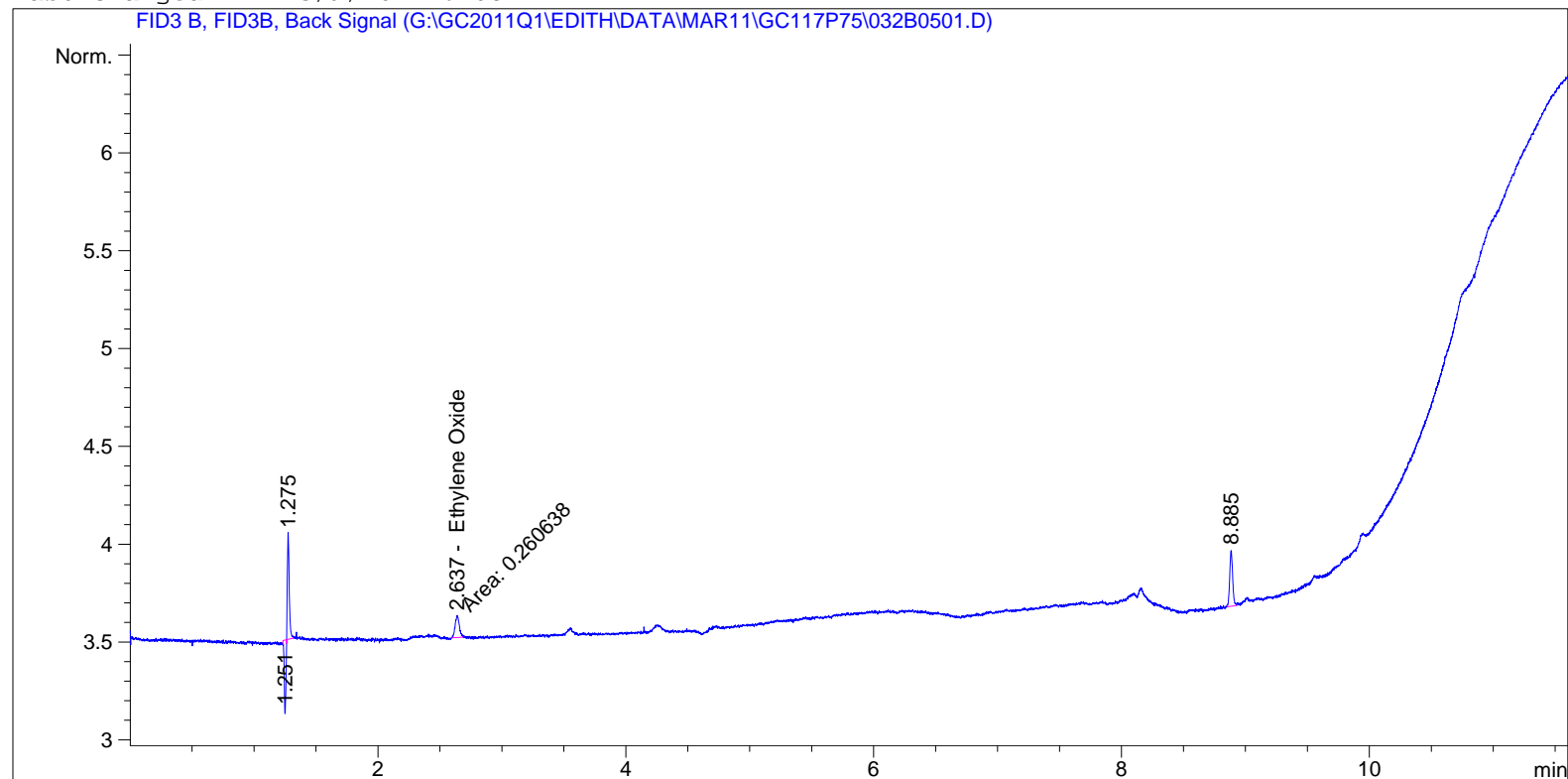
Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : JBB                      Seq. Line :    5
Acq. Instrument : Edith online              Location  : Vial 32
Injection Date  : 3/9/2011 1:04:33 AM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
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                        External Standard Report
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```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.637	MM	2.60638e-1	3.12913	8.15571e-1		Ethylene Oxide

Totals : 8.15571e-1

Manual Int. "NI" (KAM)

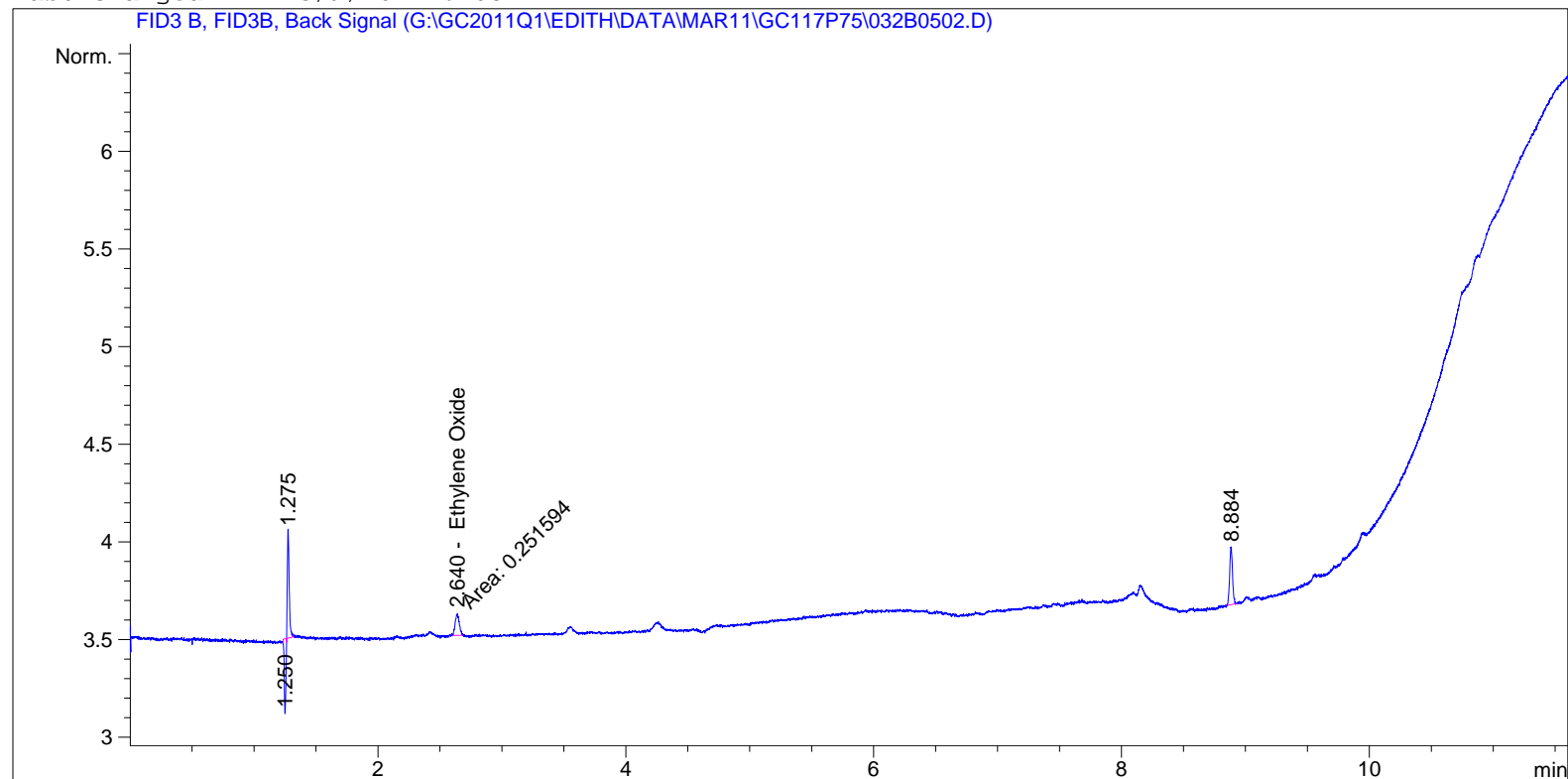
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    5
Acq. Instrument : Edith online              Location  : Vial 32
Injection Date  : 3/9/2011 1:21:54 AM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.640	MM	2.51594e-1	3.12203	7.85482e-1	--	Ethylene Oxide

Totals : 7.85482e-1

Manual Int. "NI" (KAM)

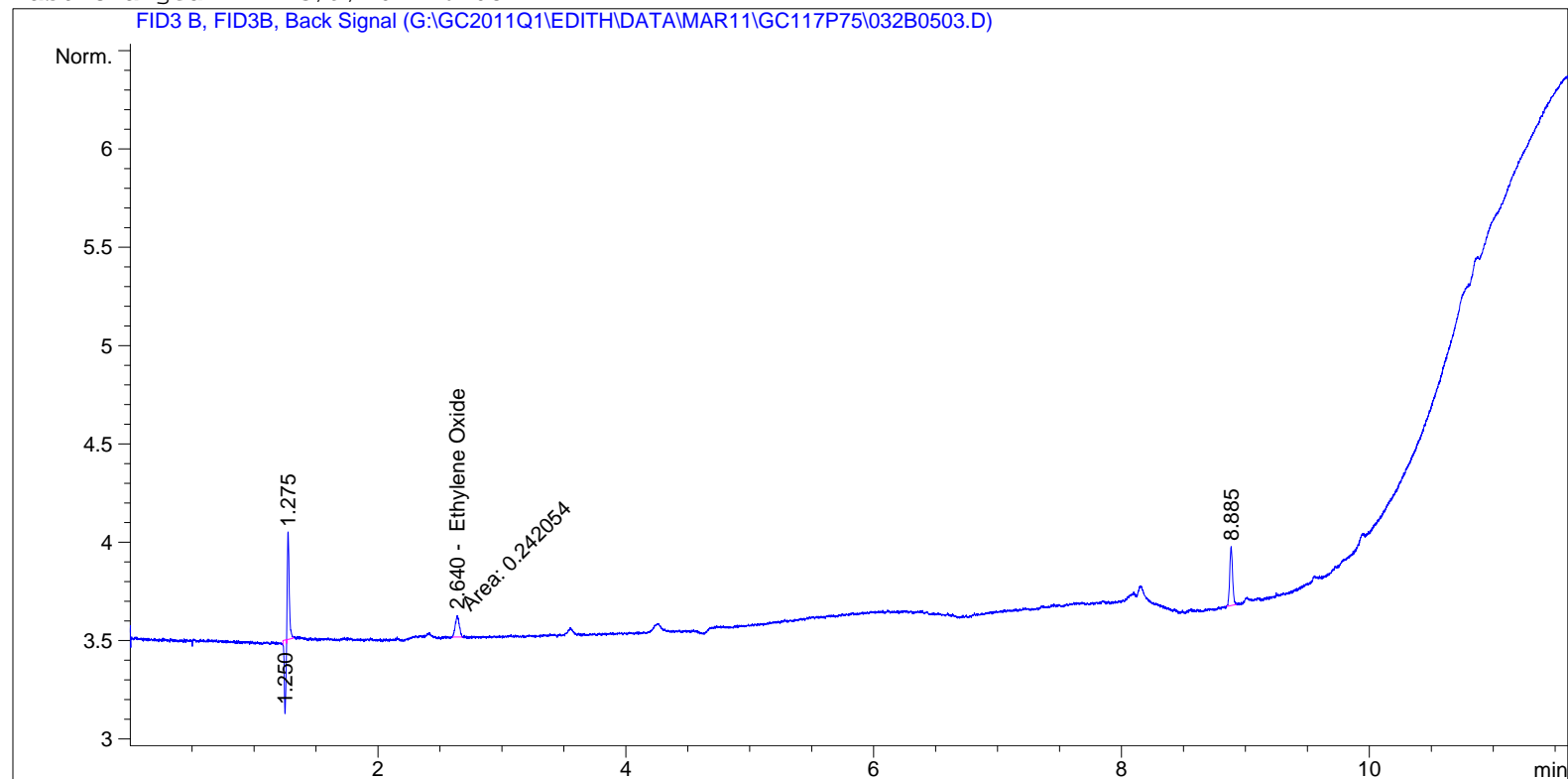
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

*** End of Report ***

```
=====
Acq. Operator   : JBB                      Seq. Line :    5
Acq. Instrument : Edith online              Location  : Vial 32
Injection Date  : 3/9/2011 1:39:14 AM      Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
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                        External Standard Report
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```

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.640	MM	2.42054e-1	3.11396	7.53747e-1		Ethylene Oxide

Totals : 7.53747e-1

Manual Int. "NI" (KAM)

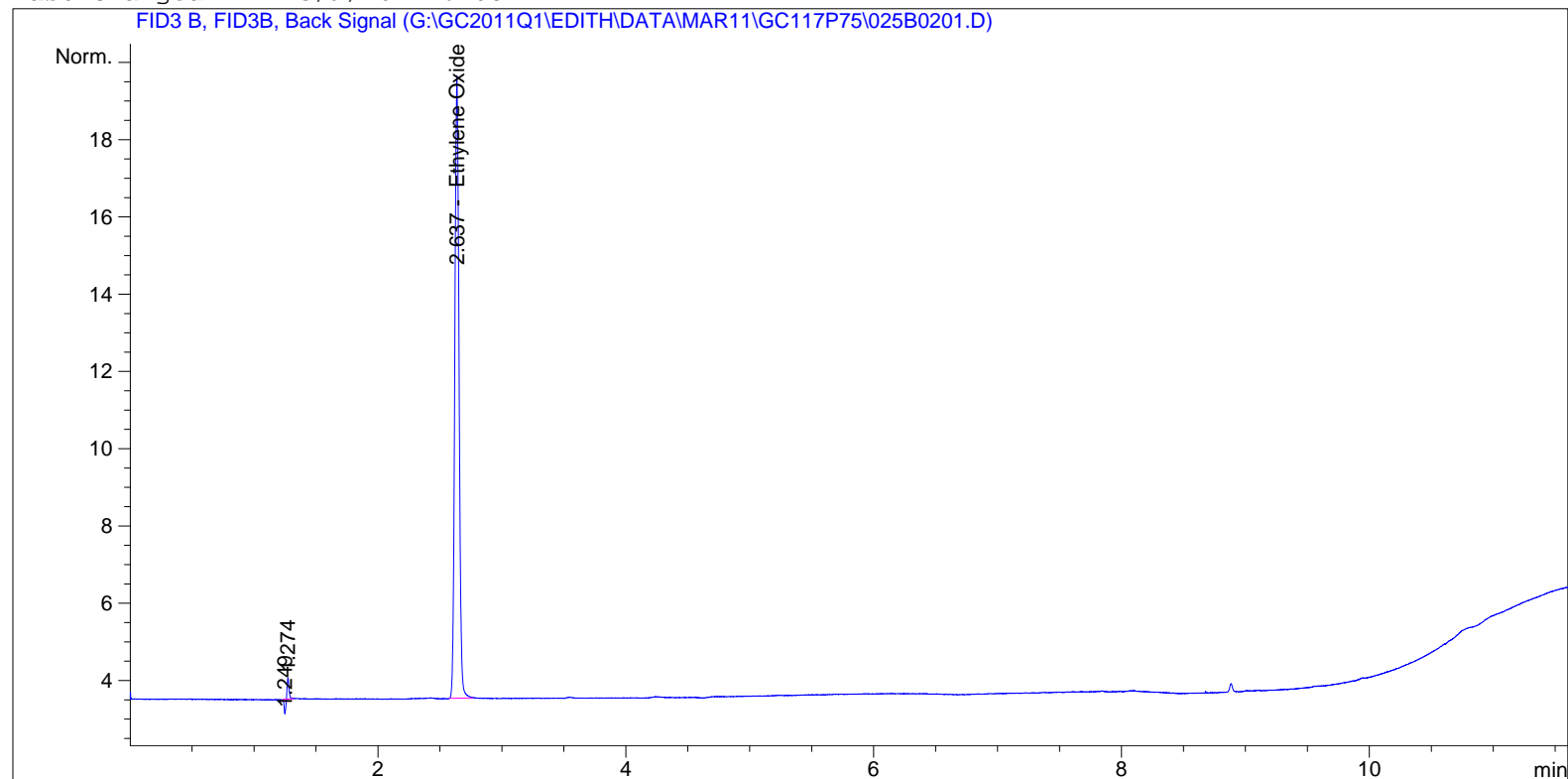
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    2
Acq. Instrument : Edith online              Location  : Vial 25
Injection Date  : 3/8/2011 10:27:24 PM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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                        External Standard Report
=====
```

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.637	BB	38.45201	3.32540	127.86814		Ethylene Oxide

Totals : 127.86814

1 Warnings or Errors :

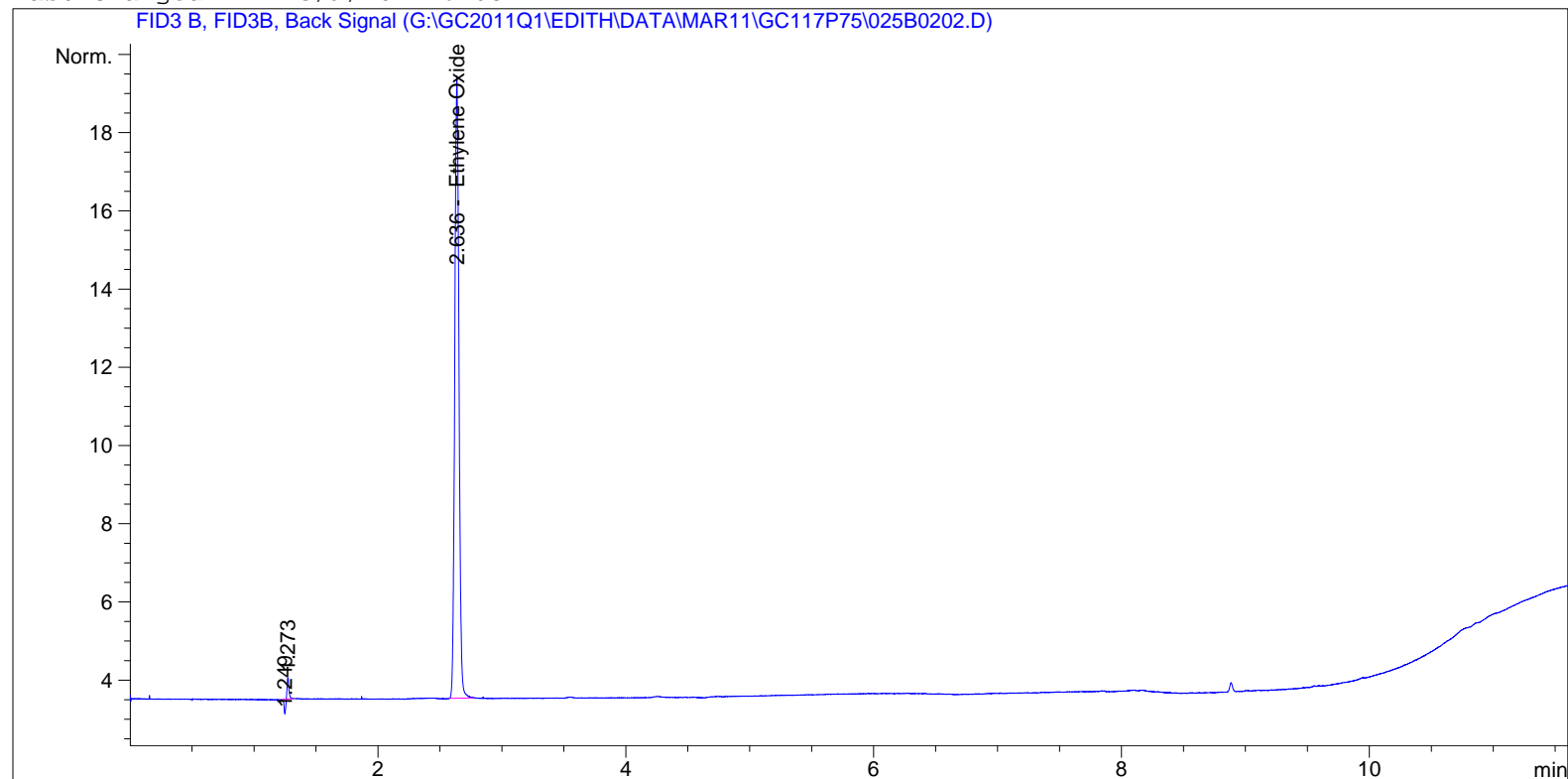
Warning : Calibration warnings (see calibration table listing)

