

# **SOURCE COMPLIANCE TEST REPORT**

**CITGO PETROLEUM CORPORATION**

*Petroleum Refinery Information Collection Request (ICR)*

*Component 4 Emission Test Program*

*Fluidized Catalytic Cracking Unit (FCCU)*

*B-Cat Wet Gas Scrubber (EQT039) [Source ID 3(II)17]*

**VOLUME II OF III**

**Prepared for:**

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**Test Date: May 17, 2011 through May 27, 2011**

**Shaw Project No. 142733**

***Enthalpy:***  
***Analytical Report 0511-68***

# **Shaw Environmental, Inc.**

Air Measurements Division - 4171 Essen Lane  
Baton Rouge, LA 70809

**CITGO ICR Testing**  
Project # 142733

**Analytical Report**  
(0511-68)

## ***ASTM D1946-90 & EPA Method 18-Type***

Fixed gases, C<sub>2</sub> – C<sub>7</sub> with other VOC as C<sub>X</sub>,  
Net Heating Value, and Molecular Weight

## ***EPA SW-846 Method 0011***

Acetaldehyde, Formaldehyde, and Propionaldehyde

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

Chloride, Hydrogen chloride, and Hydrogen fluoride

## ***EPA CTM-027***

Hydrogen cyanide



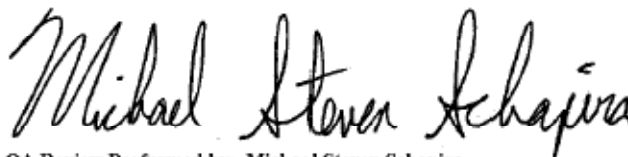
## **Enthalpy Analytical, Inc.**

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

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

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

This analytical report was prepared in Portable Document Format (.PDF) and contains 560 pages.



QA Review Performed by: Michael Steven Schapira

Report Issued: 6/16/11



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# Summary of Results



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Company	Shaw Environmental, Inc.
Analyst	CJT / TBO
Parameters	Net Heating Value / Mixed MW

Client #	142733
Job #	0511-68
# Samples	3 Canisters

Heating units	Sample ID / Net Heating Value		
	<i>051811-FUEL-1</i>	<i>051811-FUEL-2</i>	<i>051811-FUEL-3</i>
	<i>Can 1412</i>	<i>Can 1452</i>	<i>Can 1031</i>
Btu/SCF	968	1,003	1,006
The Btu/SCF values for cans 1452 and 1031 have been normalized down to 100% total gases.			
Density units	Sample ID / Mixed Molecular Weight		
	<i>051811-FUEL-1</i>	<i>051811-FUEL-2</i>	<i>051811-FUEL-3</i>
	<i>Can 1412</i>	<i>Can 1452</i>	<i>Can 1031</i>
g/mole	19.5	20.0	20.2
The Mixed MW values for all three cans have been normalized to 100% total gases.			

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	ASTM D1946-90

Client #	142733
Job #	0511-68
# Samples	3 Canisters

Compound	Sample ID / Sample Concentration (%)		
	<i>051811-FUEL-1</i>	<i>051811-FUEL-2</i>	<i>051811-FUEL-3</i>
	<i>Can 1412</i>	<i>Can 1452</i>	<i>Can 1031</i>
Hydrogen	20.9	19.9	18.9
Oxygen	0.800	0.808	0.781
Nitrogen	5.51	5.57	5.71
Carbon monoxide	0.348	0.348	0.355
Methane	45.6	46.3	47.4
Carbon dioxide	0.200	0.216	0.216

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-68
# Samples	3 Canisters

Compound	Sample ID / Sample Concentration (ppm)		
	<i>051811-FUEL-1 Can 1412</i>	<i>051811-FUEL-2 Can 1452</i>	<i>051811-FUEL-3 Can 1031</i>
Ethane	121,798	143,882	142,513
C2 as Ethane	53,957	52,863	52,983
Propane	31,854	34,573	35,217
C3 as Propane	13,310	12,997	12,817
Butane	8,087	7,982	7,649
C4 as Butane	13,033	12,883	12,700
Pentane	1,916	2,479	2,414
C5 as Pentane	8,164	8,379	8,333
Hexane	570	615	604
C6 as Hexane	2,847	2,988	2,965
Benzene	79.4	127	122
Heptane	222	289	301
C7 as Heptane	675	940	1,050

Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	142733
Job #	0511-68
# Samples	7 Runs

Compound	Sample ID / Catch Weight (ug)		
	<i>052011-0011U-1-1</i>	<i>052011-0011U-1-2</i>	<i>052011-0011U-1-3</i>
Formaldehyde	31.7	23.0	17.4
Acetaldehyde	0.634 ND	0.615 ND	6.46 J
Propionaldehyde	2.20 ND	2.13 ND	1.48 ND
	<i>052011-0011S-1-1</i>	<i>052011-0011-Field Spike</i>	
Formaldehyde	882	804	
Acetaldehyde	5.30 J	0.265 ND	
Propionaldehyde	1.32 ND	0.917 ND	
	<i>052011-0011-Sample BL</i>	<i>052011-0011-DM/H2O BL</i>	
Formaldehyde	84.8	7.80 ND	
Acetaldehyde	0.316 ND	2.38 ND	
Propionaldehyde	1.09 ND	8.24 ND	

Company	Shaw Environmental, Inc.
Analyst	EO
Parameters	EPA Method 26A

Client #	142733
Job #	0511-68
# Samples	3 Runs & 2 blanks

Compound	Sample ID / Catch Weight (ug)		
	<i>R1 C3</i>	<i>R2 C3</i>	<i>R3 C3</i>
Hydrogen fluoride	232 ND	187 ND	172 ND
Hydrogen chloride	2,023 J	1,388 J	1,093 J
	<i>26A-8-BL DI H2O</i>	<i>26A-6-BL H2SO4</i>	
Hydrogen fluoride	2.30 ND	78.6 ND	
Hydrogen chloride	2.25 ND	76.7 ND	

Company	Shaw Environmental, Inc.
Analyst	EO
Parameters	EPA Method 26A

Client #	142733
Job #	0511-68
# Samples	3 Runs & 1 blank

Compound	Sample ID / Catch Weight (ug)		
	<i>R1 C4</i>	<i>R2 C4</i>	<i>R3 C4</i>
Chloride	10,889	9,693	9,135
	<i>NaOH Blank</i>		
Chloride	4,514		

Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	OTM-29

Client #	142733
Job #	0511-68
# Samples	3 Runs, 1 blank, 1 spike

Compound	Sample ID / Catch Weight (ug)		
	<i>051811-OTM29-1</i>	<i>051811-OTM29-2</i>	<i>051811-OTM29-3</i>
Hydrogen cyanide	42,721	119,064	81,553
	<i>051811-OTM29 Spike</i>	<i>051811-OTM29 Wash-BL</i>	
Hydrogen cyanide	1,115	5.43 ND	



# Results



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Company Analyst Parameters	Shaw Environmental, Inc. CJT / TBO Net Heating Value / MW	Client # 142733 Job # 0511-68 # Samples 3 Canisters
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Sample ID	Analyte	MW	Mol. %	Btu/lb	Btu/SCF
051811-FUEL-1 Can 1412	Hydrogen	2.02	20.9	51,571	56.4
	Oxygen	32.0	0.800	0.00	0.00
	Nitrogen	28.0	5.51	0.00	0.00
	Carbon monoxide	28.0	0.348	4,894	1.24
	Methane	16.0	45.6	21,502	408
	Carbon dioxide	44.0	0.200	0.00	0.00
	Ethane	30.1	12.2	20,416	194
	C2	30.1	5.40	20,416	86.0
	Propane	44.1	3.19	19,929	72.7
	C3	44.1	1.33	19,929	30.4
	Butane	58.1	0.809	19,665	24.0
	C4	58.1	1.30	19,665	38.7
	Pentane	72.1	0.192	19,499	7.00
	C5	72.1	0.816	19,499	29.8
	Hexane	86.2	0.0570	19,391	2.47
	C6	86.2	0.285	19,391	12.3
	Benzene	78.1	0.00794	17,460	0.281
	Heptane	100	0.0222	19,314	1.11
	C7	100	0.0675	19,314	3.39
		Total	19.5	Total	968
Total gases			98.98		

Sample ID	Analyte	MW	Mol. %	Btu/lb	Btu/SCF
051811-FUEL-2 Can 1452	Hydrogen	2.02	19.9	51,571	53.8
	Oxygen	32.0	0.808	0.00	0.00
	Nitrogen	28.0	5.57	0.00	0.00
	Carbon monoxide	28.0	0.348	4,894	1.24
	Methane	16.0	46.3	21,502	414
	Carbon dioxide	44.0	0.216	0.00	0.00
	Ethane	30.1	14.4	20,416	229
	C2	30.1	5.29	20,416	84.2
	Propane	44.1	3.46	19,929	78.9
	C3	44.1	1.30	19,929	29.6
	Butane	58.1	0.798	19,665	23.7
	C4	58.1	1.29	19,665	38.2
	Pentane	72.1	0.248	19,499	9.05
	C5	72.1	0.838	19,499	30.6
	Hexane	86.2	0.0615	19,391	2.67
	C6	86.2	0.299	19,391	13.0
	Benzene	78.1	0.0127	17,460	0.449
	Heptane	100	0.0289	19,314	1.45
	C7	100	0.0940	19,314	4.72
		Total	20.0	Total	1,003
Total gases			101.24		

0511-68-Btu

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Company Analyst Parameters	Shaw Environmental, Inc. CJT / TBO Net Heating Value / MW	Client # 142733 Job # 0511-68 # Samples 3 Canisters
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Sample ID	Analyte	MW	Mol. %	Btu/lb	Btu/SCF
051811-FUEL-3 Can 1031	Hydrogen	2.02	18.9	51,571	51.1
	Oxygen	32.0	0.781	0.00	0.00
	Nitrogen	28.0	5.71	0.00	0.00
	Carbon monoxide	28.0	0.355	4,894	1.26
	Methane	16.0	47.4	21,502	425
	Carbon dioxide	44.0	0.216	0.00	0.00
	Ethane	30.1	14.3	20,416	227
	C2	30.1	5.30	20,416	84.4
	Propane	44.1	3.52	19,929	80.3
	C3	44.1	1.28	19,929	29.2
	Butane	58.1	0.765	19,665	22.7
	C4	58.1	1.27	19,665	37.7
	Pentane	72.1	0.241	19,499	8.82
	C5	72.1	0.833	19,499	30.4
	Hexane	86.2	0.0604	19,391	2.62
	C6	86.2	0.296	19,391	12.9
	Benzene	78.1	0.0122	17,460	0.432
	Heptane	100	0.0301	19,314	1.51
	C7	100	0.105	19,314	5.28
		Total	20.2	Total	1,006
Total gases			101.38		

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	ASTM D1946-90

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.160 (%)  
 LOQ 0.200 (%)  
 Compound Hydrogen

Lower Curve Limit 0.200 (%)  
 Upper Curve Limit 40.0 (%)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (%)	Conc # 2 (%)	% Diff Conc	Avg Conc (%)	DF	Sample Conc (%)	Qual
051811-FUEL-1 Can 1412	007F1201.D	007F1202.D	GC115P136F.M	0.83	0.83	0.2	20.8	21.0	0.4	20.9	1	20.9	
051811-FUEL-2 Can 1452	008F1301.D	008F1302.D	GC115P136F.M	0.83	0.83	0.0	20.0	19.9	0.4	19.9	1	19.9	
051811 FUEL-3 Can 1031	009F1401.D	009F1402.D	GC115P136F.M	0.83	0.83	0.0	18.9	19.0	0.3	18.9	1	18.9	
He Blank	001F0701.D	001F0702.D	GC115P136F.M	NA	NA	NA	0.160	0.160	0.0	0.160	1	0.160	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	ASTM D1946-90

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.0182 (%)  
 LOQ 0.182 (%)  
 Compound Oxygen

Lower Curve Limit 0.182 (%)  
 Upper Curve Limit 99.8 (%)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (%)	Conc # 2 (%)	% Diff Conc	Avg Conc (%)	DF	Sample Conc (%)	Qual
051811-FUEL-1 Can 1412	007F1201.D	007F1202.D	GC115P136F.M	3.52	3.51	0.2	0.818	0.782	2.3	0.800	1	0.800	
051811-FUEL-2 Can 1452	008F1301.D	008F1302.D	GC115P136F.M	3.50	3.50	0.0	0.807	0.809	0.1	0.808	1	0.808	
051811 FUEL-3 Can 1031	009F1401.D	009F1402.D	GC115P136F.M	3.50	3.50	0.1	0.781	0.782	0.1	0.781	1	0.781	
He Blank	001F0701.D	001F0702.D	GC115P136F.M	NA	NA	NA	0.0182	0.0182	0.0	0.0182	1	0.0182	ND

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Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	ASTM D1946-90

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.0200 (%)  
 LOQ 0.200 (%)  
 Compound Nitrogen

Lower Curve Limit 0.200 (%)  
 Upper Curve Limit 100 (%)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (%)	Conc # 2 (%)	% Diff Conc	Avg Conc (%)	DF	Sample Conc (%)	Qual
051811-FUEL-1 Can 1412	007F1201.D	007F1202.D	GC115P136F.M	3.96	3.95	0.2	5.55	5.47	0.7	5.51	1	5.51	
051811-FUEL-2 Can 1452	008F1301.D	008F1302.D	GC115P136F.M	3.94	3.94	0.0	5.56	5.57	0.1	5.57	1	5.57	
051811 FUEL-3 Can 1031	009F1401.D	009F1402.D	GC115P136F.M	3.94	3.94	0.0	5.70	5.73	0.3	5.71	1	5.71	
He Blank	001F0701.D	001F0702.D	GC115P136F.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	0.0200	ND

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Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	ASTM D1946-90

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.0200 (%)  
 LOQ 0.200 (%)  
 Compound Carbon monoxide

Lower Curve Limit 0.200 (%)  
 Upper Curve Limit 99.0 (%)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (%)	Conc # 2 (%)	% Diff Conc	Avg Conc (%)	DF	Sample Conc (%)	Qual
051811-FUEL-1 Can 1412	007F1201.D	007F1202.D	GC115P136F.M	5.24	5.24	0.1	0.348	0.348	0.1	0.348	1	0.348	
051811-FUEL-2 Can 1452	008F1301.D	008F1302.D	GC115P136F.M	5.23	5.23	0.0	0.347	0.349	0.2	0.348	1	0.348	
051811 FUEL-3 Can 1031	009F1401.D	009F1402.D	GC115P136F.M	5.22	5.22	0.0	0.354	0.356	0.2	0.355	1	0.355	
He Blank	001F0701.D	001F0702.D	GC115P136F.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	0.0200	ND

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Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	ASTM D1946-90

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.0160 (%)  
 LOQ 0.160 (%)  
 Compound Methane

Lower Curve Limit 0.160 (%)  
 Upper Curve Limit 99.0 (%)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (%)	Conc # 2 (%)	% Diff Conc	Avg Conc (%)	DF	Sample Conc (%)	Qual
051811-FUEL-1 Can 1412	007F1201.D	007F1202.D	GC115P136F.M	7.34	7.33	0.1	45.3	45.8	0.5	45.6	1	45.6	
051811-FUEL-2 Can 1452	008F1301.D	008F1302.D	GC115P136F.M	7.32	7.32	0.0	46.1	46.4	0.3	46.3	1	46.3	
051811 FUEL-3 Can 1031	009F1401.D	009F1402.D	GC115P136F.M	7.32	7.32	0.0	47.4	47.5	0.2	47.4	1	47.4	
He Blank	001F0701.D	001F0702.D	GC115P136F.M	NA	NA	NA	0.0160	0.0160	0.0	0.0160	1	0.0160	ND



Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	ASTM D1946-90

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.0182 (%)  
LOQ 0.182 (%)  
Compound Carbon dioxide

Lower Curve Limit 0.182 (%)  
Upper Curve Limit 99.8 (%)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (%)	Conc # 2 (%)	% Diff Conc	Avg Conc (%)	DF	Sample Conc (%)	Qual
051811-FUEL-1 Can 1412	007F1201.D	007F1202.D	GC115P136F.M	9.38	9.37	0.2	0.200	0.200	0.0	0.200	1	0.200	
051811-FUEL-2 Can 1452	008F1301.D	008F1302.D	GC115P136F.M	9.37	9.36	0.1	0.211	0.220	1.9	0.216	1	0.216	
051811 FUEL-3 Can 1031	009F1401.D	009F1402.D	GC115P136F.M	9.33	9.34	0.0	0.216	0.215	0.2	0.216	1	0.216	
He Blank	001F0701.D	001F0702.D	GC115P136F.M	NA	NA	NA	0.0182	0.0182	0.0	0.0182	1	0.0182	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-88
# Samples	3 Canisters

MDL 0.250 (ppm)  
LOQ 2.50 (ppm)  
Compound Ethane

Lower Curve Limit 2.50 (ppm)  
Upper Curve Limit 49,880 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Di# Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Di# Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	032B0301.D	032B0302.D	032B0303.D	GC115P152B_0511-88.M	1.44	1.44	1.44	0.2	11,104	11,103	11,010	0.6	11,073	11	121,798	
051811-FUEL-2 Can 1452	025B1801.D	025B1802.D	025B1803.D	GC115P152B_0511-88.M	1.45	1.49	1.50	3.5	12,948	13,151	13,143	1.0	13,080	11	143,882	
051811-FUEL-3 Can 1031	026B1901.D	026B1902.D	026B1903.D	GC115P152B_0511-88.M	1.48	1.47	1.45	2.0	13,002	12,939	12,927	0.4	12,956	11	142,513	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.250	0.250	0.250	0.0	0.250	1	0.250	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.250	0.250	0.250	0.0	0.250	1	0.250	ND

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Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.250 (ppm)  
 LOQ 2.50 (ppm)  
 Compound C2 as Ethane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-68.M	53,740	54,030	54,100	0.4	53,957	1	53,957	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-68.M	52,860	52,690	53,040	0.3	52,863	1	52,863	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-68.M	53,020	52,810	53,120	0.3	52,983	1	52,983	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-68.M	0.250	0.250	0.250	0.0	0.250	1	0.250	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-68.M	0.250	0.250	0.250	0.0	0.250	1	0.250	ND

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Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-88
# Samples	3 Canisters

MDL 0.250 (ppm)  
LOQ 2.50 (ppm)  
Compound Propane

Lower Curve Limit 2.50 (ppm)  
Upper Curve Limit 49,930 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Di# Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Di# Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-88.M	2.24	2.24	2.25	0.4	31,723	31,901	31,939	0.4	31,854	1	31,854	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-88.M	2.25	2.24	2.25	0.3	34,572	34,484	34,883	0.3	34,573	1	34,573	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-88.M	2.24	2.23	2.23	0.6	35,249	35,085	35,318	0.4	35,217	1	35,217	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.250	0.250	0.250	0.0	0.250	1	0.250	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.250	0.250	0.250	0.0	0.250	1	0.250	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.250 (ppm)  
LOQ 2.50 (ppm)  
Compound C3 as Propane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-68.M	13,270	13,330	13,330	0.3	13,310	1	13,310	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-68.M	13,000	12,950	13,040	0.4	12,997	1	12,997	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-68.M	12,820	12,790	12,840	0.2	12,817	1	12,817	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-68.M	0.250	0.250	0.250	0.0	0.250	1	0.250	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-68.M	0.250	0.250	0.250	0.0	0.250	1	0.250	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-88
# Samples	3 Canisters

MDL 0.250 (ppm)  
LOQ 2.50 (ppm)  
Compound Butane

Lower Curve Limit 2.50 (ppm)  
Upper Curve Limit 9.990 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Di# Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Di# Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-88.M	4.89	4.88	4.89	0.1	8.062	8.097	8.103	0.3	8.087	1	8.087	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-88.M	4.89	4.89	4.89	0.0	7.986	7.955	8.007	0.3	7.982	1	7.982	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-88.M	4.88	4.88	4.88	0.1	7.656	7.625	7.667	0.3	7.649	1	7.649	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.250	0.250	0.250	0.0	0.250	1	0.250	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.250	0.250	0.250	0.0	0.250	1	0.250	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.250 (ppm)  
LOQ 2.50 (ppm)  
Compound C4 as Butane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-68.M	13,000	13,050	13,050	0.3	13,033	1	13,033	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-68.M	12,890	12,840	12,920	0.3	12,883	1	12,883	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-68.M	12,710	12,660	12,730	0.3	12,700	1	12,700	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-68.M	0.250	0.250	0.250	0.0	0.250	1	0.250	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-68.M	0.250	0.250	0.250	0.0	0.250	1	0.250	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.247 (ppm)  
LOQ 2.50 (ppm)  
Compound Pentane

Lower Curve Limit 2.50 (ppm)  
Upper Curve Limit 2.002 (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
051811-FUEL-1 Can 1412	032B0301.D	032B0302.D	032B0303.D	GC115P152B_0511-68.M	6.44	6.44	6.44	0.0	175	174	173	0.5	174	11	1,916	
051811-FUEL-2 Can 1452	025B1801.D	025B1802.D	025B1803.D	GC115P152B_0511-68.M	6.44	6.45	6.45	0.1	223	227	228	1.1	225	11	2,479	
051811-FUEL-3 Can 1031	026B1901.D	026B1902.D	026B1903.D	GC115P152B_0511-68.M	6.45	6.45	6.44	0.0	220	219	219	0.3	219	11	2,414	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-68.M	NA	NA	NA	NA	0.247	0.247	0.247	0.0	0.247	1	0.247	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-68.M	NA	NA	NA	NA	0.247	0.247	0.247	0.0	0.247	1	0.247	ND



Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.247 (ppm)  
 LOQ 2.50 (ppm)  
 Compound C5 as Pentane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-68.M	8,136	8,174	8,181	0.3	8,164	1	8,164	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-68.M	8,381	8,351	8,405	0.3	8,379	1	8,379	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-68.M	8,340	8,307	8,352	0.3	8,333	1	8,333	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-68.M	0.247	0.247	0.247	0.0	0.247	1	0.247	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-68.M	0.247	0.247	0.247	0.0	0.247	1	0.247	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-88
# Samples	3 Canisters

MDL 0.258 (ppm)  
LOQ 2.50 (ppm)  
Compound Hexane

Lower Curve Limit 2.50 (ppm)  
Upper Curve Limit 1.003 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Di# Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Di# Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-88.M	7.36	7.36	7.36	0.0	565	571	573	0.7	570	1	570	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-88.M	7.36	7.36	7.36	0.0	618	615	613	0.4	615	1	615	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-88.M	7.35	7.35	7.35	0.0	603	602	605	0.3	604	1	604	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.258	0.258	0.258	0.0	0.258	1	0.258	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.258	0.258	0.258	0.0	0.258	1	0.258	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.258 (ppm)  
 LOQ 2.50 (ppm)  
 Compound C6 as Hexane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-68.M	2,839	2,849	2,852	0.3	2,847	1	2,847	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-68.M	2,987	2,977	3,001	0.4	2,988	1	2,988	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-68.M	2,968	2,954	2,972	0.4	2,965	1	2,965	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-68.M	0.258	0.258	0.258	0.0	0.258	1	0.258	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-68.M	0.258	0.258	0.258	0.0	0.258	1	0.258	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-88
# Samples	3 Canisters