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



```
=====
Acq. Operator   : JBB                               Seq. Line :    2
Acq. Instrument : Edith online                       Location  : Vial 25
Injection Date  : 3/8/2011 10:44:49 PM              Inj       :    2
                                                    Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	BB	37.88651	3.32538	125.98687	--	Ethylene Oxide

Totals : 125.98687

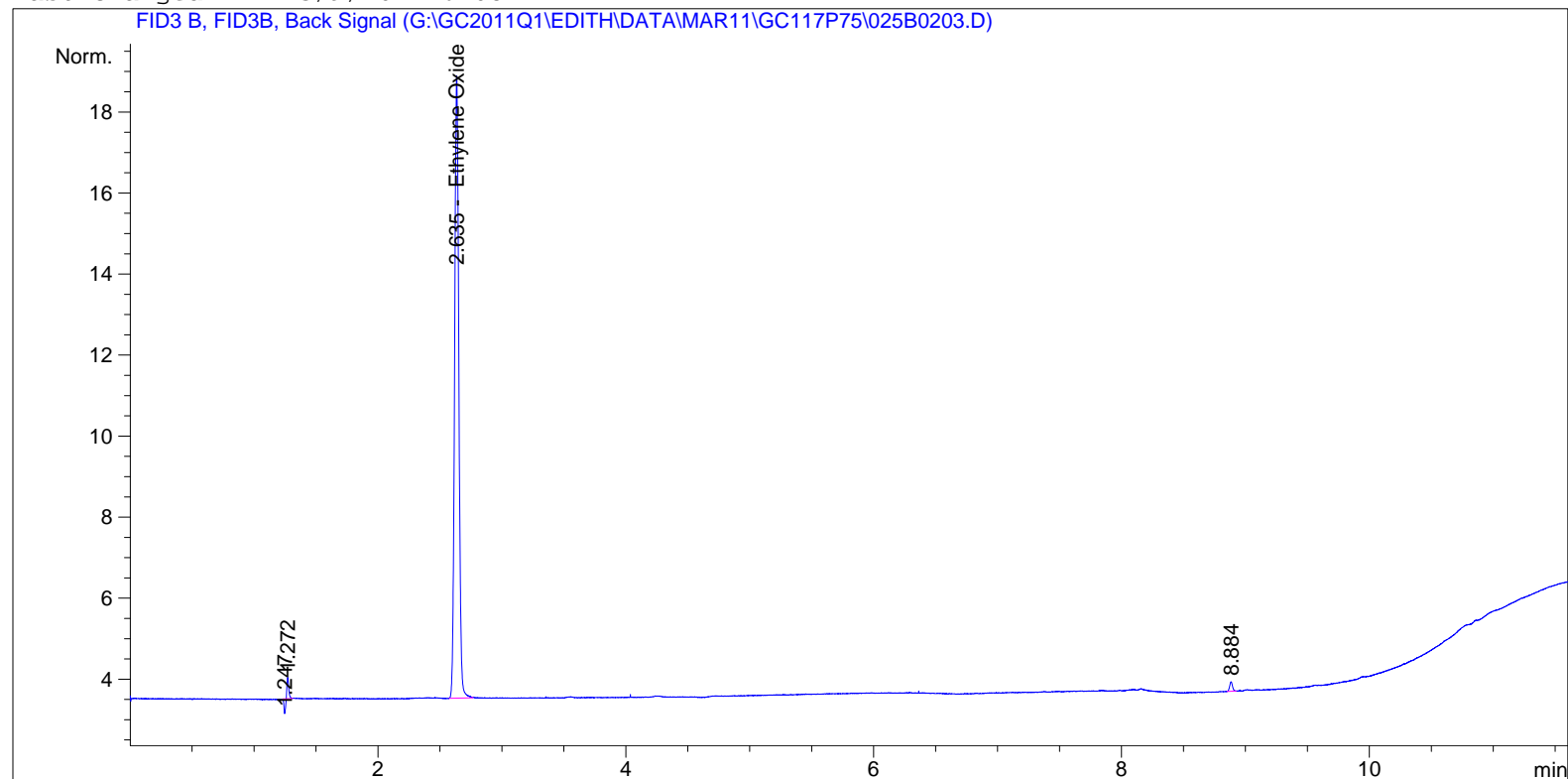
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    2
Acq. Instrument : Edith online              Location  : Vial 25
Injection Date  : 3/8/2011 11:02:19 PM      Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method  : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.635	BB	36.49002	3.32532	121.34112		Ethylene Oxide

Totals : 121.34112

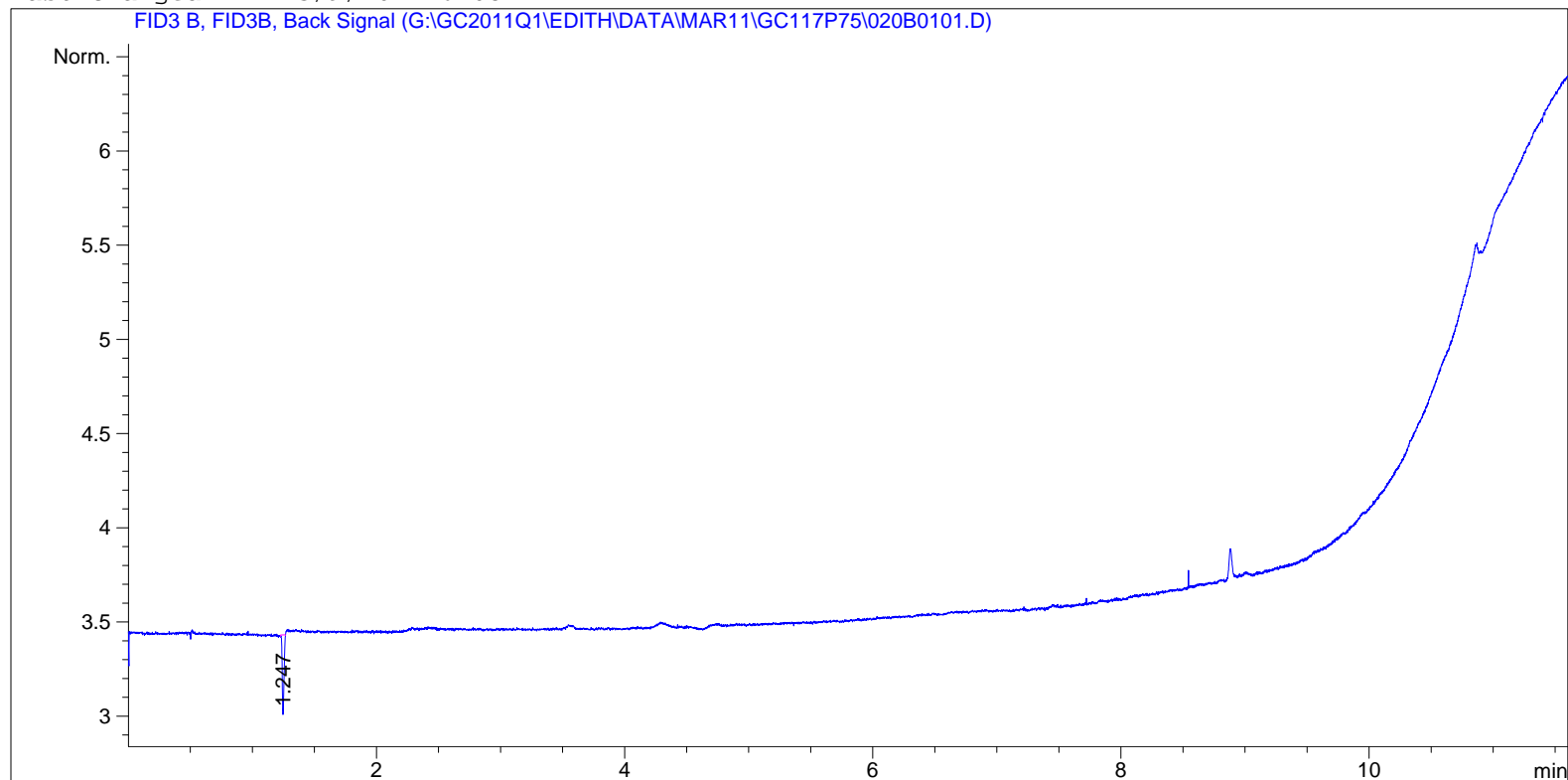
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    1
Acq. Instrument : Edith online              Location  : Vial 20
Injection Date  : 3/8/2011 9:35:19 PM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

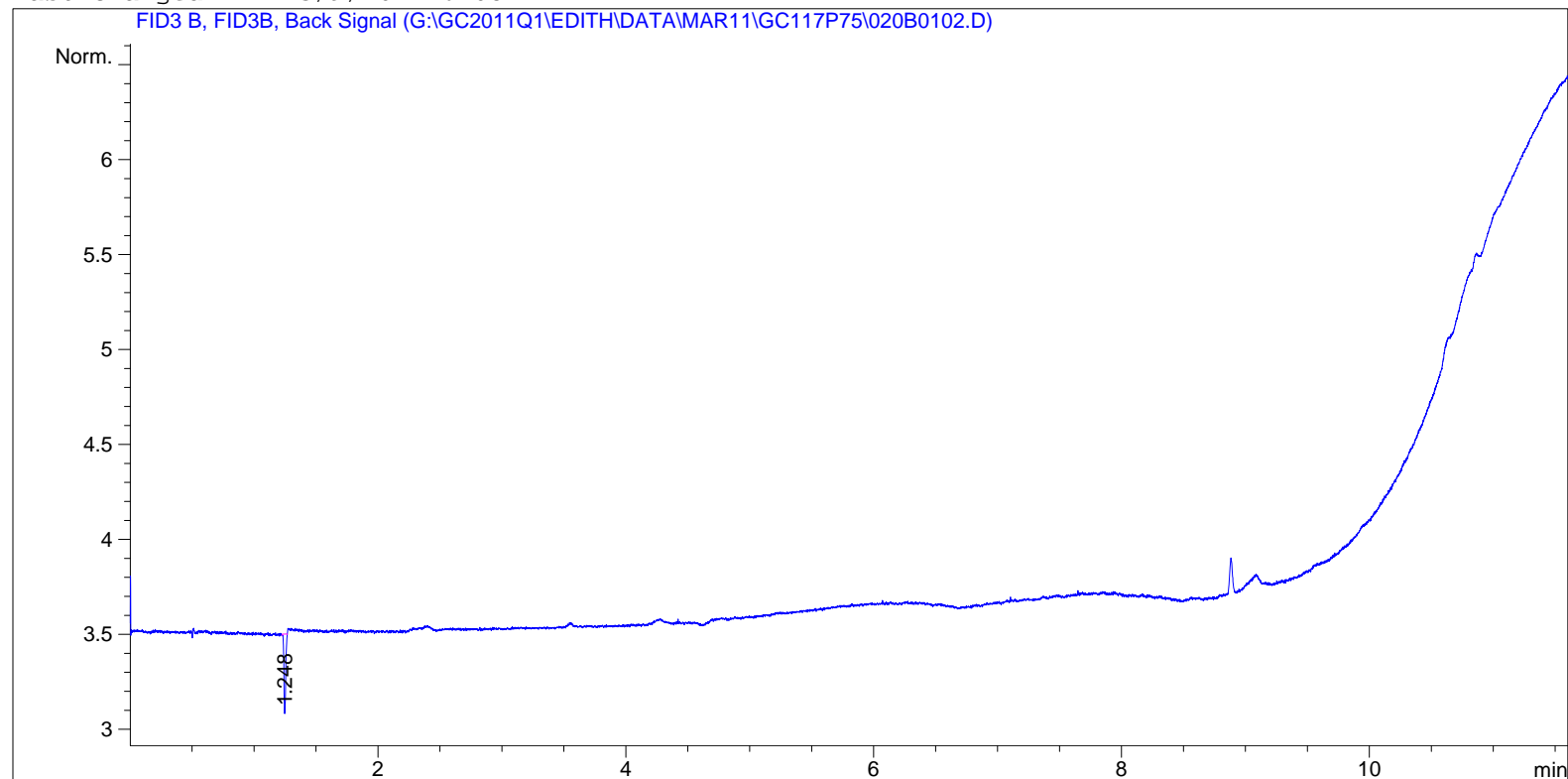
Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : JBB                      Seq. Line :    1
Acq. Instrument : Edith online              Location  : Vial 20
Injection Date  : 3/8/2011 9:52:36 PM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

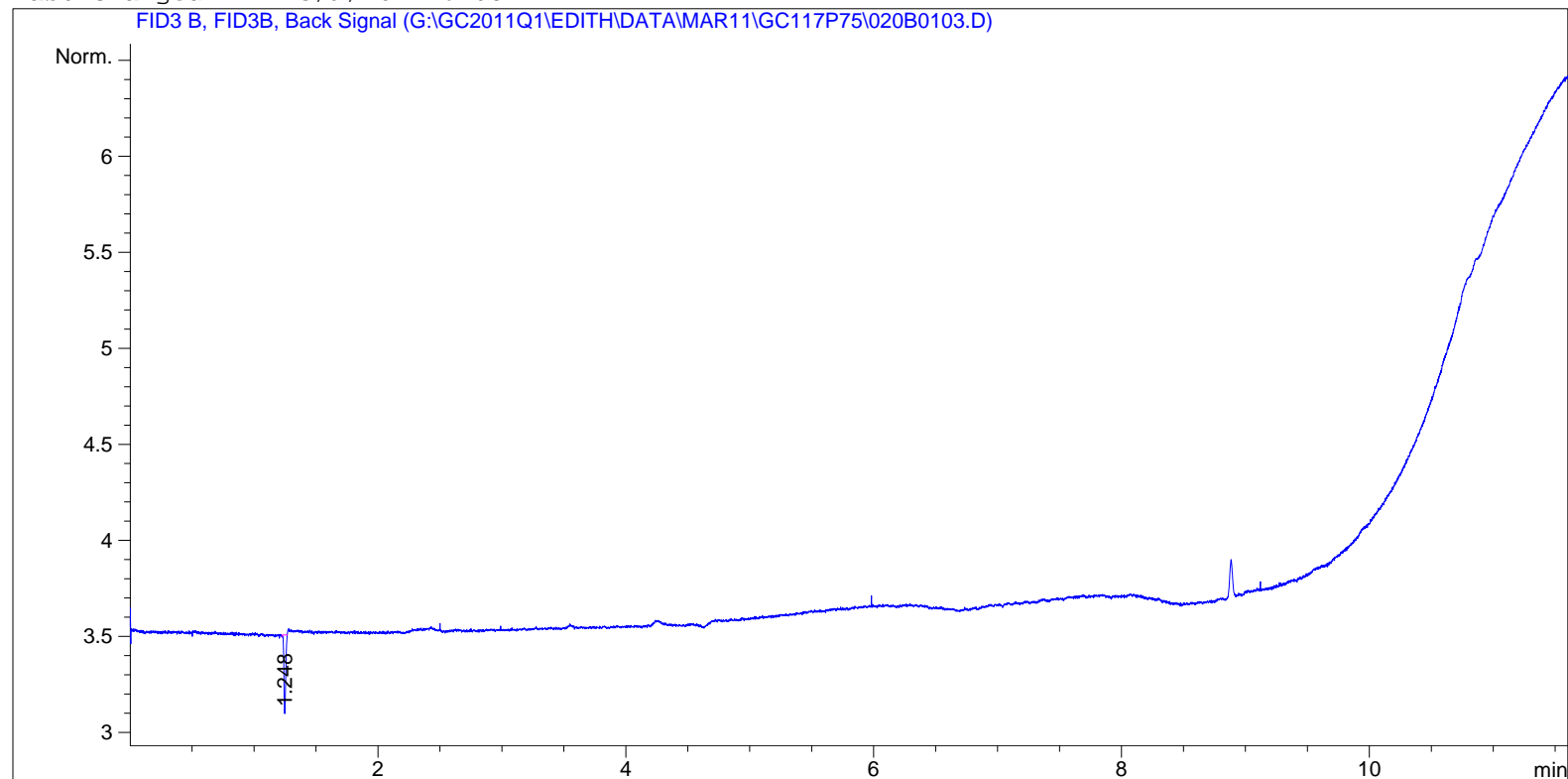
Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

```
=====
Acq. Operator   : JBB                               Seq. Line :    1
Acq. Instrument : Edith online                       Location  : Vial 20
Injection Date  : 3/8/2011 10:09:57 PM              Inj       :    3
                                                    Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

Sorted By : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	-	-	-	-	-	Ethylene Oxide

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

Calibration Curve Chromatograms



```

=====
                        Calibration Table
=====

```

Calib. Data Modified : 3/9/2011 6:45:06 PM

Rel. Reference Window : 0.000 %
 Abs. Reference Window : 0.100 min
 Rel. Non-ref. Window : 0.000 %
 Abs. Non-ref. Window : 0.050 min
 Uncalibrated Peaks : not reported
 Partial Calibration : Yes, identified peaks are recalibrated
 Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
 Origin : Connected
 Weight : Quadratic (Amnt)

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: FID1 A, FID1A, Front Signal
 Signal 2: FID3 B, FID3B, Back Signal

RetTime	Lvl	Amount	Area	Amt/Area	Ref Grp Name
[min]	Sig	[ppm]			
2.636	2 71	5.00000e-1	1.66169e-1	3.00899	Ethylene Oxide
	72	5.00000	1.43264	3.49006	
	73	25.00000	7.64340	3.27080	
	74	100.00000	30.06403	3.32623	
	75	250.00000	76.05633	3.28704	

1 Warnings or Errors :

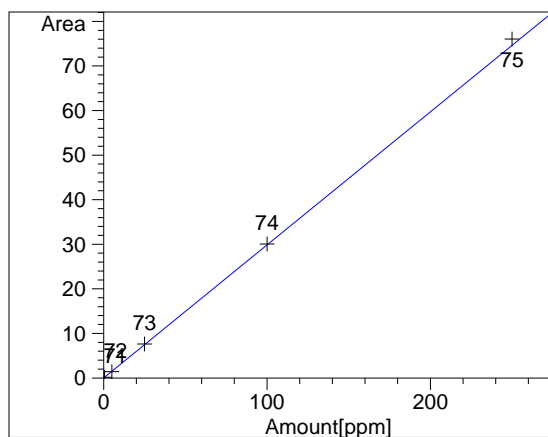
Warning : Cal. table open and changed while report was generated.

```

=====
                        Peak Sum Table
=====

```

No Entries in table

=====
Calibration Curves
=====

Ethylene Oxide at exp. RT: 2.636
FID3 B, FID3B, Back Signal
Correlation: 0.99953
Residual Std. Dev.: 0.81647
Formula: $y = mx + b$
m: 2.98600e-1
b: 1.61783e-2
x: Amount
y: Area
Calibration Level Weights:
Level 71 : 1
Level 72 : 0.01
Level 73 : 0.0004
Level 74 : 0.000025
Level 75 : 4e-006

=====


```
=====
                        Calibration Table
=====
```

Calib. Data Modified : Wednesday, March 09, 2011 11:50:15 AM

Rel. Reference Window : 0.000 %
 Abs. Reference Window : 0.100 min
 Rel. Non-ref. Window : 0.000 %
 Abs. Non-ref. Window : 0.050 min
 Uncalibrated Peaks : not reported
 Partial Calibration : Yes, identified peaks are recalibrated
 Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
 Origin : Connected
 Weight : Quadratic (Amnt)

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: FID1 A, FID1A, Front Signal

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref Grp Name
1.248	2 11	2.52500	7.61400e-1	3.31626	Methane
	12	5.05000	1.49760	3.37207	
	13	10.10000	3.00993	3.35556	
	14	40.40000	12.19621	3.31250	
	15	101.00000	31.15792	3.24155	
	16	1002.00000	326.72239	3.06682	
	17	4008.00000	1246.75745	3.21474	
	18	1.00200e4	3264.92529	3.06898	
	21	8.00000e4	2.53170e4	3.15993	
1.397	2 11	2.49750	1.46008	1.71052	Ethane
	12	4.99500	2.84306	1.75691	
	13	9.99000	5.62800	1.77505	
	14	39.96000	22.71791	1.75896	
	15	99.90000	57.83514	1.72732	
	16	999.00000	598.66555	1.66871	
	17	3996.00000	2279.66455	1.75289	
	18	9990.00000	5965.38053	1.67466	
	19	2.00800e4	1.13162e4	1.77445	
	20	5.02000e4	2.91048e4	1.72480	
1.519	1 1	2.52500	6.07715e-1	4.15491	Methane
	2	5.05000	1.22397	4.12590	
	3	10.10000	2.44817	4.12553	
	4	40.40000	10.16393	3.97484	
	5	101.00000	26.46560	3.81627	
	6	1002.00000	270.06290	3.71025	
	7	4008.00000	1083.74870	3.69827	
	8	1.00200e4	2809.46224	2.56652	

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RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
-----	--	--	-----	-----	---	--	-----
1.608	1	11 8.00000e4	2.13855e4	3.74086			
		50 1.25000	6.39127e-1	1.95579			Ethylene
		61 5.00200	2.46424	2.02984			
		62 31.26200	15.55932	2.00921			
		63 62.52500	30.80281	2.02985			
		64 250.10000	124.79735	2.00405			
		65 1950.00000	944.26626	2.06510			
		66 9750.00000	4982.07585	1.95702			
1.659	1	1 2.49750	1.21492	2.05570			Ethane
		2 4.99500	2.36933	2.10819			
		3 9.99000	4.70090	2.12513			
		4 39.96000	19.07654	2.09472			
		5 99.90000	49.55010	2.01614			
		6 999.00000	499.62769	1.99949			
		7 3996.00000	2003.68298	1.99433			
		8 9990.00000	5191.34001	1.92436			
		9 2.00800e4	9452.06803	2.12440			
		10 5.02000e4	2.44204e4	2.05566			
1.689	2	11 2.49250	2.21655	1.12449			Propane
		12 4.98500	4.29459	1.16076			
		13 9.97000	8.51687	1.17062			
		14 39.88000	34.09854	1.16955			
		15 99.70000	86.93290	1.14686			
		16 1002.00000	844.52694	1.18646			
		17 4008.00000	3216.59253	1.24604			
		18 1.00200e4	8418.74479	1.19020			
		19 2.00000e4	1.69360e4	1.18092			
		20 5.00000e4	4.36280e4	1.14605			
1.955	1	50 1.25200	8.88696e-1	1.40881			Propylene
		61 5.00800	3.58672	1.39626			
		62 31.30000	22.95884	1.36331			
		63 62.60000	45.51003	1.37552			
		64 250.40000	184.77419	1.35517			
		65 2000.00000	1439.18844	1.38967			
		66 1.00000e4	7601.84880	1.31547			
1.995	1	1 2.49250	1.80125	1.38376			Propane
		2 4.98500	3.63423	1.37168			
		3 9.97000	7.09356	1.40550			
		4 39.88000	28.74196	1.38752			
		5 99.70000	74.63092	1.33591			
		6 1002.00000	705.78043	1.41971			
		7 4008.00000	2833.95076	1.41428			
		8 1.00200e4	7342.81966	1.36460			
		9 2.00000e4	1.42045e4	1.40800			
		10 5.00000e4	3.67283e4	1.36135			
2.143	2	51 1.25600	3.72991e-1	3.36737			Acetaldehyde
		52 3.77000	1.10725	3.40482			
		53 25.13000	7.49968	3.35081			
		54 75.39000	22.30020	3.38069			
		55 251.30000	74.44786	3.37552			
2.520	2	11 2.55000	2.75654	9.25072e-1			Butane
		12 5.10000	5.78087	8.82220e-1			
		13 10.20000	11.65062	8.75490e-1			
		14 40.80000	46.36705	8.79935e-1			
		15 102.00000	117.93933	8.64851e-1			
		16 999.00000	1148.36031	8.69936e-1			
		17 3996.00000	4374.00732	9.13579e-1			
		19 4080.00000	4553.58545	8.95997e-1			
		18 9990.00000	1.14495e4	8.72526e-1			
		20 1.02000e4	1.17538e4	8.67802e-1			
2.636	2	71 5.00000e-1	1.66169e-1	3.00899			Ethylene Oxide
		72 5.00000	1.47466	2.39061			

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RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref	Grp Name
-----	--	---	-----	-----	---	-----
		73 25.00000	7.64340	3.27080		
		74 100.00000	30.06403	3.32623		
		75 250.00000	76.05633	3.28704		
2.898	1	1 2.55000	2.54103	1.00353		Butane
		2 5.10000	4.95221	1.02984		
		3 10.20000	9.79232	1.04163		
		4 40.80000	39.05260	1.04474		
		5 102.00000	101.14616	1.00844		
		6 999.00000	958.74960	1.04198		
		7 3996.00000	3841.10270	1.04033		
		9 4080.00000	3806.44604	1.07187		
		8 9990.00000	9957.59928	1.00325		
		10 1.02000e4	9864.83008	1.03398		
3.431	2	56 1.26600	7.47430e-1	1.69381		Acrolein
		57 3.80000	2.16587	1.75449		
		58 25.32000	15.16072	1.67011		
		59 75.96000	44.37594	1.71174		
		60 253.20000	147.93264	1.71159		
3.545	2	41 2.02000	1.32435	1.52528		Acetone
		42 4.55000	2.62328	1.73447		
		43 10.10000	6.37496	1.58432		
		44 40.40000	25.04633	1.61301		
		45 101.00000	57.70815	1.75019		
4.038	2	11 2.52500	3.80949	6.62818e-1		Pentane
		12 5.05000	7.37420	6.84820e-1		
		13 10.10000	14.50125	6.96492e-1		
		14 40.40000	57.64728	7.00814e-1		
		15 101.00000	146.56061	6.89135e-1		
		19 801.60000	1129.10303	7.09944e-1		
		20 2004.00000	2915.44124	6.87375e-1		
4.459	1	1 2.52500	3.19154	7.91154e-1		Pentane
		2 5.05000	6.16404	8.19267e-1		
		3 10.10000	12.19695	8.28076e-1		
		4 40.40000	48.52916	8.32489e-1		
		5 101.00000	125.36766	8.05630e-1		
		9 801.60000	941.39543	8.51502e-1		
		10 2004.00000	2445.60921	8.19428e-1		
5.680	2	11 2.55000	4.56456	5.58652e-1		Hexane
		12 5.10000	8.80256	5.79377e-1		
		13 10.20000	17.29738	5.89685e-1		
		14 40.80000	68.75628	5.93400e-1		
		15 102.00000	174.74183	5.83718e-1		
		19 399.20000	670.81059	5.95101e-1		
		20 998.00000	1731.47327	5.76388e-1		
5.889	1	81 4.01200	5.13698	7.81004e-1		Hexene
		82 10.03000	14.01679	7.15570e-1		
		83 60.18000	85.61003	7.02955e-1		
		84 200.60000	292.67167	6.85410e-1		
6.035	1	1 2.55000	3.80003	6.71048e-1		Hexane
		2 5.10000	7.36914	6.92076e-1		
		3 10.20000	14.51082	7.02924e-1		
		4 40.80000	57.65150	7.07701e-1		
		5 102.00000	148.97859	6.84662e-1		
		9 399.20000	557.25920	7.16363e-1		
		10 998.00000	1445.79500	6.90278e-1		
6.411	2	41 2.00000	3.49716	5.71892e-1		Benzene
		42 4.50000	7.66881	5.86793e-1		
		43 10.00000	17.89241	5.58896e-1		
		44 40.00000	71.20449	5.61762e-1		
		45 100.00000	166.49500	6.00619e-1		
6.773	1	31 2.00000	2.95192	6.77524e-1		Benzene
		32 4.50000	6.66055	6.75620e-1		

RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref	Grp Name
-----	--	--	-----	-----	---	---
		33	10.00000	14.91388	6.70516e-1	
		34	40.00000	59.05473	6.77338e-1	
		35	100.00000	149.68007	6.68092e-1	
6.871	2	11	2.52500	5.19710	4.85848e-1	Heptane
		12	5.05000	10.02409	5.03786e-1	
		13	10.10000	19.68500	5.13081e-1	
		14	40.40000	78.20864	5.16567e-1	
		15	101.00000	198.73366	5.08218e-1	
		19	200.16000	393.74745	5.08346e-1	
		20	500.40000	1016.58293	4.92237e-1	
7.215	1	1	2.52500	4.26092	5.92595e-1	Heptane
		2	5.05000	8.32267	6.06776e-1	
		3	10.10000	16.43417	6.14573e-1	
		4	40.40000	65.45001	6.17265e-1	
		5	101.00000	169.20620	5.96905e-1	
		9	200.60000	326.76149	6.13903e-1	
		10	500.40000	848.51154	5.89739e-1	
7.499	2	41	1.97600	3.96596	4.98240e-1	Toluene
		42	4.44600	8.74511	5.08399e-1	
		43	9.88000	20.60904	4.79401e-1	
		44	39.52000	82.11844	4.81256e-1	
		45	98.80000	191.62931	5.15579e-1	
7.853	1	31	1.97600	3.35495	5.88980e-1	Toluene
		32	4.44600	7.55255	5.88675e-1	
		33	9.88000	17.12396	5.76969e-1	
		34	39.52000	67.83909	5.82555e-1	
		35	98.80000	171.65477	5.75574e-1	
8.117	1	81	4.01200	6.16469	6.50803e-1	Octane
		82	10.03000	18.66742	5.37300e-1	
		83	60.18000	116.62098	5.16031e-1	
		84	200.60000	393.66553	5.09570e-1	
8.296	2	41	1.99000	4.43971	4.48227e-1	Ethylbenzene
		42	4.47750	9.78277	4.57692e-1	
		43	9.95000	23.52002	4.23044e-1	
		44	39.80000	94.07535	4.23065e-1	
		45	99.50000	218.93179	4.54479e-1	
8.341	2	41	2.01200	4.45192	4.51939e-1	p-Xylene
		42	4.52700	9.84299	4.59921e-1	
		43	10.06000	23.81992	4.22336e-1	
		44	40.24000	95.20871	4.22650e-1	
		45	100.60000	221.19145	4.54810e-1	
8.530	2	41	2.04000	4.44911	4.58519e-1	o-Xylene
		42	4.59000	9.86361	4.65347e-1	
		43	10.20000	24.08467	4.23506e-1	
		44	40.80000	96.69026	4.21966e-1	
		45	102.00000	224.73295	4.53872e-1	
8.639	1	31	1.99000	3.66896	5.42389e-1	Ethylbenzene
		32	4.47750	8.34552	5.36515e-1	
		33	9.95000	19.36179	5.13899e-1	
		34	39.80000	77.20119	5.15536e-1	
		35	99.50000	194.76450	5.10873e-1	
8.697	1	31	2.01200	3.72662	5.39899e-1	p-Xylene
		32	4.52700	8.49951	5.32619e-1	
		33	10.06000	19.81466	5.07705e-1	
		34	40.24000	79.05763	5.08996e-1	
		35	100.60000	199.19728	5.05027e-1	
8.889	1	31	2.04000	3.69963	5.51407e-1	o-Xylene
		32	4.59000	8.46286	5.42370e-1	
		33	10.20000	19.93391	5.11691e-1	
		34	40.80000	79.79545	5.11307e-1	
		35	102.00000	201.13818	5.07114e-1	

2 Warnings or Errors :

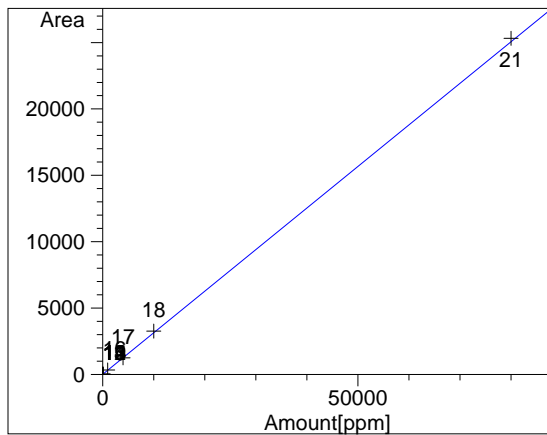
Warning : Overlapping peak time windows at 1.955 min, signal 1

Warning : Overlapping peak time windows at 8.296 min, signal 2

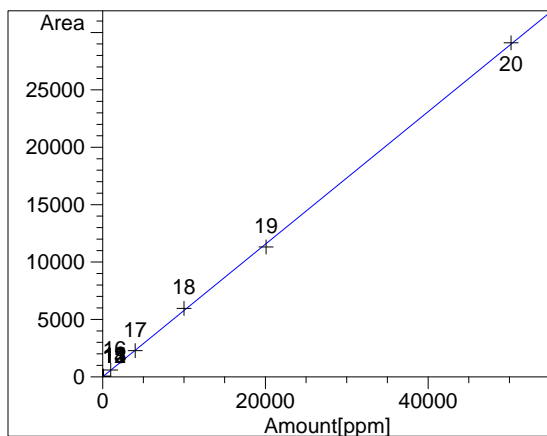
=====
Peak Sum Table
=====

No Entries in table
=====

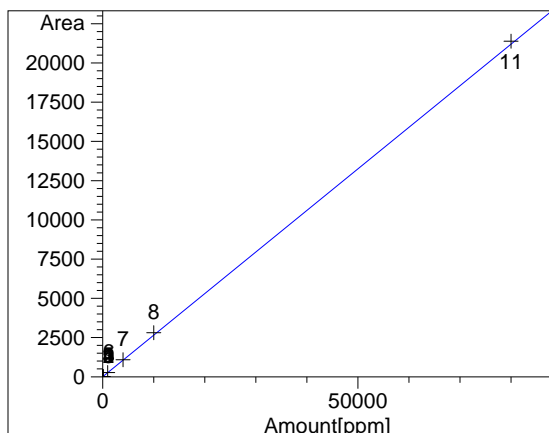
=====
Calibration Curves
=====



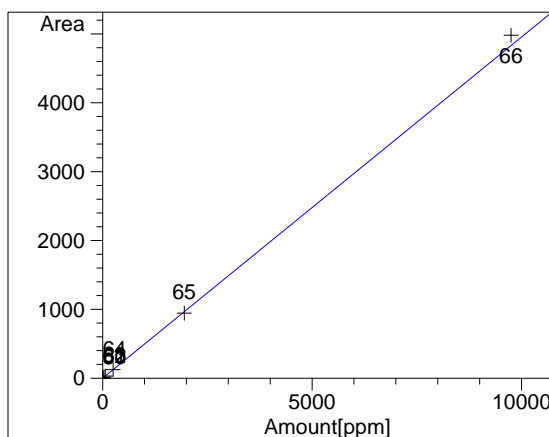
Methane at exp. RT: 1.248
FID3 B, FID3B, Back Signal
Correlation: 0.99947
Residual Std. Dev.: 103.26753
Formula: $y = mx + b$
m: 3.13429e-1
b: -4.79037e-2
x: Amount
y: Area
Calibration Level Weights:
Level 11 : 1
Level 12 : 0.25
Level 13 : 0.0625
Level 14 : 0.003906
Level 15 : 0.000625
Level 16 : 6.3502e-006
Level 17 : 3.96887e-007
Level 18 : 6.3502e-008
Level 21 : 9.96191e-010



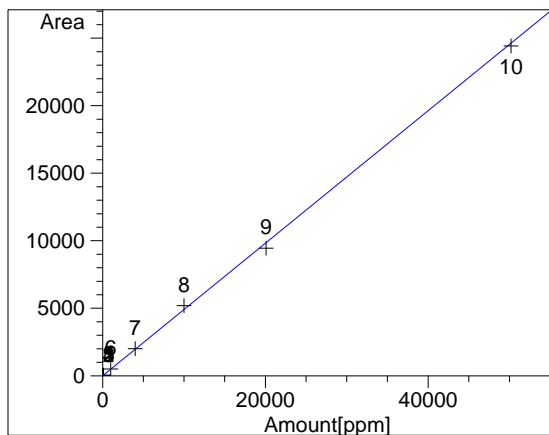
Ethane at exp. RT: 1.397
FID3 B, FID3B, Back Signal
Correlation: 0.99970
Residual Std. Dev.: 127.78524
Formula: $y = mx + b$
m: 5.77674e-1
b: -2.59978e-3
x: Amount
y: Area
Calibration Level Weights:
Level 11 : 1
Level 12 : 0.25
Level 13 : 0.0625
Level 14 : 0.003906
Level 15 : 0.000625
Level 16 : 6.25e-006
Level 17 : 3.90625e-007
Level 18 : 6.25e-008
Level 19 : 1.54698e-008
Level 20 : 2.47516e-009



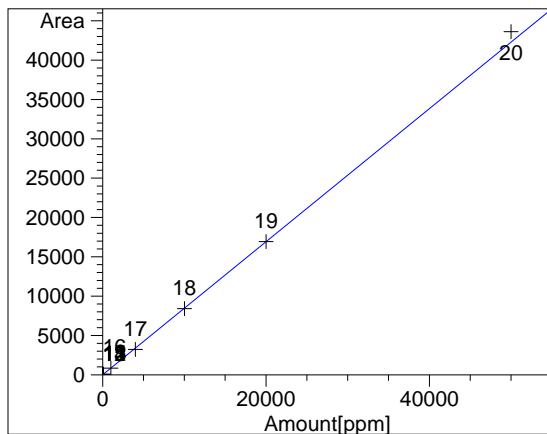
Methane at exp. RT: 1.519
 FID1 A, FID1A, Front Signal
 Correlation: 0.99918
 Residual Std. Dev.: 89.01365
 Formula: $y = mx + b$
 m: 2.65100e-1
 b: -8.12227e-2
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 1 : 1
 Level 2 : 0.25
 Level 3 : 0.0625
 Level 4 : 0.003906
 Level 5 : 0.000625
 Level 6 : 6.3502e-006
 Level 7 : 3.96887e-007
 Level 8 : 6.3502e-008
 Level 11 : 9.96191e-010



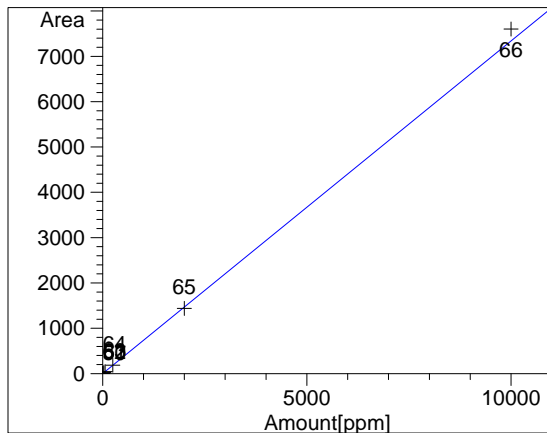
Ethylene at exp. RT: 1.608
 FID1 A, FID1A, Front Signal
 Correlation: 0.99984
 Residual Std. Dev.: 67.18851
 Formula: $y = mx + b$
 m: 4.95745e-1
 b: 1.73925e-2
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 50 : 1
 Level 61 : 0.06245
 Level 62 : 0.001599
 Level 63 : 0.0004
 Level 64 : 0.000025
 Level 65 : 4.10914e-007
 Level 66 : 1.64366e-008



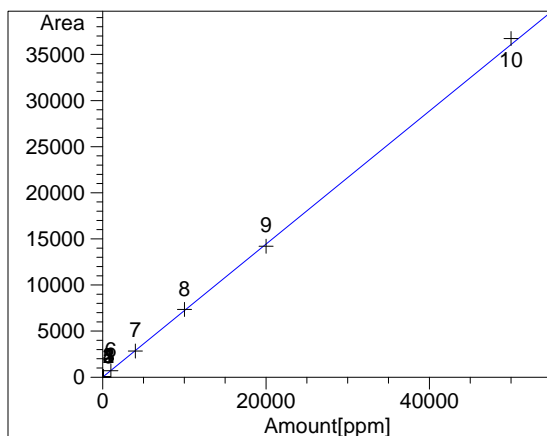
Ethane at exp. RT: 1.659
 FID1 A, FID1A, Front Signal
 Correlation: 0.99941
 Residual Std. Dev.: 193.03311
 Formula: $y = mx + b$
 m: 4.90897e-1
 b: -3.50620e-2
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 1 : 1
 Level 2 : 0.25
 Level 3 : 0.0625
 Level 4 : 0.003906
 Level 5 : 0.000625
 Level 6 : 6.25e-006
 Level 7 : 3.90625e-007
 Level 8 : 6.25e-008
 Level 9 : 1.54698e-008
 Level 10 : 2.47516e-009



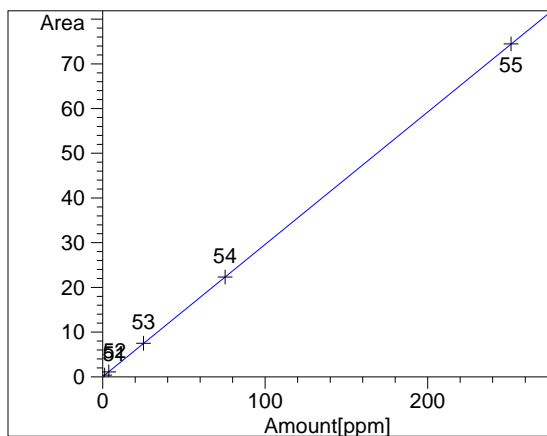
Propane at exp. RT: 1.689
FID3 B, FID3B, Back Signal
Correlation: 0.99969
Residual Std. Dev.: 471.50182
Formula: $y = mx + b$
m: 8.46145e-1
b: 1.02220e-1
x: Amount
y: Area
Calibration Level Weights:
Level 11 : 1
Level 12 : 0.25
Level 13 : 0.0625
Level 14 : 0.003906
Level 15 : 0.000625
Level 16 : 6.18778e-006
Level 17 : 3.86736e-007
Level 18 : 6.18778e-008
Level 19 : 1.55314e-008
Level 20 : 2.48502e-009



Propylene at exp. RT: 1.955
FID1 A, FID1A, Front Signal
Correlation: 0.99981
Residual Std. Dev.: 116.37873
Formula: $y = mx + b$
m: 7.34333e-1
b: -3.43577e-2
x: Amount
y: Area
Calibration Level Weights:
Level 50 : 1
Level 61 : 0.0625
Level 62 : 0.0016
Level 63 : 0.0004
Level 64 : 0.000025
Level 65 : 3.91876e-007
Level 66 : 1.5675e-008



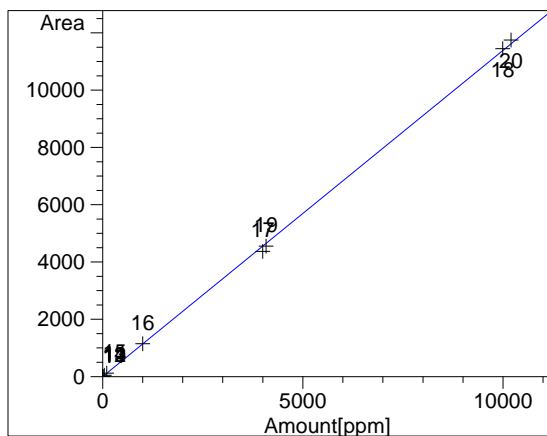
Propane at exp. RT: 1.995
FID1 A, FID1A, Front Signal
Correlation: 0.99977
Residual Std. Dev.: 244.04116
Formula: $y = mx + b$
m: 7.21810e-1
b: 4.61796e-3
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.0625
Level 4 : 0.003906
Level 5 : 0.000625
Level 6 : 6.18778e-006
Level 7 : 3.86736e-007
Level 8 : 6.18778e-008
Level 9 : 1.55314e-008
Level 10 : 2.48502e-009



Acetaldehyde at exp. RT: 2.143
FID3 B, FID3B, Back Signal
Correlation: 0.99998
Residual Std. Dev.: 0.03765
Formula: $y = mx + b$
m: $2.96232e-1$
b: $-4.97377e-6$
x: Amount
y: Area

Calibration Level Weights:

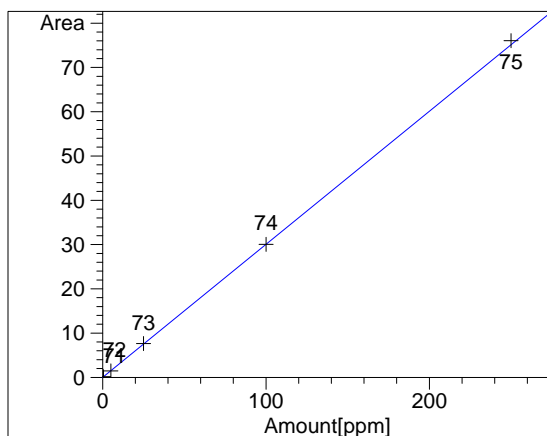
Level 51	: 1
Level 52	: 0.110993
Level 53	: 0.002498
Level 54	: 0.000278
Level 55	: 0.000025



Butane at exp. RT: 2.520
FID3 B, FID3B, Back Signal
Correlation: 0.99980
Residual Std. Dev.: 89.06531
Formula: $y = mx + b$
m: 1.13920
b: $-1.16289e-1$
x: Amount
y: Area

Calibration Level Weights:

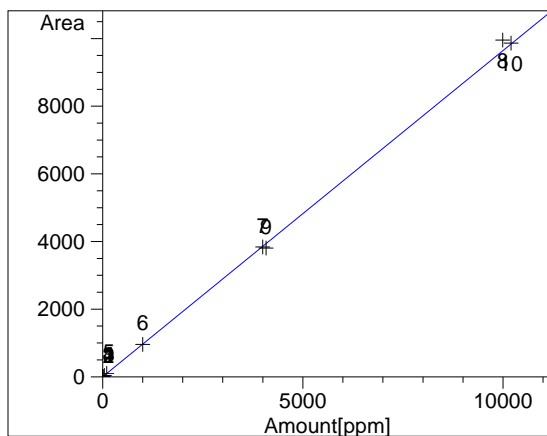
Level 11	: 1
Level 12	: 0.25
Level 13	: 0.0625
Level 14	: 0.003906
Level 15	: 0.000625
Level 16	: $6.51552e-006$
Level 17	: $4.0722e-007$
Level 19	: $3.90625e-007$
Level 18	: $6.51552e-008$
Level 20	: $6.25e-008$



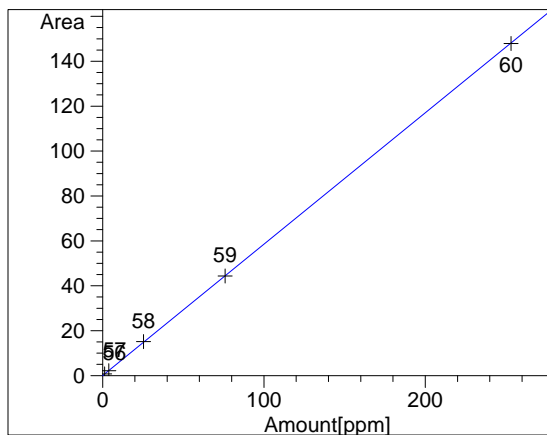
Ethylene Oxide at exp. RT: 2.636
FID3 B, FID3B, Back Signal
Correlation: 0.99984
Residual Std. Dev.: 0.51982
Formula: $y = mx + b$
m: $3.00595e-1$
b: $1.54816e-2$
x: Amount
y: Area

Calibration Level Weights:

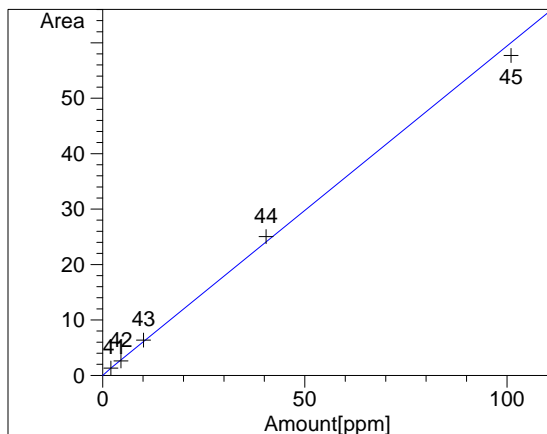
Level 71	: 1
Level 72	: 0.01
Level 73	: 0.0004
Level 74	: 0.000025
Level 75	: $4e-006$



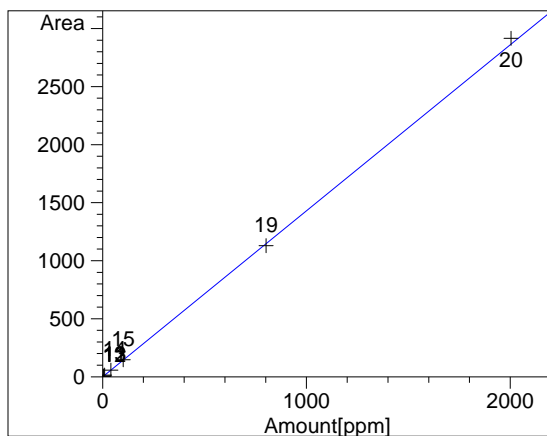
Butane at exp. RT: 2.898
 FID1 A, FID1A, Front Signal
 Correlation: 0.99978
 Residual Std. Dev.: 122.69019
 Formula: $y = mx + b$
 m: 9.64653e-1
 b: 6.59069e-2
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 1 : 1
 Level 2 : 0.25
 Level 3 : 0.0625
 Level 4 : 0.003906
 Level 5 : 0.000625
 Level 6 : 6.51552e-006
 Level 7 : 4.0722e-007
 Level 9 : 3.90625e-007
 Level 8 : 6.51552e-008
 Level 10 : 6.25e-008



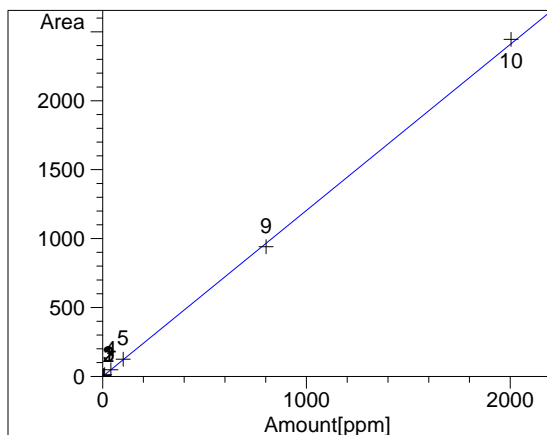
Acrolein at exp. RT: 3.431
 FID3 B, FID3B, Back Signal
 Correlation: 0.99980
 Residual Std. Dev.: 0.26389
 Formula: $y = mx + b$
 m: 5.85386e-1
 b: 5.75412e-4
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 56 : 1
 Level 57 : 0.110994
 Level 58 : 0.0025
 Level 59 : 0.000278
 Level 60 : 0.000025



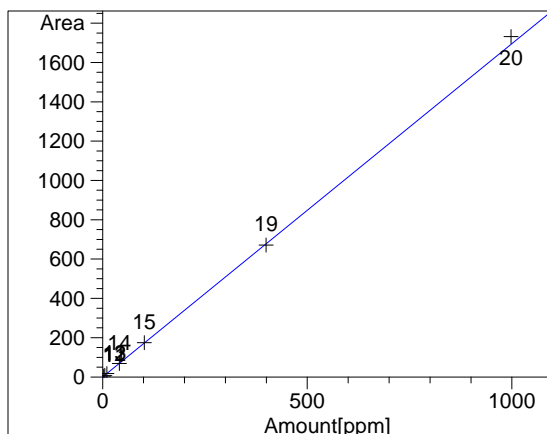
Acetone at exp. RT: 3.545
 FID3 B, FID3B, Back Signal
 Correlation: 0.99809
 Residual Std. Dev.: 1.47445
 Formula: $y = mx + b$
 m: 5.93531e-1
 b: 1.02554e-1
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 41 : 1
 Level 42 : 0.197097
 Level 43 : 0.04
 Level 44 : 0.0025
 Level 45 : 0.0004



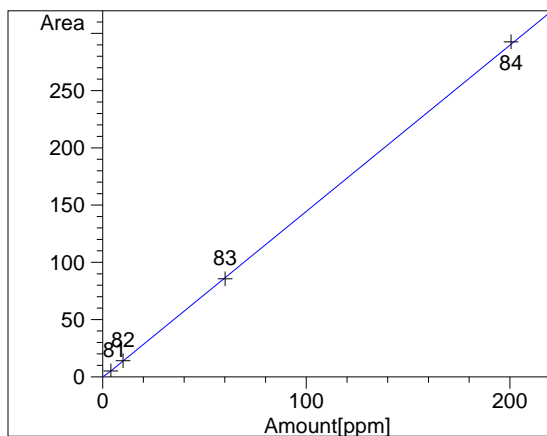
Pentane at exp. RT: 4.038
FID3 B, FID3B, Back Signal
Correlation: 0.99990
Residual Std. Dev.: 23.09433
Formula: $y = mx + b$
m: 1.43055
b: 1.81274e-1
x: Amount
y: Area
Calibration Level Weights:
Level 11 : 1
Level 12 : 0.25
Level 13 : 0.0625
Level 14 : 0.003906
Level 15 : 0.000625
Level 19 : 9.92219e-006
Level 20 : 1.58755e-006



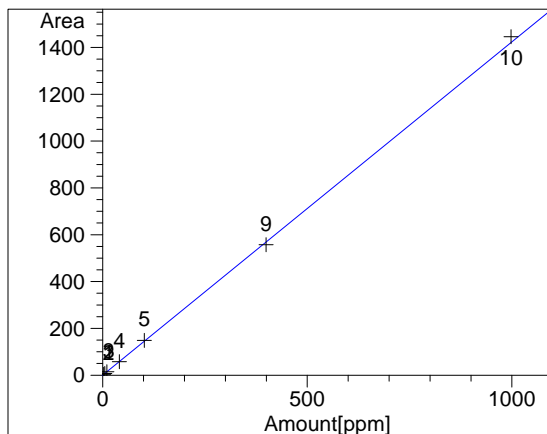
Pentane at exp. RT: 4.459
FID1 A, FID1A, Front Signal
Correlation: 0.99979
Residual Std. Dev.: 17.74339
Formula: $y = mx + b$
m: 1.20484
b: 1.30973e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.0625
Level 4 : 0.003906
Level 5 : 0.000625
Level 9 : 9.92219e-006
Level 10 : 1.58755e-006



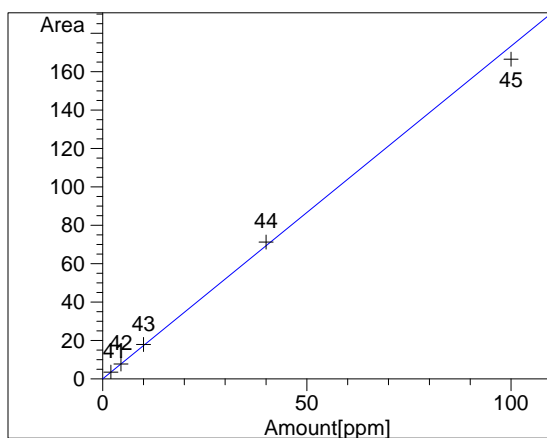
Hexane at exp. RT: 5.680
FID3 B, FID3B, Back Signal
Correlation: 0.99988
Residual Std. Dev.: 17.43961
Formula: $y = mx + b$
m: 1.69625
b: 2.09619e-1
x: Amount
y: Area
Calibration Level Weights:
Level 11 : 1
Level 12 : 0.25
Level 13 : 0.0625
Level 14 : 0.003906
Level 15 : 0.000625
Level 19 : 0.000041
Level 20 : 6.52859e-006



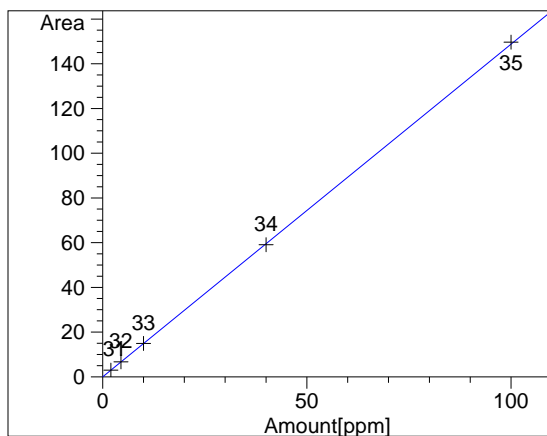
Hexene at exp. RT: 5.889
FID1 A, FID1A, Front Signal
Correlation: 0.99993
Residual Std. Dev.: 1.63204
Formula: $y = mx + b$
m: 1.45228
b: -6.73861e-1
x: Amount
y: Area
Calibration Level Weights:
Level 81 : 1
Level 82 : 0.16
Level 83 : 0.004444
Level 84 : 0.0004



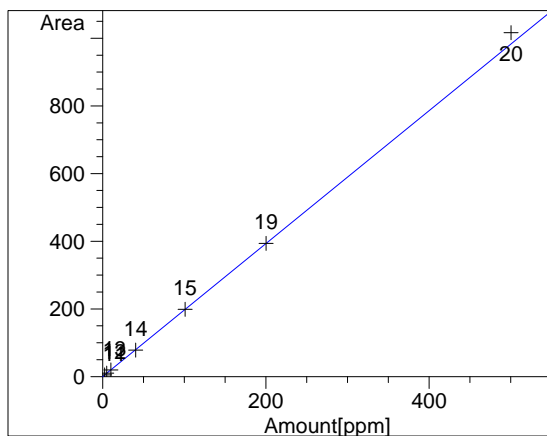
Hexane at exp. RT: 6.035
FID1 A, FID1A, Front Signal
Correlation: 0.99982
Residual Std. Dev.: 12.11973
Formula: $y = mx + b$
m: 1.42419
b: 1.47322e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.0625
Level 4 : 0.003906
Level 5 : 0.000625
Level 9 : 0.000041
Level 10 : 6.52859e-006



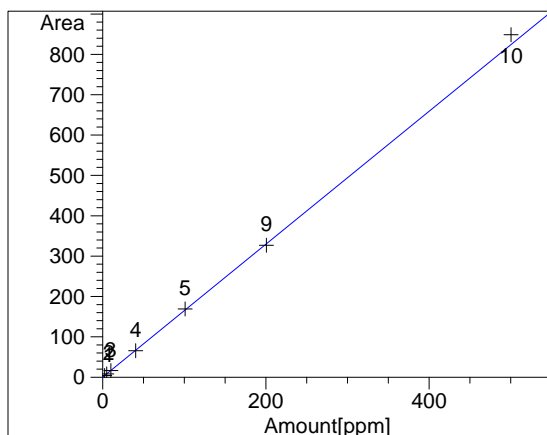
Benzene at exp. RT: 6.411
FID3 B, FID3B, Back Signal
Correlation: 0.99931
Residual Std. Dev.: 4.12327
Formula: $y = mx + b$
m: 1.73350
b: 2.28338e-2
x: Amount
y: Area
Calibration Level Weights:
Level 41 : 1
Level 42 : 0.197531
Level 43 : 0.04
Level 44 : 0.0025
Level 45 : 0.0004



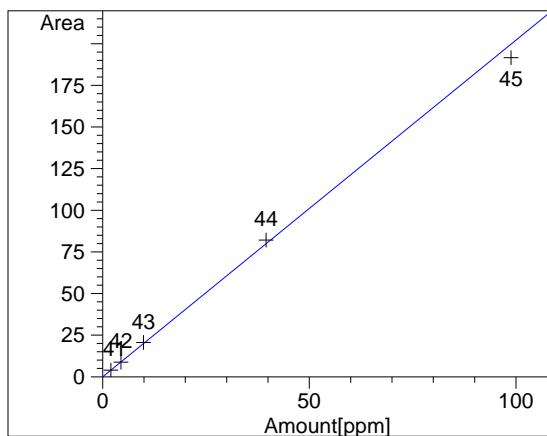
Benzene at exp. RT: 6.773
 FID1 A, FID1A, Front Signal
 Correlation: 0.99998
 Residual Std. Dev.: 0.55546
 Formula: $y = mx + b$
 m: 1.48866
 b: -2.64467e-2
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 31 : 1
 Level 32 : 0.197531
 Level 33 : 0.04
 Level 34 : 0.0025
 Level 35 : 0.0004