MDL 0.250 (ppm)  
LOQ 2.04 (ppm)  
Compound Benzene

Lower Curve Limit 2.04 (ppm)  
Upper Curve Limit 102 (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
051811-FUEL-1 Can 1412	032B0301.D	032B0302.D	032B0303.D	GC115P152B_0511-88.M	7.78	7.78	7.78	0.0	7.28	7.23	7.18	0.9	7.22	11	79.4	
051811-FUEL-2 Can 1452	025B1801.D	025B1802.D	025B1803.D	GC115P152B_0511-88.M	7.78	7.78	7.78	0.0	11.4	11.7	11.5	1.2	11.5	11	127	
051811-FUEL-3 Can 1031	026B1901.D	026B1902.D	026B1903.D	GC115P152B_0511-88.M	7.78	7.78	7.78	0.0	11.1	11.1	11.1	0.3	11.1	11	122	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.250	0.250	0.250	0.0	0.250	1	0.250	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.250	0.250	0.250	0.0	0.250	1	0.250	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-88
# Samples	3 Canisters

MDL 0.243 (ppm)  
LOQ 2.50 (ppm)  
Compound Heptane

Lower Curve Limit 2.50 (ppm)  
Upper Curve Limit 404 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Di# Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Di# Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-88.M	8.04	8.04	8.04	0.0	223	220	222	0.8	222	1	222	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-88.M	8.04	8.04	8.04	0.0	288	289	289	0.2	289	1	289	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-88.M	8.04	8.04	8.04	0.0	302	301	301	0.4	301	1	301	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.243	0.243	0.243	0.0	0.243	1	0.243	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-88.M	NA	NA	NA	NA	0.243	0.243	0.243	0.0	0.243	1	0.243	ND

Company	Shaw Environmental, Inc.
Analyst	CJT
Parameters	EPA Method 18-Type

Client #	142733
Job #	0511-68
# Samples	3 Canisters

MDL 0.243 (ppm)  
 LOQ 2.50 (ppm)  
 Compound C7 as Heptane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
051811-FUEL-1 Can 1412	023B1201.D	023B1202.D	023B1203.D	GC115P152B_0511-68.M	664	677	684	1.7	675	1	675	
051811-FUEL-2 Can 1452	024B1301.D	024B1302.D	024B1303.D	GC115P152B_0511-68.M	940	936	944	0.4	940	1	940	
051811-FUEL-3 Can 1031	025B1401.D	025B1402.D	025B1403.D	GC115P152B_0511-68.M	1,050	1,046	1,055	0.4	1,050	1	1,050	
He Blank	017B0701.D	017B0702.D	017B0703.D	GC115P152B_0511-68.M	0.243	0.243	0.243	0.0	0.243	1	0.243	ND
He Blank	017B0901.D	017B0902.D	017B0903.D	GC115P152B_0511-68.M	0.243	0.243	0.243	0.0	0.243	1	0.243	ND

Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	142733
Job #	0511-88
# Samples	7 Runs

MDL 0.00927 (ug/mL)  
LOQ 0.0747 (ug/mL)  
Compound Formaldehyde

Lower Curve Limit 0.0747 (ug/mL)  
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Qual
052011-0011U-1-1	011-1001.D	HPLC54PG120ICR.M	5.06	0.141	2	112	31.7	
052011-0011U-1-1	011-1101.D	HPLC54PG120ICR.M	5.07	0.141	2	112	31.7	
							difference	0.0%
							average	31.7
052011-0011U-1-2	013-1301.D	HPLC54PG120ICR.M	5.05	0.106	2	109	23.0	
052011-0011U-1-3	014-1401.D	HPLC54PG120ICR.M	5.08	0.115	1	151	17.4	
052011-0011S-1-1	015-1501.D	HPLC54PG120ICR.M	5.04	6.57	1	134	882	
052011-0011-Field Spike	016-1601.D	HPLC54PG120ICR.M	5.08	8.59	1	93.8	804	
							Spike Amount (ug)	1,002
							Spike Recovery (%)	80.3%
052011-0011-Sample BL	017-1701.D	HPLC54PG120ICR.M	5.06	0.759	1	112	84.8	
052011-0011-DM/H2O BL	018-1801.D	HPLC54PG120ICR.M	NA	0.00927	7.85	107	7.80	ND
MB-1	019-1901.D	HPLC54PG120ICR.M	5.06	0.0526	1	136	7.15	J
MB-2	073-1101.D	HPLC54PG120ICR.M	NA	0.00927	1	136	1.26	ND
RB/100% ACN	008-0301.D	HPLC54PG120ICR.M	NA	0.00927	1	1.00	0.00927	ND
MS/U-1-2	071-0901.D	HPLC54PG120ICR.M	4.93	1.21	1	95.1	115	
							Spike Amount (ug)	301
							Native Amount (ug)	3.83
							Spike Recovery (%)	37.2%
MSD/U-1-2	072-1001.D	HPLC54PG120ICR.M	4.93	1.23	1	95.1	117	
							Spike Amount (ug)	301
							Native Amount (ug)	3.83
							Spike Recovery (%)	37.6%

Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	142733
Job #	0511-88
# Samples	7 Runs

MDL 0.00927 (ug/mL)  
LOQ 0.0747 (ug/mL)  
Compound Formaldehyde

Lower Curve Limit 0.0747 (ug/mL)  
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	Aliquot Factor	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	020-2101.D	HPLC54PG120ICR.M	5.08	6.15	1	136	836	
Spike Amount (ug)							1.002	
Spike Recovery (%)							83.5%	
LCS-2	074-1201.D	HPLC54PG120ICR.M	4.94	0.780	1	139	108	
Spike Amount (ug)							301	
Spike Recovery (%)							36.1%	
052011-0011U-1-1 LD	012-1201.D	HPLC54PG120ICR.M	5.06	0.137	2	109	29.8	
difference							6.1%	
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00927	1	1.00	0.00927	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00927	1	1.00	0.00927	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00927	1	1.00	0.00927	ND
average							0.00927	ND
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	5.06	3.07	1	1.00	3.07	
hplc54pg120 #SS	007-0802.D	HPLC54PG120.M	5.07	3.07	1	1.00	3.07	
hplc54pg120 #SS	007-0803.D	HPLC54PG120.M	5.06	3.06	1	1.00	3.06	
average							3.07	
Tag value							2.90	
Recovery (%)							106%	



Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	142733
Job #	0511-88
# Samples	7 Runs

MDL 0.00283 (ug/mL)  
LOQ 0.0747 (ug/mL)  
Compound Acetaldehyde

Lower Curve Limit 0.0747 (ug/mL)  
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
052011-0011U-1-1	011-1001.D	HPLC54PG120ICR.M	NA	0.00283	2	112	0.634	ND
052011-0011U-1-1	011-1101.D	HPLC54PG120ICR.M	NA	0.00283	2	112	0.634	ND
							difference	0.00%
							average	0.634
052011-0011U-1-2	013-1301.D	HPLC54PG120ICR.M	NA	0.00283	2	109	0.615	ND
052011-0011U-1-3	014-1401.D	HPLC54PG120ICR.M	6.40	0.0428	1	151	6.46	J
052011-0011S-1-1	015-1501.D	HPLC54PG120ICR.M	6.36	0.0364	1	134	5.30	J
052011-0011-Field Spike	016-1601.D	HPLC54PG120ICR.M	NA	0.00283	1	93.6	0.265	ND
052011-0011-Sample BL	017-1701.D	HPLC54PG120ICR.M	NA	0.00283	1	112	0.316	ND
052011-0011-DM/H2O BL	018-1801.D	HPLC54PG120ICR.M	NA	0.00283	7.85	107	2.38	ND
MB-1	019-1901.D	HPLC54PG120ICR.M	NA	0.00283	1	136	0.384	ND
MB-2	073-1101.D	HPLC54PG120ICR.M	NA	0.00283	1	136	0.384	ND
RB/100% ACN	008-0301.D	HPLC54PG120ICR.M	NA	0.00283	1	1.00	0.00283	ND
MS/U-1-2	071-0901.D	HPLC54PG120ICR.M	6.23	2.87	1	95.1	273	
							Spike Amount (ug)	318
							Native Amount (ug)	0.00
							Spike Recovery (%)	85.8%
MSD/U-1-2	072-1001.D	HPLC54PG120ICR.M	6.24	2.86	1	95.1	272	
							Spike Amount (ug)	318
							Native Amount (ug)	0.00
							Spike Recovery (%)	85.7%

Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	142733
Job #	0511-88
# Samples	7 Runs

MDL 0.00283 (ug/mL)  
LOQ 0.0747 (ug/mL)  
Compound Acetaldehyde

Lower Curve Limit 0.0747 (ug/mL)  
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	020-2101.D	HPLC54PG120ICR.M	6.40	5.50	1	136	760	
							Spike Amount (ug)	807
							Spike Recovery (%)	94.2%
LCS-2	074-1201.D	HPLC54PG120ICR.M	6.25	1.98	1	139	275	
							Spike Amount (ug)	318
							Spike Recovery (%)	86.5%
052011-0011U-1-1 LD	012-1201.D	HPLC54PG120ICR.M	NA	0.00283	2	109	0.615	ND
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00283	1	1.00	0.00283	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00283	1	1.00	0.00283	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00283	1	1.00	0.00283	ND
							average	0.00283 ND
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	6.39	3.11	1	1.00	3.11	
hplc54pg120 #SS	007-0802.D	HPLC54PG120.M	6.39	3.11	1	1.00	3.11	
hplc54pg120 #SS	007-0803.D	HPLC54PG120.M	6.39	3.10	1	1.00	3.10	
							average	3.11
							Tag value	2.90
							Recovery (%)	107%

Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	142733
Job #	0511-88
# Samples	7 Runs

MDL 0.00980 (ug/mL)  
LOQ 0.0746 (ug/mL)  
Compound Propionaldehyde

Lower Curve Limit 0.0746 (ug/mL)  
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
052011-0011U-1-1	011-1001.D	HPLC54PG120ICR.M	NA	0.00980	2	112	2.20	ND
052011-0011U-1-1	011-1101.D	HPLC54PG120ICR.M	NA	0.00980	2	112	2.20	ND
							difference	0.00%
							average	2.20
052011-0011U-1-2	013-1301.D	HPLC54PG120ICR.M	NA	0.00980	2	109	2.13	ND
052011-0011U-1-3	014-1401.D	HPLC54PG120ICR.M	NA	0.00980	1	151	1.48	ND
052011-0011S-1-1	015-1501.D	HPLC54PG120ICR.M	NA	0.00980	1	134	1.32	ND
052011-0011-Field Spike	016-1601.D	HPLC54PG120ICR.M	NA	0.00980	1	93.6	0.917	ND
052011-0011-Sample BL	017-1701.D	HPLC54PG120ICR.M	NA	0.00980	1	112	1.09	ND
052011-0011-DM/H2O BL	018-1801.D	HPLC54PG120ICR.M	NA	0.00980	7.85	107	8.24	ND
MB-1	019-1901.D	HPLC54PG120ICR.M	NA	0.00980	1	136	1.33	ND
MB-2	073-1101.D	HPLC54PG120ICR.M	NA	0.00980	1	136	1.33	ND
RB/100% ACN	008-0301.D	HPLC54PG120ICR.M	NA	0.00980	1	1.00	0.00980	ND
MS/U-1-2	071-0901.D	HPLC54PG120ICR.M	8.45	3.19	1	95.1	304	
							Spike Amount (ug)	321
							Native Amount (ug)	0.00
							Spike Recovery (%)	94.6%
MSD/U-1-2	072-1001.D	HPLC54PG120ICR.M	8.46	3.14	1	95.1	299	
							Spike Amount (ug)	321
							Native Amount (ug)	0.00
							Spike Recovery (%)	93.1%

Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	EPA SW-846 Method 0011

Client #	142733
Job #	0511-88
# Samples	7 Runs

MDL 0.00980 (ug/mL)  
LOQ 0.0746 (ug/mL)  
Compound Propionaldehyde

Lower Curve Limit 0.0746 (ug/mL)  
Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID	Analysis Method	Ret Time (min)	Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
LCS-1	020-2101.D	HPLC54PG120ICR.M	8.63	6.18	1	136	840	
							Spike Amount (ug)	802
							Spike Recovery (%)	105%
LCS-2	074-1201.D	HPLC54PG120ICR.M	8.47	2.37	1	139	329	
							Spike Amount (ug)	321
							Spike Recovery (%)	103%
052011-0011U-1-1 LD	012-1201.D	HPLC54PG120ICR.M	NA	0.00980	2	109	2.13	ND
RB/100% ACN	008-0901.D	HPLC54PG120.M	NA	0.00980	1	1.00	0.00980	ND
RB/100% ACN	008-0902.D	HPLC54PG120.M	NA	0.00980	1	1.00	0.00980	ND
RB/100% ACN	008-0903.D	HPLC54PG120.M	NA	0.00980	1	1.00	0.00980	ND
							average	0.00980
hplc54pg120 #SS	007-0801.D	HPLC54PG120.M	8.62	3.08	1	1.00	3.08	
hplc54pg120 #SS	007-0802.D	HPLC54PG120.M	8.61	3.08	1	1.00	3.08	
hplc54pg120 #SS	007-0803.D	HPLC54PG120.M	8.62	3.07	1	1.00	3.07	
							average	3.08
							Tag value	2.90
							Recovery (%)	106%

Company	Shaw Environmental, Inc.
Analyst	EO
Parameters	EPA Method 26A

Client #	142733
Job #	0511-68
# Samples	3 Runs & 2 blanks

MDL 0.0200 (ug/mL)  
 LOQ 0.200 (ug/mL)  
 Compound Hydrogen fluoride

Lower Curve Limit 0.200 (ug/mL)  
 Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Aliquot Factor	Catch Weight (ug)	Qual
R1 C3	008-0901.D	008-0902.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	1.101	1.053	232	ND
R2 C3	012-1301.D	012-1302.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	886	1.053	187	ND
R3 C3	014-1501.D	014-1502.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	818	1.053	172	ND
26A-8-BL DI H2O	016-1901.D	016-1902.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	109	1.053	2.30	ND
26A-8-BL H2SO4	017-2001.D	017-2002.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	373	1.053	78.6	ND
0.01N H2SO4/NaOH RB	007-0801.D	007-0802.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.053	0.0211	ND
MS R1 C3	009-1001.D	009-1002.D	HPLC55PG144.M	2.65	2.65	0.0	3.42	3.43	0.1	3.42	1	10.0	1.053	36.0	
														Spike Amount (ug)	31.6
														Native Amount (ug)	0.00
														Spike Recovery (%)	114%
MSD R1 C3	010-1101.D	010-1102.D	HPLC55PG144.M	2.65	2.65	0.0	3.43	3.41	0.2	3.42	1	10.0	1.053	36.0	
														Spike Amount (ug)	31.6
														Native Amount (ug)	0.00
														Spike Recovery (%)	114%
HPLC55pg144 #SS	006-0701.D	006-0702.D	HPLC55PG144.M	2.64	2.64	0.0	1.38	1.38	0.1	1.38	1	1.00	1.053	1.46	
														Spike Amount (ug)	1.32
														Spike Recovery (%)	111%

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Company	Shaw Environmental, Inc.
Analyst	EO
Parameters	EPA Method 26A

Client #	142733
Job #	0511-68
# Samples	3 Runs & 2 blanks

MDL 0.0200 (ug/mL)  
 LOQ 0.200 (ug/mL)  
 Compound Hydrogen chloride

Lower Curve Limit 0.200 (ug/mL)  
 Upper Curve Limit 15.0 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Aliquot Factor	Catch Weight (ug)	Qual
R1 C3	008-0901.D	008-0902.D	HPLC55PG144.M	3.50	3.50	0.0	0.179	0.179	0.0	0.179	10	1.101	1.028	2.023	J
R2 C3	012-1301.D	012-1302.D	HPLC55PG144.M	3.50	3.50	0.0	0.152	0.152	0.1	0.152	10	886	1.028	1.388	J
R3 C3	014-1501.D	014-1502.D	HPLC55PG144.M	3.50	3.50	0.0	0.131	0.129	0.7	0.130	10	818	1.028	1.093	J
26A-8-BL DI H2O	016-1901.D	016-1902.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	109	1.028	2.25	ND
26A-8-BL H2SO4	017-2001.D	017-2002.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	10	373	1.028	76.7	ND
0.01N H2SO4/NaOH RB	007-0801.D	007-0802.D	HPLC55PG144.M	NA	NA	NA	0.0200	0.0200	0.0	0.0200	1	1.00	1.028	0.0206	ND
MS R1 C3	009-1001.D	009-1002.D	HPLC55PG144.M	3.50	3.50	0.0	3.17	3.18	0.2	3.17	1	10.0	1.028	32.6	
														Spike Amount (ug)	30.8
														Native Amount (ug)	1.84
														Spike Recovery (%)	99.8%
MSD R1 C3	010-1101.D	010-1102.D	HPLC55PG144.M	3.50	3.50	0.0	3.18	3.16	0.2	3.17	1	10.0	1.028	32.6	
														Spike Amount (ug)	30.8
														Native Amount (ug)	1.84
														Spike Recovery (%)	99.6%
HPLC55pg144 #SS	006-0701.D	006-0702.D	HPLC55PG144.M	3.50	3.50	0.0	2.43	2.43	0.0	2.43	1	1.00	1.028	2.50	
														Spike Amount (ug)	2.57
														Spike Recovery (%)	97.3%

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Company	Shaw Environmental, Inc.
Analyst	EO
Parameters	EPA Method 26A

Client #	142733
Job #	0511-68
# Samples	3 Runs & 1 blank

MDL 0.0200 (ug/mL) Lower Curve Limit 0.200 (ug/mL)  
 LOQ 0.200 (ug/mL) Upper Curve Limit 15.0 (ug/mL)  
 Compound Chloride

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
R1 C4	011-1201.D	011-1202.D	HPLC55PG144CLM	3.48	3.47	0.0	3.28	3.29	0.0	3.28	10	332	10,889	
R2 C4	013-1401.D	013-1402.D	HPLC55PG144CLM	3.40	3.40	0.0	3.56	3.57	0.1	3.56	10	272	9,093	
R3 C4	015-1601.D	015-1602.D	HPLC55PG144CLM	3.49	3.49	0.0	3.44	3.50	0.7	3.47	10	263	9,135	
NaOH Blank	018-2101.D	018-2102.D	HPLC55PG144CLM	3.46	3.46	0.0	1.32	1.32	0.1	1.32	10	342	4,514	

Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	OTM-29

Client #	142733
Job #	0511-68
# Samples	3 Runs, 1 blank, 1 spike

MDL 0.0104 (ug/mL) Lower Curve Limit 0.104 (ug/mL)  
 LOQ 0.104 (ug/mL) Upper Curve Limit 2.08 (ug/mL)  
 Compound Hydrogen cyanide

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
051811-OTM29-1 3	008-0901.D	008-0902.D	HPLC56PG48B.M	7.90	7.81	1.1	0.947	0.948	0.0	0.947	50	825	39,074	
051811-OTM29-1 4	011-1201.D	011-1202.D	HPLC56PG48B.M	7.87	7.86	0.1	0.310	0.311	0.2	0.310	50	235	3,647	
													42,721	
051811-OTM29-2 3	014-0901.D	014-0902.D	HPLC56PG49.M	7.92	7.90	0.2	1.41	1.40	0.2	1.40	100	745	104,547	
051811-OTM29-2 4	015-1801.D	015-1802.D	HPLC56PG48B.M	7.83	7.84	0.1	1.56	1.55	0.2	1.55	50	187	14,517	
													119,064	
051811-OTM29-3 3	016-1901.D	016-1902.D	HPLC56PG48B.M	7.83	7.84	0.1	2.01	2.02	0.4	2.01	50	670	67,478	
051811-OTM29-3 4	017-2001.D	017-2002.D	HPLC56PG48B.M	7.87	7.87	0.1	1.38	1.37	0.1	1.37	50	205	14,075	
													81,553	
051811-OTM29 Spike	018-2301.D	018-2302.D	HPLC56PG46.M	7.78	7.78	0.0	1.38	1.37	0.4	1.38	5	162	1,115	
													Spike Amount (ug)	1,008
													Spike Recovery (%)	111%
051811-OTM29 Wash-BL	019-2401.D	019-2402.D	HPLC56PG46.M	NA	NA	NA	0.0104	0.0104	0.0	0.0104	5	105	5.43	ND
MB/0.1N NaOH	007-0801.D	007-0802.D	HPLC56PG46.M	NA	NA	NA	0.0104	0.0104	0.0	0.0104	1	1.00	0.0104	ND
MB/0.1N NaOH	007-0801.D	007-0802.D	HPLC56PG48B.M	NA	NA	NA	0.0104	0.0104	0.0	0.0104	1	1.00	0.0104	ND
MB/0.1N NaOH	007-0801.D	007-0802.D	HPLC56PG49.M	NA	NA	NA	0.0104	0.0104	0.0	0.0104	1	1.00	0.0104	ND

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Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	OTM-29

Client #	142733
Job #	0511-68
# Samples	3 Runs, 1 blank, 1 spike

MDL 0.0104 (ug/mL)  
 LOQ 0.104 (ug/mL)  
 Compound Hydrogen cyanide

Lower Curve Limit 0.104 (ug/mL)  
 Upper Curve Limit 2.08 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
MS/051811-OTM29 3-1	009-1001.D	009-1002.D	HPLC56PG48B.M	7.80	7.81	0.1	1.71	1.71	0.1	1.71	1	0.500	0.855	
													Spike Amount (ug)	0.416
													Native Amount (ug)	0.455
													Spike Recovery (%)	96.2%
MSD/051811-OTM29 3-1	010-1101.D	010-1102.D	HPLC56PG48B.M	7.82	7.86	0.6	1.61	1.61	0.1	1.61	1	0.500	0.805	
													Spike Amount (ug)	0.416
													Native Amount (ug)	0.455
													Spike Recovery (%)	84.2%
MS/051811-OTM29 4-1	012-1301.D	012-1302.D	HPLC56PG48B.M	7.01	7.00	0.1	1.09	1.09	0.0	1.09	1	0.500	0.543	
													Spike Amount (ug)	0.416
													Native Amount (ug)	0.149
													Spike Recovery (%)	94.8%
MSD/051811-OTM29 4-1	013-1601.D	013-1602.D	HPLC56PG48B.M	7.83	7.78	0.6	1.09	1.11	0.9	1.10	1	0.500	0.551	
													Spike Amount (ug)	0.416
													Native Amount (ug)	0.149
													Spike Recovery (%)	96.7%
LCS 1	020-2501.D	020-2502.D	HPLC56PG46.M	7.86	7.87	0.1	0.476	0.465	1.1	0.470	100	25.0	1,176	
													Spike Amount (ug)	1,008
													Spike Recovery (%)	117%
LCS 2	021-2601.D	021-2602.D	HPLC56PG46.M	7.87	7.88	0.1	0.459	0.465	0.7	0.462	100	25.0	1,155	
													Spike Amount (ug)	1,008
													Spike Recovery (%)	115%

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Company	Shaw Environmental, Inc.
Analyst	KHB
Parameters	OTM-29

Client #	142733
Job #	0511-68
# Samples	3 Runs, 1 blank, 1 spike

MDL 0.0104 (ug/mL)  
LOQ 0.104 (ug/mL)  
Compound Hydrogen cyanide

Lower Curve Limit 0.104 (ug/mL)  
Upper Curve Limit 2.08 (ug/mL)

Sample ID	Lab ID # 1	Lab ID # 2	Analysis Method	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ug/mL)	Conc # 2 (ug/mL)	% Diff Conc	Avg Conc (ug/mL)	DF	Vol (mL)	Catch Weight (ug)	Qual
hplc56pg41 #SS	006-0701.D	006-0702.D	HPLC56PG46.M	7.75	7.74	0.2	1.04	1.04	0.1	1.04	1	1.00	1.04	
													Spike Amount (ug)	1.02
													Spike Recovery (%)	102%
hplc56pg41 #SS	006-0701.D	006-0702.D	HPLC56PG48B.M	7.81	7.85	0.4	1.06	1.08	0.8	1.07	1	1.00	1.07	
													Spike Amount (ug)	1.02
													Spike Recovery (%)	105%
hplc56pg41 #SS	006-0701.D	006-0702.D	HPLC56PG49.M	7.89	7.87	0.4	1.06	1.06	0.2	1.06	1	1.00	1.06	
													Spike Amount (ug)	1.02
													Spike Recovery (%)	104%

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# Narrative Summary



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## Enthalpy Analytical Narrative Summary

<b>Company</b>	Shaw Environmental, Inc.	<b>Client #</b>	142733
<b>Analyst</b>	CJT	<b>Job #</b>	0511-68
<b>Parameters</b>	ASTM D1946-90	<b># Samples</b>	3 Canisters

**Custody** Heather Tarjeft of Enthalpy Analytical, Inc. received the samples on 5/24/11 at ambient temperature after being relinquished by Shaw Environmental, Inc. The samples were received in good condition. 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 hydrogen, oxygen, nitrogen, carbon monoxide, methane, and carbon dioxide using the analytical procedures in ASTM D1946 – 90 (Reapproved 2000), Standard Practice for Analysis of Reformed Gas by Gas Chromatography.