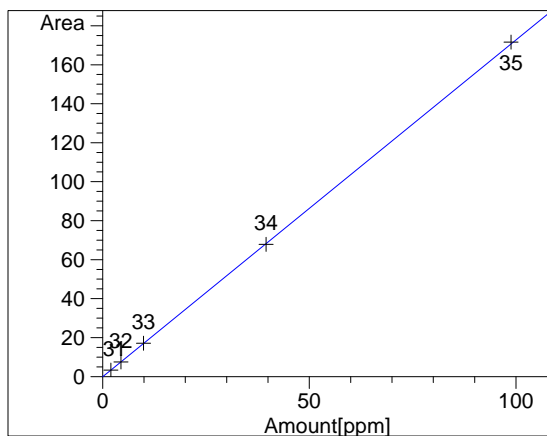
Heptane at exp. RT: 6.871
 FID3 B, FID3B, Back Signal
 Correlation: 0.99978
 Residual Std. Dev.: 14.73776
 Formula: $y = mx + b$
 m: 1.96537
 b: 1.86241e-1
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 11 : 1
 Level 12 : 0.25
 Level 13 : 0.0625
 Level 14 : 0.003906
 Level 15 : 0.000625
 Level 19 : 0.000159
 Level 20 : 0.000025



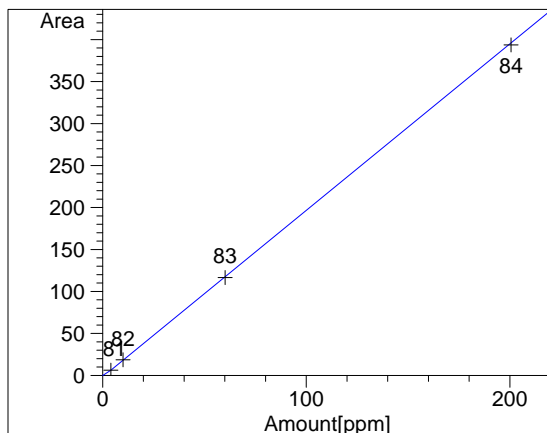
Heptane at exp. RT: 7.215
 FID1 A, FID1A, Front Signal
 Correlation: 0.99978
 Residual Std. Dev.: 10.86942
 Formula: $y = mx + b$
 m: 1.64796
 b: 6.38674e-2
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 1 : 1
 Level 2 : 0.25
 Level 3 : 0.0625
 Level 4 : 0.003906
 Level 5 : 0.000625
 Level 9 : 0.000158
 Level 10 : 0.000025



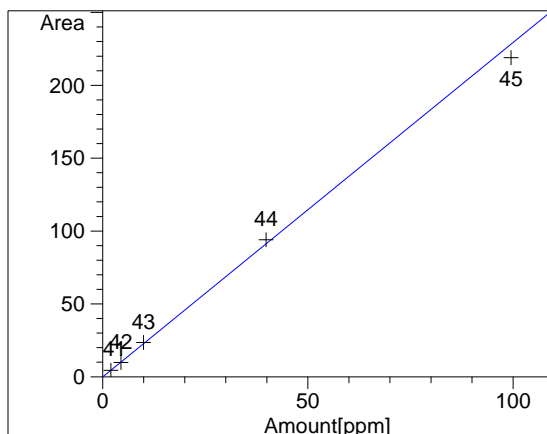
Toluene at exp. RT: 7.499
 FID3 B, FID3B, Back Signal
 Correlation: 0.99922
 Residual Std. Dev.: 4.91976
 Formula: $y = mx + b$
 m: 2.02300
 b: -4.32863e-2
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 41 : 1
 Level 42 : 0.197531
 Level 43 : 0.04
 Level 44 : 0.0025
 Level 45 : 0.0004



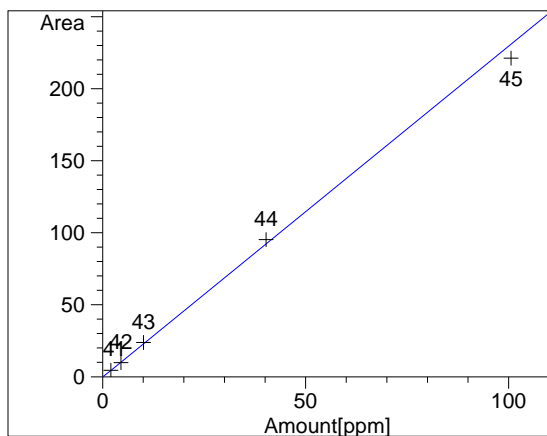
Toluene at exp. RT: 7.853
 FID1 A, FID1A, Front Signal
 Correlation: 0.99996
 Residual Std. Dev.: 0.58056
 Formula: $y = mx + b$
 m: 1.72895
 b: -7.02934e-2
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 31 : 1
 Level 32 : 0.197531
 Level 33 : 0.04
 Level 34 : 0.0025
 Level 35 : 0.0004



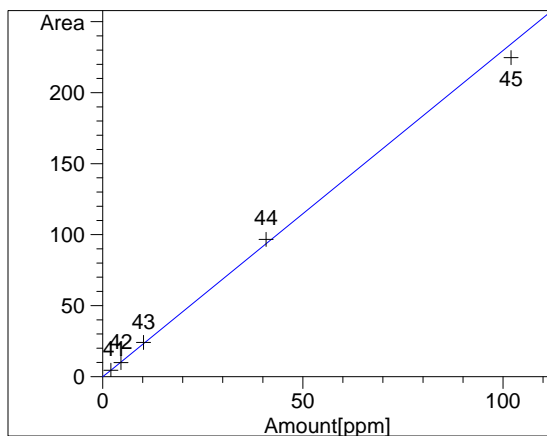
Octane at exp. RT: 8.117
 FID1 A, FID1A, Front Signal
 Correlation: 0.99981
 Residual Std. Dev.: 2.03425
 Formula: $y = mx + b$
 m: 1.98413
 b: -1.72306
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 81 : 1
 Level 82 : 0.16
 Level 83 : 0.004444
 Level 84 : 0.0004



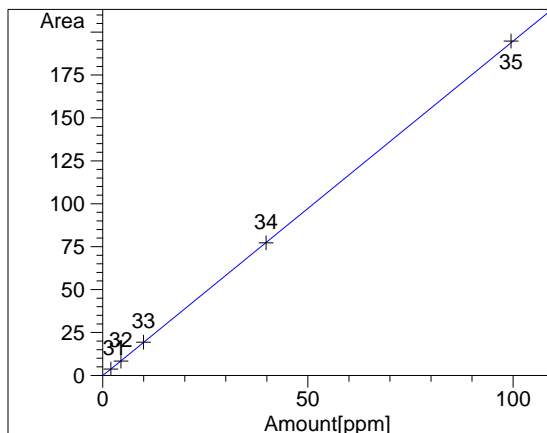
Ethylbenzene at exp. RT: 8.296
 FID3 B, FID3B, Back Signal
 Correlation: 0.99903
 Residual Std. Dev.: 5.69231
 Formula: $y = mx + b$
 m: 2.29639
 b: -1.60455e-1
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 41 : 1
 Level 42 : 0.197531
 Level 43 : 0.04
 Level 44 : 0.0025
 Level 45 : 0.0004



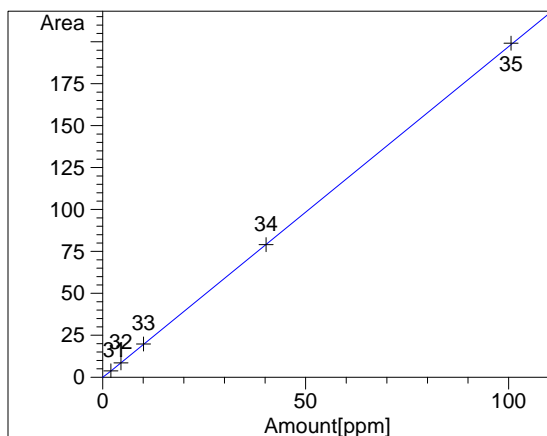
p-Xylene at exp. RT: 8.341
 FID3 B, FID3B, Back Signal
 Correlation: 0.99895
 Residual Std. Dev.: 5.96440
 Formula: $y = mx + b$
 m: 2.29882
 b: -2.04920e-1
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 41 : 1
 Level 42 : 0.197531
 Level 43 : 0.04
 Level 44 : 0.0025
 Level 45 : 0.0004



o-Xylene at exp. RT: 8.530
 FID3 B, FID3B, Back Signal
 Correlation: 0.99889
 Residual Std. Dev.: 5.89482
 Formula: $y = mx + b$
 m: 2.30096
 b: -2.86215e-1
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 41 : 1
 Level 42 : 0.197531
 Level 43 : 0.04
 Level 44 : 0.0025
 Level 45 : 0.0004



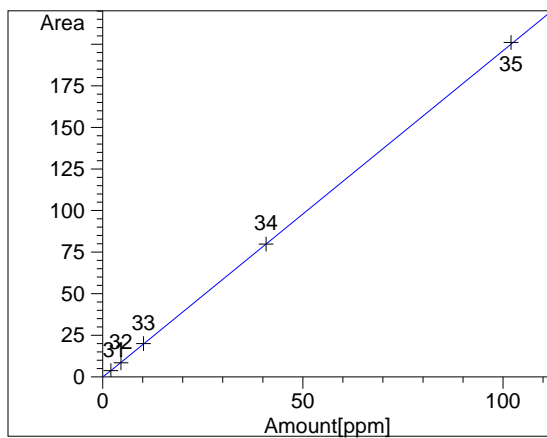
Ethylbenzene at exp. RT: 8.639
 FID1 A, FID1A, Front Signal
 Correlation: 0.99991
 Residual Std. Dev.: 0.54875
 Formula: $y = mx + b$
 m: 1.95080
 b: -2.36050e-1
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 31 : 1
 Level 32 : 0.197531
 Level 33 : 0.04
 Level 34 : 0.0025
 Level 35 : 0.0004



p-Xylene at exp. RT: 8.697
 FID1 A, FID1A, Front Signal
 Correlation: 0.99990
 Residual Std. Dev.: 0.47293
 Formula: $y = mx + b$
 m: 1.97529
 b: -2.72690e-1
 x: Amount
 y: Area
 Calibration Level Weights:
 Level 31 : 1
 Level 32 : 0.197531
 Level 33 : 0.04
 Level 34 : 0.0025
 Level 35 : 0.0004

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Level 35 : 0.0004

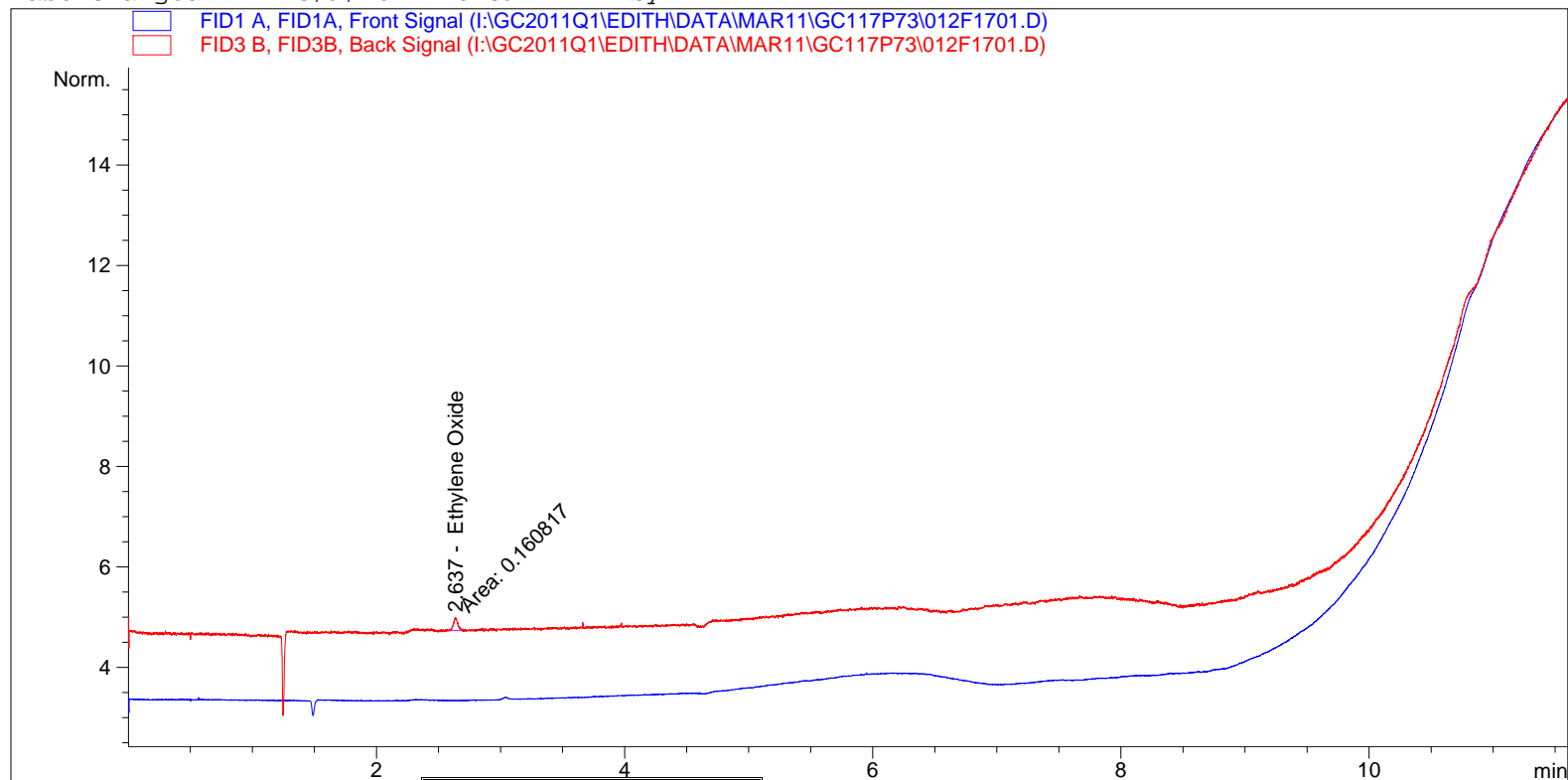


o-Xylene at exp. RT: 8.889
FID1 A, FID1A, Front Signal
Correlation: 0.99985
Residual Std. Dev.: 0.60202
Formula: $y = mx + b$
m: 1.96558
b: -3.43396e-1
x: Amount
y: Area
Calibration Level Weights:
Level 31 : 1
Level 32 : 0.197531
Level 33 : 0.04
Level 34 : 0.0025
Level 35 : 0.0004

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Acq. Operator	: kam	Seq. Line	: 17
Acq. Instrument	: Edith online	Location	: Vial 12
Injection Date	: 3/8/2011 1:17:01 PM	Inj	: 1
		Inj Volume	: 250 µl
Acq. Method	: G:\GC2011Q1\EDITH\METHODS\GC117P56.M		
Last changed	: 3/4/2011 11:14:27 AM		
Analysis Method	: I:\GC2011Q1\EDITH\METHODS\GC117P73.M		
Last changed	: 3/9/2011 10:59:12 AM by KAM		



Manual Int. "II" (KAM)

External Standard Report

Sorted By : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

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RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene
Totals :				0.00000		

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.637	MM	1.60817e-1	2.99916	4.82314e-1		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene
Totals :				4.82314e-1		

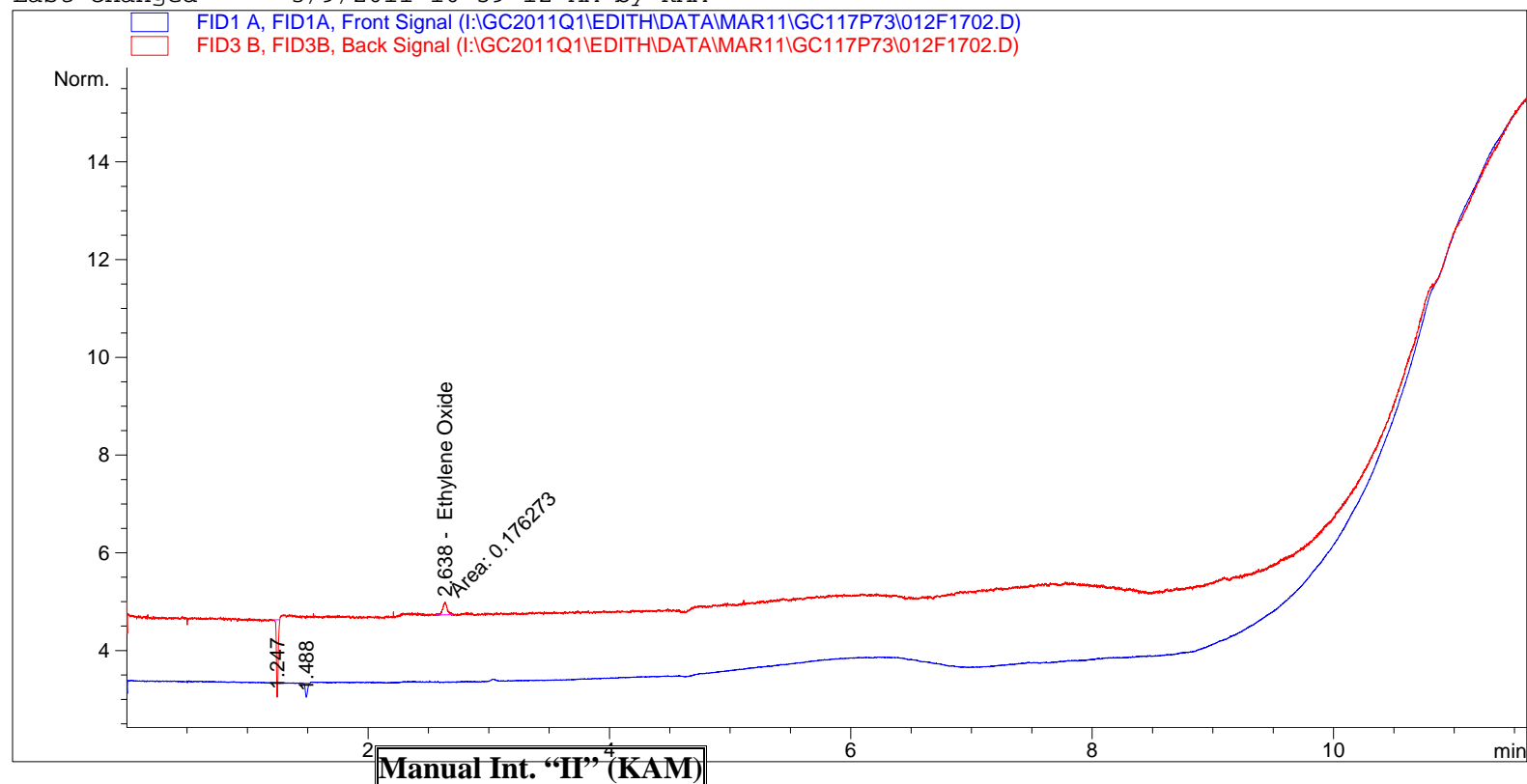
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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

```
=====
Acq. Operator   : kam                      Seq. Line :   17
Acq. Instrument : Edith online              Location  : Vial 12
Injection Date  : 3/8/2011 1:37:40 PM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 10:59:12 AM by KAM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene
Totals :				0.00000		

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.638	MM	1.76273e-1	3.01243	5.31009e-1		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene
Totals :				5.31009e-1		

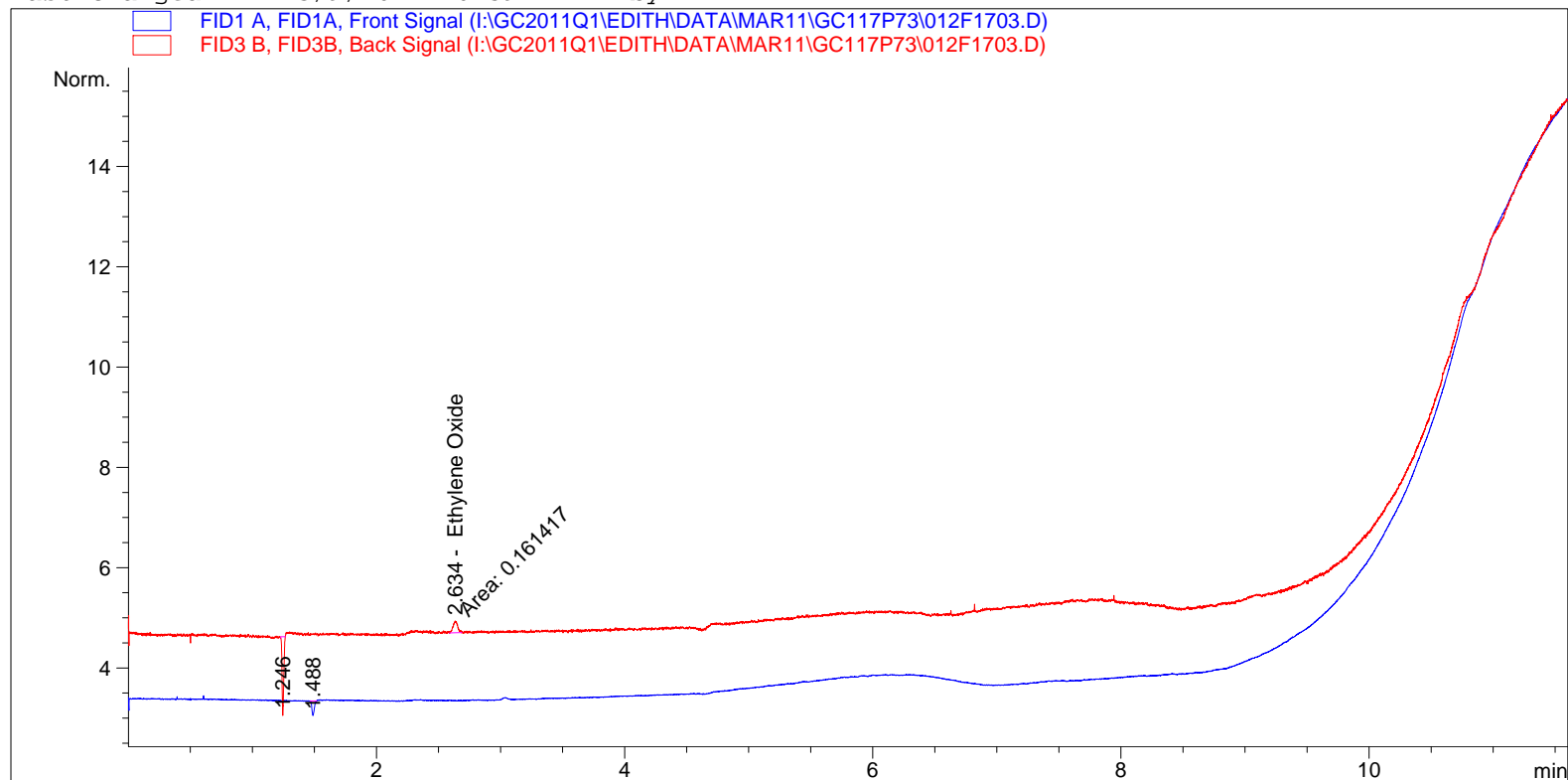
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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

```
=====
Acq. Operator   : kam                      Seq. Line :   17
Acq. Instrument : Edith online              Location  : Vial 12
Injection Date  : 3/8/2011 1:58:25 PM      Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 10:59:12 AM by KAM
=====
```



Manual Int. "I" (KAM)

External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene
Totals :				0.00000		

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.634	MM	1.61417e-1	2.99916	4.84114e-1		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene
Totals :				4.84114e-1		

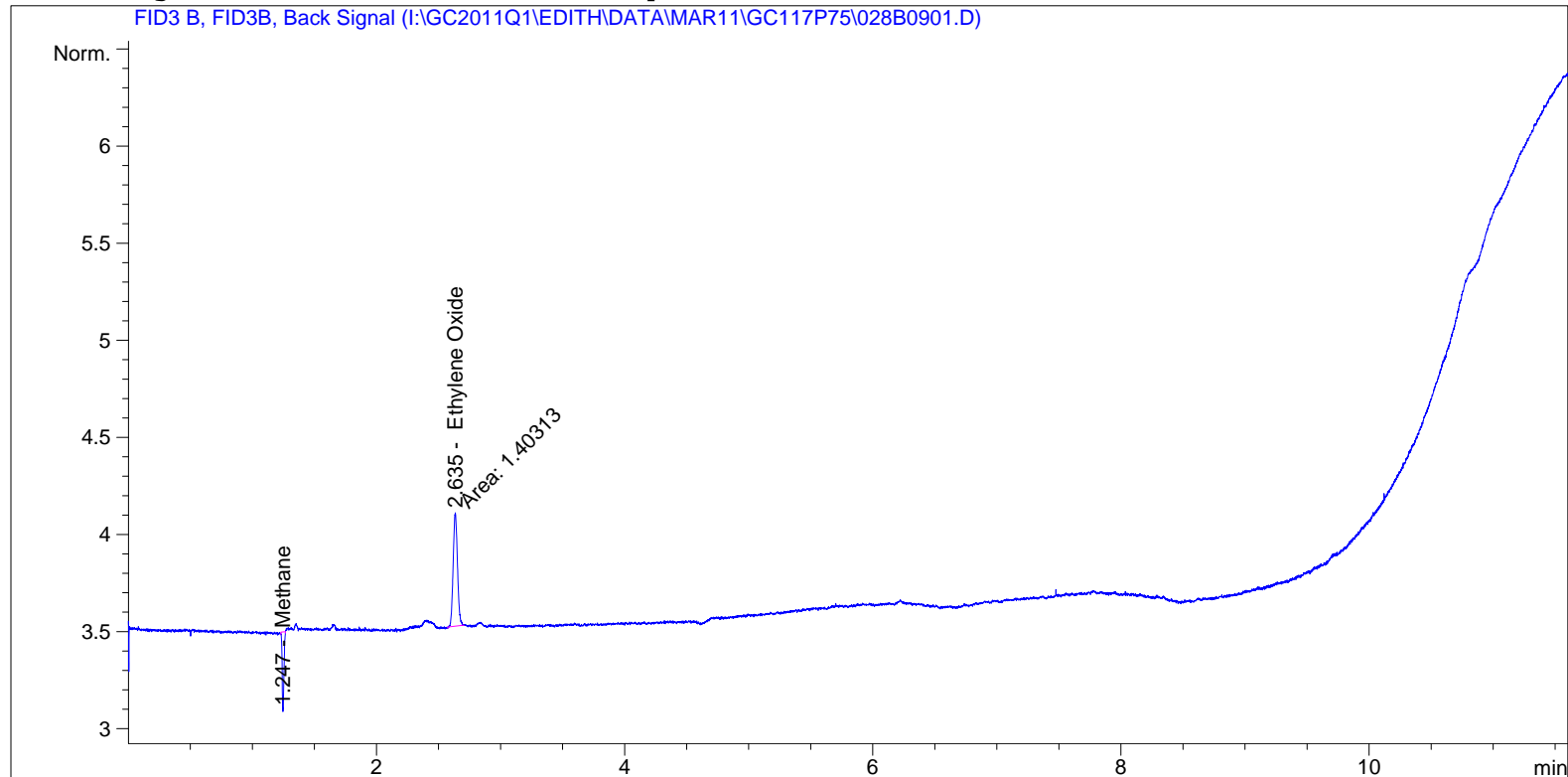
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    9
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 12:01:41 PM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, March 09, 2011 11:50:15 AM
Multiplier:     : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

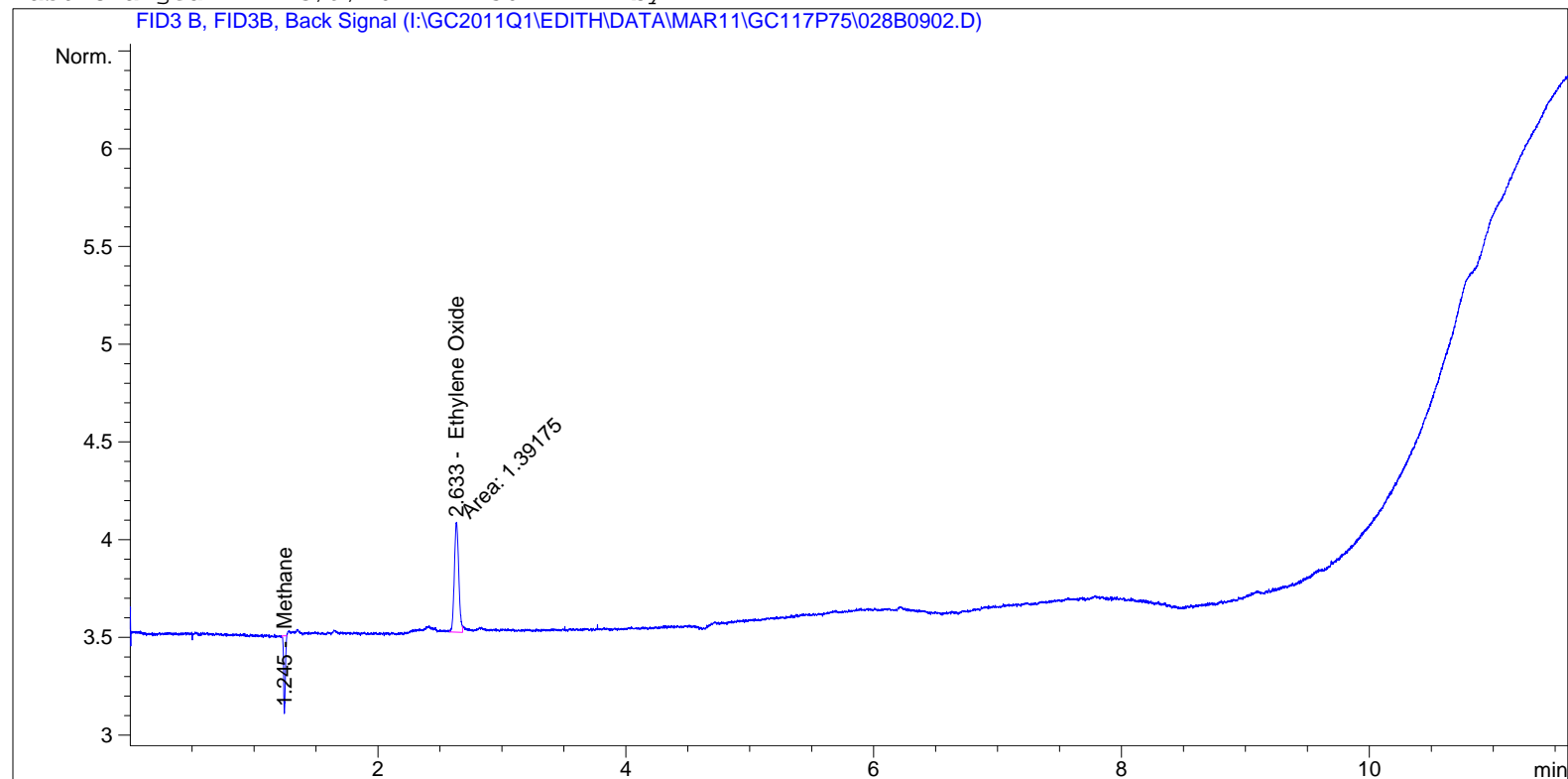
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.247	BP N	3.84380e-1	3.39608	1.30539		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.635	MM	1.40313	3.29003	4.61634		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene

Manual Int. "II" (KAM)

=====

Acq. Operator	: JBB	Seq. Line	: 9
Acq. Instrument	: Edith online	Location	: Vial 28
Injection Date	: 3/9/2011 12:22:21 PM	Inj	: 2
		Inj Volume	: 250 µl

Acq. Method : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed : 3/9/2011 11:50:27 AM by KAM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed : 3/9/2011 11:50:27 AM by KAM



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, March 09, 2011 11:50:15 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.245	BP N	3.64132e-1	3.39608	1.23662		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.633	MM	1.39175	3.28973	4.57850		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene

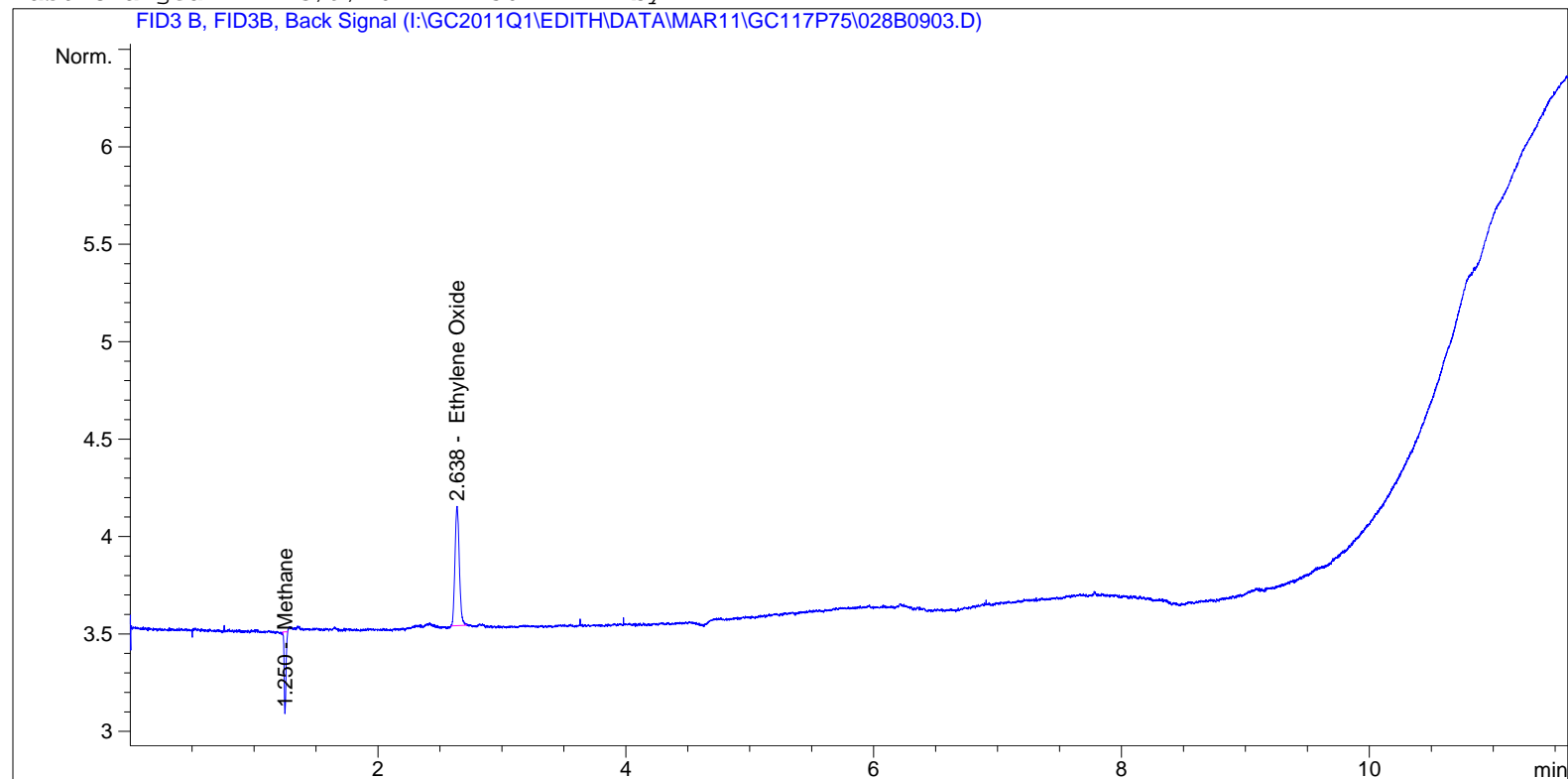
Manual Int. "II" (KAM)


```

=====
Acq. Operator   : JBB                      Seq. Line :    9
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 12:43:08 PM      Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
=====

```



External Standard Report

```

Sorted By      : Signal
Calib. Data Modified : Wednesday, March 09, 2011 11:50:15 AM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs

```

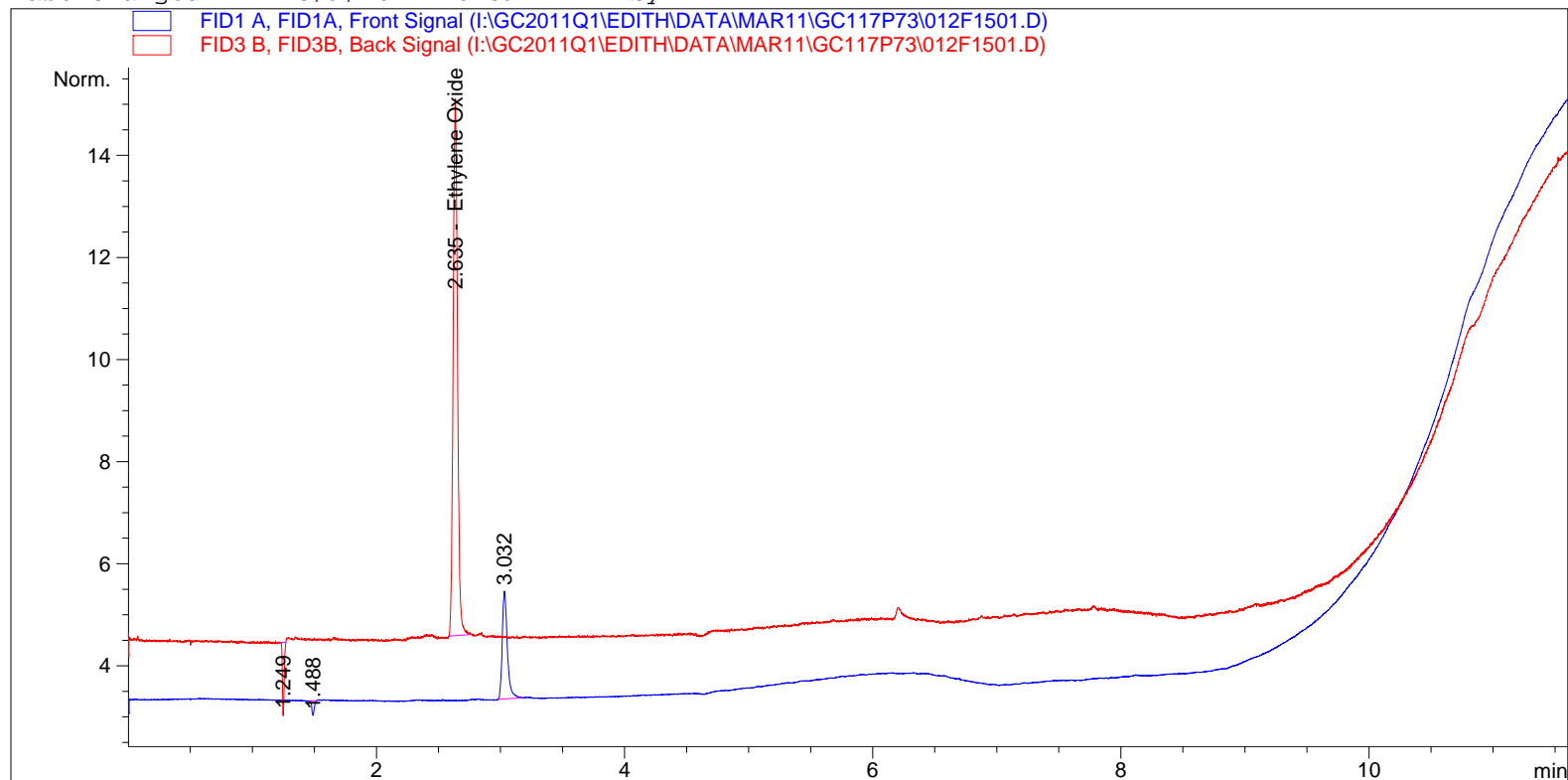
Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.250	BP N	4.09339e-1	3.39608	1.39015		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.638	BB	1.50304	3.29247	4.94871		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene

EA# 0311-50 Page 57 of 95

=====

Acq. Operator	: kam	Seq. Line	: 15
Acq. Instrument	: Edith online	Location	: Vial 12
Injection Date	: 3/8/2011 11:15:03 AM	Inj	: 1
		Inj Volume	: 250 µl
Acq. Method	: G:\GC2011Q1\EDITH\METHODS\GC117P56.M		
Last changed	: 3/4/2011 11:14:27 AM		
Analysis Method	: I:\GC2011Q1\EDITH\METHODS\GC117P73.M		
Last changed	: 3/9/2011 10:59:12 AM by KAM		



=====

External Standard Report

=====

Sorted By : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

EA# 0311-50 Page 58 of 93

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene
Totals :				0.00000		

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.635	BB	7.73374	3.23858	25.04634		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene
Totals :				25.04634		

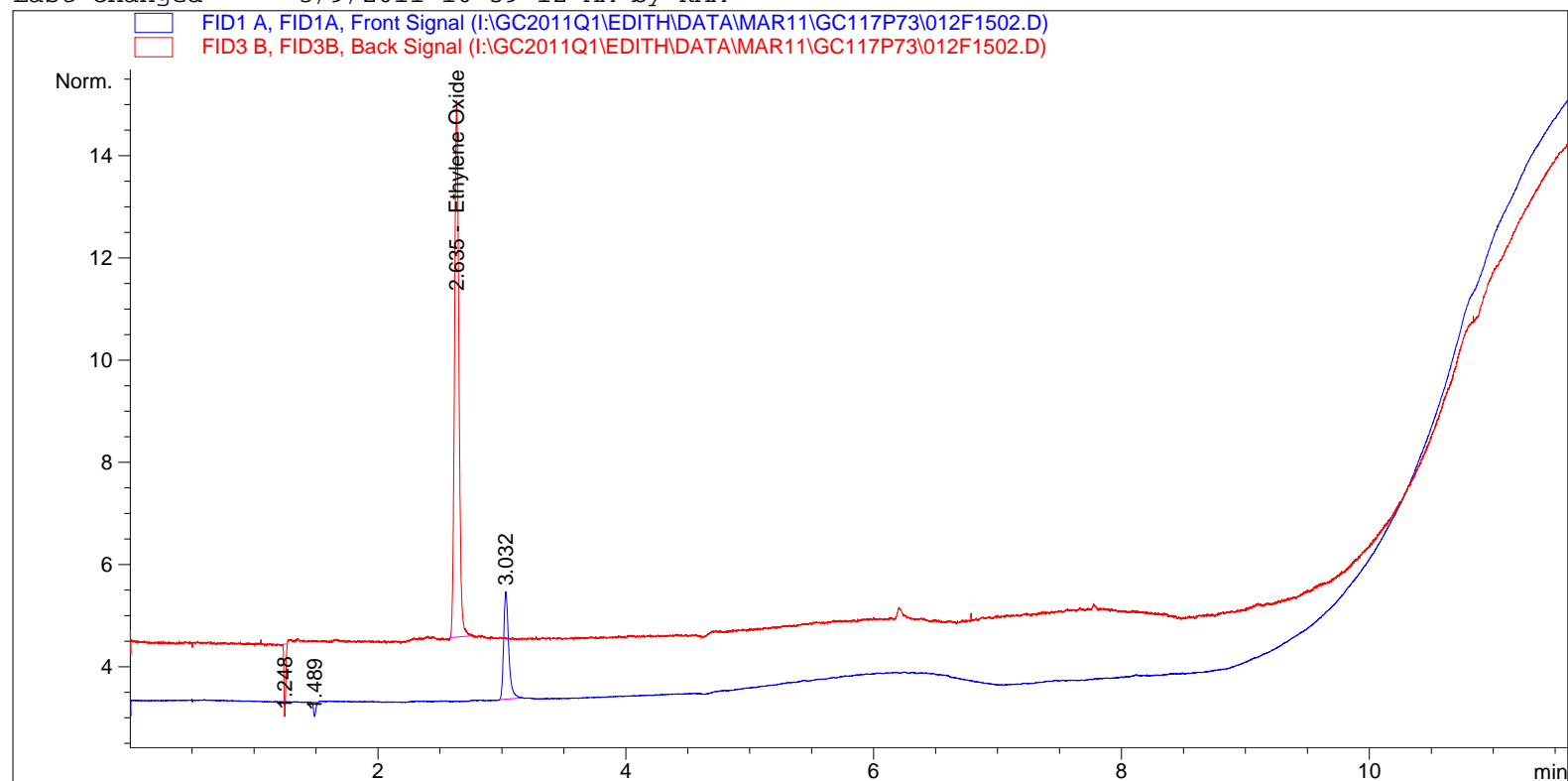
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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

```
=====
Acq. Operator   : kam                      Seq. Line :   15
Acq. Instrument : Edith online              Location  : Vial 12
Injection Date  : 3/8/2011 11:35:07 AM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 10:59:12 AM by KAM
=====
```



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

Sorted By : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

EA# 0311-50 Page 60 of 93

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene
Totals :				0.00000		

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.635	BB	7.62529	3.23851	24.69456		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene
Totals :				24.69456		

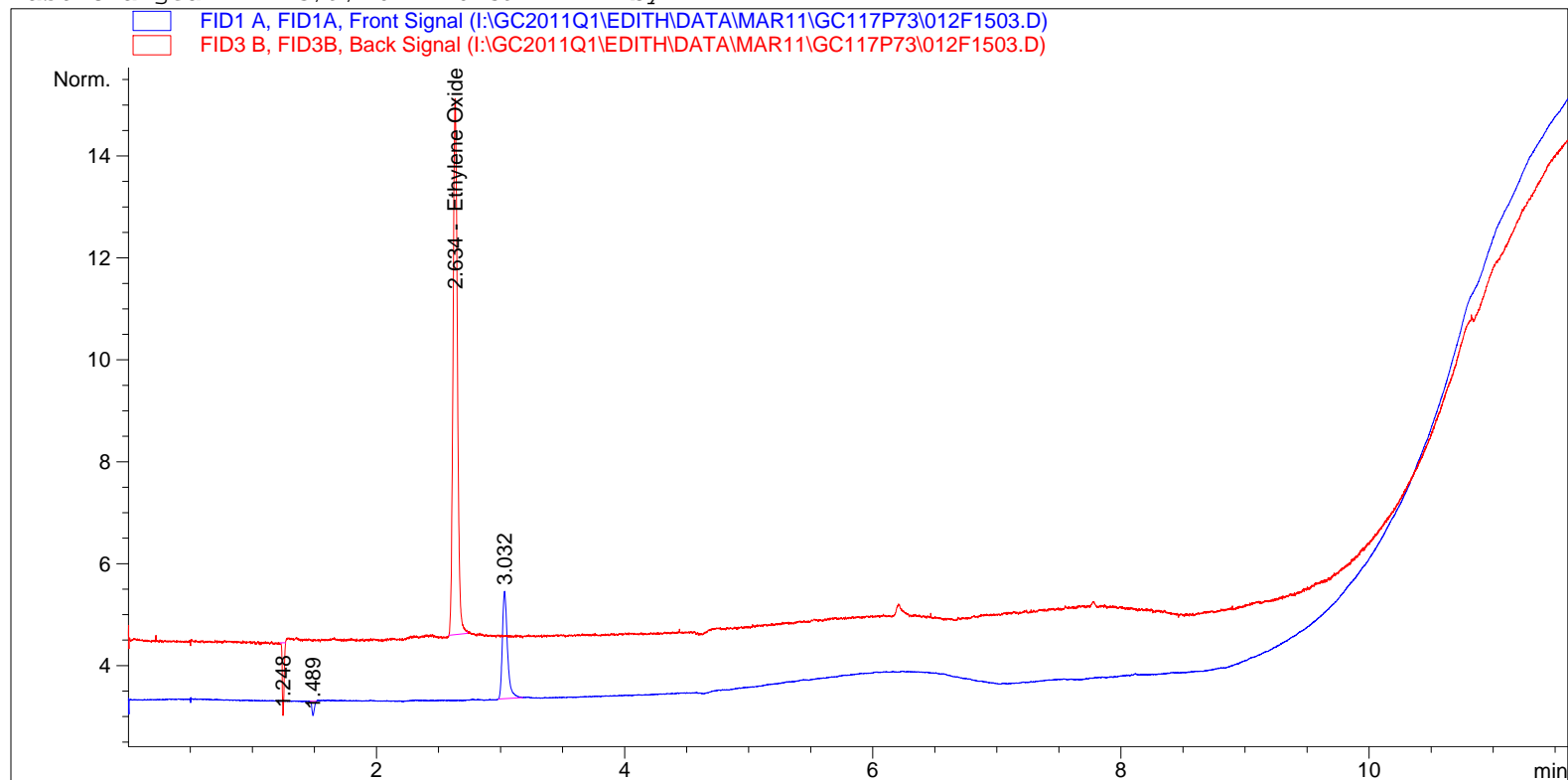
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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

```
=====
Acq. Operator   : kam                      Seq. Line :   15
Acq. Instrument : Edith online             Location  : Vial 12
Injection Date  : 3/8/2011 11:55:07 AM     Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 10:59:12 AM by KAM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

EA# 0311-50 Page 62 of 93

Sample Name: gc117p73 #EO3 ENV(1=900,4=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene

Totals : 0.00000

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.634	BB	7.57116	3.23847	24.51897		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene

Totals : 24.51897

2 Warnings or Errors :

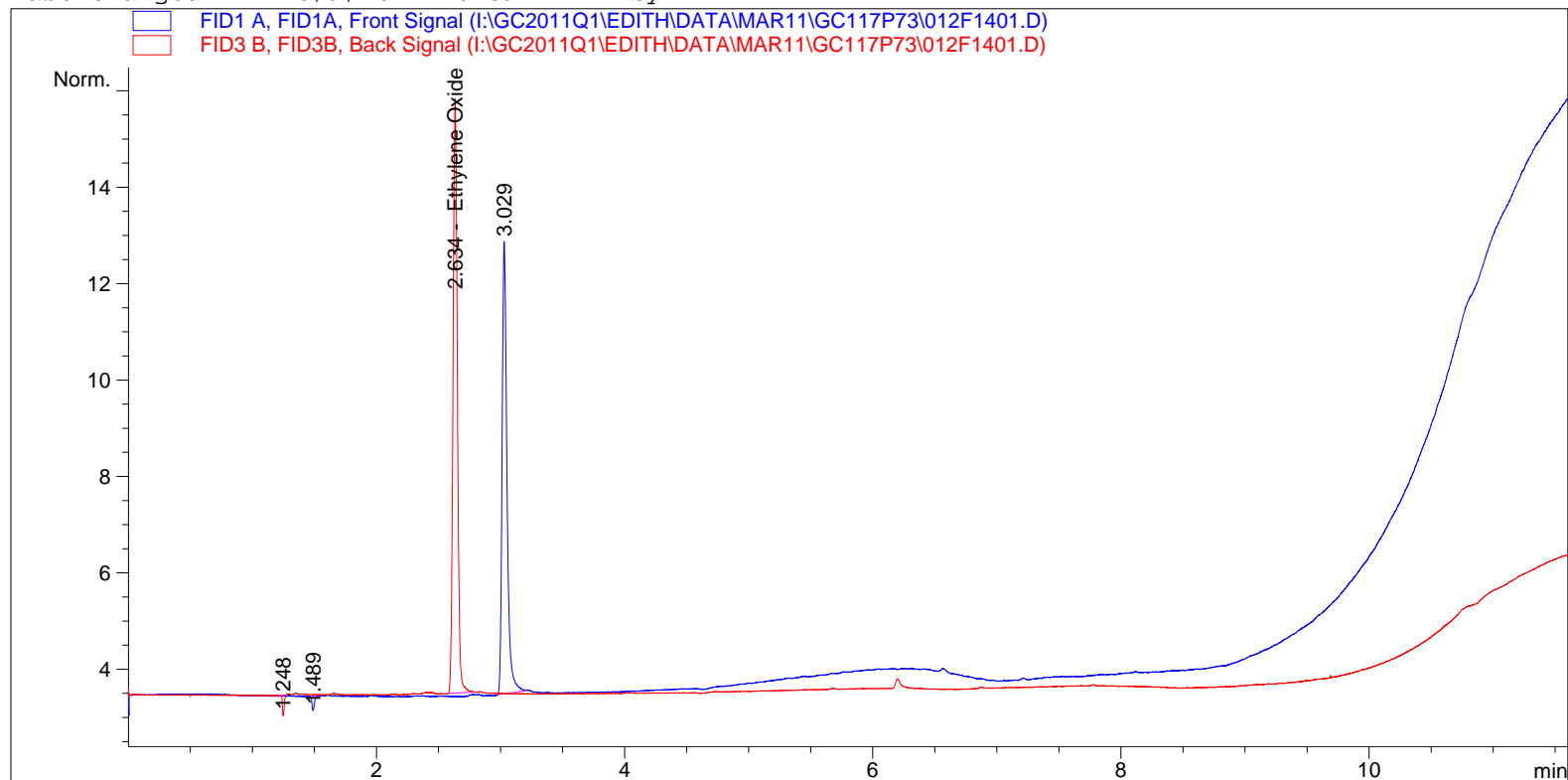
Warning : Calibration warnings (see calibration table listing)