The samples were analyzed following the procedures in Section 8.0, Procedure.

All samples and standards were introduced directly to the column using an automated 6-port Valco gas sampling valve equipped with a stainless steel loop. All target analytes were referenced to certified gas phase standards.

Upon receipt, the tank pressures were measured and recorded. All canisters were received under pressure and additional pressurization was not required for analysis.

The Agilent Technologies Model 6890N, Gas Chromatograph ("Betty" S/N US10430048) was equipped with a Thermal Conductivity Detector and a Restek shin Carbon ST, 2 m x 1 mm (S/N C19538-13) column.

**Calibration** The calibration curves are located in the Calibration Curve Chromatograms section 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.



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## Enthalpy Analytical Narrative Summary

(continued)

<b>Chromatographic Conditions</b>	The acquisition methods GC115P136F.M, GC115P025.M, GC115P80.M, and GC115P80F.M are included in the Calibration Curve Chromatograms section of this report.
<b>QC Notes</b>	All sample preparation and analytical holding times specified in the method were met.
<b>Reporting Notes</b>	<p>These analytical results are reported on a wet basis. The user of this report should determine the percent moisture in the sample and correct the reported value to ppmvd as appropriate.</p> <p>These analyses met the requirements of the NELAC Standard. Any deviations from the requirements of the reference method or NELAC Standard have been previously noted in the report narrative.</p> <p>The results presented in this report are representative of the samples as provided to the laboratory.</p>



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## Enthalpy Analytical Narrative Summary

<b>Company</b>	Shaw Environmental, Inc.	<b>Client #</b>	142733
<b>Analyst</b>	TBO / CJT	<b>Job #</b>	0511-68
<b>Parameters</b>	EPA Method 18-Type	<b># Samples</b>	3 Canisters

**Custody** Heather Tarjeft of Enthalpy Analytical, Inc. received the samples on 5/24/11 at ambient temperature after being relinquished by Shaw Environmental, Inc. The samples were received in good condition. 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 C<sub>1</sub> – C<sub>7</sub> with other VOC as C<sub>x</sub> using the general analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A).

All samples and standards were introduced directly to the column using an automated 6-port Valco gas sampling valve equipped with a stainless steel loop. All the C<sub>1</sub>-C<sub>7</sub> n-alkanes were referenced to certified gas phase standards.

The retention times for each n-alkane are used to generate retention time windows for the other VOCs, which are then referenced to the nearest n-alkane response factor. For example, the areas for all peaks between 3.6 and 5.7 minutes (except the n-butane peak) are summed, the total referenced to the calibrated n-butane response, and results are labeled "as butane" on the chromatograms ("C<sub>4</sub> as butane" in the results tables).

Upon receipt, the tank pressures were measured and recorded. All canisters were received under pressure and additional pressurization was not required for analysis.

The Agilent Technologies Model 6890N, Gas Chromatograph ("Betty" S/N US10430048) was equipped with a Flame Ionization Detector and a Restek Rtx-1 30m x 0.32mm x 4.0um (S/N 945433) capillary column.

**Chromatographic Conditions** The acquisition methods GC115P136F.M, GC115P025.M, GC115P80.M, and GC115P80F.M are included in the Calibration Curve Chromatograms section of this report.

**Calibration** The calibration curves are located in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page.



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## Enthalpy Analytical Narrative Summary (continued)

### Calibration (continued)

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.

### QC Notes

No spike and recovery test was performed along with these samples.

### Reporting Notes

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

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

Although methane was analyzed for in this analysis, the results have not been reported from this analysis set. The levels were more appropriate to the ASTM D1946 analyses, and the methane results have therefore been reported from that set of analyses. The ASTM D1946 results for methane are also the ones used to help determine the net heating values and mixed molecular weights for these samples.



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## Enthalpy Analytical Narrative Summary

<b>Company</b>	Shaw Environmental, Inc.
<b>Analyst</b>	KHB
<b>Parameters</b>	EPA SW-846 Method 0011

<b>Client #</b>	142733
<b>Job #</b>	0511-68
<b># Samples</b>	7 Runs

### Custody

Heather Tarjeft of Enthalpy Analytical, Inc. received the samples on 5/24/11 at 9.4 °C after being relinquished by Shaw Environmental, Inc. The samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

### Sample Preparation and Analysis

The samples were analyzed for formaldehyde, acetaldehyde, and propionaldehyde using the analytical procedures in EPA SW-846 Method 0011, Sampling for Selected Aldehyde and Ketone Emissions from Stationary Sources.

During sample preparation, *052011-0011U-1-1* was split in two equal halves. The first half was extracted and analyzed as *052011-0011U-1-1*. The second half was extracted and analyzed as *052011-0011U-1-1 LD*. To determine the catch weights for these two samples, this splitting is compensated for by use of the 'Aliquot Factor' (2) shown in the detailed results spreadsheet.

*052011-0011U-1-2* was also split in half. The first half was analyzed as the sample, and has an aliquot factor of 2 (as described for the prior sample). The remaining half was split in thirds for use as the Matrix Spike (MS), Matrix Spike Duplicate (MSD), and an archive fraction. These spikes do not have an aliquot factor, and their results are calculated on the basis of what was prepared. Therefore the native amount of the sample used in determining the spike recovery values was 1/6 the calculated final result for the sample itself.

The sample *052011-0011-DM-BL* was received in two bottles. One contained DNPH and the other a mixture of water and methylene chloride. The contents of the two bottles were combined and separated into two bottles, one of methylene chloride and the other DNPH and water. A 20-mL aliquot was removed from each of these bottles was combined, and then extracted and analyzed as the *052011-0011 Sample BL*. An aliquot factor of 7.85 has been applied to this sample based on the volume of the aliquot of the methylene chloride fraction used.



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## Enthalpy Analytical Narrative Summary (continued)

<b>Analysis (continued)</b>	The Agilent Model 1100, High Performance Liquid Chromatograph ("Bart") was equipped with an Ultraviolet (UV) Detector operating at 218 nm and a Restek Ultra C18, 150 x 4 mm (S/N 100316P) column.
<b>Chromatographic Conditions</b>	The acquisition method 8315ICR.M is included in the Calibration Curve Chromatograms section of this report.
<b>Calibration</b>	<p>The calibration curve is located in the Calibration Curve Chromatograms section of this report and referenced in the Analysis Method column on the Detailed Results page.</p> <p>For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.</p>
<b>QC Notes</b>	<p>All sample preparation and analytical holding times specified in the method were met.</p> <p>The percent difference value for the 052011-0011U-1-1 LD analysis from the initial result was 6.1%.</p> <p>A replicate injection was made of the sample 052011-0011U-1-1 and the difference between the sample and replicate results was 0.0%.</p> <p>Prior to sample collection, five aqueous spikes were prepared from a stock solution such that each spike contained 1,002 µg of formaldehyde. Three of the spikes were provided to the client and the remaining two were retained by the laboratory for use as Laboratory Control Spikes. The stock solution was also retained by the lab for use in preparing LCSs. LCS-1 was prepared using one of the retained spikes and analyzed with the samples, and exhibited 83.5% recovery.</p> <p>The MS, MSD, and LCS-2 were inadvertently prepared using an incorrect formaldehyde stock solution. The MS, MSD, and LCS-2 exhibited recovery values of 37.2%, 37.6%, and 36.1% respectively, based on the intended spike amount. If the LCS result is used as the spike amount, the MS and MSD exhibited 103% and 104% recovery respectively.</p>



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## Enthalpy Analytical Narrative Summary (continued)

### QC Notes (continued)

All three of the above spike samples (MS, MSD, and LCS-2) were prepared using the intended stock solutions of acetaldehyde and propionaldehyde. The recovery values for these two compounds in these three spiked samples ranged from 85.7% to 103%.

### Reporting Notes

These analyses met the requirements of the NELAC Standard. Any deviations from the requirements of the reference method or NELAC Standard have been previously noted in the report narrative.

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



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## Enthalpy Analytical Narrative Summary

<b>Company</b>	Shaw Environmental, Inc.	<b>Client #</b>	142733
<b>Analyst</b>	EO	<b>Job #</b>	0511-68
<b>Parameters</b>	EPA Method 26A	<b># Samples</b>	6 Runs & 3 blanks

**Custody** Heather Tarjeft of Enthalpy Analytical, Inc. received the samples on 5/24/11 at 9.4 °C after being relinquished by Shaw Environmental, Inc. The samples were received in good condition. 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 chloride and fluoride using the analytical procedures in EPA Method 26A, Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic Method (40 CFR Part 60, Appendix A).

The samples were analyzed following the procedures in Section 11.0, Analytical Procedures. All samples and standards are prepared, stored, and analyzed using high-density polyethylene containers.

The Metrohm 861 Compact IC ("Smithers" S/N 1861002007189) was equipped with a Metrohm 861 Conductivity Detector and a Metrosep A Supp 5 - 110/4.0mm (S/N # 7908289) column.

**Calibration** The calibration curves are located in the Calibration Curve Chromatograms section 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 method METROHMM is included in the Calibration Curve Chromatograms section of this report.

**QC Notes** As required in Section 7.2.2, Absorbing Solution Blanks, client-provided reagent blanks were analyzed. Additionally, a quality control check sample was analyzed at the same time as the blanks and samples. All method required acceptance criteria were met.



## Enthalpy Analytical Narrative Summary (continued)

### QC Notes (continued)

All sample preparation and analytical holding times specified in the method were met. Section 13.2, Sample Stability, specifies an analytical holding time of four weeks.

### Reporting Notes

The sulfuric acid matrix samples were analyzed for chloride and fluoride but are reported as hydrogen chloride and hydrogen fluoride. The results were converted using conversion factors of 1.028 for hydrogen chloride and 1.053 for hydrogen fluoride.

These analyses met the requirements of the NELAC Standard. Any deviations from the requirements of the reference method or NELAC Standard have been previously noted in the report narrative.

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



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## Enthalpy Analytical Narrative Summary

<b>Company</b>	Shaw Environmental, Inc.	<b>Client #</b>	142733
<b>Analyst</b>	KHB	<b>Job #</b>	0511-68
<b>Parameters</b>	EPA OTM 29	<b># Samples</b>	3 Runs, 1 spike, 1 blank

**Custody** Heather Tarjeft of Enthalpy Analytical, Inc. received the samples on 5/24/11 at 9.4 °C after being relinquished by Shaw Environmental, Inc. The samples were received in good condition. 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 hydrogen cyanide using the analytical procedures in EPA Conditional Test Method 027, Procedure for Collection and Analysis of Ammonia in Stationary Sources.

The samples were analyzed following the procedures in Section 4.2, Sample Analysis.

The Dionex Model 500, High Performance Liquid Chromatograph ("Grandmama") was equipped with a Dionex ED40 Electrochemical Detector and a Dionex Ion Pac AS7, 4 x 250 mm (S/N 012759) column.

**Calibration** The calibration curves are located in the Calibration Curve Chromatograms section 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 method 1000.M is included in the Calibration Curve Chromatograms section of this report.

**QC Notes** Prior to sample collection the laboratory prepared five aqueous spikes, each of which contained 1,008 µg of hydrogen cyanide. Three were provided to the client, and two were retained by the laboratory for use as Laboratory Control Samples (LCSs). The Field Spike exhibited 111% recovery, and the LCSs exhibited 117% and 115% recovery.



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## Enthalpy Analytical Narrative Summary (continued)

### QC Notes (continued)

As required in section 4.2.3, Quality Control and Quality Assurance Enthalpy periodically analyzes independently prepared standards and blank checks reagents.

All sample preparation and analytical holding times specified in the method were met. In Section 4.1, Sample Preparation, the specified analytical holding time is 30 days from sampling date.

### Reporting Notes

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



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## 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.



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# Sample Custody



EA# 0511-68 Page 59 of 560

**CHAIN OF CUSTODY / REQUEST FOR ANALYSIS  
(COC/RFA)**

Date 5/20/11 Page 1 of 1

PROJECT INFORMATION						PRESERVATIVE										
Project Number: 142733																
Project Name: CITGO ICR Testing																
Delivered Via:																
TAT: <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 days <input type="checkbox"/> 21 days																
COMMENTS																
Contact: Richard Ishikawa 225-241-9584																
Sample ID	Sample Collection Date	Sample Collection Time	Sample Matrix	Number of Containers and Size	2011-05-20 Aldehydes / Ketones											
✓ 142733-052011-0011U-1-1	06/20/11	12:54	Liquid	1-1L Amber	X											
✓ 142733-052011-0011U-1-2	06/20/11	14:57	Liquid	1-1L Amber	X											
✓ 142733-052011-0011U-1-3	06/20/11	16:48	Liquid	1-1L Amber	X											
✓ 142733-052011-0011S-1-1	06/20/11	12:54	Liquid	1-1L Amber	X											
✗ 142733-052011-0011-DNPH-BL	05/20/11	--	--	--		Not enough DNPH to do a DNPH Reagent Blank										
✓ 142733-052011-0011-H2O-BL	05/20/11	16:35	Liquid	1-1L Amber	X											
✓ 142733-052011-0011-DM-BL	05/20/11	16:35	Liquid	1-1L Amber	X											
✓ 142733-052011-0011-FIELD SPIKE	05/20/11	16:35	Liquid	1-1L Amber	X											
✓ 142733-052011-0011-Sample-BL	05/20/11	16:35	Liquid	1-1L Amber	X											

Relinquished by Collector:		Received by: 1.		Relinquished by: 1.		Received by: 2.		Relinquished by: 2.		Received by: (lab)	
Signature: <u>B. Foglia</u>	Time: <u>18:09</u>	Signature: <u>B. Foglia</u>	Time: <u>12:15</u>	Signature: <u>B. Foglia</u>	Time: <u>12:30</u>	Signature: <u>Heather Torrey</u>	Time: <u>11:50am</u>	Signature: <u>Heather Torrey</u>	Time: <u>11:50am</u>	Signature: <u>Heather Torrey</u>	Time: <u>11:50am</u>
Printed Name: <u>B. Foglia</u>	Date: <u>5/20/11</u>	Printed Name: <u>B. Foglia</u>	Date: <u>5/23/11</u>	Printed Name: <u>B. Foglia</u>	Date: <u>5/23/11</u>	Printed Name: <u>Heather Torrey</u>	Date: <u>5/24/11</u>	Printed Name: <u>Heather Torrey</u>	Date: <u>5/24/11</u>	Printed Name: <u>Heather Torrey</u>	Date: <u>5/24/11</u>
Company: <u>Shaw</u>		Company: <u>Shaw</u>		Company: <u>Shaw</u>		Company: <u>Entology</u>		Company: <u>Entology</u>		Company: <u>Entology</u>	

\*To Shop locked

EA# 0511-68 Page 60 of 560 Temp: 9.4°C Raytek gun#1

**CHAIN OF CUSTODY / REQUEST FOR ANALYSIS  
(COC/RFA)**

Date 5/18/11 Page 1 of 1

PROJECT INFORMATION						PRESERVATIVE									
Project Number: 142733															
Project Name: CITGO ICR Testing															
Delivered Via:															
TAT: <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 days <input type="checkbox"/> 21 days															
COMMENTS															
Contact: Rickie G. Ishikawa 225-241-2094															
Sample ID	Sample Collection Date	Sample Collection Time	Sample Matrix	Number of Containers and Size	HCN	H <sub>2</sub> O/C <sub>2</sub> H <sub>6</sub>									
✓ 142733-051811-26A-6-BL	05/18/11	21:36	Liquid	1/500ml		X									
✓ 142733-051811-26A-7-BL	05/18/11	21:36	Liquid	1/500ml		X									
✓ 142733-051811-26A-8-BL	05/18/11	21:36	Liquid	1/500ml		X									
✓ 142733-051811-26A-3-1	05/18/11	18:15	Liquid	3/500ml		X									
✓ 142733-051811-26A-4-1	05/18/11	18:15	Liquid	1/500ml		X									
✓ 142733-051811-26A-3-2	05/18/11	21:35	Liquid	2/500ml		X									
✓ 142733-051811-26A-4-2	05/18/11	21:35	Liquid	1/500ml		X									
✓ 142733-051811-26A-3-3	05/18/11	12:10	Liquid	2/500ml		X									
✓ 142733-051811-26A-4-3	05/18/11	12:10	Liquid	1/500ml		X									
✓ 142733-051811-OTM29-Wash-BL	05/18/11	21:35	Liquid	1/500ml		X									
✓ 142733-051811-OTM29-3-1	05/18/11	18:15	Liquid	2/500ml		X									
✓ 142733-051811-OTM29-4-1	05/18/11	18:15	Liquid	1/500ml		X									
✓ 142733-051811-OTM29-3-2	05/18/11	21:35	Liquid	2/500ml		X									
✓ 142733-051811-OTM29-4-2	05/18/11	21:35	Liquid	1/500ml		X									
✓ 142733-051811-OTM29-3-3	05/18/11	12:10	Liquid	2/500ml		X									
✓ 142733-051811-OTM29-4-3	05/18/11	12:10	Liquid	1/500ml		X									
✓ 142733-051811-OTM29-SPIKE	05/18/11	16:14	Liquid	1/500ml		X									

Relinquished by Collector:		Received by: 1.		Relinquished by: 1.		Received by: 2.		Relinquished by: 2.		Received by: (lab)	
Signature: Time: 15:50	Signature: Time: 12:45	Signature: Time: 12:50	Signature: Time: 11:50	Signature: Time:	Signature: Time:	Signature: Time:	Signature: Time:	Signature: Time:	Signature: Time:	Signature: Time:	Signature: Time:
Printed Name: Blake Fogelman	Printed Name: Blake Fogelman	Printed Name: Blake Fogelman	Printed Name: Blake Fogelman	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Date: 5/20/11	Date: 5/23/11	Date: 5/23/11	Date: 5/24/11	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:
Company: Shaw	Company: Shaw	Company: Shaw	Company: Shaw	Company:	Company:	Company:	Company:	Company:	Company:	Company:	Company:

\* Locked @ shop in fridge  
Temp = 5.2 5.3C Packed 9:41

# CHAIN OF CUSTODY / REQUEST FOR ANALYSIS (COC/RFA)

Shaw Environmental, Inc.  
4171 Essen Lane, Baton Rouge, LA 70809  
Phone: 225-932-2745

Date 05/20/11 Page 1 of 1

PROJECT INFORMATION						PRESERVATIVE									
Project Number: 142733															
Project Name: CITGO ICR Testing															
Delivered Via:															
TAT: <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 days <input type="checkbox"/> 21 days <input checked="" type="checkbox"/> <u>STANDARD</u>															
COMMENTS															
Contact: Richard Ishikawa 225-241-9584															
Sample ID	Sample Collection Date	Sample Collection Time	Sample Matrix	Number of Containers and Size	RM 18 BULKING 11-26	ASTM 1916-10 FUEL OILS									
142733-051811-FUEL-1 <u>Can # 1412</u>	05/18/11	14:00	GAS	1	✓	✓									
142733-051811-FUEL-2 <u>Can # 1402</u>	05/18/11	16:00	GAS	1	✓	✓									
142733-051811-FUEL-3 <u>Can # 1031</u>	05/18/11	18:00	GAS	1	✓	✓									

Relinquished by Collector:	Received by: 1.	Relinquished by: 1.	Received by: 2.	Relinquished by: 2.	Received by: (lab)
Signature: <u>[Signature]</u> Time: _____	Signature: <u>[Signature]</u> Time: <u>12:51pm</u>	Signature: _____ Time: _____	Signature: _____ Time: _____	Signature: _____ Time: _____	Signature: _____ Time: _____
Printed Name: Date: _____	Printed Name: Date: <u>05/20/11</u>	Printed Name: Date: _____	Printed Name: Date: _____	Printed Name: Date: _____	Printed Name: Date: _____
Company: <u>SAW</u>	Company: <u>Enthalpy</u>	Company: _____	Company: _____	Company: _____	Laboratory: _____

Temp = Ambient

EA# 0511-68 Page 62 of 560

# Sample Chromatograms



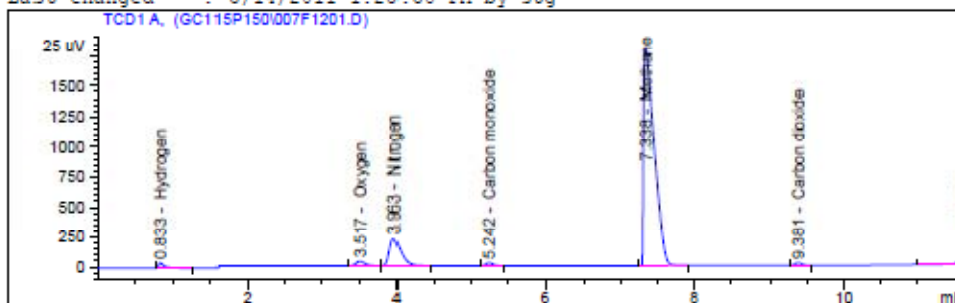
EA# 0511-68 Page 63 of 560

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\007F1201.D  
Sample Name: 051811-FUEL-1 Can 1412 0511-68

=====

Acq. Operator : cjt	Seq. Line : 12
Acq. Instrument : Betty	Location : Vial 7
Injection Date : 02-Jun-11, 10:03:14	Inj : 1
	Inj Volume : External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.833	BB	226.57489	9.19207e-2	20.82693		Hydrogen
3.517	BB	319.33521	2.56305e-3	8.18473e-1		Oxygen
3.963	BB	2264.81934	2.44891e-3	5.54634		Nitrogen
5.242	BB	161.23822	2.16043e-3	3.48344e-1		Carbon monoxide
7.338	BB	1.80178e4	2.51573e-3	45.32783		Methane
9.381	BB	140.00580	1.42625e-3	1.99684e-1		Carbon dioxide