Warning : Calibrated compound(s) not found

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

```
=====
Acq. Operator   : kam                      Seq. Line :   14
Acq. Instrument : Edith online             Location  : Vial 12
Injection Date  : 3/8/2011 10:14:10 AM     Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 10:59:12 AM by KAM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

Sample Name: gc117p73 #EO4 ENV(1=600,4=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene

Totals : 0.00000

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.634	BB	30.05891	3.24250	97.46599		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene

Totals : 97.46599

2 Warnings or Errors :

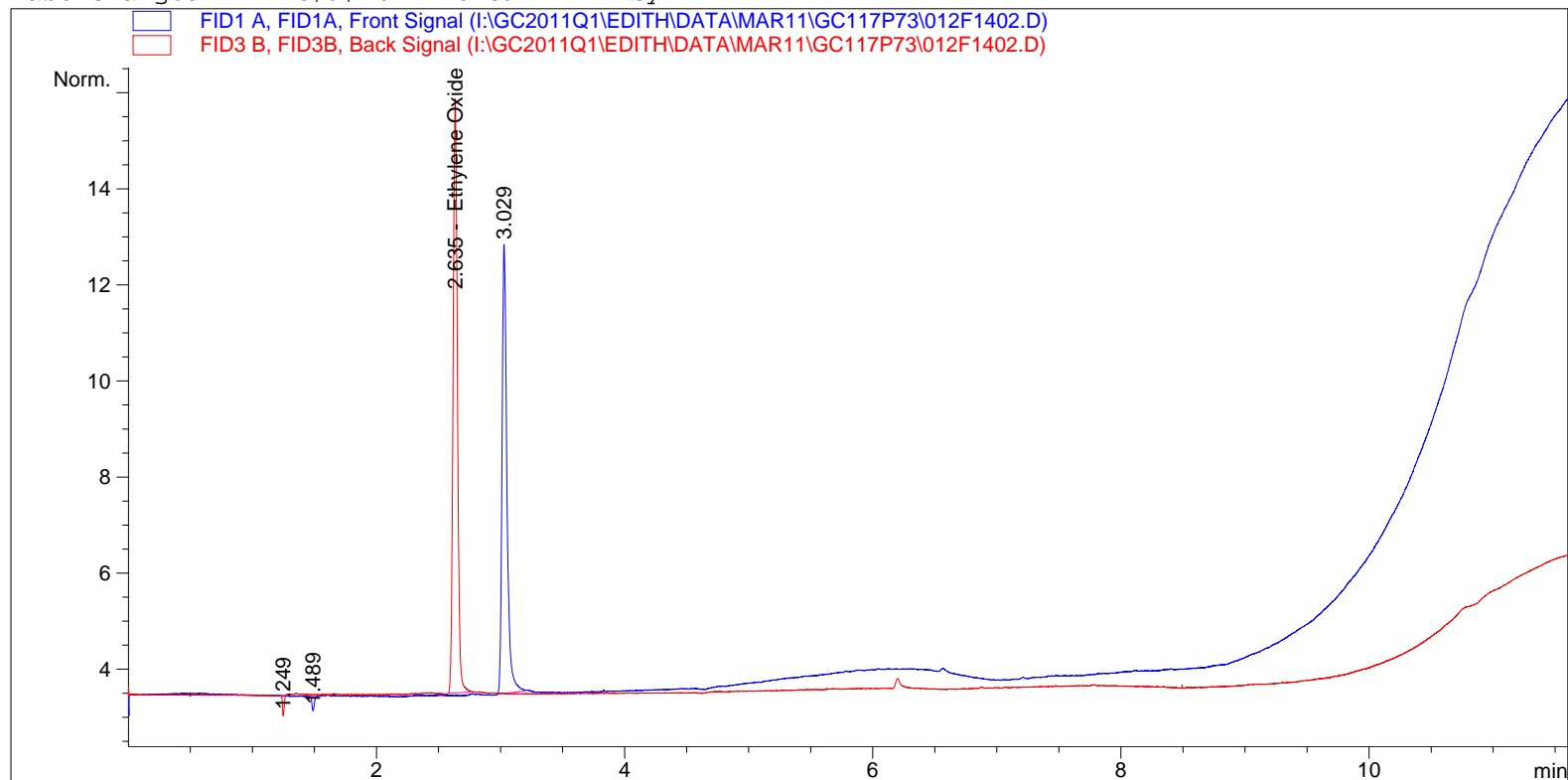
Warning : Calibration warnings (see calibration table listing)

Warning : Calibrated compound(s) not found

*** End of Report ***

```
=====
Acq. Operator   : kam                      Seq. Line :   14
Acq. Instrument : Edith online             Location  : Vial 12
Injection Date  : 3/8/2011 10:34:28 AM     Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 10:59:12 AM by KAM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

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RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene
Totals :				0.00000		

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.635	BB	30.08376	3.24250	97.54658		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene
Totals :				97.54658		

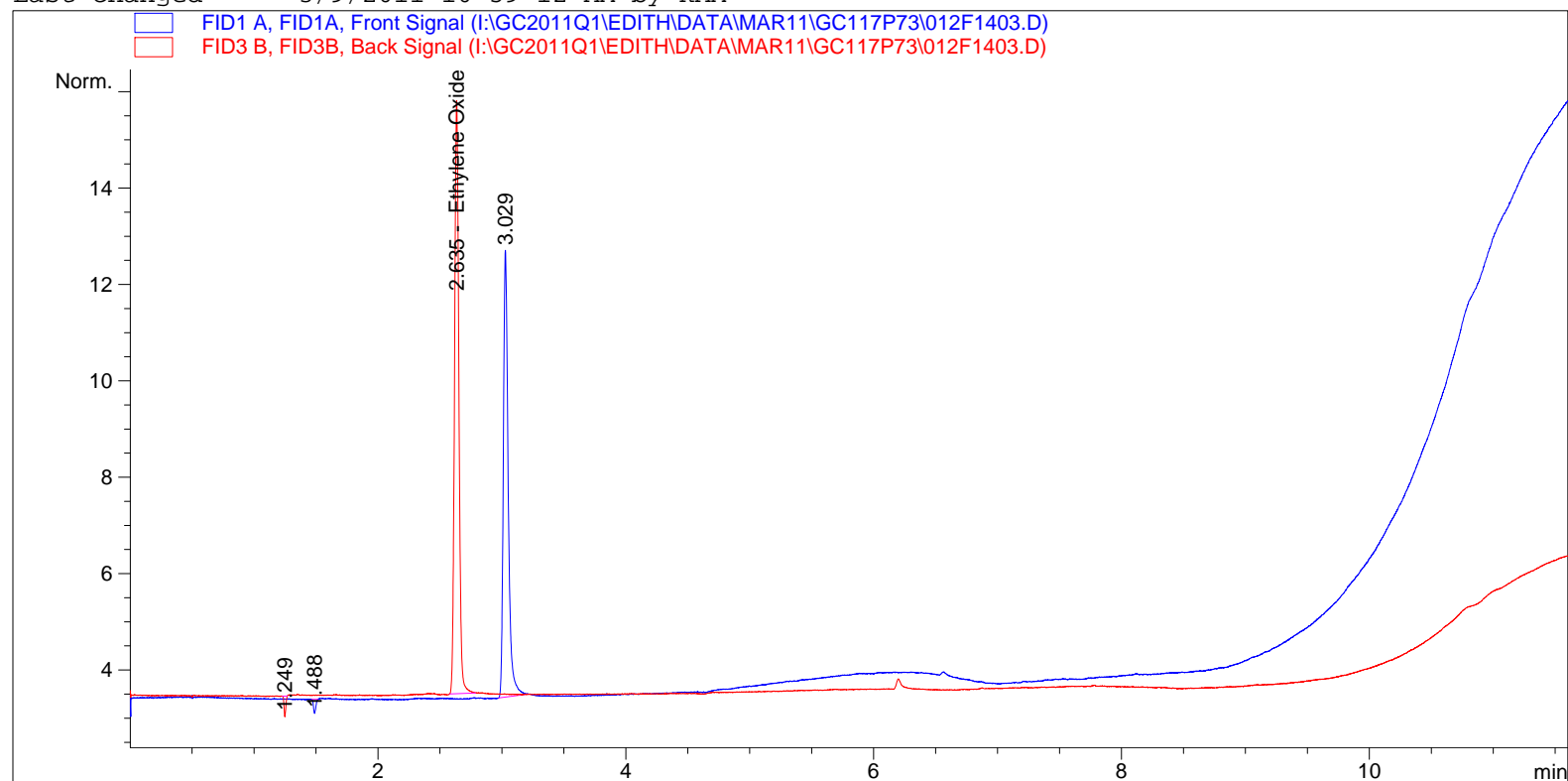
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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

```
=====
Acq. Operator   : kam                      Seq. Line :   14
Acq. Instrument : Edith online             Location  : Vial 12
Injection Date  : 3/8/2011 10:54:50 AM     Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 10:59:12 AM by KAM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, March 08, 2011 3:00:42 PM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A, FID1A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.519	-	-	-	-	-	Methane
1.608	-	-	-	-	-	Ethylene
1.659	-	-	-	-	-	Ethane
1.955	-	-	-	-	-	Propylene
1.995	-	-	-	-	-	Propane
2.898	-	-	-	-	-	Butane
4.459	-	-	-	-	-	Pentane
5.889	-	-	-	-	-	Hexene
6.035	-	-	-	-	-	Hexane
6.773	-	-	-	-	-	Benzene
7.215	-	-	-	-	-	Heptane
7.853	-	-	-	-	-	Toluene
8.117	-	-	-	-	-	Octane

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RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
8.639		-	-	-		Ethylbenzene
8.697		-	-	-		p-Xylene
8.889		-	-	-		o-Xylene
Totals :				0.00000		

Signal 2: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.274		-	-	-		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.635	BB	30.04942	3.24250	97.43518		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene
8.296		-	-	-		Ethylbenzene
8.341		-	-	-		p-Xylene
8.530		-	-	-		o-Xylene
Totals :				97.43518		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

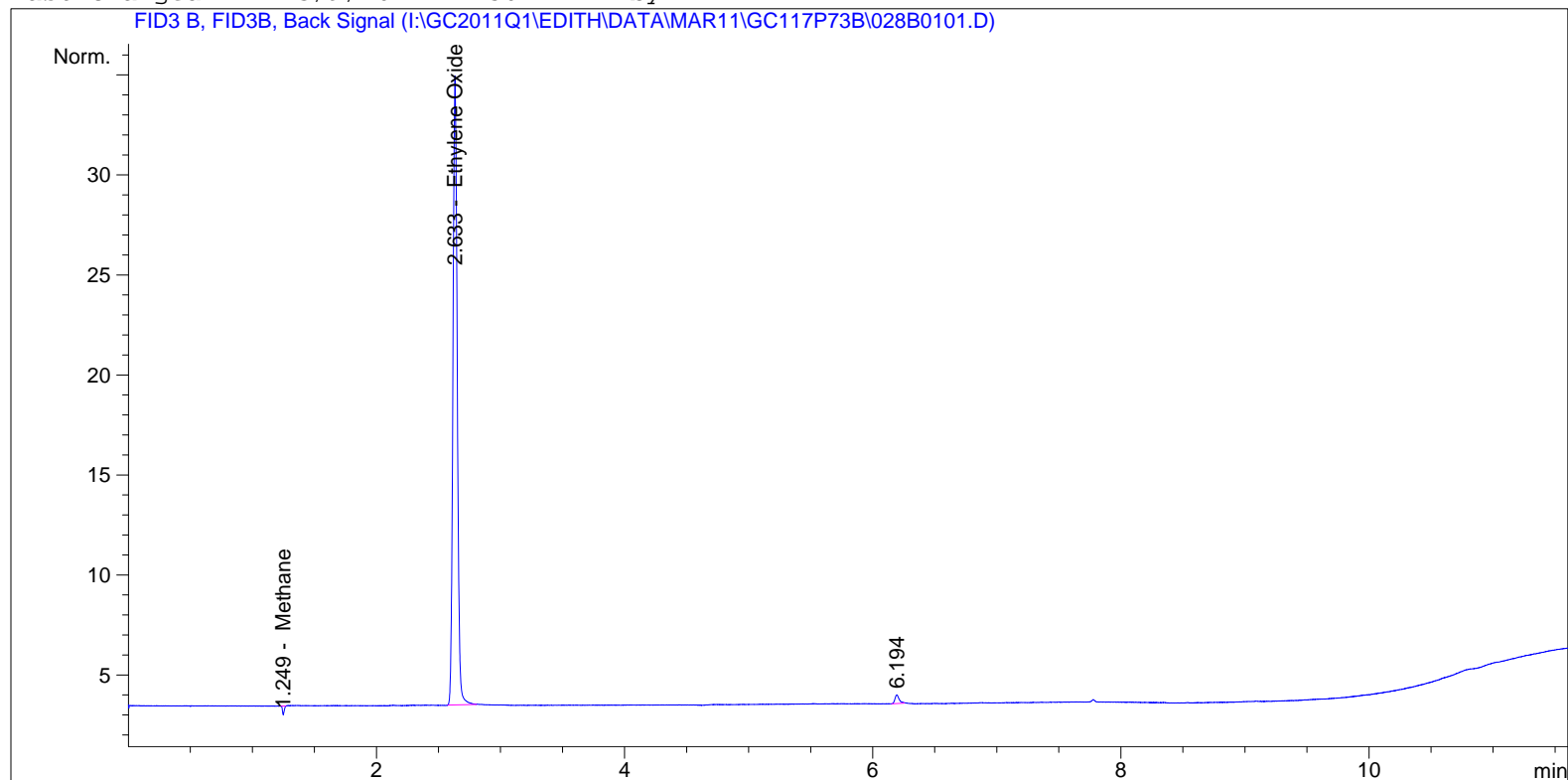
=====
*** End of Report ***

```

=====
Acq. Operator   : kam                      Seq. Line :    1
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/8/2011 3:07:10 PM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method  : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
=====

```



External Standard Report

```

=====
Sorted By           :      Signal
Calib. Data Modified :      Wednesday, March 09, 2011 11:50:15 AM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====

```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.249	BP N	4.14506e-1	3.39608	1.40770		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.633	BB	76.38244	3.32606	254.05260		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene

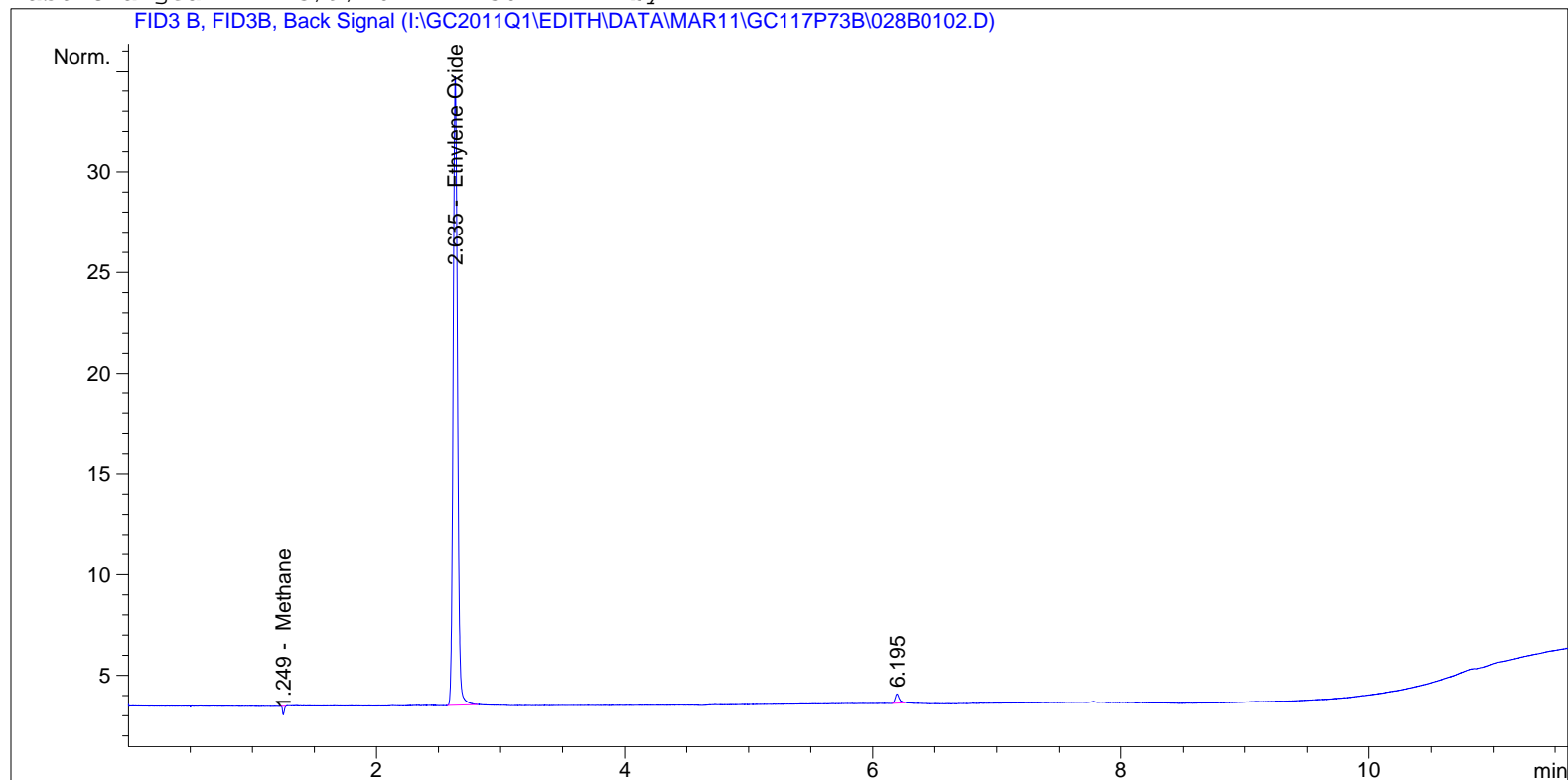
EA# 0311-50 Page 76 of 95

```

=====
Acq. Operator   : kam                      Seq. Line :    1
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/8/2011 3:27:46 PM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
=====

```



External Standard Report

```

=====
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, March 09, 2011 11:50:15 AM
Multiplier:    :      1.0000
Dilution:     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====

```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.249	BP N	4.04096e-1	3.39608	1.37234		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.635	BB	76.03568	3.32606	252.89901		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene

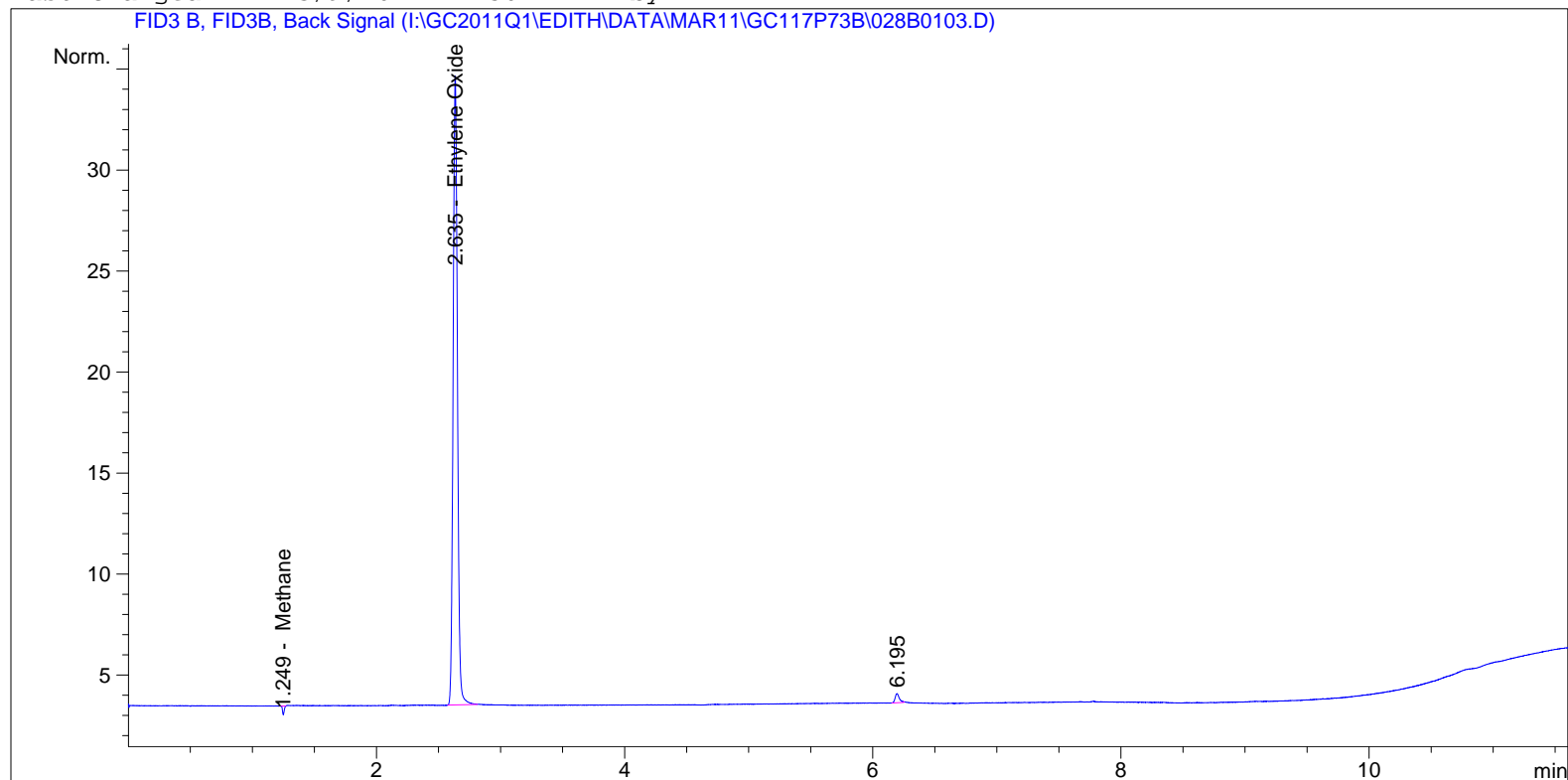
EA# 0311-50 Page 71 of 95

```

=====
Acq. Operator   : kam                      Seq. Line :    1
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/8/2011 3:48:12 PM      Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P56.M
Last changed    : 3/4/2011 11:14:27 AM
Analysis Method : I:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
=====

```



External Standard Report

```

=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, March 09, 2011 11:50:15 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====

```

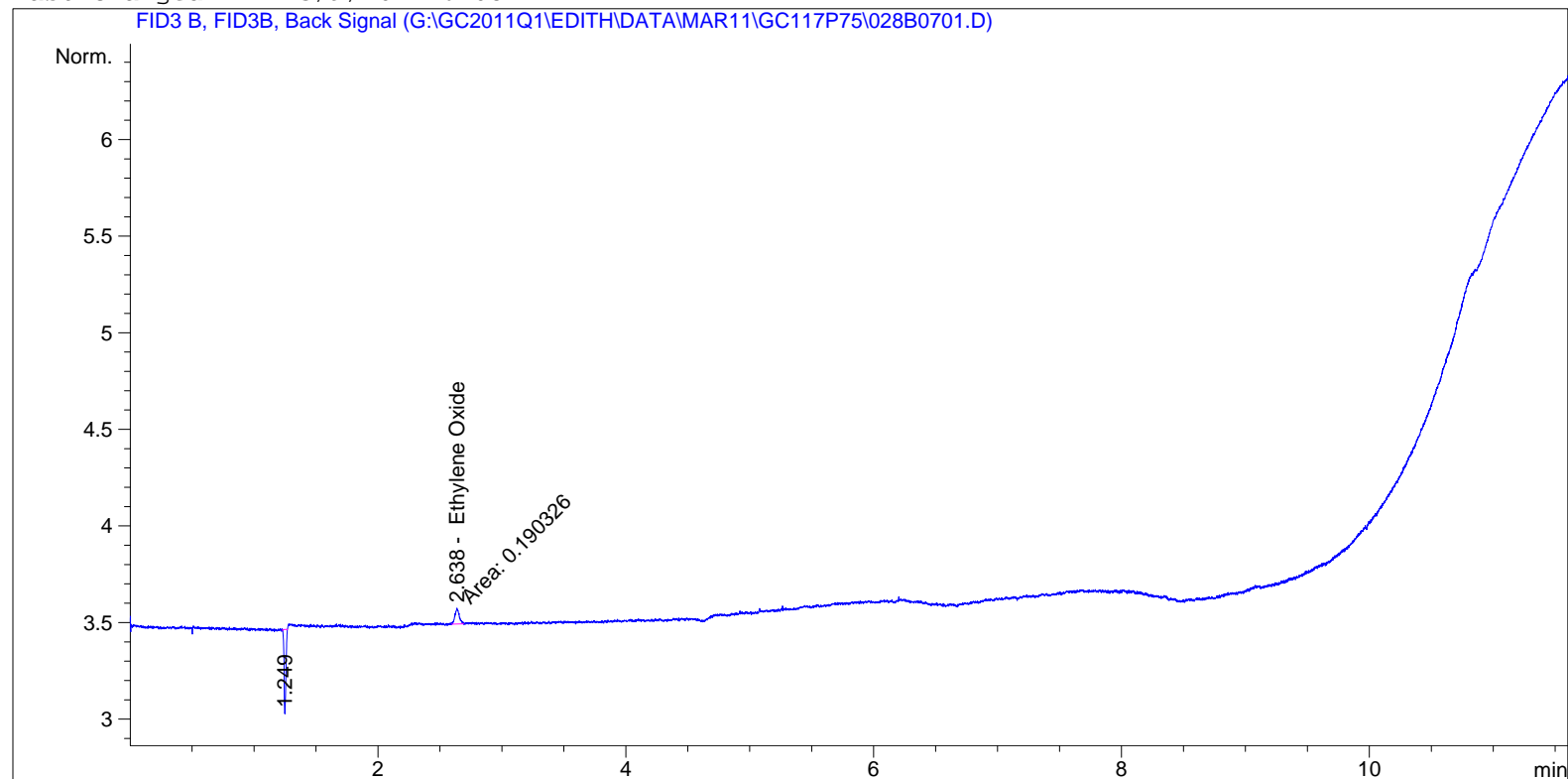
Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.249	BP N	4.05140e-1	3.39608	1.37589		Methane
1.397		-	-	-		Ethane
1.689		-	-	-		Propane
2.143		-	-	-		Acetaldehyde
2.520		-	-	-		Butane
2.635	BB	75.75089	3.32605	251.95159		Ethylene Oxide
3.431		-	-	-		Acrolein
3.545		-	-	-		Acetone
4.038		-	-	-		Pentane
5.680		-	-	-		Hexane
6.411		-	-	-		Benzene
6.871		-	-	-		Heptane
7.499		-	-	-		Toluene

EA# 0311-50 Page 72 of 95


```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 3:00:17 AM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.638	MM	1.90326e-1	3.05613	5.81660e-1		Ethylene Oxide

Manual Int. "NI" (KAM)