Totals : 73.06759

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

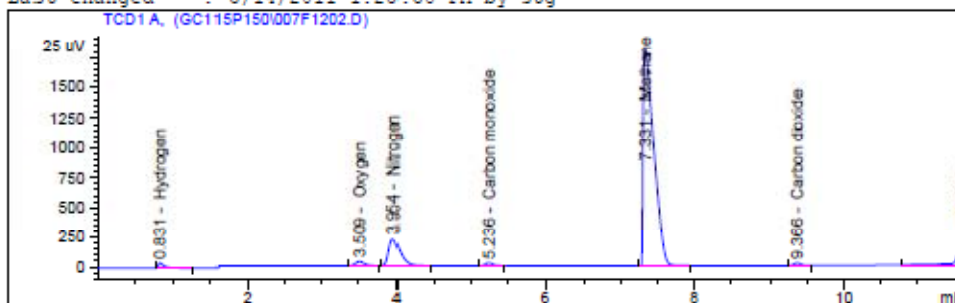
\*\*\* End of Report \*\*\*

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\007F1202.D  
Sample Name: 051811-FUEL-1 Can 1412 0511-68

=====

Acq. Operator : cjt	Seq. Line : 12
Acq. Instrument : Betty	Location : Vial 7
Injection Date : 02-Jun-11, 10:26:59	Inj : 2
	Inj Volume : External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.831	BB	228.19795	9.19196e-2	20.97587		Hydrogen
3.509	BB	305.27197	2.56182e-3	7.82051e-1		Oxygen
3.954	BB	2233.23730	2.44867e-3	5.46846		Nitrogen
5.236	BB	161.06100	2.16043e-3	3.47960e-1		Carbon monoxide
7.331	BB	1.82099e4	2.51573e-3	45.81124		Methane
9.366	BB	140.01987	1.42626e-3	1.99705e-1		Carbon dioxide

Totals : 73.58529

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

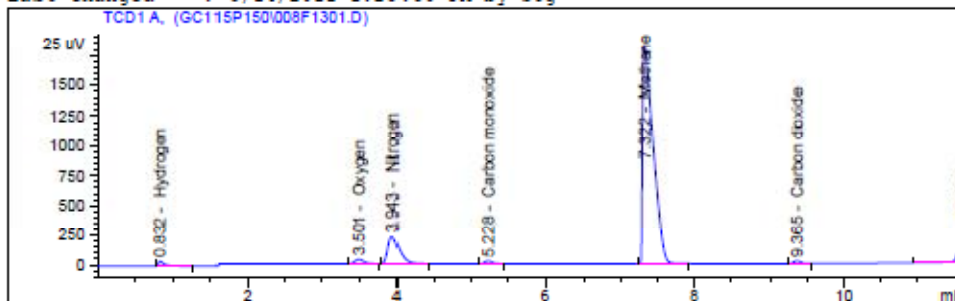
\*\*\* End of Report \*\*\*

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\008F1301.D  
Sample Name: 051811-FUEL-2 Can 1452 0511-68

=====

Acq. Operator	: cjt	Seq. Line	: 13
Acq. Instrument	: Betty	Location	: Vial 8
Injection Date	: 02-Jun-11, 11:13:51	Inj	: 1
		Inj Volume	: External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.832	BB	217.75751	9.19272e-2	20.01784		Hydrogen
3.501	BB	314.96927	2.56268e-3	8.07166e-1		Oxygen
3.943	BB	2272.25513	2.44896e-3	5.56467		Nitrogen
5.228	BB	160.74881	2.16042e-3	3.47284e-1		Carbon monoxide
7.322	BB	1.83328e4	2.51573e-3	46.12056		Methane
9.365	BB	147.95799	1.42888e-3	2.11414e-1		Carbon dioxide

Totals : 73.06893

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

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

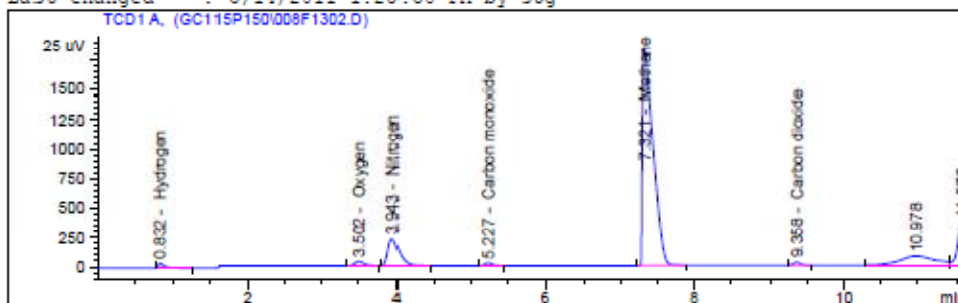


Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\008F1302.D  
Sample Name: 051811-FUEL-2 Can 1452 0511-68

=====

Acq. Operator : cjt	Seq. Line : 13
Acq. Instrument : Betty	Location : Vial 8
Injection Date : 02-Jun-11, 11:37:48	Inj : 2
	Inj Volume : External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.832	BB	216.09033	9.19285e-2	19.86486		Hydrogen
3.502	BB	315.71008	2.56274e-3	8.09084e-1		Oxygen
3.943	BB	2276.02466	2.44899e-3	5.57396		Nitrogen
5.227	BB	161.39081	2.16044e-3	3.48674e-1		Carbon monoxide
7.321	BB	1.84382e4	2.51574e-3	46.38559		Methane
9.358	BB	153.59300	1.43057e-3	2.19725e-1		Carbon dioxide

Totals : 73.20190

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

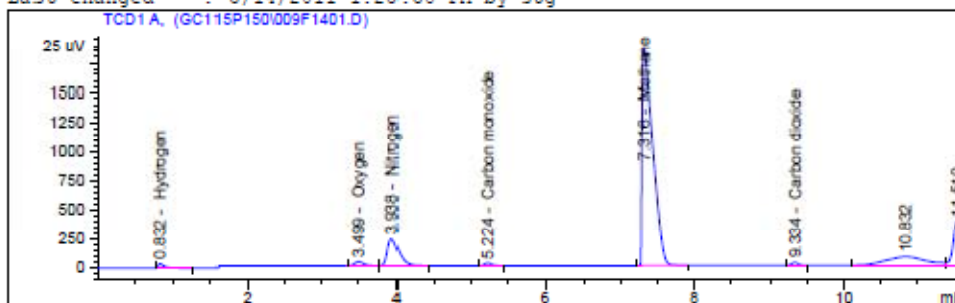
\*\*\* End of Report \*\*\*

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\009F1401.D  
Sample Name: 051811-FUEL-3 Can 1031 0511-68

=====

Acq. Operator	: cjt	Seq. Line	: 14
Acq. Instrument	: Betty	Location	: Vial 9
Injection Date	: 02-Jun-11, 12:25:25	Inj	: 1
		Inj Volume	: External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.832	BB	205.28172	9.19373e-2	18.87304		Hydrogen
3.499	BB	304.85147	2.56178e-3	7.80962e-1		Oxygen
3.938	BB	2326.34692	2.44935e-3	5.69804		Nitrogen
5.224	BB	163.81865	2.16051e-3	3.53931e-1		Carbon monoxide
7.316	BB	1.88217e4	2.51575e-3	47.35068		Methane
9.334	BB	151.24261	1.42988e-3	2.16259e-1		Carbon dioxide

Totals : 73.27291

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

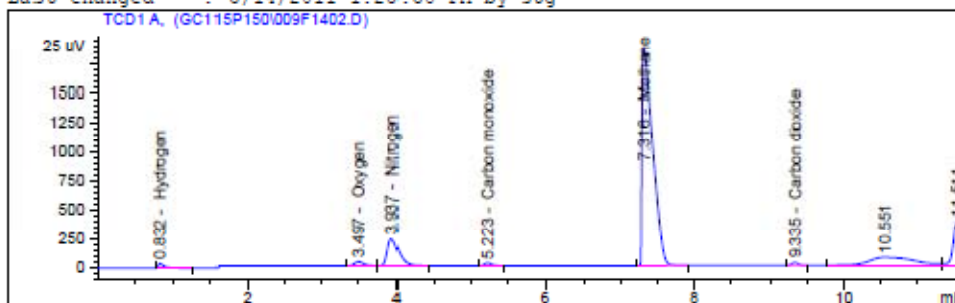
\*\*\* End of Report \*\*\*

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\009F1402.D  
Sample Name: 051811-FUEL-3 Can 1031 0511-68

=====

Acq. Operator	: cjt	Seq. Line	: 14
Acq. Instrument	: Betty	Location	: Vial 9
Injection Date	: 02-Jun-11, 12:49:17	Inj	: 2
		Inj Volume	: External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.832	BB	206.37657	9.19363e-2	18.97351		Hydrogen
3.497	BV	305.25290	2.56182e-3	7.82002e-1		Oxygen
3.937	VB	2339.83667	2.44945e-3	5.73130		Nitrogen
5.223	BB	164.55478	2.16053e-3	3.55525e-1		Carbon monoxide
7.316	BB	1.88812e4	2.51575e-3	47.50048		Methane
9.335	BB	150.51617	1.42966e-3	2.15187e-1		Carbon dioxide

Totals : 73.55801

1 Warnings or Errors :

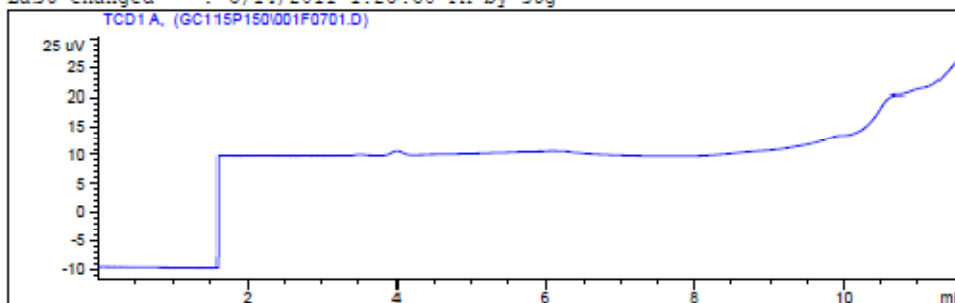
Warning : Calibration warnings (see calibration table listing)

=====

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\001F0701.D  
Sample Name: He Blank

```
=====
Acq. Operator   : cjt                               Seq. Line :    7
Acq. Instrument : Betty                             Location  : Vial 1
Injection Date  : 02-Jun-11, 01:33:42                Inj       :    1
                                                    Inj Volume: External
Method          : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, May 11, 2011 6:20:46 PM
Multiplier:      :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.854	-	-	-	-	-	Hydrogen
3.180	-	-	-	-	-	Oxygen
4.054	-	-	-	-	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.559	-	-	-	-	-	Methane
9.070	-	-	-	-	-	Carbon dioxide

Totals : 0.00000

2 Warnings or Errors :

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

```
=====
                        Area Percent Report
=====
```

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, May 11, 2011 6:20:46 PM
Multiplier:      :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

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Instrument 2 6/8/2011 3:07:02 PM cjt

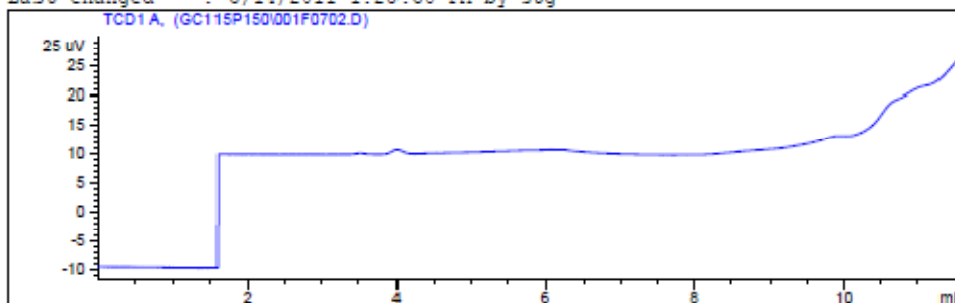
Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\001F0702.D  
Sample Name: He Blank

=====

Acq. Operator	: cjt	Seq. Line	: 7
Acq. Instrument	: Betty	Location	: Vial 1
Injection Date	: 02-Jun-11, 01:58:49	Inj	: 2
		Inj Volume	: External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.854	-	-	-	-	-	Hydrogen
3.180	-	-	-	-	-	Oxygen
4.054	-	-	-	-	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.559	-	-	-	-	-	Methane
9.070	-	-	-	-	-	Carbon dioxide

Totals : 0.00000

2 Warnings or Errors :

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

=====

Area Percent Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

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Instrument 2 6/8/2011 3:07:12 PM cjt

Page 1 of 2

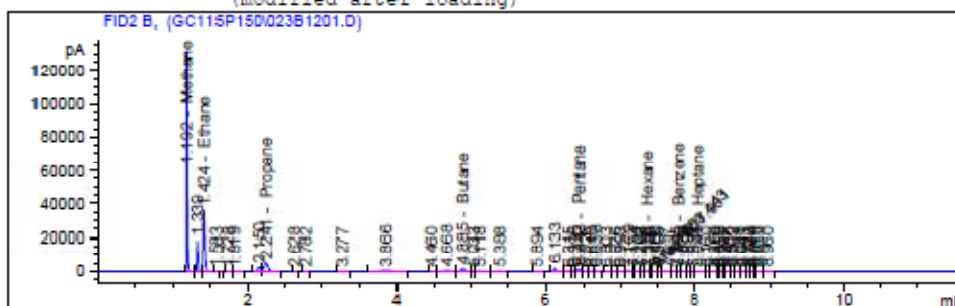
# Sample Chromatograms



EA# 0511-68 Page 72 of 560

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\023B1201.D  
Sample Name: 051811-FUEL-1 Can 1412 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line : 12
Acq. Instrument : Betty                             Location  : Vial 23
Injection Date  : 02-Jun-11, 10:03:14                Inj       : 1
                                                Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 10:52:14 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.192	BV	1.10408e5	4.40245	4.86950e5		Methane
1.424	VB S	6.02283e4	2.43462	1.46633e5		Ethane
2.241	VB	1.91970e4	1.65248	3.17227e4		Propane
4.885	VV	6522.11328	1.23605	8061.68469		Butane
6.443	VV	2362.64648	9.86928e-1	2331.76146		Pentane
7.356	MF	683.44281	8.27387e-1	565.47139		Hexane
7.779	VV	124.10079	8.13966e-1	101.00560		Benzene
8.041	VV	312.36826	7.13681e-1	222.93141		Heptane

Report from TCD (MGM)

Report From Diluted Analysis (MGM)

Manual Int. "II" (MGM)

Totals : 6.75689e5

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.22932e4	5.374e4
as Propane	1.850	3.600	8159.93431	1.327e4
as Butane	3.600	5.700	1.05987e4	1.300e4
as Pentane	5.700	6.950	8283.00338	8.136e3
as Hexane	6.950	7.250	2449.99645	2.838e3

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Instrument 2 6/10/2011 10:52:55 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\023B1201.D  
Sample Name: 051811-FUEL-1 Can 1412 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	933.19518	663.5671

Totals : 9.1645e4

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.22932e4	5.374e4
as Propane	8159.93431	1.327e4
as Butane	1.05987e4	1.300e4
as Pentane	8283.00338	8.136e3
as Hexane	3448.88647	2.839e3
as Heptane	933.19518	663.5671
Methane	1.10405e5	4.861e5
Ethane	6.02283e4	1.466e5
Propane	1.91970e4	3.172e4
Butane	6522.11328	8.062e3
Pentane	2362.64648	2.332e3
Hexane	683.44281	565.4714
Benzene	124.18873	101.0856
Heptane	312.36826	222.9314

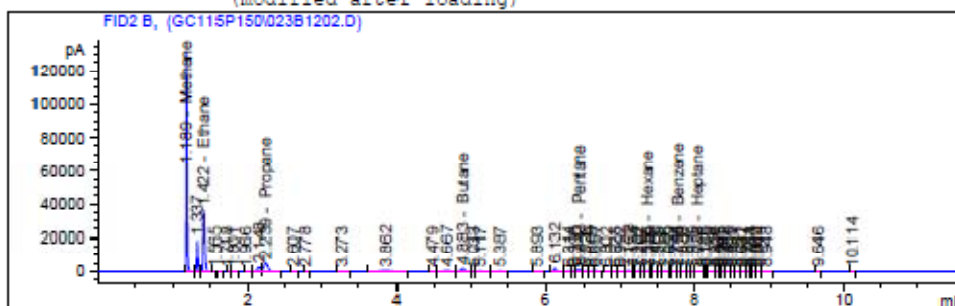
Totals : 7.6733e5

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



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\023B1202.D  
Sample Name: 051811-FUEL-1 Can 1412 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line : 12
Acq. Instrument : Betty                             Location  : Vial 23
Injection Date  : 02-Jun-11, 10:26:59                Inj       : 2
                                                Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 10:52:14 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.189	PV	1.10977e5	4.40245	4.88868e5		Methane
1.422	VB S	6.05701e4	2.43462	1.47484e5		Ethane
2.239	VB	1.93048e4	1.65248	3.19009e4		Propane
4.883	VV	6550.71289	1.23605	8097.03590		Butane
6.443	VV	2370.04443	9.86928e-1	2339.06296		Pentane
7.356	VV	689.59137	8.27387e-1	570.55914		Hexane
7.778	VV	124.93315	8.13967e-1	101.69151		Benzene
8.038	VV	308.10535	7.13680e-1	219.88848		Heptane

Totals : 6.79283e5

# Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.24125e4	5.403e4
as Propane	1.850	3.600	8193.00903	1.333e4
as Butane	3.600	5.700	1.06401e4	1.305e4
as Pentane	5.700	6.950	8321.88766	8.174e3
as Hexane	6.950	7.350	2461.61319	2.848e3

EA# 0511-68 Page 75 of 560

Instrument 2 6/10/2011 10:53:34 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\023B1202.D  
Sample Name: 051811-FUEL-1 Can 1412 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	952.51197	677.3027

Totals : 9.2099e4

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

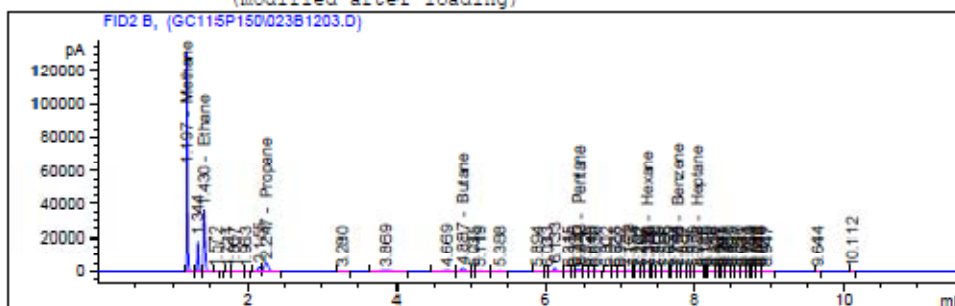
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.24125e4	5.403e4
as Propane	8193.00903	1.333e4
as Butane	1.06401e4	1.305e4
as Pentane	8321.88766	8.174e3
as Hexane	3461.61312	2.849e3
as Heptane	952.51197	677.3027
Methane	1.10977e5	4.886e5
Ethane	6.05781e4	1.475e5
Propane	1.93048e4	3.190e4
Butane	6550.71289	8.097e3
Pentane	2370.04443	2.339e3
Hexane	689.59137	570.5591
Benzene	124.93315	101.6915
Heptane	308.10535	219.8885

Totals : 7.7138e5

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\023B1203.D  
Sample Name: 051811-FUEL-1 Can 1412 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line : 12
Acq. Instrument : Betty                             Location  : Vial 23
Injection Date  : 02-Jun-11, 10:50:26                Inj       : 3
                                                Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 10:52:14 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.197	BV	1.11108e5	4.40245	4.89134e5		Methane
1.430	VB S	6.06690e4	2.43462	1.47703e5		Ethane
2.247	VB	1.93280e4	1.65248	3.19392e4		Propane
4.887	VV	6555.64502	1.23605	8103.13237		Butane
6.443	VV	2371.34985	9.86928e-1	2340.35125		Pentane
7.356	VV	692.08179	8.27388e-1	572.61988		Hexane
7.770	VV	125.20565	8.13967e-1	101.97042		Benzene
8.038	VV	311.17697	7.13681e-1	222.08105		Heptane

Report from TCD (MGM)

Report From Diluted Analysis (MGM)

Manual Int. "II" (MGM)

Totals : 6.80117e5

Summed Peaks Report

```
Signal 1: FID2 B,
```

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.24426e4	5.410e4
as Propane	1.850	3.600	8197.54598	1.333e4
as Butane	3.600	5.700	1.06438e4	1.305e4
as Pentane	5.700	6.950	8329.22289	8.181e3
as Hexane	6.950	7.350	2454.45066	2.859e3

EA# 0511-68 Page 77 of 560

Instrument 2 6/10/2011 10:53:54 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\023B1203.D  
Sample Name: 051811-FUEL-1 Can 1412 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	961.50048	683.6941

Totals : 9.2200e4

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

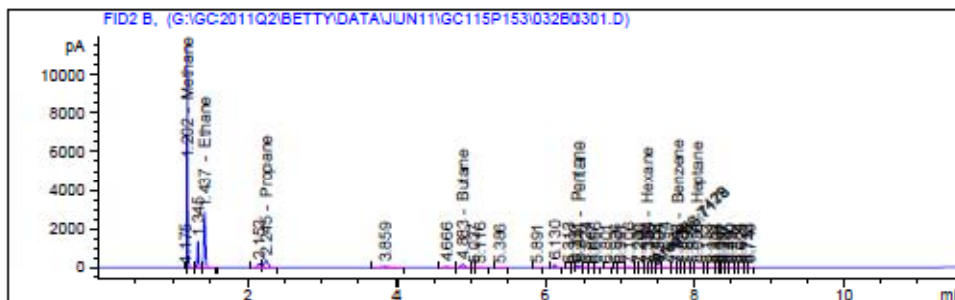
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.24426e4	5.410e4
as Propane	8197.54598	1.333e4
as Butane	1.06438e4	1.305e4
as Pentane	8329.22289	8.181e3
as Hexane	3464.45860	2.852e3
as Heptane	961.50048	683.6941
Methane	1.11105e5	4.891e5
Ethane	6.06680e4	1.477e5
Propane	1.93280e4	3.194e4
Butane	6555.64502	8.103e3
Pentane	2371.34985	2.340e3
Hexane	692.08179	572.6199
Benzene	125.28565	101.9784
Heptane	311.17697	222.0811

Totals : 7.7232e5

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\032B0301.D  
Sample Name: 051811-FUEL-1 Can 1412 \*11 0511-68

```
=====
Acq. Operator   : tbo                      Seq. Line :    3
Acq. Instrument : Betty                   Location  : Vial 32
Injection Date  : 08-Jun-11, 19:22:51      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:28:32 AM by cjt
                  (modified after loading)
Sample Info     : dilution check
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:28:25 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name	
1.202	BV	8819.08594	4.40243	3.75047e4		Methane	Report from TCD (MGM)
1.437	VB S	4561.10840	2.43459	1.11044e4		Ethane	
2.245	VB	1446.13171	1.65232	2389.47698		Propane	Report From Undiluted Analysis (MGM)
4.003	VV	597.59345	1.23506	798.46979		Butane	
6.441	VV	177.13542	9.86654e-1	174.77146		Pentane	
7.354	MF	50.74288	8.26348e-1	41.93128		Hexane	Report From Undiluted Analysis (MGM)
7.776	VV	8.91753	8.14416e-1	7.26258		Benzene	
8.036	VV	22.22918	7.11910e-1	15.02516		Heptane	Report From Undiluted Analysis (MGM)

Totals : 5.19769e4

# Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]	
as Ethane	1.200	1.050	1609.20001	4.072e3	Report From Undiluted Analysis (MGM)
as Propane	1.850	3.600	616.35358	1.001e3	

Instrument 2 6/10/2011 9:28:43 AM cjt

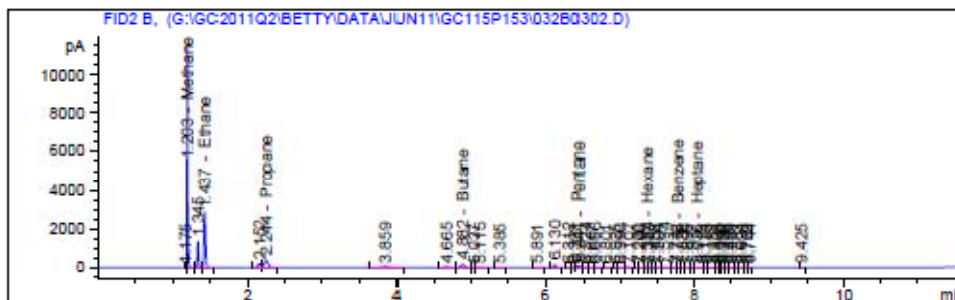
Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\032B0302.D  
Sample Name: 051811-FUEL-1 Can 1412 \*11 0511-68

```

Acq. Operator   : tbo                               Seq. Line :    3
Acq. Instrument : Betty                             Location  : Vial 32
Injection Date  : 08-Jun-11, 19:46:26              Inj       :    2
                                                    Inj Volume : External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC11SP136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC11SP152B_0511-608.M
Last changed    : 6/10/2011 9:28:32 AM by cjt
                  (modified after loading)
Sample Info     : dilution check

```



## External Standard Report

Sorted By : Signal  
Calib. Data Modified : 6/10/2011 9:29:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B.

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.203	FV	8517.21600	4.40243	3.74965e4		Methane
1.437	VB S	4560.54297	2.43459	1.11030e4		Ethane
2.244	VB	1446.24277	1.65232	2389.82575		Propane
4.082	VV	597.49963	1.23586	730.42799		Butane
6.441	VV	176.85693	9.86654e-1	174.49660		Pentane
7.254	VV	50.62440	8.26345e-1	41.83324		Hexane
7.776	VV	8.88287	8.14418e-1	7.23437		Benzene
8.936	VV	21.73915	7.11867e-1	15.47597		Heptane

Report from TCD (MGM)

Report From Undiluted Analysis (MGM)

Report From Undiluted Analysis (MGM)

Report From Undiluted Analysis (MGM)

Totals : 5.19668e4

## Summed Peaks Report

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	1688.76223	4.071e3
as Propane	1.860	2.690	3164.88574	7.700e3

Report From Undiluted Analysis (MGM)

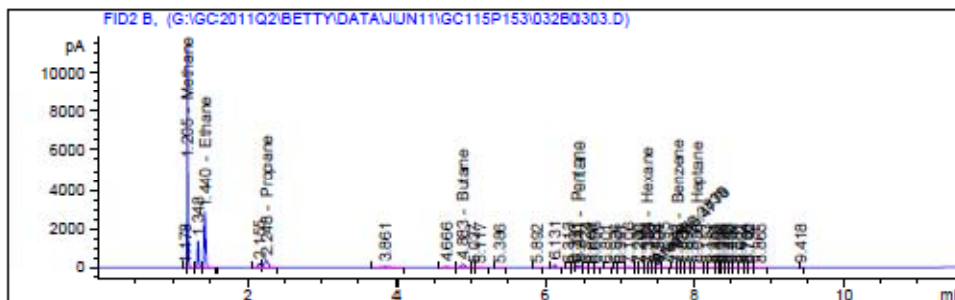
Instrument 2 6/10/2011 9:29:21 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\032B0303.D  
Sample Name: 051811-FUEL-1 Can 1412 \*11 0511-68

```
=====
Acq. Operator   : tbo                      Seq. Line :    3
Acq. Instrument : Betty                   Location  : Vial 32
Injection Date  : 08-Jun-11, 20:10:13      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:28:32 AM by cjt
                  (modified after loading)
Sample Info     : dilution check
=====
```



#### External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:29:00 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name	
1.205	BV	8445.93805	4.40243	3.71830e4		Methane	Report from TCD (MGM)
1.440	VB S	4522.43311	2.43459	1.10103e4		Ethane	
2.240	VB	1434.22497	1.65232	2369.80014		Propane	Report From Undiluted Analysis (MGM)
4.383	VV	592.76855	1.23586	732.58003		Butane	
6.441	VV	175.73206	9.86652e-1	173.38640		Pentane	
7.354	MF	50.30304	0.26340e-1	41.63419		Hexane	Report From Undiluted Analysis (MGM)
7.776	VV	8.78611	8.14423e-1	7.15561		Benzene	
8.036	VV	21.75585	7.11868e-1	15.48729		Heptane	Report From Undiluted Analysis (MGM)

Totals : 5.15332e4

#### Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]	
as Ethane	1.200	1.050	1674.87646	4.037e3	Report From Undiluted Analysis (MGM)
as Propane	1.050	3.600	630.71719	601.7700	

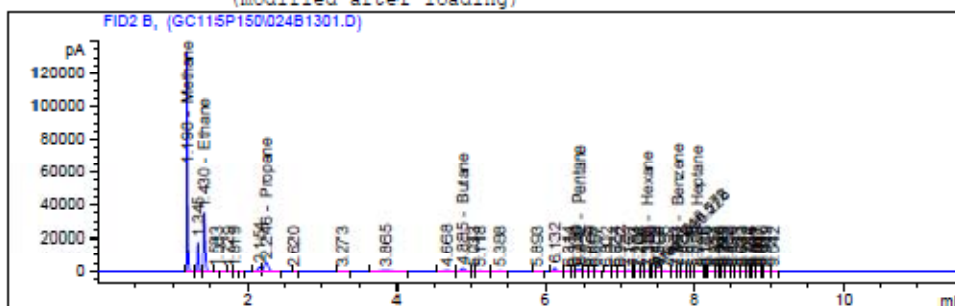
Instrument 2 6/10/2011 9:30:03 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\024B1301.D  
Sample Name: 051811-FUEL-2 Can 1452 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line :   13
Acq. Instrument : Betty                             Location  : Vial 24
Injection Date  : 02-Jun-11, 11:13:51                Inj       :    1
                                                Inj Volume: External

Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
Sorted By      :      Signal
Calib. Data Modified : 6/10/2011 10:52:14 AM
Multiplier:      :      1.0000
Dilution:        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.198	BV	1.13033e5	4.40245	4.87623e5		Methane
1.430	VB S	5.89460e4	2.43462	1.43513e5		Ethane
2.246	VB	2.09214e4	1.65248	3.45722e4		Propane
4.885	VV	6459.67578	1.23605	7984.50736		Butane
6.442	VV	2520.72705	9.86929e-1	2487.77906		Pentane
7.355	MF	746.57239	8.27394e-1	617.70921		Hexane
7.777	VV	158.10410	8.13960e-1	128.69043		Benzene
8.038	VV	403.95190	7.13712e-1	288.30539		Heptane

Report from TCD (MGM)

Report From Diluted Analysis (MGM)

Manual Int. "II" (MGM)

Totals : 6.87215e5

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.19301e4	5.286e4
as Propane	1.850	3.600	7990.92860	1.300e4
as Butane	3.600	5.700	1.05130e4	1.289e4
as Pentane	5.700	6.950	8532.23854	8.381e3
as Hexane	6.950	7.350	2639.63441	2.983e3

EA# 0511-68 Page 82 of 560

Instrument 2 6/10/2011 10:54:33 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\024B1301.D  
Sample Name: 051811-FUEL-2 Can 1452 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1322.39039	940.3121

Totals : 9.1059e4

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

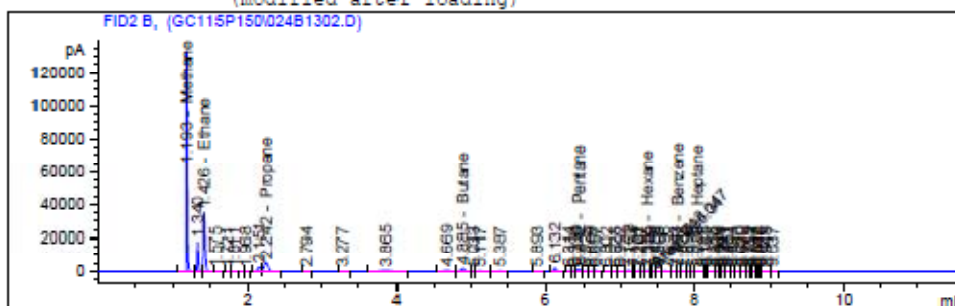
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.19301e4	5.286e4
as Propane	7990.92860	1.300e4
as Butane	1.05130e4	1.289e4
as Pentane	8532.23854	8.381e3
as Hexane	3628.62441	2.987e3
as Heptane	1322.39039	940.3121
Methane	1.13033e5	4.976e5
Ethane	5.89468e4	1.435e5
Propane	2.09214e4	3.457e4
Butane	6459.67578	7.985e3
Pentane	2520.72705	2.488e3
Hexane	746.57239	617.7092
Benzene	158.10410	128.6904
Heptane	403.95190	288.3054

Totals : 7.7827e5

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\024B1302.D  
Sample Name: 051811-FUEL-2 Can 1452 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line :   13
Acq. Instrument : Betty                             Location  : Vial 24
Injection Date  : 02-Jun-11, 11:37:48                Inj       :    2
                                                    Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 10:52:14 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.193	BV	1.12690e5	4.40245	4.86066e5		Methane
1.426	VB S	5.07595e4	2.43462	1.43057e5		Ethane
2.242	VB	2.08560e4	1.65248	3.44642e4		Propane
4.885	VV	6435.74609	1.23605	7954.92851		Butane
6.442	VV	2511.72437	9.86929e-1	2478.89396		Pentane
7.355	MF	743.04700	8.27393e-1	614.79206		Hexane
7.777	VV	157.57719	8.13960e-1	120.26157		Benzene
8.038	VV	405.10681	7.13712e-1	289.12978		Heptane

Report from TCD (MGM)

Report From Diluted Analysis (MGM)

Manual Int. "II" (MGM)

Totals : 6.85053e5

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.18582e4	5.269e4
as Propane	1.850	3.600	3.600 7959.49325	1.295e4
as Butane	3.600	5.700	1.04741e4	1.284e4
as Pentane	5.700	6.950	8502.21092	8.351e3
as Hexane	6.950	7.350	2617.05584	2.921e3

EA# 0511-68 Page 84 of 560

Instrument 2 6/10/2011 10:55:03 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\024B1302.D  
Sample Name: 051811-FUEL-2 Can 1452 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1316.46698	936.1002

Totals : 9.0744e4

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

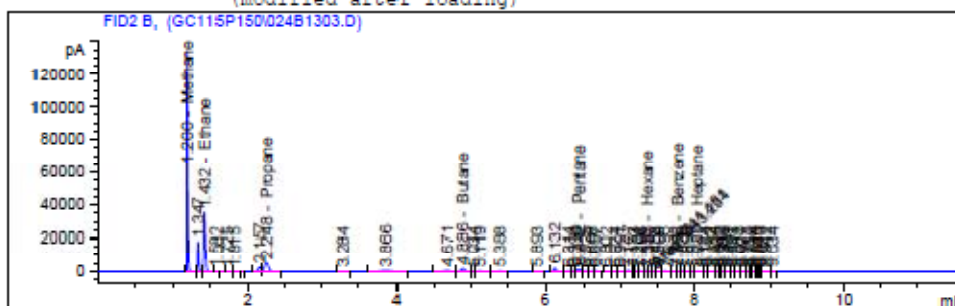
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.18582e4	5.269e4
as Propane	7959.49325	1.295e4
as Butane	1.04741e4	1.284e4
as Pentane	8502.21092	8.351e3
as Hexane	3617.05584	2.977e3
as Heptane	1316.46698	936.1002
Methane	1.12680e5	4.961e5
Ethane	5.87595e4	1.431e5
Propane	2.08560e4	3.446e4
Butane	6435.74609	7.955e3
Pentane	2511.72437	2.479e3
Hexane	743.04700	614.7921
Benzene	157.57719	128.2616
Heptane	405.10681	289.1298

Totals : 7.7580e5

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\024B1303.D  
Sample Name: 051811-FUEL-2 Can 1452 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line :   13
Acq. Instrument : Betty                             Location  : Vial 24
Injection Date  : 02-Jun-11, 12:01:34                Inj       :    3
                                                    Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 10:52:14 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.200	BV	1.13390e5	4.40245	4.89191e5		Methane
1.432	VB S	5.91654e4	2.43462	1.44845e5		Ethane
2.248	VB	2.09885e4	1.65248	3.46831e4		Propane
4.886	VV	6477.49121	1.23605	8006.52854		Butane
6.442	VV	2528.01611	9.86929e-1	2494.97300		Pentane
7.355	MF	741.48090	8.27393e-1	613.49616		Hexane
7.776	VV	150.69991	8.13960e-1	129.17590		Benzene
8.037	VV	405.26587	7.13713e-1	289.24332		Heptane

Report from TCD (MGM)

Report From Diluted Analysis (MGM)

Manual Int. "II" (MGM)

Totals : 6.89453e5

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.20040e4	5.304e4
as Propane	1.850	3.600	8017.27784	1.304e4
as Butane	3.600	5.700	1.05405e4	1.292e4
as Pentane	5.700	6.950	8556.73184	8.405e3
as Hexane	6.950	7.350	2646.48446	3.085e3

EA# 0511-68 Page 86 of 560

Instrument 2 6/10/2011 10:55:39 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\024B1303.D  
Sample Name: 051811-FUEL-2 Can 1452 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1327.05766	943.6309

Totals : 9.1356e4

Final Summed Peaks Report

Signal 1: FID2 B,

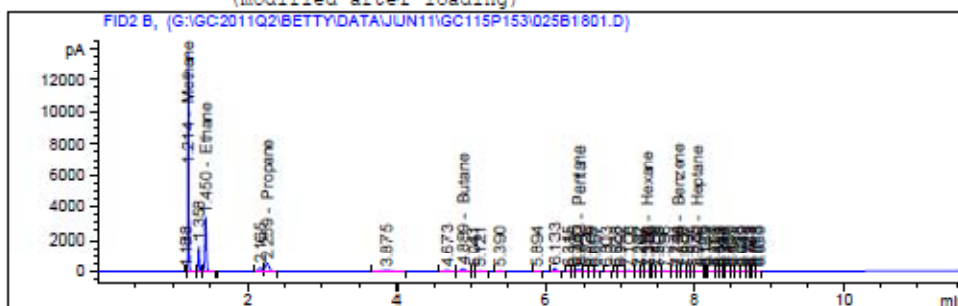
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.20040e4	5.304e4
as Propane	8017.27784	1.304e4
as Butane	1.05405e4	1.292e4
as Pentane	8556.73184	8.405e3
as Hexane	3646.48449	3.001e3
as Heptane	1327.05766	943.6309
Methane	1.13390e5	4.992e5
Ethane	5.91654e4	1.440e5
Propane	2.09885e4	3.468e4
Butane	6477.49121	8.007e3
Pentane	2528.01611	2.495e3
Hexane	741.48090	613.4962
Benzene	158.69991	129.1754
Heptane	405.26587	289.2433

Totals : 7.8081e5

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\025B1801.D  
Sample Name: 051811-FUEL-2 Can 1452 \*11 0511-68

```
=====
Acq. Operator   : tbo                      Seq. Line : 18
Acq. Instrument : Betty                   Location  : Vial 25
Injection Date  : 09-Jun-11, 14:11:27      Inj       : 1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:28:32 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:29:00 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.214	PV	1.04214e4	4.40244	4.50796e4		Methane
1.450	VB S	5317.66943	2.43459	1.29463e4		Ethane
2.259	VB	1883.67249	1.66236	3112.61107		Propane
4.009	VV	500.41193	1.23506	717.30693		Butane
6.443	VV	225.89886	9.86718e-1	222.89853		Pentane
7.356	VV	66.21638	8.26610e-1	54.73514		Hexane
7.778	VV	14.01106	8.14240e-1	11.40837		Benzene
8.940	VV	34.04624	7.12600e-1	24.69144		Heptane

Totals : 6.29696e4

Summed Peaks Report

Signal 1: FID2 B,

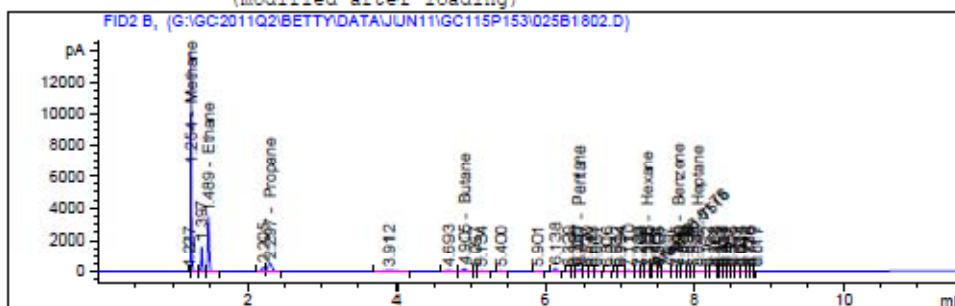
Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.250	1.850	1881.40332	4.776e3
as Propane	1.850	3.600	719.01630	1.170e3
as Butane	3.600	5.700	843.30701	1.157e3
as Pentane	5.700	6.950	765.10002	751.5271
as Hexane	6.950	7.350	330.75286	264.8085

Instrument 2 6/10/2011 9:32:05 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\025B1802.D  
Sample Name: 051811-FUEL-2 Can 1452 \*11 0511-68

```
=====
Acq. Operator   : tbo                      Seq. Line : 18
Acq. Instrument : Betty                   Location  : Vial 25
Injection Date  : 09-Jun-11, 14:35:42      Inj       : 2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:32:30 AM by cjt
                (modified after loading)
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:32:33 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name	
1.254	PV	1.05822e4	4.40244	4.65873e4		Methane	Report from TCD (MGM)
1.489	VB S	5401.69238	2.43459	1.31509e4		Ethane	
2.297	VB	1919.10947	1.65237	9161.27704		Propane	
4.905	VV	509.66376	1.23506	720.74227		Butane	Report From Undiluted Analysis (MGM)
6.447	VV	230.03566	9.86722e-1	226.98134		Pentane	
7.356	MF	66.81761	8.26618e-1	55.23255		Hexane	Report From Undiluted Analysis (MGM)
7.780	VV	14.33346	8.14234e-1	11.67079		Benzene	
8.942	VV	37.02571	7.12672e-1	26.38718		Heptane	Report From Undiluted Analysis (MGM)

Totals : 6.39485e4

# Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]	
as Ethane	1.250	1.650	2012.20729	4.651e3	Report From Undiluted Analysis (MGM)
as Propane	1.650	2.600	739.88409	1.189e3	
as Butane	2.600	5.700	959.35498	1.175e3	
as Pentane	5.700	6.950	776.53871	762.7629	
as Hexane	6.950	7.350	236.83253	268.8806	

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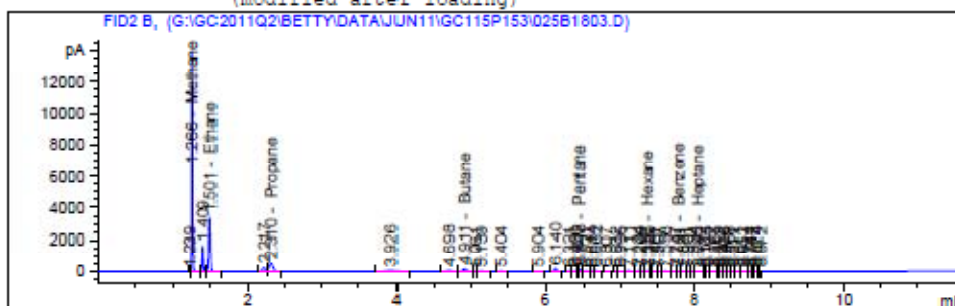
Instrument 2 6/10/2011 9:34:33 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\025B1803.D  
Sample Name: 051811-FUEL-2 Can 1452 \*11 0511-68

```
=====
Acq. Operator   : tbo                      Seq. Line :   18
Acq. Instrument : Betty                   Location  : Vial 25
Injection Date  : 09-Jun-11, 15:19:45      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:32:30 AM by cjt
                (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:32:33 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name	
1.266	PV	1.08776e4	4.40244	4.65674e4		Methane	Report from TCD (MGM)
1.501	VB S	5398.56641	2.43459	1.31433e4		Ethane	
2.310	VB	1912.31787	1.65237	3159.84743		Propane	
4.911	VV	589.13082	1.23586	728.08265		Butane	Report From Undiluted Analysis (MGM)
6.448	VV	229.37799	9.86722e-1	226.33226		Pentane	
7.357	VV	66.70193	8.26616e-1	55.13692		Hexane	Report From Undiluted Analysis (MGM)
7.781	VV	14.15853	8.14237e-1	11.52841		Benzene	
8.046	VV	35.64428	7.12624e-1	26.32971		Heptane	Report From Undiluted Analysis (MGM)

Totals : 6.39170e4

# Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]	
as Ethane	1.260	1.850	2011.09717	4.848e3	Report From Undiluted Analysis (MGM)
as Propane	1.850	3.600	729.31812	1.186e3	
as Butane	3.600	5.700	957.53697	1.174e3	
as Pentane	5.700	6.950	776.06066	762.2932	
as Hexane	6.950	7.850	335.43496	267.8540	

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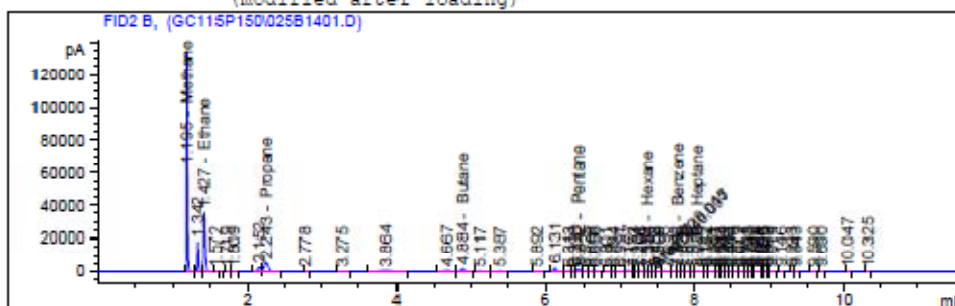
Instrument 2 6/10/2011 9:35:01 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\025B1401.D  
Sample Name: 051811-FUEL-3 Can 1031 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line :   14
Acq. Instrument : Betty                             Location  : Vial 25
Injection Date  : 02-Jun-11, 12:25:25                Inj       :    1
                                                    Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 10:52:14 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.195	BV	1.13668e5	4.40245	5.00416e5		Methane
1.427	VB	5.91611e4	2.42462	1.44035e5		Ethane
2.243	VB	2.13307e4	1.65248	3.52487e4		Propane
4.884	VB	6193.64404	1.23605	7655.67263		Butane
6.442	VV	2498.66943	9.86929e-1	2456.13990		Pentane
7.354	MF	729.01471	8.27392e-1	603.18076		Hexane
7.776	VV	159.11749	8.13960e-1	129.51527		Benzene
8.036	VV	423.78436	7.13717e-1	302.46214		Heptane

Report from TCD (MGM)  
Report From Diluted Analysis (MGM)  
Manual Int. "II" (MGM)

Totals : 6.90846e5

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.19947e4	5.302e4
as Propane	1.850	3.600	7882.69402	1.282e4
as Butane	3.600	5.700	1.03699e4	1.271e4
as Pentane	5.700	6.950	8490.33241	8.340e3
as Hexane	6.950	7.250	2605.04553	2.969e3

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Instrument 2 6/10/2011 10:56:23 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\025B1401.D  
Sample Name: 051811-FUEL-3 Can 1031 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1476.33830	1.050e3

Totals : 9.0913e4

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

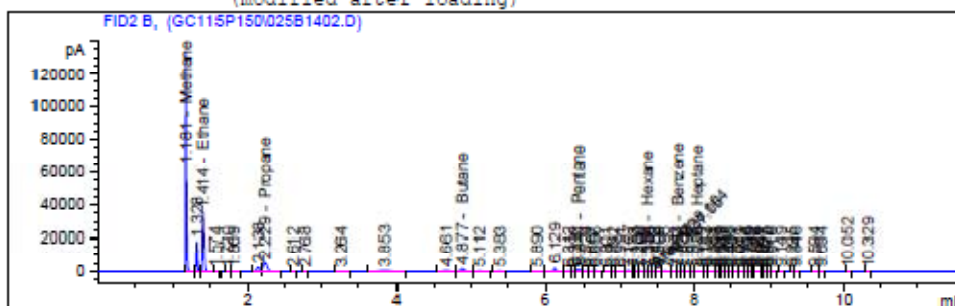
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.19947e4	5.302e4
as Propane	7882.69402	1.282e4
as Butane	1.03699e4	1.271e4
as Pentane	8490.33241	8.340e3
as Hexane	3606.04557	2.968e3
as Heptane	1476.33830	1.050e3
Methane	1.13668e5	5.004e5
Ethane	5.91611e4	1.440e5
Propane	2.13307e4	3.525e4
Butane	6193.64404	7.656e3
Pentane	2488.66943	2.456e3
Hexane	729.01471	603.1808
Benzene	159.11749	129.5153
Heptane	423.78436	302.4621

Totals : 7.8176e5

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\025B1402.D  
Sample Name: 051811-FUEL-3 Can 1031 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line :   14
Acq. Instrument : Betty                             Location  : Vial 25
Injection Date  : 02-Jun-11, 12:49:17                Inj       :    2
                                                    Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 10:57:12 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 10:57:05 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.181	VB	1.13206e5	4.40245	4.88383e5		Methane
1.414	VB	5.89915e4	2.43462	1.43476e5		Ethane
2.229	VB	2.12319e4	1.65248	3.50853e4		Propane
4.877	VB	6168.58691	1.23605	7624.70019		Butane
6.441	VV	2478.31250	9.86929e-1	2445.91802		Pentane
7.354	MF	728.10425	8.27392e-1	602.42738		Hexane
7.777	VV	158.43190	8.13960e-1	128.95724		Benzene
8.036	VV	421.16943	7.13716e-1	300.59556		Heptane

Report from TCD (MGM)

Report From Diluted Analysis (MGM)

Manual Int. "II" (MGM)

Totals : 6.88046e5

Summed Peaks Report