Totals : 5.81660e-1

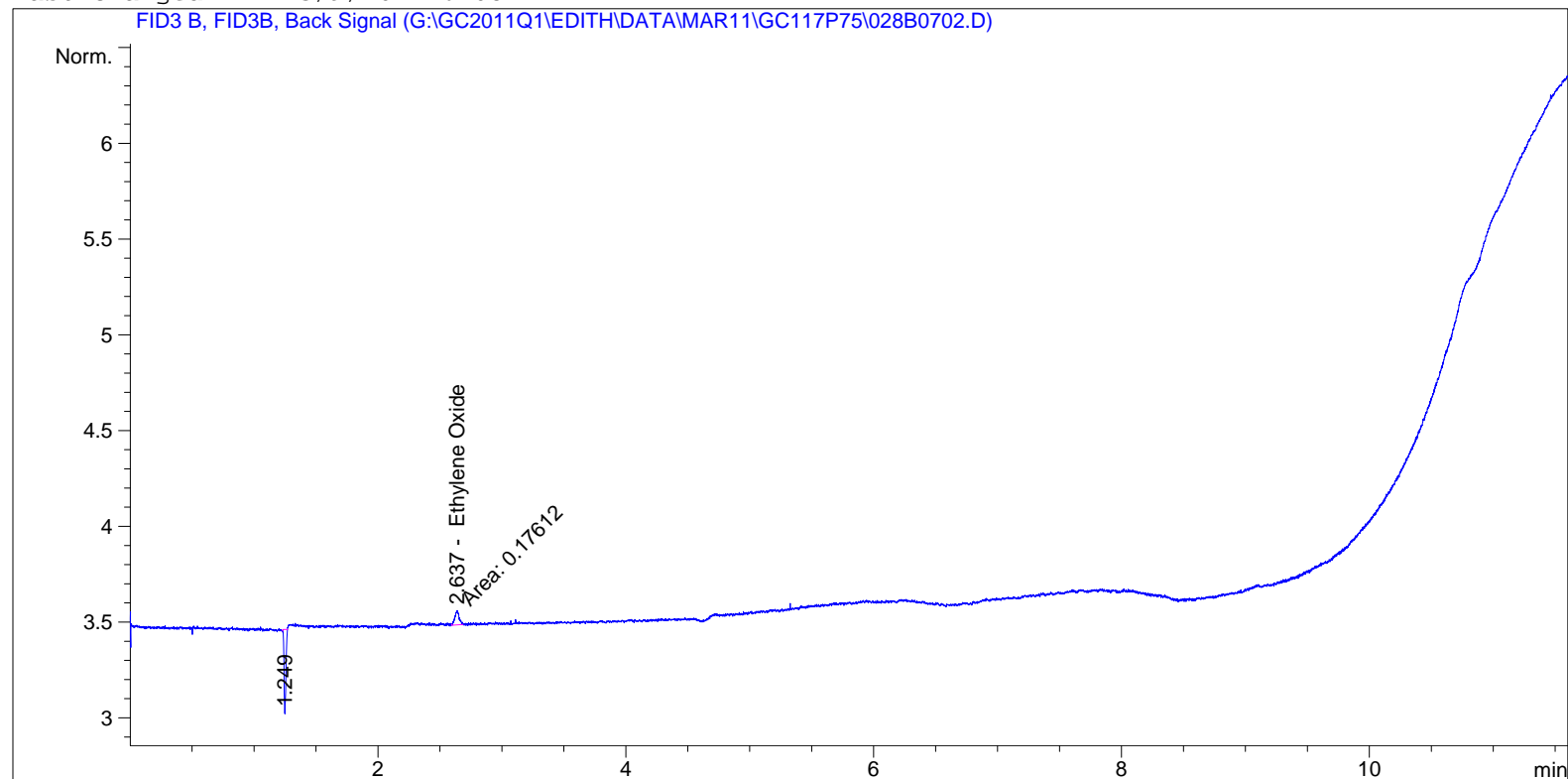
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 3:20:33 AM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.637	MM	1.76120e-1	3.03430	5.34401e-1		Ethylene Oxide

Manual Int. "NI" (KAM)

Totals : 5.34401e-1

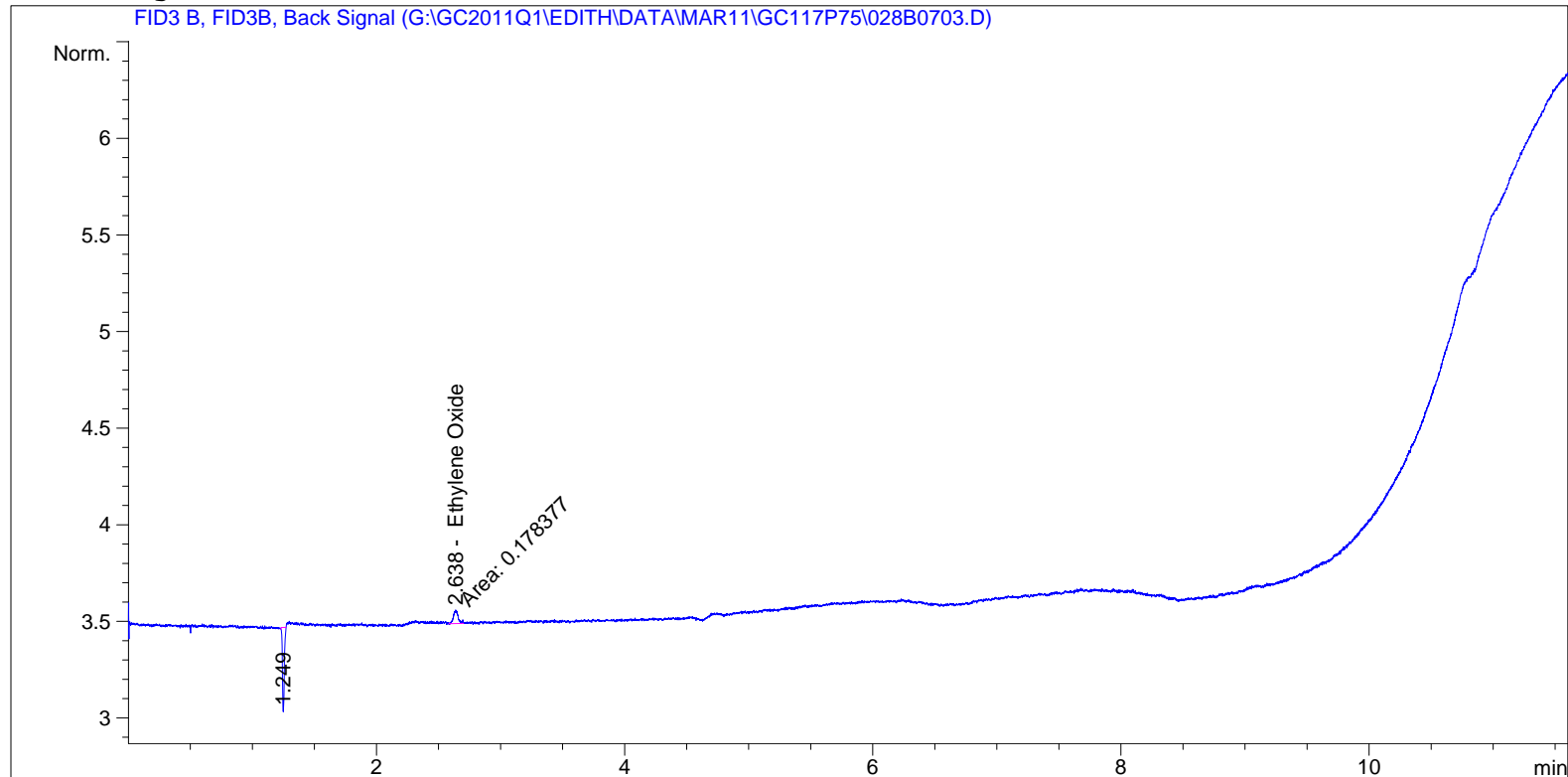
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

*** End of Report ***

```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 3:40:55 AM      Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.638	MM	1.78377e-1	3.03800	5.41909e-1		Ethylene Oxide

Manual Int. "NI" (KAM)

Totals : 5.41909e-1

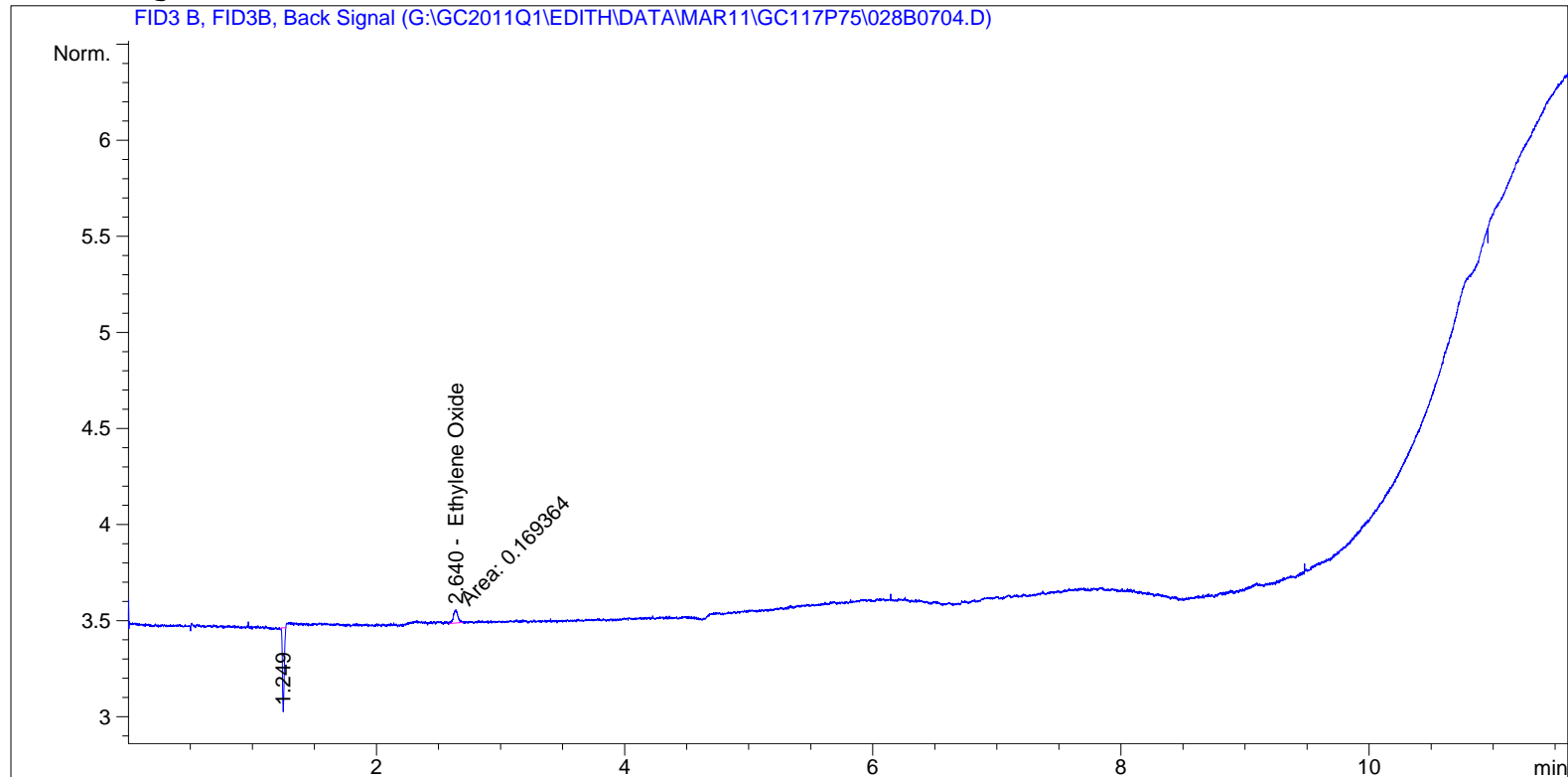
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

*** End of Report ***

```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 4:01:09 AM      Inj       :    4
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier:     : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.640	MM	1.69364e-1	3.02264	5.11927e-1		Ethylene Oxide

Manual Int. "NF" (KAM)

Totals : 5.11927e-1

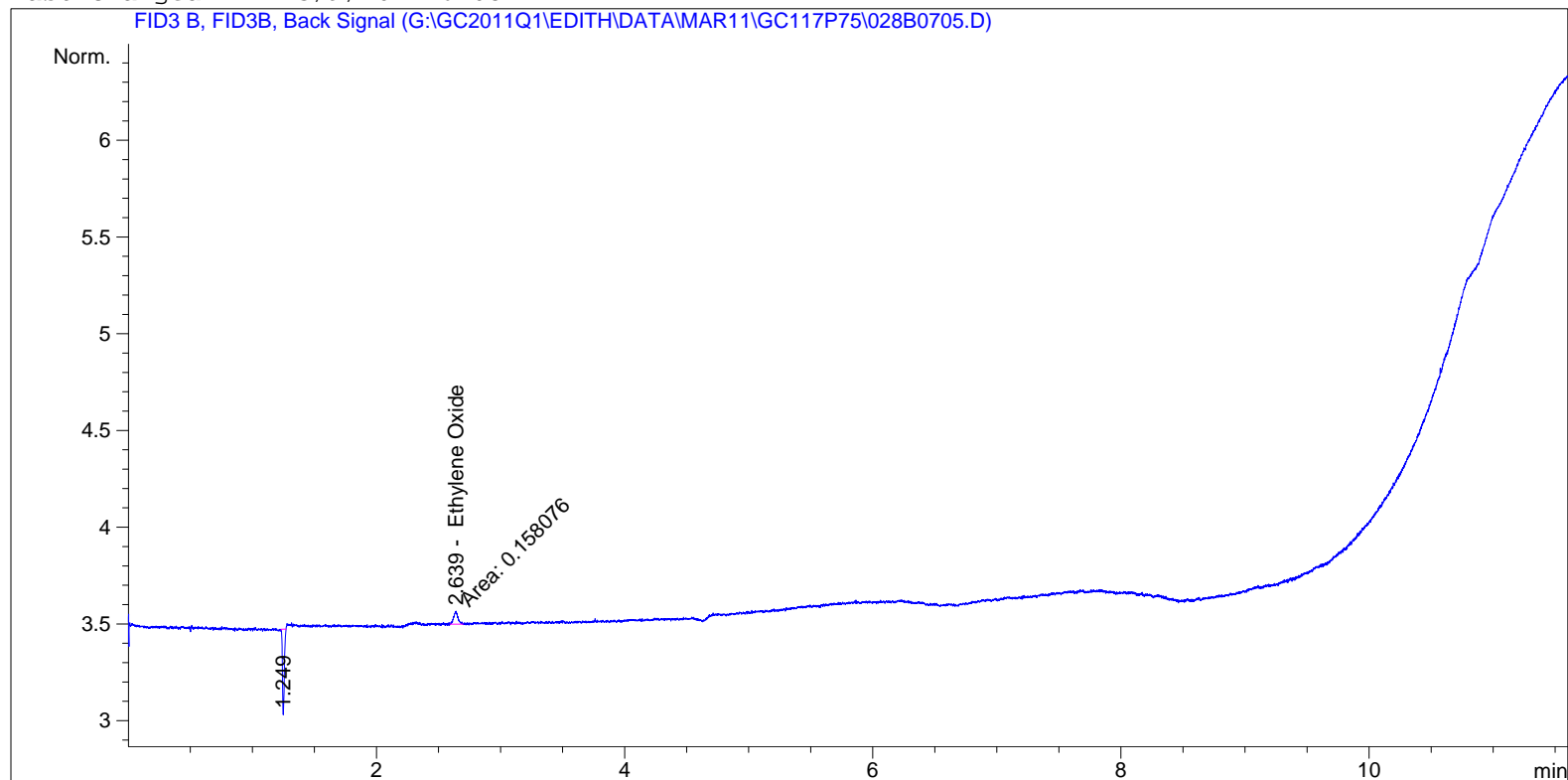
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

*** End of Report ***

```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 4:21:38 AM      Inj       :    5
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

Sorted By : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.639	MM	1.58076e-1	3.01606	4.76766e-1		Ethylene Oxide

Manual Int. "NP" (KAM)

Totals : 4.76766e-1

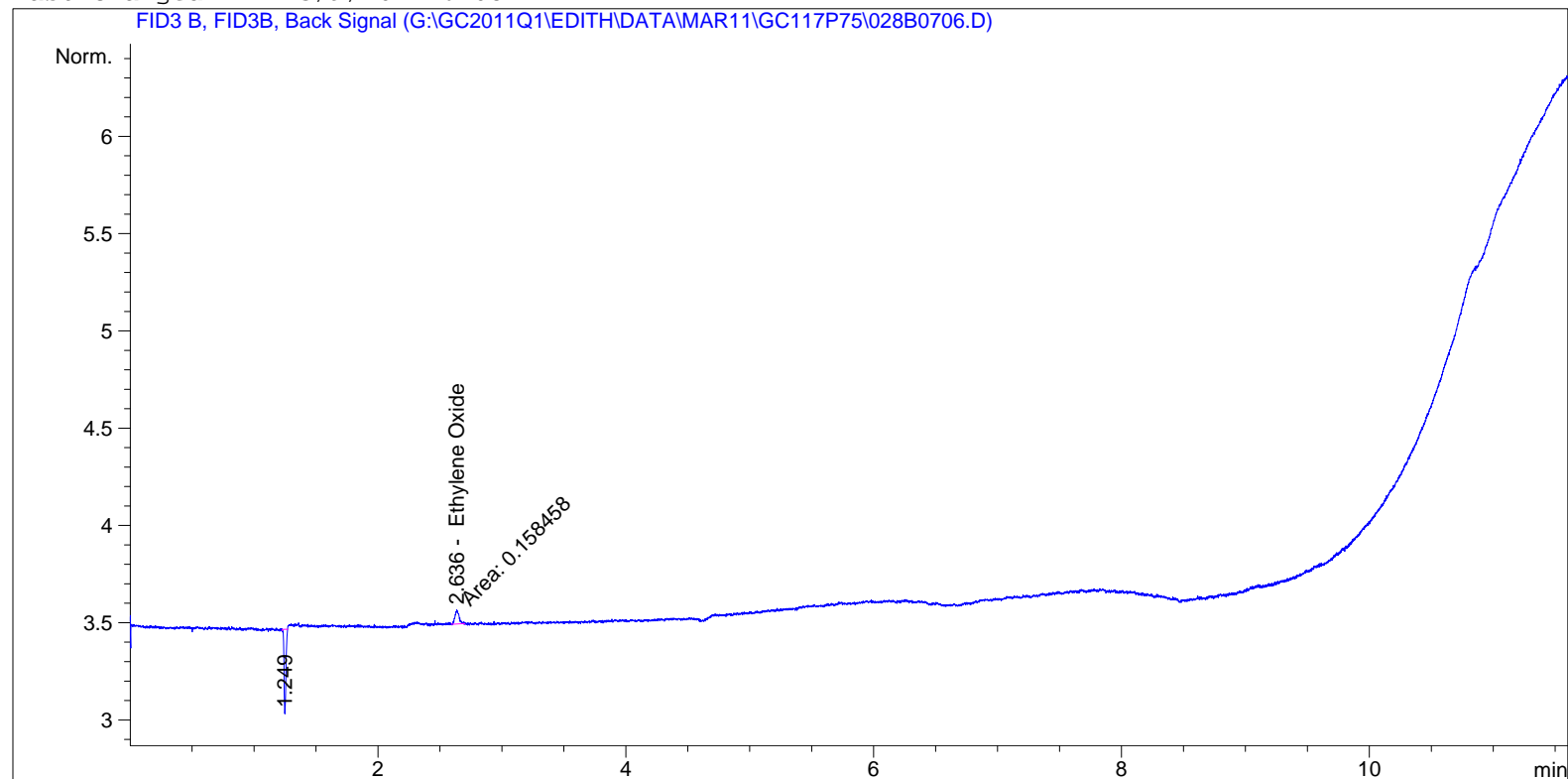
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 4:41:49 AM      Inj       :    6
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.636	MM	1.58458e-1	3.01606	4.77918e-1		Ethylene Oxide

Manual Int. "NI" (KAM)

Totals : 4.77918e-1

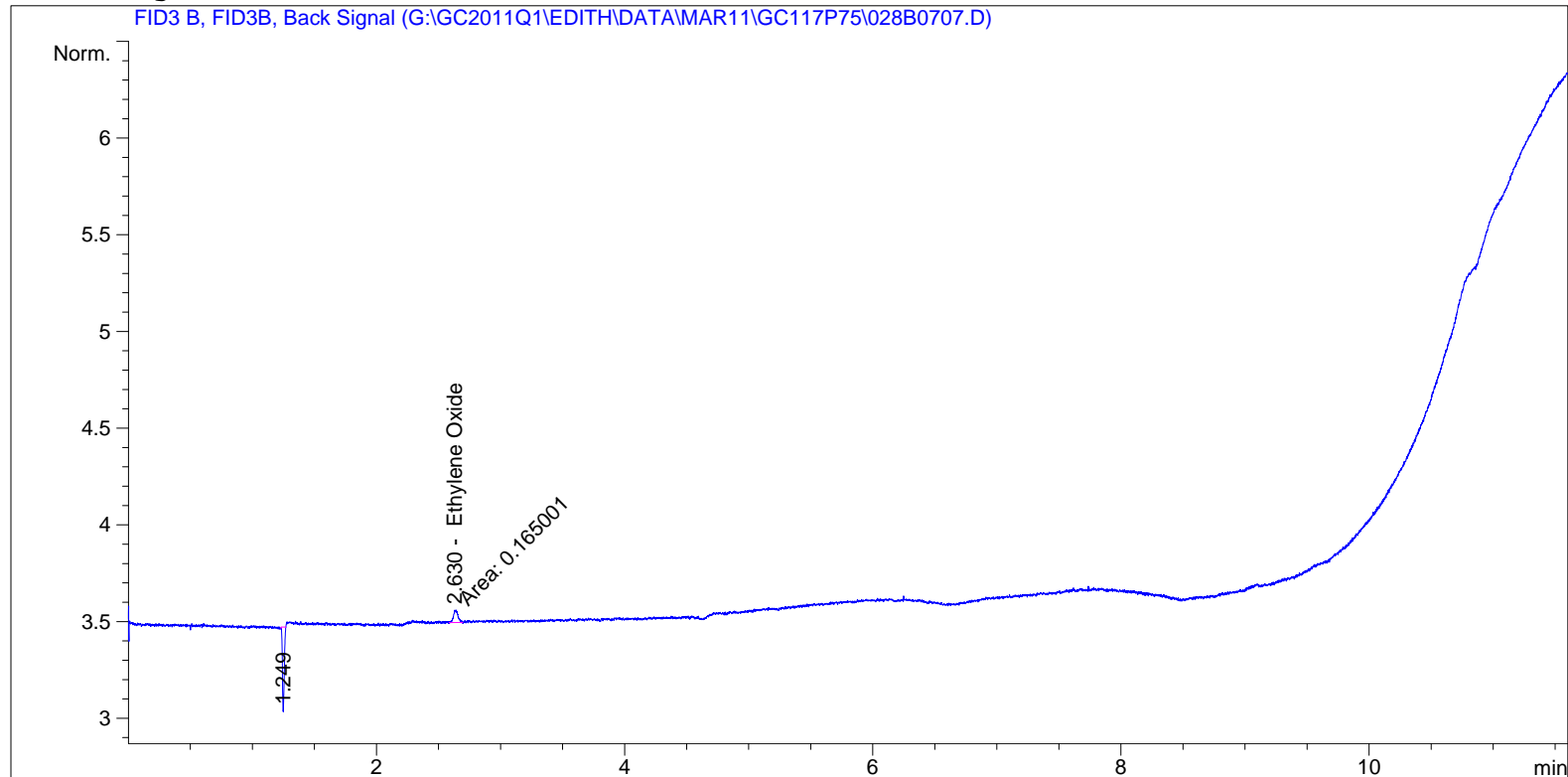
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 5:02:07 AM      Inj       :    7
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

Sorted By : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.630	MM	1.65001e-1	3.01606	4.97653e-1		Ethylene Oxide

Manual Int. "NI" (KAM)

Totals : 4.97653e-1

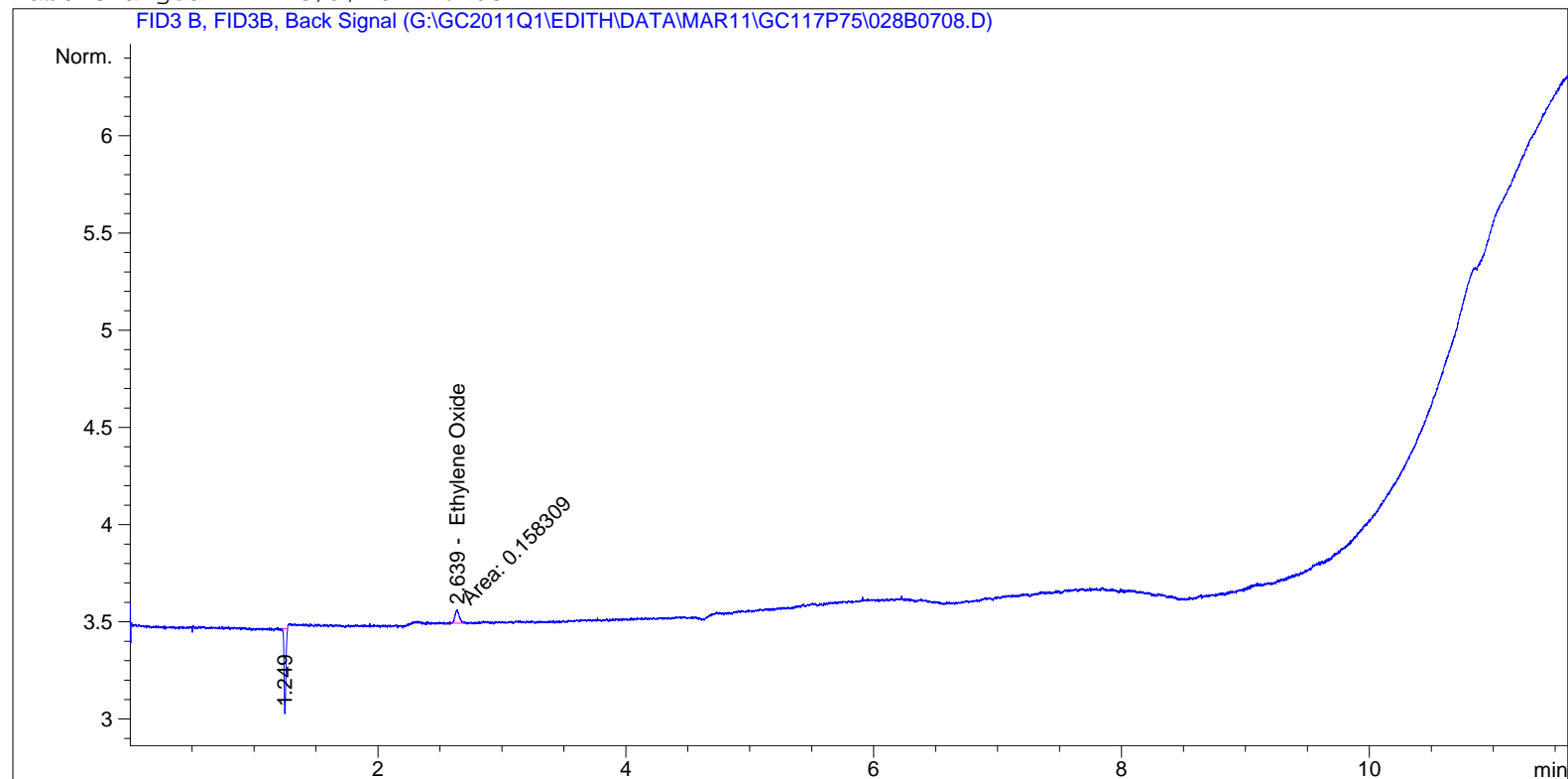
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 5:22:17 AM      Inj       :    8
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.639	MM	1.58309e-1	3.01606	4.77468e-1	--	Ethylene Oxide

Manual Int. "NI" (KAM)

Totals : 4.77468e-1

1 Warnings or Errors :

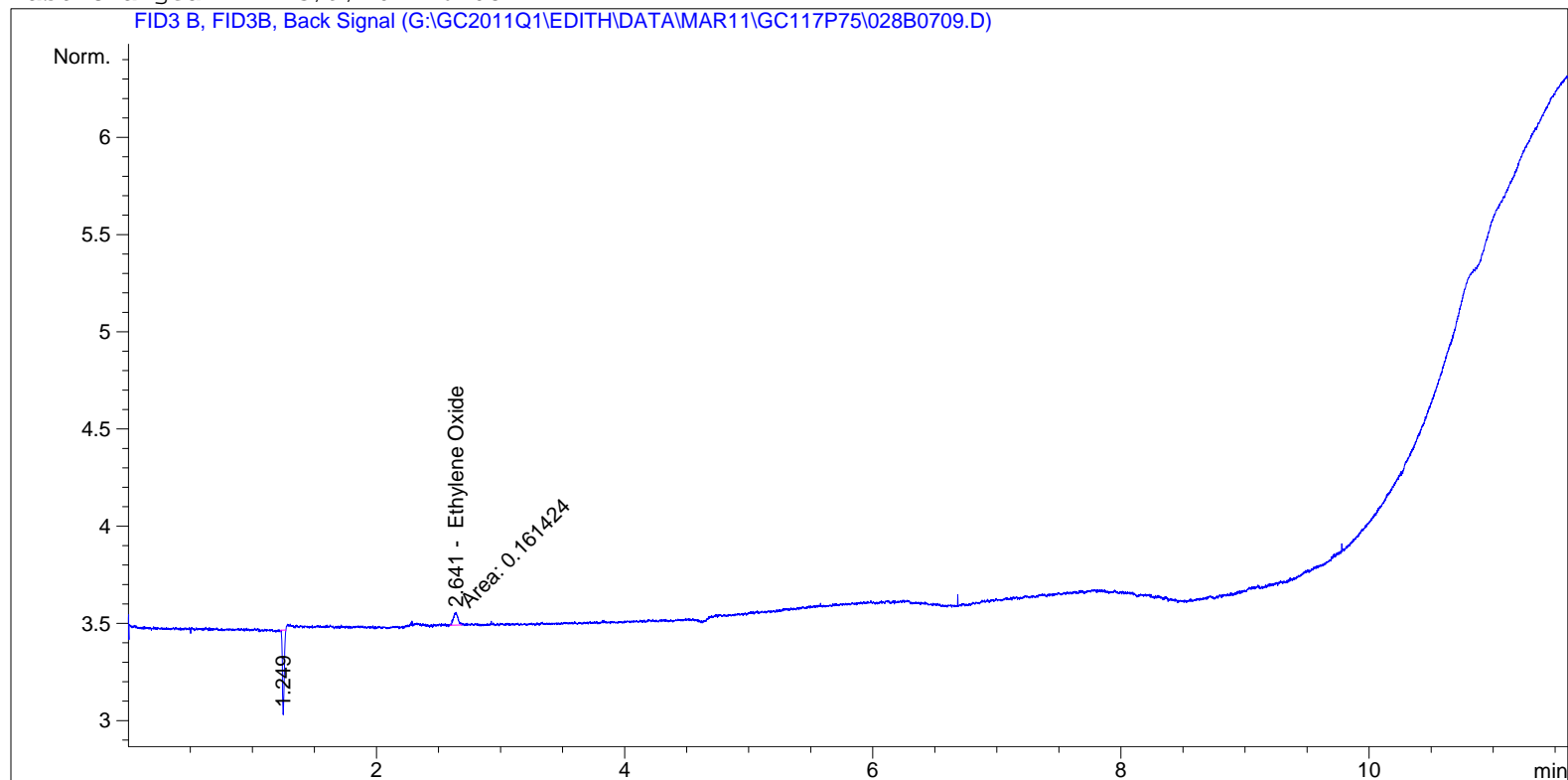
Warning : Calibration warnings (see calibration table listing)

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