```
Signal 1: FID2 B,
```

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.19070e4	5.281e4
as Propane	1.850	3.600	7864.76321	1.279e4
as Butane	3.600	5.700	1.03268e4	1.266e4
as Pentane	5.700	6.950	8457.32701	8.307e3
as Hexane	6.950	7.350	2559.05689	2.964e3

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Instrument 2 6/10/2011 10:57:16 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\025B1402.D  
Sample Name: 051811-FUEL-3 Can 1031 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1470.55033	1.046e3

Totals : 9.0569e4

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

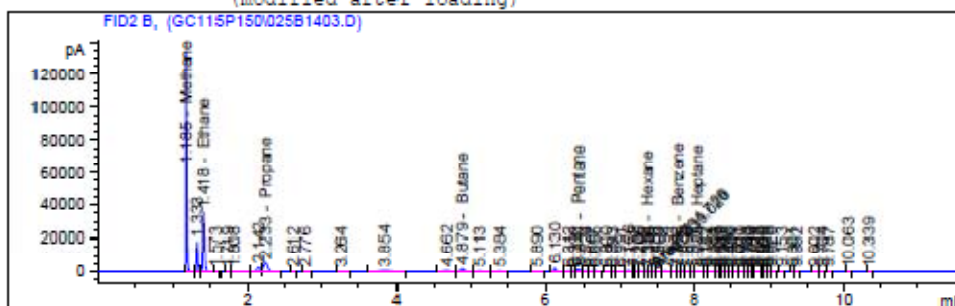
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.19070e4	5.281e4
as Propane	7864.76321	1.279e4
as Butane	1.03268e4	1.266e4
as Pentane	8457.32701	8.307e3
as Hexane	3589.05682	2.954e3
as Heptane	1470.55033	1.046e3
Methane	1.13206e5	4.984e5
Ethane	5.89315e4	1.435e5
Propane	2.12319e4	3.509e4
Butane	6168.58691	7.625e3
Pentane	2478.31250	2.446e3
Hexane	728.10425	602.4274
Benzene	158.43190	128.9572
Heptane	421.16943	300.5956

Totals : 7.7862e5

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\025B1403.D  
Sample Name: 051811-FUEL-3 Can 1031 0511-68

```
=====
Acq. Operator   : cjt                               Seq. Line :   14
Acq. Instrument : Betty                             Location  : Vial 25
Injection Date  : 02-Jun-11, 13:12:57                Inj       :    3
                                                    Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 10:57:12 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

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Sorted By      : Signal
Calib. Data Modified : 6/10/2011 10:57:28 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.185	VB	1.13868e5	4.40245	5.01297e5		Methane
1.418	VB	5.92846e4	2.42462	1.44360e5		Ethane
2.233	VB	2.13725e4	1.65248	3.53176e4		Propane
4.879	VB	6202.90088	1.23605	7667.11476		Butane
6.441	VV	2492.94277	9.86929e-1	2460.25969		Pentane
7.354	MF	731.72626	8.27392e-1	605.42449		Hexane
7.776	VV	159.27997	8.13960e-1	129.64751		Benzene
8.035	VV	421.29630	7.13716e-1	300.68612		Heptane

Report from TCD (MGM)

Report From Diluted Analysis (MGM)

Manual Int. "II" (MGM)

Totals : 6.92138e5

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	2.20374e4	5.312e4
as Propane	1.850	3.600	7894.92855	1.284e4
as Butane	3.600	5.700	1.03854e4	1.273e4
as Pentane	5.700	6.950	8503.18465	8.352e3
as Hexane	6.950	7.350	731.72626	2.925e3

EA# 0511-68 Page 95 of 560

Instrument 2 6/10/2011 10:57:56 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\025B1403.D  
Sample Name: 051811-FUEL-3 Can 1031 0511-68

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1483.20415	1.055e3

Totals : 9.1076e4

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

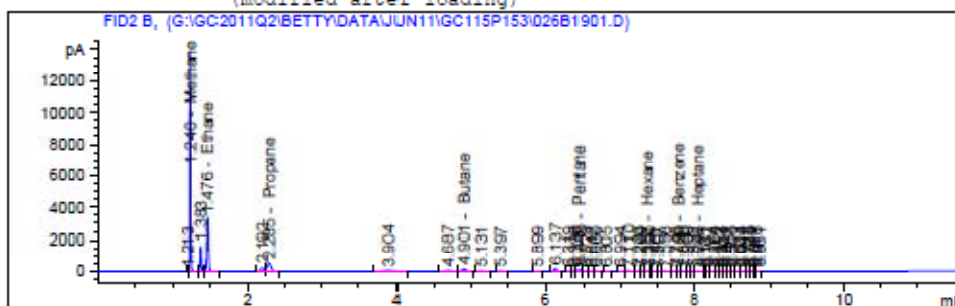
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.20374e4	5.312e4
as Propane	7894.92855	1.284e4
as Butane	1.03854e4	1.273e4
as Pentane	8503.18465	8.352e3
as Hexane	3610.58717	2.972e3
as Heptane	1483.20415	1.055e3
Methane	1.13868e5	5.013e5
Ethane	5.92946e4	1.444e5
Propane	2.13725e4	3.532e4
Butane	6202.90088	7.667e3
Pentane	2492.84277	2.460e3
Hexane	731.72626	605.4245
Benzene	159.27997	129.6475
Heptane	421.29630	300.6861

Totals : 7.8321e5

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\026B1901.D  
Sample Name: 051811-FUEL-3 Can 1031 \*11 0511-68

```
=====
Acq. Operator   : tbo                      Seq. Line :   19
Acq. Instrument : Betty                   Location  : Vial 26
Injection Date  : 09-Jun-11, 15:43:42      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:32:30 AM by cjt
                (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:32:33 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name	
1.240	PV	1.04812e4	4.40244	4.61430e4		Methane	Report from TCD (MGM)
1.476	VB S	5340.32422	2.43459	1.30015e4		Ethane	
2.205	VB	1910.47009	1.65237	9170.01995		Propane	Report From Undiluted Analysis (MGM)
4.901	VB	557.10126	1.23505	600.49264		Butane	
6.446	VV	223.04514	9.86715e-1	220.08205		Pentane	
7.357	VV	65.28728	8.26582e-1	53.87461		Hexane	Report From Undiluted Analysis (MGM)
7.780	VV	13.67652	8.14248e-1	11.13608		Benzene	
8.043	VV	36.91524	7.12645e-1	25.00004		Heptane	Report From Undiluted Analysis (MGM)

Totals : 6.33141e4

# Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]	
as Ethane	1.200	1.050	1980.41174	4.799e3	Report From Undiluted Analysis (MGM)
as Propane	1.850	2.600	710.84910	1.156e3	
as Butane	2.600	5.700	931.88667	1.143e3	
as Pentane	5.700	6.950	762.07401	740.5540	
as Hexane	6.950	7.350	317.10648	261.5566	

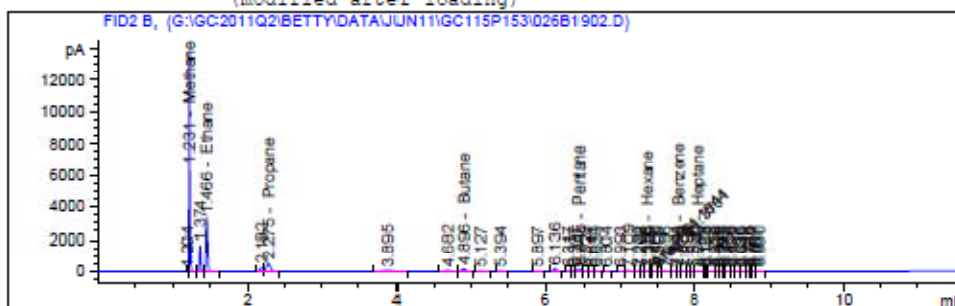
Instrument 2 6/10/2011 9:37:20 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\026B1902.D  
Sample Name: 051811-FUEL-3 Can 1031 \*11 0511-68

```
=====
Acq. Operator   : tbo                      Seq. Line :   19
Acq. Instrument : Betty                   Location  : Vial 26
Injection Date  : 09-Jun-11, 16:07:29      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:32:30 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:32:33 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name	
1.231	PV	1.04310e4	4.40244	4.59216e4		Methane	Report from TCD (MGM)
1.466	VB S	5314.58301	2.43459	1.29388e4		Ethane	
2.275	VB	1900.99291	1.65296	9154.35196		Propane	Report From Undiluted Analysis (MGM)
4.096	VB	554.29003	1.23505	605.01074		Butane	
6.445	VV	222.27835	9.86714e-1	219.32527		Pentane	
7.356	MF	64.18442	8.26582e-1	53.05375		Hexane	Report From Undiluted Analysis (MGM)
7.778	VV	13.62617	8.14249e-1	11.09510		Benzene	
8.040	VV	36.07520	7.12642e-1	25.70863		Heptane	Report From Undiluted Analysis (MGM)

Totals : 6.30090e4

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]	
as Ethane	1.200	1.050	1970.66797	4.776e3	Report From Undiluted Analysis (MGM)
as Propane	1.850	2.600	707.74048	1.151e3	
as Butane	3.600	5.700	927.14464	1.137e3	
as Pentane	5.700	6.950	757.56553	744.1263	
as Hexane	6.850	7.350	216.88875	260.8386	

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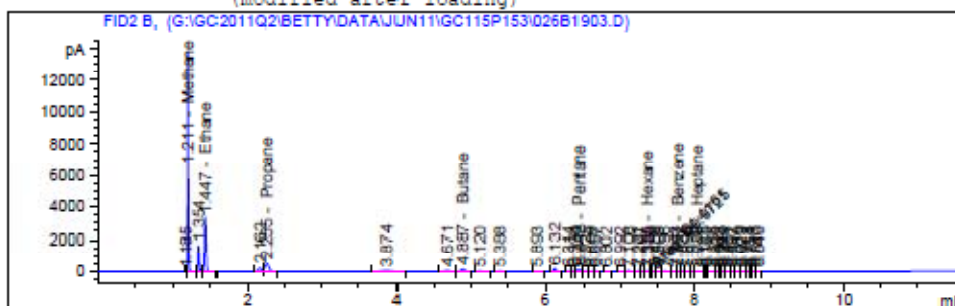
Instrument 2 6/10/2011 9:38:05 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\026B1903.D  
Sample Name: 051811-FUEL-3 Can 1031 \*11 0511-68

```
=====
Acq. Operator   : tbo                      Seq. Line :   19
Acq. Instrument : Betty                   Location  : Vial 26
Injection Date  : 09-Jun-11, 16:31:32      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.211	PV	1.04227e4	4.40244	4.50054e4		Methane
1.447	VB S	5309.68408	2.43459	1.29269e4		Ethane
2.255	VB	1907.20447	1.66236	3151.39756		Propane
4.007	VB	553.64453	1.29505	604.21997		Butane
6.443	VV	221.98207	9.86714e-1	219.03285		Pentane
7.355	MF	64.41611	8.26586e-1	53.24546		Hexane
7.777	VV	13.58615	8.14250e-1	11.06252		Benzene
8.930	VV	35.07416	7.12695e-1	25.56518		Heptane

Totals : 6.29569e4

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.250	1.850	1876.78254	4.765e3
as Propane	1.850	2.600	706.82622	1.150e3
as Butane	2.600	5.700	825.82596	1.135e3
as Pentane	5.700	6.950	756.89623	743.5902
as Hexane	6.950	7.350	315.38765	260.6122

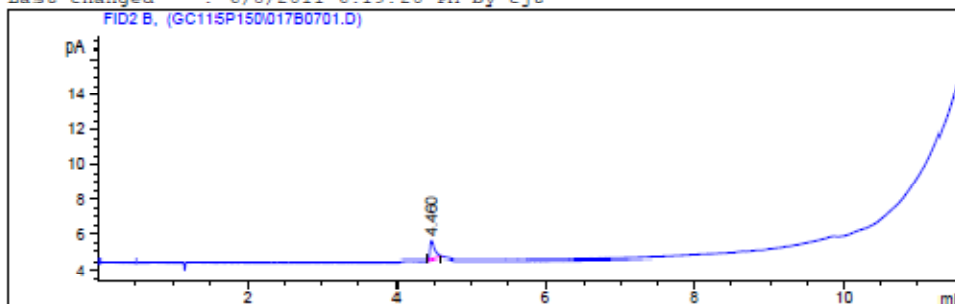
EA# 0511-68 Page 99 of 560

Instrument 2 6/10/2011 9:39:12 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0701.D  
Sample Name: He Blank

```
=====
Acq. Operator   : cjt                               Seq. Line :    7
Acq. Instrument : Betty                             Location  : Vial 17
Injection Date  : 02-Jun-11, 01:33:42                Inj       :    1
                                                Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.208	-	-	-	-	-	Methane
1.435	-	-	-	-	-	Ethane
2.240	-	-	-	-	-	Propane
4.885	-	-	-	-	-	Butane
6.439	-	-	-	-	-	Pentane
7.354	-	-	-	-	-	Hexane
7.775	-	-	-	-	-	Benzene
8.037	-	-	-	-	-	Heptane

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	3.600	5.700	4.38029	5.3707

False Positive (MSS)

EA# 0511-68 Page 100 of 560

Instrument 2 6/8/2011 6:21:50 PM cjt

Page 1 of 3

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0701.D  
Sample Name: He Blank

Totals : 5.3707

Final Summed Peaks Report

Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Butane	4.38029	5.3707
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 5.3707

Area Percent Report

Sorted By : Signal  
Calib. Data Modified : 6/8/2011 5:30:07 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.208		0.0000	0.00000	0.00000	Methane
2	1.435		0.0000	0.00000	0.00000	Ethane
3	2.240		0.0000	0.00000	0.00000	Propane
4	4.885		0.0000	0.00000	0.00000	Butane
5	6.439		0.0000	0.00000	0.00000	Pentane
6	7.354		0.0000	0.00000	0.00000	Hexane
7	7.775		0.0000	0.00000	0.00000	Benzene
8	8.037		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Butane	3.600	5.700	4.38029	100.0000

EA# 0511-68 Page 101 of 560

Instrument 2 6/8/2011 6:21:50 PM cjt

Page 2 of 3

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0701.D  
Sample Name: He Blank

Totals : 100.0000

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

Name	Total Area [pA*s]	Area %
as Butane	4.38029	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 100.0000

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

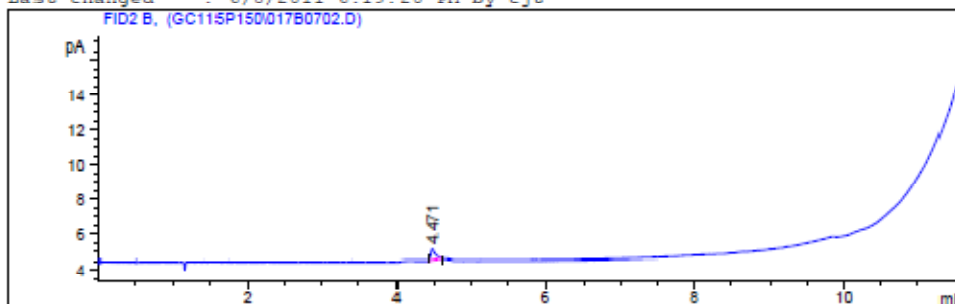
EA# 0511-68 Page 102 of 560

Instrument 2 6/8/2011 6:21:50 PM cjt

Page 3 of 3

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0702.D  
Sample Name: He Blank

```
=====
Acq. Operator   : cjt                               Seq. Line :    7
Acq. Instrument : Betty                             Location  : Vial 17
Injection Date  : 02-Jun-11, 01:58:49                Inj       :    2
                                                Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.208	-	-	-	-	-	Methane
1.435	-	-	-	-	-	Ethane
2.240	-	-	-	-	-	Propane
4.885	-	-	-	-	-	Butane
6.439	-	-	-	-	-	Pentane
7.354	-	-	-	-	-	Hexane
7.775	-	-	-	-	-	Benzene
8.037	-	-	-	-	-	Heptane

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	3.600	5.700	2.47670	3.0360

False Positive (MSS)

EA# 0511-68 Page 103 of 560

Instrument 2 6/8/2011 6:21:57 PM cjt

Page 1 of 3

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0702.D  
Sample Name: He Blank

Totals : 3.0368

Final Summed Peaks Report

Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Butane	2.47678	3.0368
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.0368

Area Percent Report

Sorted By : Signal  
Calib. Data Modified : 6/8/2011 5:30:07 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.208		0.0000	0.00000	0.00000	Methane
2	1.435		0.0000	0.00000	0.00000	Ethane
3	2.240		0.0000	0.00000	0.00000	Propane
4	4.885		0.0000	0.00000	0.00000	Butane
5	6.439		0.0000	0.00000	0.00000	Pentane
6	7.354		0.0000	0.00000	0.00000	Hexane
7	7.775		0.0000	0.00000	0.00000	Benzene
8	8.037		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Butane	3.600	5.700	2.47678	100.0000

False Positive (MSS)

EA# 0511-68 Page 104 of 560

Instrument 2 6/8/2011 6:21:57 PM cjt

Page 2 of 3

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0702.D  
Sample Name: He Blank

Totals : 100.0000

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

Name	Total Area [pA*s]	Area %
as Butane	2.47678	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 100.0000

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

EA# 0511-68 Page 105 of 560

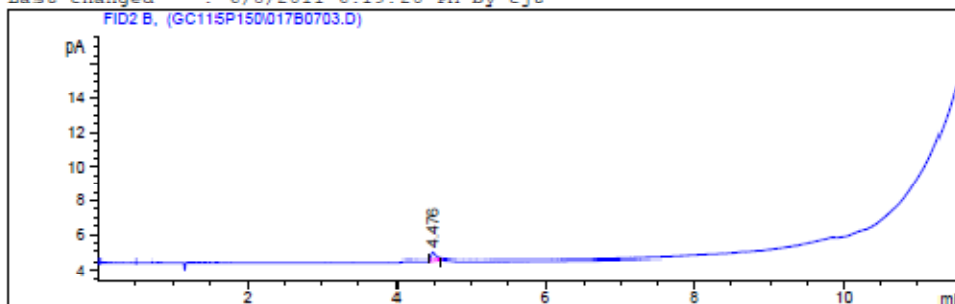
Instrument 2 6/8/2011 6:21:57 PM cjt

Page 3 of 3

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0703.D  
Sample Name: He Blank

=====

Acq. Operator	: cjt	Seq. Line	: 7
Acq. Instrument	: Betty	Location	: Vial 17
Injection Date	: 02-Jun-11, 02:23:57	Inj	: 3
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M		
Last changed	: 5/14/2011 1:23:58 PM by stg		
Analysis Method	: G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M		
Last changed	: 6/8/2011 6:19:20 PM by cjt		



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : 6/8/2011 5:30:07 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.208	-	-	-	-	-	Methane
1.435	-	-	-	-	-	Ethane
2.240	-	-	-	-	-	Propane
4.885	-	-	-	-	-	Butane
6.439	-	-	-	-	-	Pentane
7.354	-	-	-	-	-	Hexane
7.775	-	-	-	-	-	Benzene
8.037	-	-	-	-	-	Heptane

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====

Summed Peaks Report

=====

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	3.699	5.700	1.73816	2.1312

False Positive (MSS)

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Instrument 2 6/8/2011 6:22:05 PM cjt

Page 1 of 3



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0703.D  
Sample Name: He Blank

Totals : 2.1312

Final Summed Peaks Report

Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Butane	1.73816	2.1312
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 2.1312

Area Percent Report

Sorted By : Signal  
Calib. Data Modified : 6/8/2011 5:30:07 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.208		0.0000	0.00000	0.00000	Methane
2	1.435		0.0000	0.00000	0.00000	Ethane
3	2.240		0.0000	0.00000	0.00000	Propane
4	4.885		0.0000	0.00000	0.00000	Butane
5	6.439		0.0000	0.00000	0.00000	Pentane
6	7.354		0.0000	0.00000	0.00000	Hexane
7	7.775		0.0000	0.00000	0.00000	Benzene
8	8.037		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Butane	3.600	8.700	1.73816	100.0000

False Positive (MSS)

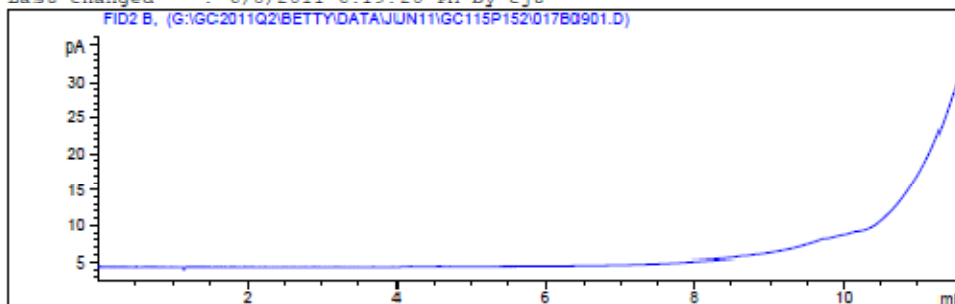
EA# 0511-68 Page 107 of 560

Instrument 2 6/8/2011 6:22:05 PM cjt

Page 2 of 3

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0901.D  
Sample Name: He Blank