```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 5:42:31 AM      Inj       :    9
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.641	MM	1.61424e-1	3.01606	4.86864e-1		Ethylene Oxide

Manual Int. "NI" (KAM)

Totals : 4.86864e-1

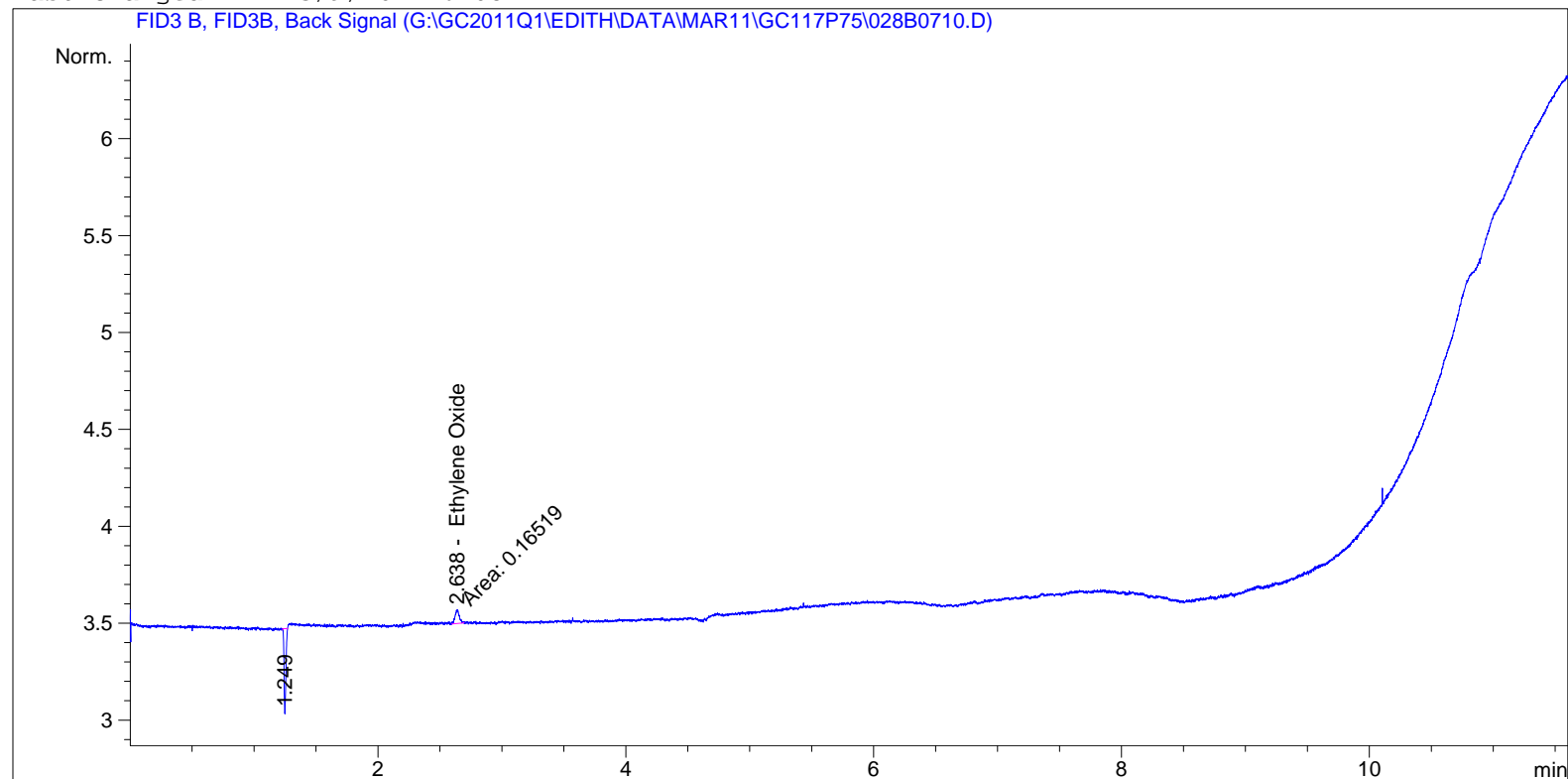
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :    7
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 6:02:58 AM      Inj       :   10
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/8/2011 3:00:50 PM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

Sorted By : Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.638	MM	1.65190e-1	3.01606	4.98222e-1		Ethylene Oxide

Manual Int. "NF" (KAM)

Totals : 4.98222e-1

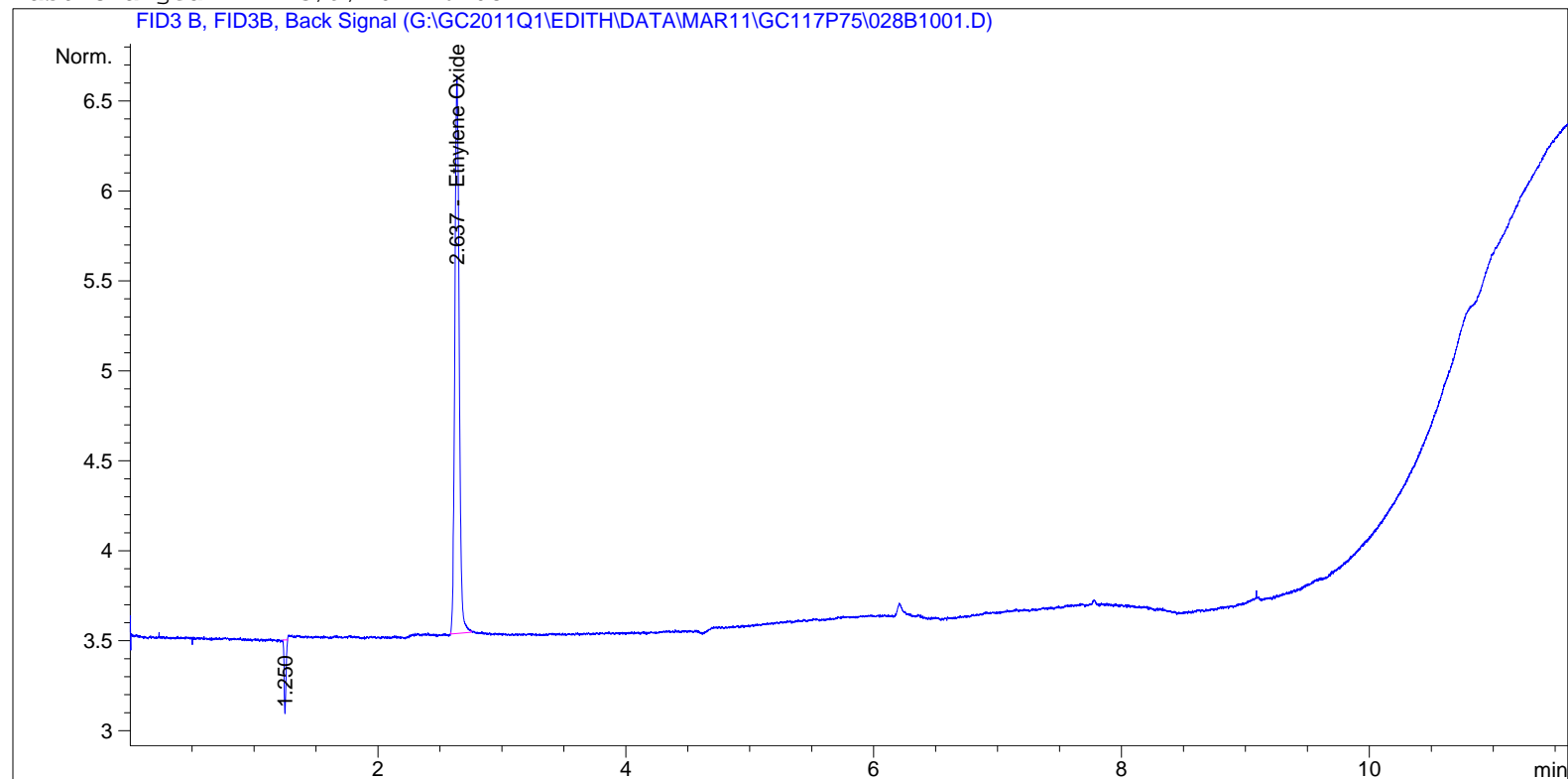
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :   10
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 1:03:51 PM      Inj       :    1
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.637	BB	7.64552	3.32000	25.38313	--	Ethylene Oxide

Totals : 25.38313

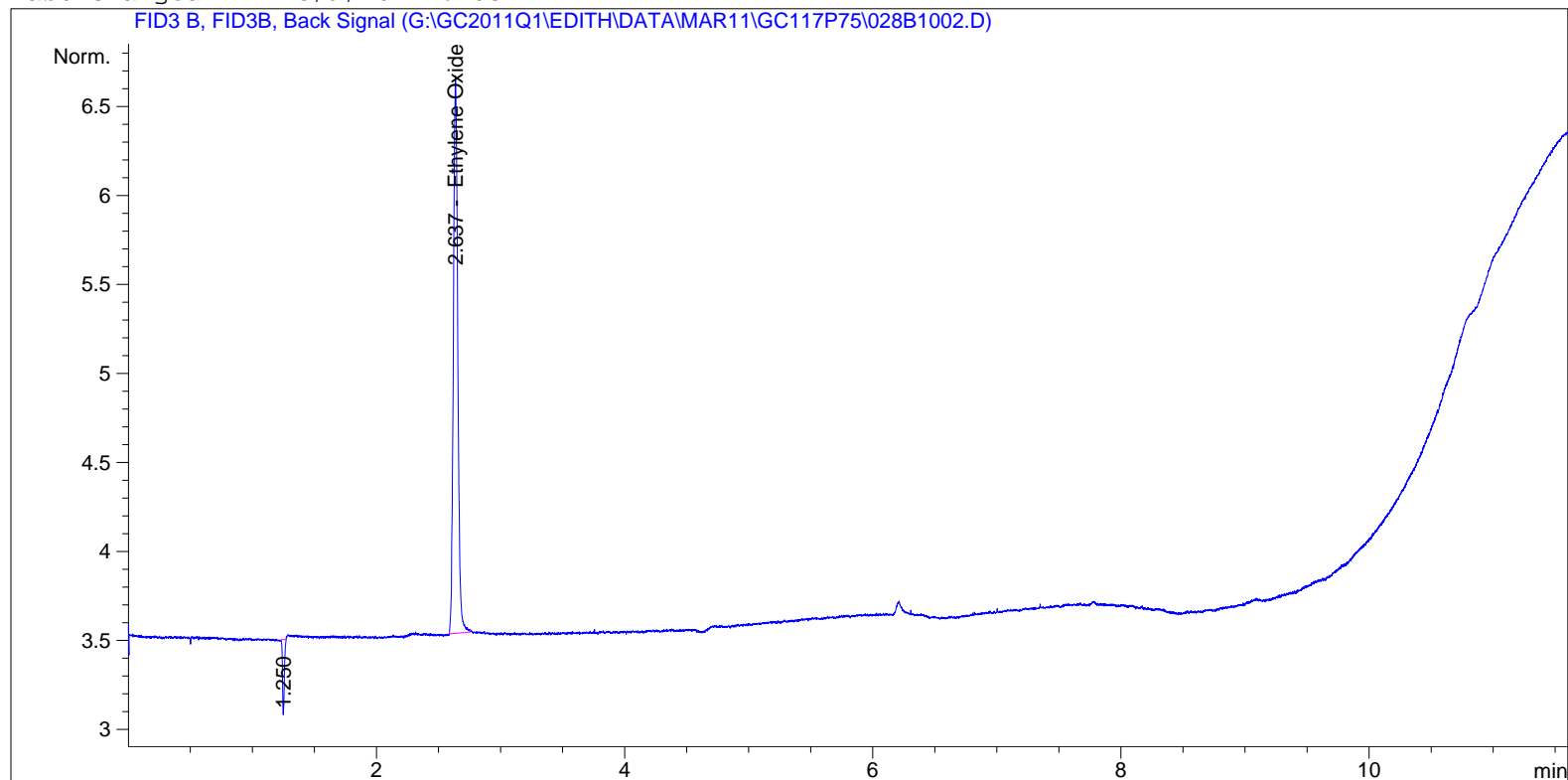
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :   10
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 1:24:22 PM      Inj       :    2
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      3/9/2011 6:08:33 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.637	BB	7.72767	3.32007	25.65639	--	Ethylene Oxide

Totals : 25.65639

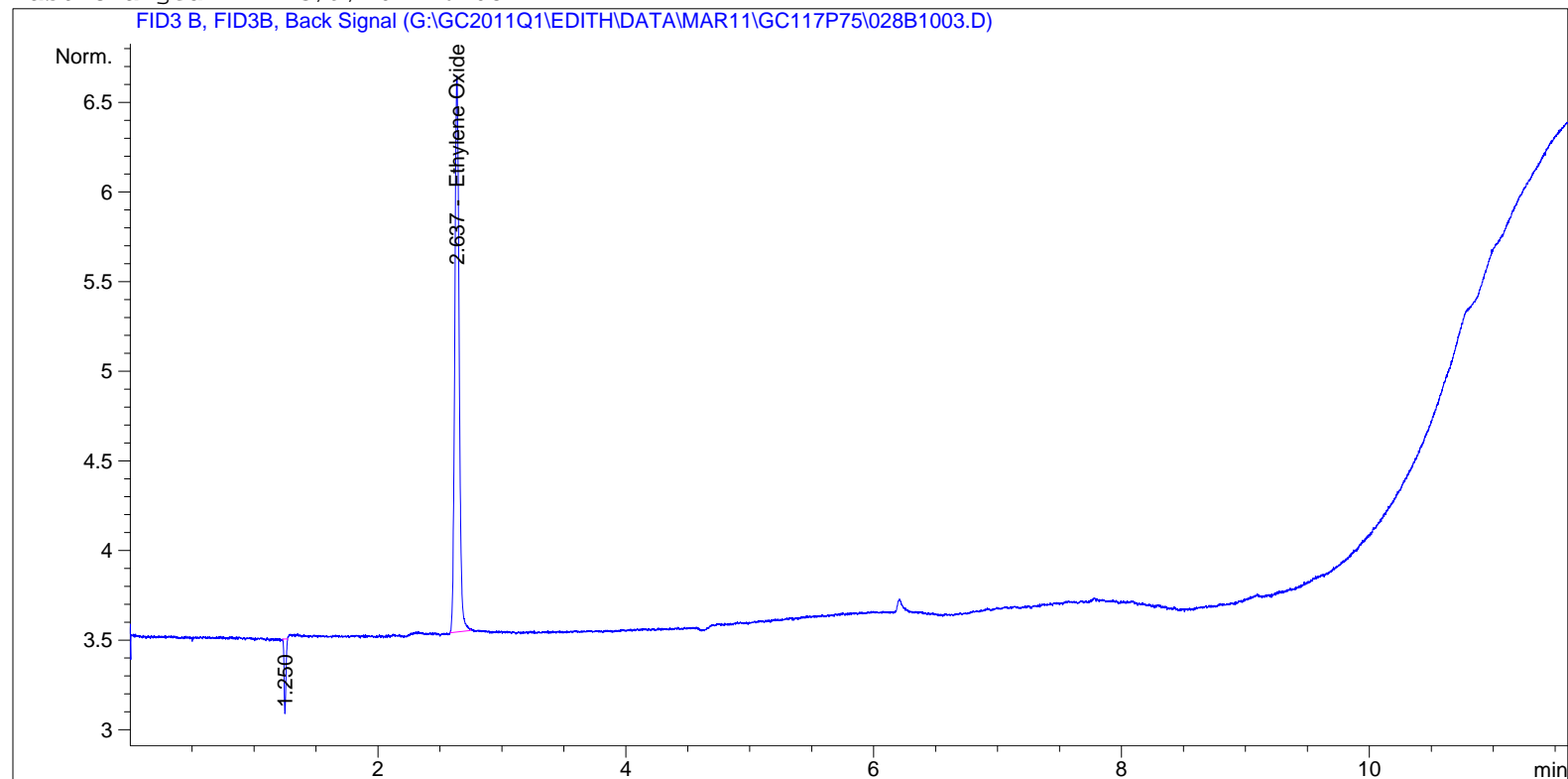
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

```
=====
Acq. Operator   : JBB                      Seq. Line :   10
Acq. Instrument : Edith online              Location  : Vial 28
Injection Date  : 3/9/2011 1:44:55 PM      Inj       :    3
                                           Inj Volume: 250 µl

Acq. Method     : G:\GC2011Q1\EDITH\METHODS\GC117P73.M
Last changed    : 3/9/2011 11:50:27 AM by KAM
Analysis Method : G:\GC2011Q1\EDITH\METHODS\GC117P73_0311-50.M
Last changed    : 3/9/2011 6:08:42 PM
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified : 3/9/2011 6:08:33 PM
Multiplier:     :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID3 B, FID3B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.637	BB	7.64419	3.32000	25.37870	--	Ethylene Oxide

Totals : 25.37870

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

=====

Agilent Agilent 7890A

=====

Oven
Equilibration Time 0.5 min
Oven Program On
 35 °C for 2.2 min
 then 15 °C/min to 70 °C for 0.07 min
 then 30 °C/min to 250 °C for 1 min
Run Time 11.603 min

Front SS Inlet H2
Mode Split
Heater On 200 °C
Pressure On 5.205 psi
Total Flow On 15.633 mL/min
Septum Purge Flow On 3 mL/min
Gas Saver Off
Split Ratio 5 :1
Split Flow 10.528 mL/min

Back SS Inlet H2
Mode Split
Heater On 200 °C
Pressure On 5.205 psi
Total Flow On 15.633 mL/min
Septum Purge Flow On 3 mL/min
Gas Saver Off
Split Ratio 5 :1
Split Flow 10.528 mL/min

Column #1
Rtx-1 30m x 0.32mm x 4um: 1189.81991
Rtx-1 30m x 0.32mm x 4um
280 °C: 30 m x 320 µm x 4 µm
In: Front SS Inlet H2
Out: Front Detector FID

(Initial) 35 °C
Pressure 5.205 psi
Flow 2.1055 mL/min
Average Velocity 40 cm/sec
Holdup Time 1.25 min
Flow Program On
 2.1055 mL/min for 0 min
Run Time 11.603 min

Column #2
Rtx-1 30m x 0.32mm x 4um: 920171
Rtx-1 30m x 0.32mm x 4um
280 °C: 30 m x 320 µm x 4 µm
In: Back SS Inlet H2
Out: Back Detector FID

(Initial) 35 °C
Pressure 5.205 psi
Flow 2.1055 mL/min

EA# 0311-50 Page 86 of 93

Modified on: 3/9/2011 at 3:33:43 PM

Average Velocity	40 cm/sec
Holdup Time	1.25 min
Flow Program	On
2.1055 mL/min for 0 min	
Run Time	11.603 min

Front Detector FID

Heater	On	300 °C
H2 Flow	On	30 mL/min
Air Flow	On	400 mL/min
Makeup Flow	On	30.646 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	

Back Detector FID

Heater	On	300 °C
H2 Flow	On	30 mL/min
Air Flow	On	400 mL/min
Makeup Flow	On	30.646 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	

Valve 1

Gas Sampling Valve	
GSV Loop Volume	0.25 mL
Load Time	1.5 min
Inject Time	0.5 min

Valve 2

Gas Sampling Valve	
GSV Loop Volume	0.25 mL
Load Time	1.5 min
Inject Time	0.5 min

Valve Box

Heater	On	150 °C
--------	----	--------

Signals

Front Signal	Save On
	20 Hz
Test Plot	Save Off
	50 Hz
Back Signal	Save On
	20 Hz
Test Plot	Save Off
	50 Hz

=====

Agilent Agilent 7890A

=====

Oven
Equilibration Time 0.5 min
Oven Program On
35 °C for 2.2 min
then 15 °C/min to 70 °C for 0.07 min
then 30 °C/min to 250 °C for 1 min
Run Time 11.603 min

Front SS Inlet H2
Mode Split
Heater On 200 °C
Pressure On 5.205 psi
Total Flow On 15.633 mL/min
Septum Purge Flow On 3 mL/min
Gas Saver Off
Split Ratio 5 :1
Split Flow 10.528 mL/min

Back SS Inlet H2
Mode Split
Heater On 200 °C
Pressure On 5.205 psi
Total Flow On 15.633 mL/min
Septum Purge Flow On 3 mL/min
Gas Saver Off
Split Ratio 5 :1
Split Flow 10.528 mL/min

Column #1
Rtx-1 30m x 0.32mm x 4um: 1189.81991
Rtx-1 30m x 0.32mm x 4um
280 °C: 30 m x 320 µm x 4 µm
In: Front SS Inlet H2
Out: Front Detector FID

(Initial) 35 °C
Pressure 5.205 psi
Flow 2.1055 mL/min
Average Velocity 40 cm/sec
Holdup Time 1.25 min
Flow Program On
2.1055 mL/min for 0 min
Run Time 11.603 min

Column #2
Rtx-1 30m x 0.32mm x 4um: 920171
Rtx-1 30m x 0.32mm x 4um
280 °C: 30 m x 320 µm x 4 µm
In: Back SS Inlet H2
Out: Back Detector FID

(Initial) 35 °C
Pressure 5.205 psi
Flow 2.1055 mL/min

EA# 0311-50 Page 89 of 93

Modified on: 2/8/2011 at 11:28:59 AM

Average Velocity	40 cm/sec
Holdup Time	1.25 min
Flow Program	On
2.1055 mL/min for 0 min	
Run Time	11.603 min

Front Detector FID

Heater	On	300 °C
H2 Flow	On	30 mL/min
Air Flow	On	400 mL/min
Makeup Flow	On	30.646 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	

Back Detector FID

Heater	On	300 °C
H2 Flow	On	30 mL/min
Air Flow	On	400 mL/min
Makeup Flow	On	30.646 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	

Valve 1

Gas Sampling Valve	
GSV Loop Volume	0.25 mL
Load Time	1.5 min
Inject Time	0.5 min

Valve 2

Gas Sampling Valve	
GSV Loop Volume	0.25 mL
Load Time	1.5 min
Inject Time	0.5 min

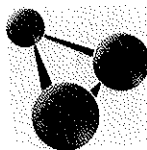
Valve Box

Heater	On	150 °C
--------	----	--------

Signals

Front Signal	Save On
	20 Hz
Test Plot	Save Off
	50 Hz
Back Signal	Save On
	20 Hz
Test Plot	Save Off
	50 Hz

CUSTOMGAS SOLUTIONS



1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc.
2202 Ellis Road, Suite A
Durham, NC 27703-5518

Tel: (919) 850-4392

Cylinder Number CC105338
Cylinder Size/CGA: AL150/350
Fill Pressure: 2000 PSIA
Gas Volume: 3700 liters
Date of Mfg: 08/11/10
Expiration Date: 08/11/11

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	081110-002	C709KMCJCB	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Ethylene Oxide	250 ppm	250 ppm +/- 5 ppm	Gravimetric Master Gas
Nitrogen	balance	balance	

NOTES: Blend Tolerance:

+/-2%

Analytical Tolerance:

+/-2%

Traceability:

NIST by weight set / Internal Standards by analysis

Reactive Mixtures:

Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.

Caution:

Do not use below 150 PSIG.

Authorized Signature:

Joseph A. Ernst

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

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