```
=====
Acq. Operator   : tbo                      Seq. Line :    9
Acq. Instrument : Betty                   Location  : Vial 17
Injection Date  : 07-Jun-11, 03:04:24      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



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

```
Sorted By           :      Signal
Calib. Data Modified :      6/8/2011 5:30:07 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.208	-	-	-	-	-	Methane
1.435	-	-	-	-	-	Ethane
2.240	-	-	-	-	-	Propane
4.885	-	-	-	-	-	Butane
6.439	-	-	-	-	-	Pentane
7.354	-	-	-	-	-	Hexane
7.775	-	-	-	-	-	Benzene
8.037	-	-	-	-	-	Heptane

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
=====
                        Summed Peaks Report
=====
```

Signal 1: FID2 B,

```
=====
                        Final Summed Peaks Report
=====
```

Signal 1: FID2 B,

EA# 0511-68 Page 108 of 560

Instrument 2 6/8/2011 6:24:38 PM cjt

Page 1 of 3

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0901.D  
Sample Name: He Blank

Name	Total Area [pA*s]	Amount [ppm]
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		0.0000

Area Percent Report

Sorted By : Signal  
Calib. Data Modified : 6/8/2011 5:30:07 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.208		0.0000	0.00000	0.00000	Methane
2	1.435		0.0000	0.00000	0.00000	Ethane
3	2.240		0.0000	0.00000	0.00000	Propane
4	4.885		0.0000	0.00000	0.00000	Butane
5	6.439		0.0000	0.00000	0.00000	Pentane
6	7.354		0.0000	0.00000	0.00000	Hexane
7	7.775		0.0000	0.00000	0.00000	Benzene
8	8.037		0.0000	0.00000	0.00000	Heptane
Totals :				0.00000	0.0000	

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Final Summed Peaks Report

Name	Total Area [pA*s]	Area %
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000

EA# 0511-68 Page 109 of 560

Instrument 2 6/8/2011 6:24:38 PM cjt

Page 2 of 3

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0901.D  
Sample Name: He Blank

Name	Total Area [pA*s]	Area %
----- ----- -----		
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		0.0000

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

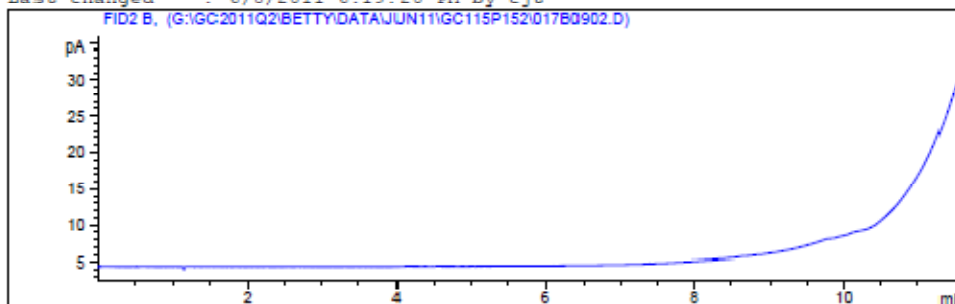
EA# 0511-68 Page 110 of 560

Instrument 2 6/8/2011 6:24:38 PM cjt

Page 3 of 3

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0902.D  
Sample Name: He Blank

```
=====
Acq. Operator   : tbo                      Seq. Line :    9
Acq. Instrument : Betty                   Location  : Vial 17
Injection Date  : 07-Jun-11, 03:28:21      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



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

```
Sorted By           : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:         : 1.0000
Dilution:           : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.208	-	-	-	-	-	Methane
1.435	-	-	-	-	-	Ethane
2.240	-	-	-	-	-	Propane
4.885	-	-	-	-	-	Butane
6.439	-	-	-	-	-	Pentane
7.354	-	-	-	-	-	Hexane
7.775	-	-	-	-	-	Benzene
8.037	-	-	-	-	-	Heptane

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
=====
                        Summed Peaks Report
=====
```

Signal 1: FID2 B,

```
=====
                        Final Summed Peaks Report
=====
```

Signal 1: FID2 B,

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Instrument 2 6/8/2011 6:24:46 PM cjt

Page 1 of 3

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0902.D  
Sample Name: He Blank

Name	Total Area [pA*s]	Amount [ppm]
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		0.0000

=====  
Area Percent Report  
=====

Sorted By : Signal  
Calib. Data Modified : 6/8/2011 5:30:07 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.208		0.0000	0.00000	0.00000	Methane
2	1.435		0.0000	0.00000	0.00000	Ethane
3	2.240		0.0000	0.00000	0.00000	Propane
4	4.885		0.0000	0.00000	0.00000	Butane
5	6.439		0.0000	0.00000	0.00000	Pentane
6	7.354		0.0000	0.00000	0.00000	Hexane
7	7.775		0.0000	0.00000	0.00000	Benzene
8	8.037		0.0000	0.00000	0.00000	Heptane
Totals :				0.00000	0.0000	

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====  
Summed Peaks Report  
=====

Signal 1: FID2 B,

=====  
Final Summed Peaks Report  
=====

Name	Total Area [pA*s]	Area %
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000

EA# 0511-68 Page 112 of 560

Instrument 2 6/8/2011 6:24:46 PM cjt

Page 2 of 3

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0902.D  
Sample Name: He Blank

Name	Total Area [pA*s]	Area %
----- ----- -----		
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		0.0000

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

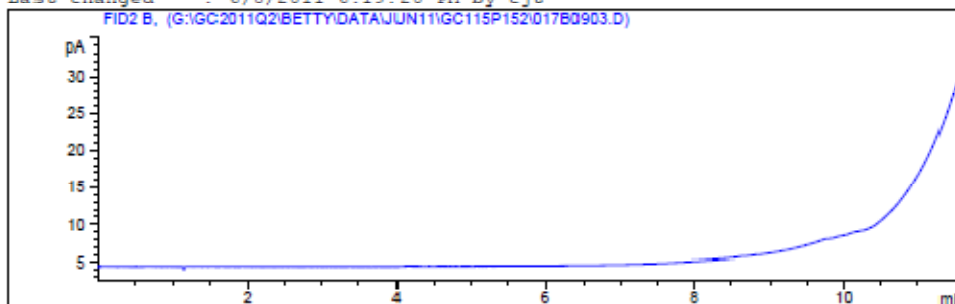
EA# 0511-68 Page 113 of 560

Instrument 2 6/8/2011 6:24:46 PM cjt

Page 3 of 3

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0903.D  
Sample Name: He Blank

```
=====
Acq. Operator   : tbo                      Seq. Line :    9
Acq. Instrument : Betty                   Location  : Vial 17
Injection Date  : 07-Jun-11, 03:52:28      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



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

Sorted By : Signal  
Calib. Data Modified : 6/8/2011 5:30:07 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.208	-	-	-	-	-	Methane
1.435	-	-	-	-	-	Ethane
2.240	-	-	-	-	-	Propane
4.885	-	-	-	-	-	Butane
6.439	-	-	-	-	-	Pentane
7.354	-	-	-	-	-	Hexane
7.775	-	-	-	-	-	Benzene
8.037	-	-	-	-	-	Heptane

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
=====
                        Summed Peaks Report
=====
```

Signal 1: FID2 B,

```
=====
                        Final Summed Peaks Report
=====
```

Signal 1: FID2 B,

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Instrument 2 6/8/2011 6:24:53 PM cjt

Page 1 of 3



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0903.D  
Sample Name: He Blank

Name	Total Area [pA*s]	Amount [ppm]
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 0.0000

# Area Percent Report

Sorted By : Signal  
Calib. Data Modified : 6/8/2011 5:30:07 PM  
Multiplier: 1.0000  
Dilution: 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.208		0.0000	0.00000	0.00000	Methane
2	1.435		0.0000	0.00000	0.00000	Ethane
3	2.240		0.0000	0.00000	0.00000	Propane
4	4.885		0.0000	0.00000	0.00000	Butane
5	6.439		0.0000	0.00000	0.00000	Pentane
6	7.354		0.0000	0.00000	0.00000	Hexane
7	7.775		0.0000	0.00000	0.00000	Benzene
8	8.037		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

# Summed Peaks Report

Signal 1: FID2 B,

# Final Summed Peaks Report

Name	Total Area [pA*s]	Area %
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000

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Instrument 2 6/8/2011 6:24:53 PM cjt

Page 2 of 3

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\017B0903.D  
Sample Name: He Blank

Name	Total Area [pA*s]	Area %
----- ----- -----		
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		0.0000

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

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Instrument 2 6/8/2011 6:24:53 PM cjt

Page 3 of 3

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\017B0703.D  
Sample Name: He Blank

Totals : 100.0000

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

Name	Total Area [pA*s]	Area %
as Butane	1.73816	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 100.0000

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

EA# 0511-68 Page 117 of 560

Instrument 2 6/8/2011 6:22:05 PM cjt

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# Calibration Curve Chromatograms



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=====

Calibration Table

=====

Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM

Rel. Reference Window : 2.000 %  
 Abs. Reference Window : 0.000 min  
 Rel. Non-ref. Window : 2.000 %  
 Abs. Non-ref. Window : 0.200 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: TCD1 A,  
 Signal 2: FID2 B,

RetTime	Lvl	Amount	Area	Amt/Area	Ref Grp Name
[min]	Sig	[%]			
0.854	1 11	2.00000e-1	1.80633	1.10722e-1	Hydrogen
	12	8.50000e-1	8.57902	9.90790e-2	
	13	4.00000	41.33787	9.67636e-2	
	14	8.00000	85.44923	9.36228e-2	
	15	20.00000	222.57526	8.98572e-2	
	16	40.00000	460.37256	8.68862e-2	
3.180	1 8	1.82000e-1	73.86340	2.46401e-3	Oxygen
	4	9.80000e-1	372.66600	2.62970e-3	
	5	4.90000	1895.79468	2.58467e-3	
	6	9.80000	3857.11670	2.54076e-3	
	9	99.80000	3.85815e4	2.58673e-3	
4.054	1 7	2.00000e-1	96.54302	2.07162e-3	Nitrogen
	1	1.00000	421.19687	2.37419e-3	
	2	5.00000	2034.64948	2.45743e-3	
	3	10.00000	4048.09033	2.47030e-3	
	9	100.00000	4.09458e4	2.44225e-3	
5.258	1 7	2.00000e-1	92.42490	2.16392e-3	Carbon monoxide
	1	1.00000	470.54378	2.12520e-3	
	2	5.00000	2302.92566	2.17115e-3	
	3	10.00000	4570.86816	2.18777e-3	
	9	99.00000	4.56475e4	2.16879e-3	
7.559	1 7	1.60000e-1	66.68196	2.39945e-3	Methane
	1	8.00000e-1	331.24899	2.41510e-3	
	2	4.00000	1600.45245	2.49929e-3	
	3	8.00000	3173.94128	2.52053e-3	
	9	99.00000	3.83102e4	2.58417e-3	
9.070	1 8	1.82000e-1	127.79883	1.42411e-3	Carbon dioxide

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RetTime [min]	Lvl Sig	Amount [%]	Area	Amt/Area	Ref Grp Name
4	9.80000e-1	674.36972	1.45321e-3		
5	4.90000	3344.95581	1.46489e-3		
6	9.80000	6683.89722	1.46621e-3		
9	99.80000	6.65036e4	1.50067e-3		

More compound-specific settings:

Compound: Oxygen  
Time Window : From 2.878 min To 3.597 min

Compound: Nitrogen  
Time Window : From 3.558 min To 4.729 min

Compound: Carbon monoxide  
Time Window : From 4.772 min To 5.712 min

Compound: Methane  
Time Window : From 7.163 min To 7.734 min

Compound: Carbon dioxide  
Time Window : From 8.707 min To 9.408 min

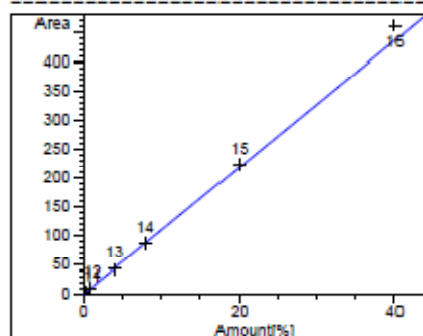
1 Warnings or Errors :

Warning : Overlapping peak time windows at 3.18 min, signal 1

#### Peak Sum Table

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.260	1.850	None	2.2055	1.0000	None
as Propane	1.850	3.600	None	1.4758	1.0000	None
as Butane	3.600	5.700	None	1.1022	1.0000	None
as Pentane	5.700	6.950	None	8.8365e-1	1.0000	None
as Hexane	6.950	7.750	None	7.5775e-1	1.0000	None
as Heptane	7.750	11.600	None	6.6737e-1	1.0000	None

#### Calibration Curves

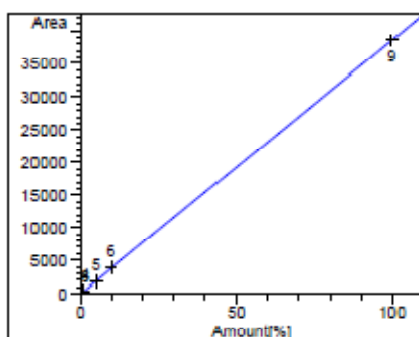


Hydrogen at exp. RT: 0.854  
TCD1 A,  
Correlation: 0.99921  
Residual Std. Dev.: 12.72904  
Formula:  $y = mx + b$   
m: 10.89784  
b: -3.93683e-1  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 11 : 1  
Level 12 : 0.055363  
Level 13 : 0.0025  
Level 14 : 0.000625  
Level 15 : 0.0001  
Level 16 : 0.000025

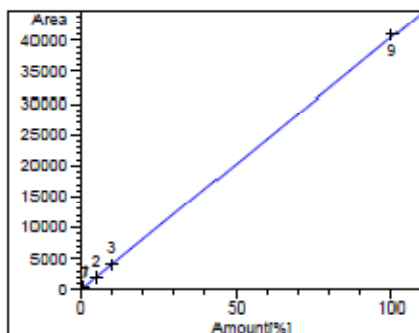
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Instrument 1 6/1/2011 11:09:06 AM cjt

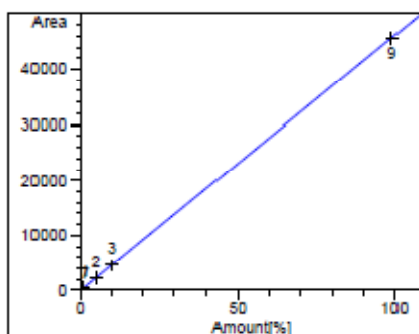
Page 2 of 5



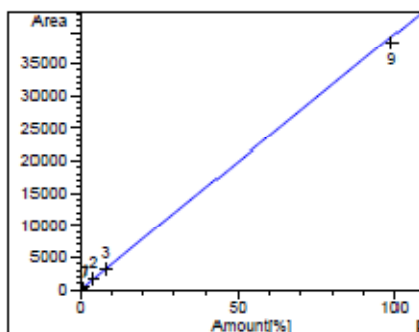
Oxygen at exp. RT: 3.180  
TCD1 A,  
Correlation: 0.99987  
Residual Std. Dev.: 47.57254  
Formula:  $y = mx + b$   
m: 386.12596  
b: 3.30159  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 8 : 1  
Level 4 : 0.03449  
Level 5 : 0.00138  
Level 6 : 0.000345  
Level 9 : 3.32569e-006



Nitrogen at exp. RT: 4.054  
TCD1 A,  
Correlation: 0.99998  
Residual Std. Dev.: 216.30695  
Formula:  $y = mx + b$   
m: 405.56551  
b: 15.41704  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 7 : 1  
Level 1 : 0.04  
Level 2 : 0.0016  
Level 3 : 0.0004  
Level 9 : 4e-006



Carbon monoxide at exp. RT: 5.258  
TCD1 A,  
Correlation: 0.99993  
Residual Std. Dev.: 51.04738  
Formula:  $y = mx + b$   
m: 461.82579  
b: 3.63989e-1  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 7 : 1  
Level 1 : 0.04  
Level 2 : 0.0016  
Level 3 : 0.0004  
Level 9 : 4.08122e-006



Methane at exp. RT: 7.559  
TCD1 A,  
Correlation: 0.99975  
Residual Std. Dev.: 599.44235  
Formula:  $y = mx + b$   
m: 397.42242  
b: 3.49247  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 7 : 1  
Level 1 : 0.04  
Level 2 : 0.0016  
Level 3 : 0.0004

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Method G:\GC2011Q2\BETTY\METHODS\GC115P136F.M

Level 9 : 2.61198e-006

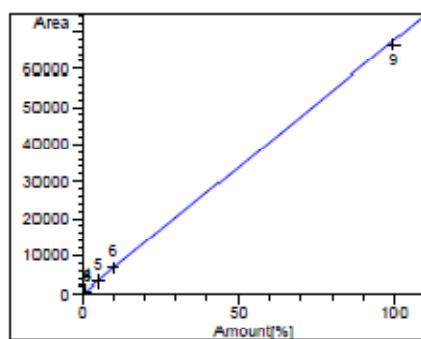
EA# 0511-68 Page 122 of 560

Instrument 1 6/1/2011 11:09:06 AM cjt

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Method G:\GC2011Q2\BETTY\METHODS\GC115P136F.M



Carbon dioxide at exp. RT: 9.070  
TCD1 A,  
Correlation: 0.99994  
Residual Std. Dev.: 670.19494  
Formula:  $y = mx + b$   
m: 677.94670  
b: 4.63084  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 8 : 1  
Level 4 : 0.03449  
Level 5 : 0.00138  
Level 6 : 0.000348  
Level 9 : 3.32569e-006

=====

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Instrument 1 6/1/2011 11:09:06 AM cjt

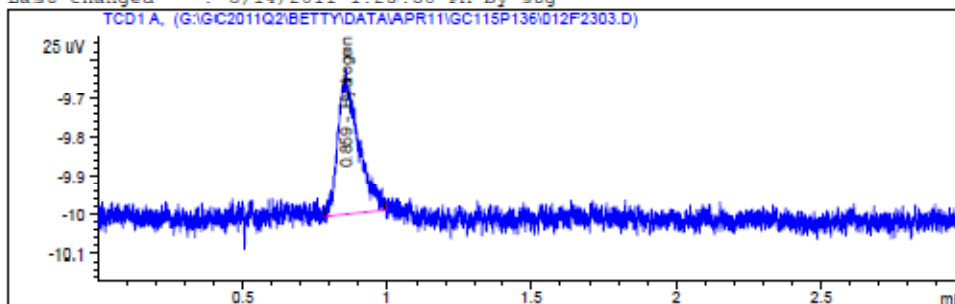
Page 5 of 5

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2303.D  
Sample Name: gc115p136 #H1 ENV(1=4231.5,4=11.88)

=====

Acq. Operator	: stg	Seq. Line	: 23
Acq. Instrument	: Betty	Location	: Vial 12
Injection Date	: 30-Apr-11, 02:00:41	Inj	: 3
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M		
Last changed	: 4/29/2011 7:49:43 PM by stg		
Analysis Method	: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M		
Last changed	: 5/14/2011 1:23:58 PM by stg		

TCD1 A, (G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2303.D)



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.859	BB	1.80557	1.11769e-1	2.01807e-1		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 2.01807e-1

2 Warnings or Errors :

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

=====

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

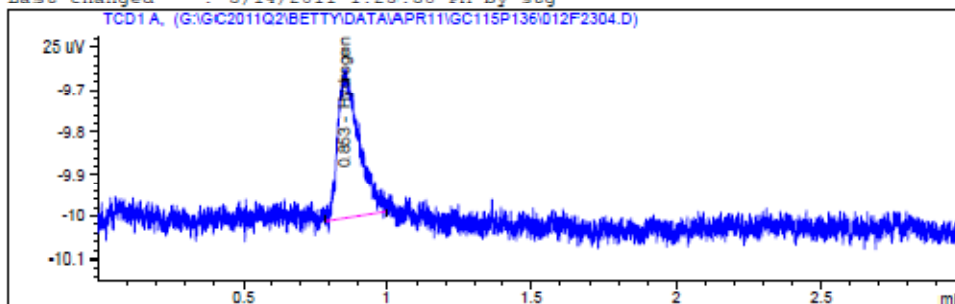
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Instrument 1 6/1/2011 11:19:16 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2304.D  
Sample Name: gc115p136 #H1 ENV(1=4231.5,4=11.88)

```
=====
Acq. Operator   : stg                      Seq. Line :   23
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 02:09:43      Inj       :    4
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.853	BB	1.80709	1.11752e-1	2.01946e-1		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 2.01946e-1

2 Warnings or Errors :

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

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

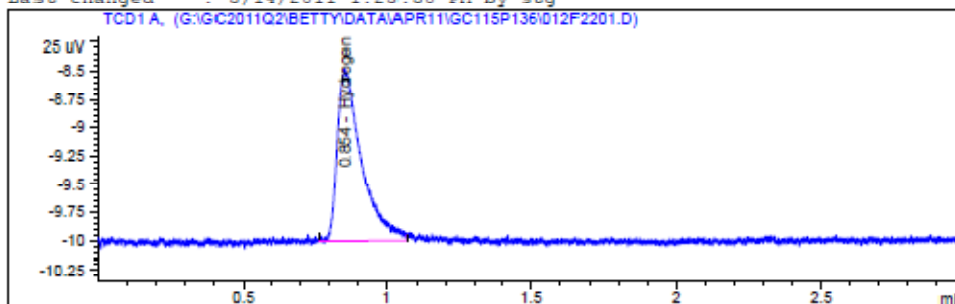
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Instrument 1 6/1/2011 11:19:26 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2201.D  
Sample Name: gc115p136 #H2 ENV(1=1401.31,4=16.83)

```
=====
Acq. Operator   : stg                      Seq. Line :   22
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 01:24:35      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.854	BB	8.91958	9.58114e-2	8.54597e-1		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 8.54597e-1

2 Warnings or Errors :

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

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

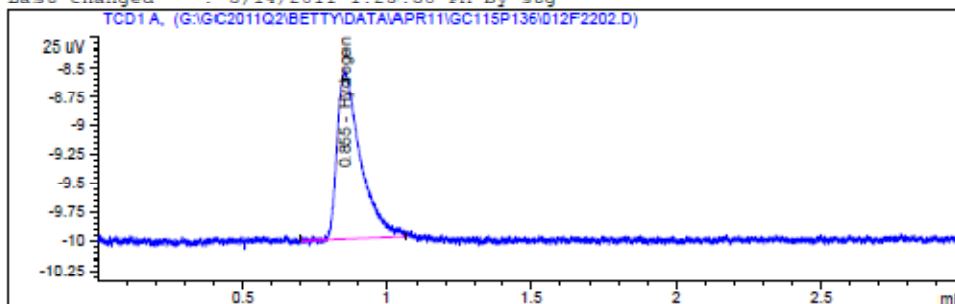
EA# 0511-68 Page 126 of 560

Instrument 1 6/1/2011 11:13:09 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2202.D  
Sample Name: gc115p136 #H2 ENV(1=1401.31,4=16.83)

```
=====
Acq. Operator   : stg                      Seq. Line : 22
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 01:33:37      Inj       : 2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.855	BB	8.23845	9.61462e-2	7.92096e-1		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 7.92096e-1

2 Warnings or Errors :

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

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

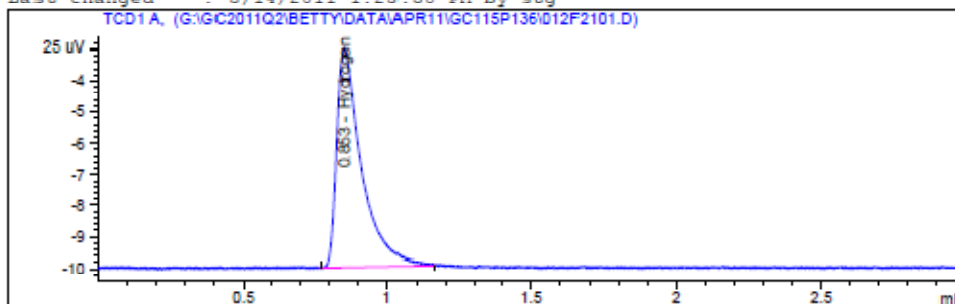
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Instrument 1 6/1/2011 11:13:19 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2101.D  
Sample Name: gc115p136 #H3 ENV(1=678.4,4=39.6)

```
=====
Acq. Operator   : stg                      Seq. Line : 21
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 01:06:30      Inj       : 1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.853	BB	41.38015	9.26343e-2	3.83322		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 3.83322

2 Warnings or Errors :

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

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

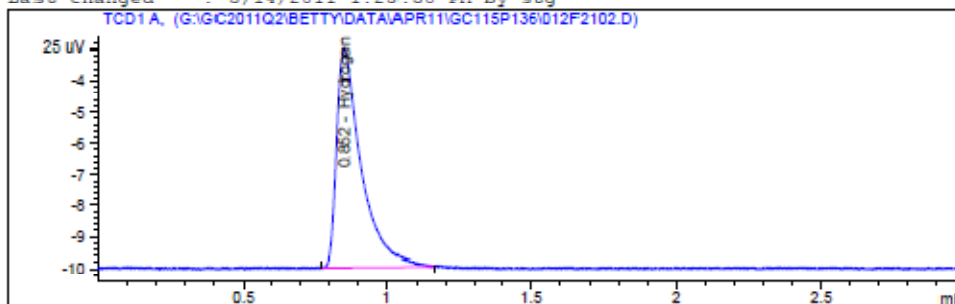
EA# 0511-68 Page 128 of 560

Instrument 1 6/1/2011 11:12:26 AM cjt

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2102.D  
Sample Name: gc115p136 #H3 ENV(1=678.4,4=39.6)

```
=====
Acq. Operator   : stg                      Seq. Line :   21
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 01:15:32      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.852	BB	41.29559	9.26361e-2	3.82546		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 3.82546

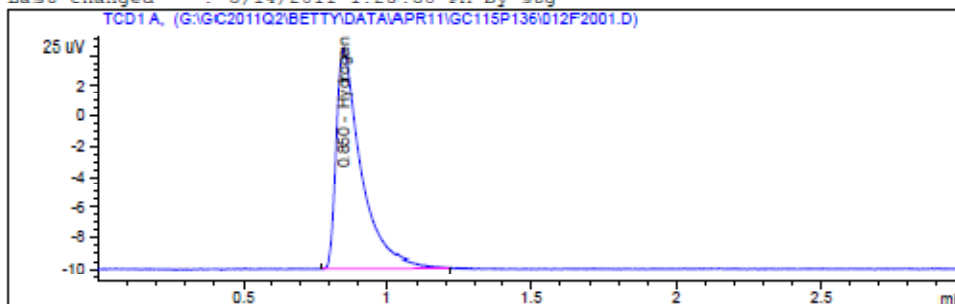
2 Warnings or Errors :

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

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

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2001.D  
Sample Name: gc115p136 #H4 ENV(1=650.13,4=79.2)

```
=====
Acq. Operator   : stg                      Seq. Line :   20
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 00:48:26      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.850	BB	85.40315	9.21843e-2	7.87283		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 7.87283

2 Warnings or Errors :

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

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

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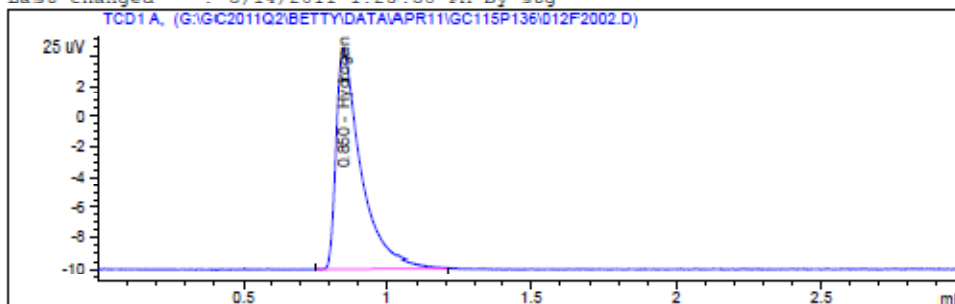
Instrument 1 6/1/2011 11:11:56 AM cjt

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F2002.D  
Sample Name: gc115p136 #H4 ENV(1=650.13,4=79.2)

```
=====
Acq. Operator   : stg                      Seq. Line :   20
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 00:57:28      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.850	BB	85.49532	9.21838e-2	7.88129		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 7.88129

2 Warnings or Errors :

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

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

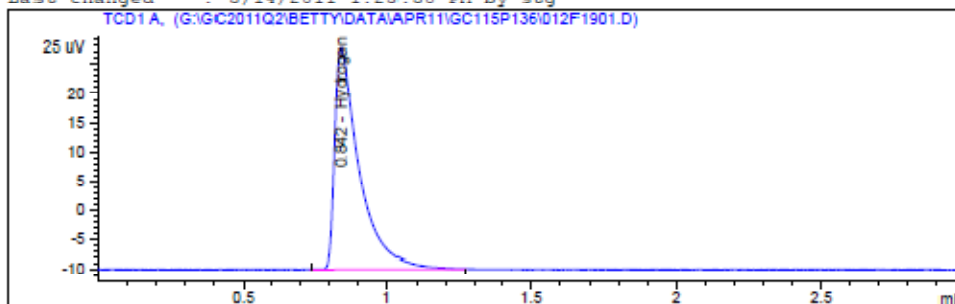
EA# 0511-68 Page 131 of 560

Instrument 1 6/1/2011 11:12:06 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F1901.D  
Sample Name: gc115p136 #H5 ENV(1=565.33,3=198)

```
=====
Acq. Operator   : stg                      Seq. Line :   19
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 00:30:21      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.842	VB	222.93498	9.19233e-2	20.49293		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 20.49293

2 Warnings or Errors :

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

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

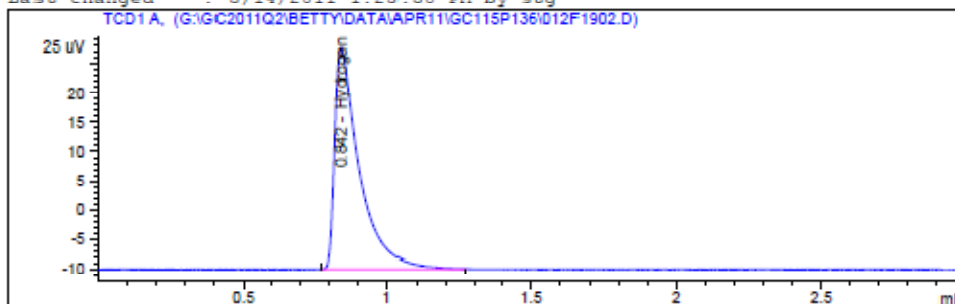
EA# 0511-68 Page 132 of 560

Instrument 1 6/1/2011 11:11:31 AM cjt

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F1902.D  
Sample Name: gc115p136 #H5 ENV(1=565.33,3=198)

```
=====
Acq. Operator   : stg                      Seq. Line :   19
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 00:39:24      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.842	BB	222.21555	9.19239e-2	20.42691		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 20.42691

2 Warnings or Errors :

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

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

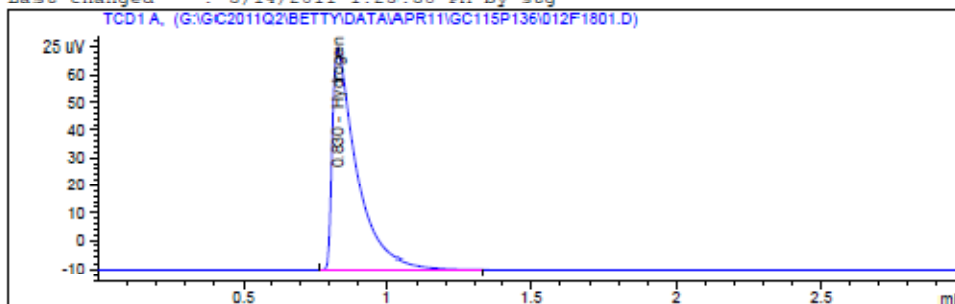
EA# 0511-68 Page 133 of 560

Instrument 1 6/1/2011 11:11:40 AM cjt

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F1801.D  
Sample Name: gc115p136 #H6 ENV(1=530,3=495)

```
=====
Acq. Operator   : stg                      Seq. Line :   18
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 00:12:15      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.830	BB	466.32663	9.18388e-2	42.82686		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 42.82686

2 Warnings or Errors :

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

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

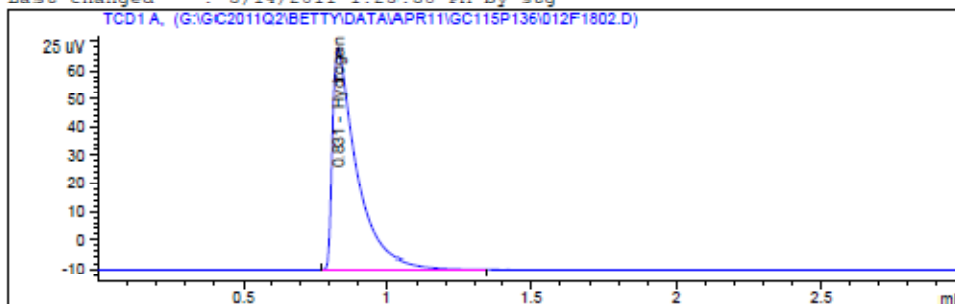
EA# 0511-68 Page 134 of 560

Instrument 1 6/1/2011 11:11:00 AM cjt

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P136\012F1802.D  
Sample Name: gc115p136 #H6 ENV(1=530,3=495)

```
=====
Acq. Operator   : stg                      Seq. Line :   18
Acq. Instrument : Betty                   Location  : Vial 12
Injection Date  : 30-Apr-11, 00:21:17      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80_SHORT.M
Last changed    : 4/29/2011 7:49:43 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.831	BB	454.41849	9.18408e-2	41.73416		Hydrogen
3.180		-	-	-		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 41.73416

2 Warnings or Errors :

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

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

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Instrument 1 6/1/2011 11:11:09 AM cjt

Page 1 of 1

=====

Calibration Table

=====

Calib. Data Modified : 2/9/2011 11:30:42 AM

Rel. Reference Window : 2.000 %  
 Abs. Reference Window : 0.000 min  
 Rel. Non-ref. Window : 2.000 %  
 Abs. Non-ref. Window : 0.200 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: TCD1 A,  
 Signal 2: FID2 B,

RetTime	Lvl	Amount	Area	Amt/Area	Ref Grp Name
[min]	Sig	[%]			
0.846	1	7 1.60000e-1	1.522913	1.04634e-1	Hydrogen
		1 8.00000e-1	7.26941	1.10050e-1	
		2 4.00000e-1	38.28706	1.04474e-1	
		3 8.00000e-1	77.57706	1.03123e-1	
3.150	1	8 1.82000e-1	73.86340	2.46401e-3	Oxygen
		4 9.80000e-1	372.66600	2.62970e-3	
		5 4.90000e-1	1895.79468	2.58467e-3	
		6 9.80000e-1	3857.11670	2.54076e-3	
		9 99.80000e-1	3.85815e4	2.58673e-3	
4.024	1	7 2.00000e-1	96.54302	2.07162e-3	Nitrogen
		1 1.00000e-1	421.19687	2.37419e-3	
		2 5.00000e-1	2034.64948	2.45743e-3	
		3 10.00000e-1	4048.09033	2.47030e-3	
		9 100.00000e-1	4.09458e4	2.44225e-3	
5.258	1	7 2.00000e-1	92.42490	2.16392e-3	Carbon monoxide
		1 1.00000e-1	470.54378	2.12520e-3	
		2 5.00000e-1	2302.92566	2.17115e-3	
		3 10.00000e-1	4570.86816	2.18777e-3	
		9 99.00000e-1	4.56475e4	2.16879e-3	
7.559	1	7 1.60000e-1	66.68196	2.39945e-3	Methane
		1 8.00000e-1	331.24899	2.41510e-3	
		2 4.00000e-1	1600.45245	2.49929e-3	
		3 8.00000e-1	3173.94128	2.52053e-3	
		9 99.00000e-1	3.83102e4	2.58417e-3	
9.070	1	8 1.82000e-1	127.79887	1.42411e-3	Carbon dioxide
		4 9.80000e-1	674.36972	1.45321e-3	
		5 4.90000e-1	3344.95583	1.66495e-3	

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Instrument 1 2/9/2011 11:34:00 AM KAM

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Method I:\GC2011Q1\BETTY\METHODS\GC115P80F.M

RetTime [min]	Lvl Sig	Amount [%]	Area	Amt/Area	Ref Grp Name
6	9	9.80000	6683.89722	1.46621e-3	
9	9	99.80000	6.65036e4	1.50067e-3	

More compound-specific settings:

Compound: Oxygen  
Time Window : From 2.848 min To 3.567 min

Compound: Nitrogen  
Time Window : From 3.527 min To 4.699 min

Compound: Carbon monoxide  
Time Window : From 4.772 min To 5.712 min

Compound: Methane  
Time Window : From 7.163 min To 7.734 min

Compound: Carbon dioxide  
Time Window : From 8.707 min To 9.408 min

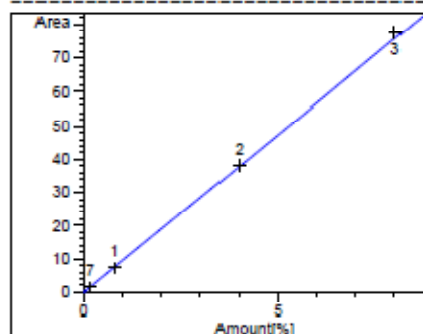
1 Warnings or Errors :

Warning : Overlapping peak time windows at 7.559 min, signal 1

#### Peak Sum Table

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.260	1.850	None	2.2055	1.0000	None
as Propane	1.850	3.600	None	1.4758	1.0000	None
as Butane	3.600	5.700	None	1.1022	1.0000	None
as Pentane	5.700	6.950	None	8.8365e-1	1.0000	None
as Hexane	6.950	7.750	None	7.5775e-1	1.0000	None
as Heptane	7.750	11.600	None	6.6737e-1	1.0000	None

#### Calibration Curves



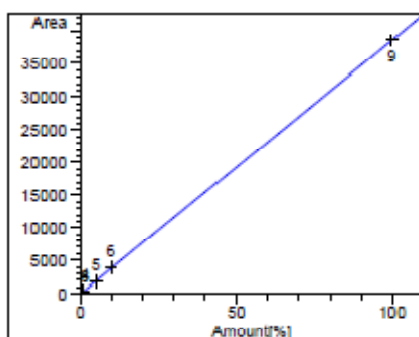
Hydrogen at exp. RT: 0.845  
TCD1 A,  
Correlation: 0.99951  
Residual Std. Dev.: 1.30956  
Formula:  $y = mx + b$   
m: 9.47392  
b: 2.16664e-3  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 7 : 1  
Level 1 : 0.04  
Level 2 : 0.0016  
Level 3 : 0.0004

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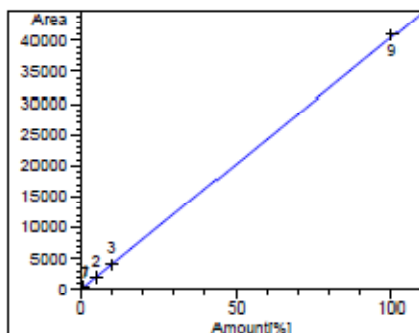
Instrument 1 2/9/2011 11:34:00 AM KAM

Page 2 of 5

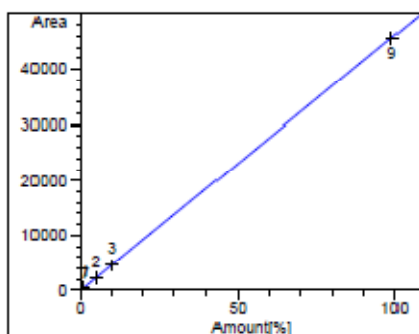




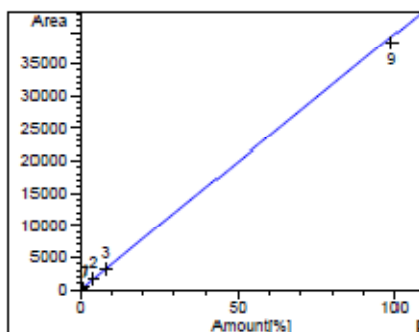
Oxygen at exp. RT: 3.150  
TCD1 A,  
Correlation: 0.99987  
Residual Std. Dev.: 47.57254  
Formula:  $y = mx + b$   
m: 386.12596  
b: 3.30159  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 8 : 1  
Level 4 : 0.03449  
Level 5 : 0.00138  
Level 6 : 0.000345  
Level 9 : 3.32569e-006



Nitrogen at exp. RT: 4.024  
TCD1 A,  
Correlation: 0.99998  
Residual Std. Dev.: 216.30695  
Formula:  $y = mx + b$   
m: 405.56551  
b: 15.41704  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 7 : 1  
Level 1 : 0.04  
Level 2 : 0.0016  
Level 3 : 0.0004  
Level 9 : 4e-006



Carbon monoxide at exp. RT: 5.258  
TCD1 A,  
Correlation: 0.99993  
Residual Std. Dev.: 51.04738  
Formula:  $y = mx + b$   
m: 461.82579  
b: 3.63989e-1  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 7 : 1  
Level 1 : 0.04  
Level 2 : 0.0016  
Level 3 : 0.0004  
Level 9 : 4.08122e-006



Methane at exp. RT: 7.559  
TCD1 A,  
Correlation: 0.99975  
Residual Std. Dev.: 599.44235  
Formula:  $y = mx + b$   
m: 397.42242  
b: 3.49247  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 7 : 1  
Level 1 : 0.04  
Level 2 : 0.0016  
Level 3 : 0.0004  
Level 9 : 5.99583e-006

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Method I:\GC2011Q1\BETTY\METHODS\GC115P80F.M

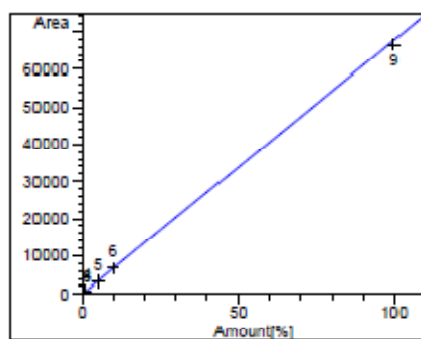
Level 9 : 2.61198e-006

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Instrument 1 2/9/2011 11:34:00 AM KAM

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Method I:\GC2011Q1\BETTY\METHODS\GC115P80F.M



Carbon dioxide at exp. RT: 9.070

TCD1 A,

Correlation: 0.99994

Residual Std. Dev.: 670.19494

Formula:  $y = mx + b$

m: 677.94670

b: 4.63084

x: Amount

y: Area

Calibration Level Weights:

Level 8 : 1

Level 4 : 0.03449

Level 5 : 0.00138

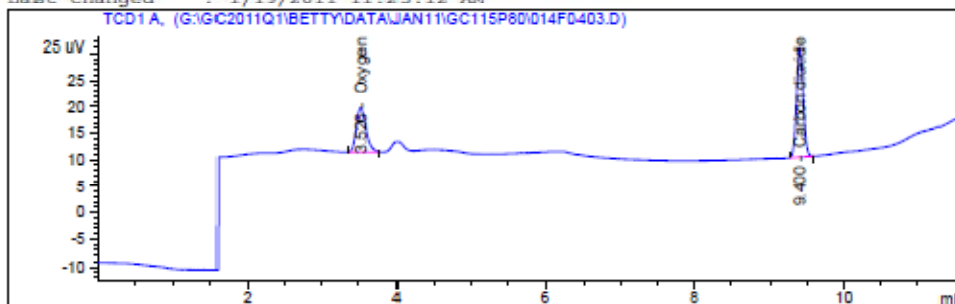
Level 6 : 0.000348

Level 9 : 3.32569e-006

=====

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0403.D  
Sample Name: gc115p80 #FG5 ENV(1=4854.78,2=103.63)

```
=====
Acq. Operator   : tbo                      Seq. Line :    4
Acq. Instrument : Betty                   Location  : Vial 14
Injection Date  : 14-Jan-11, 15:25:30      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846		-	-	-		Hydrogen
3.526	BB	74.67765	2.47508e-3	1.84833e-1		Oxygen
4.000		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.385		-	-	-		Methane
9.400	BB	128.14978	1.42174e-3	1.82196e-1		Carbon dioxide

Totals : 3.67029e-1

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

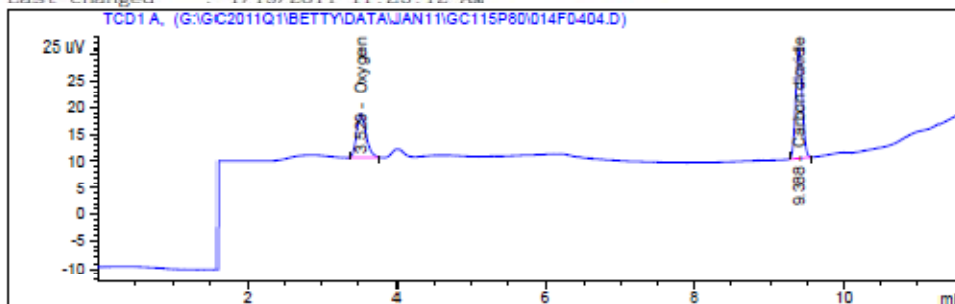
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Instrument 1 1/19/2011 12:43:15 PM

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Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0404.D  
Sample Name: gc115p80 #FG5 ENV(1=4854.78,2=103.63)

```
=====
Acq. Operator   : tbo                      Seq. Line :    4
Acq. Instrument : Betty                   Location  : Vial 14
Injection Date  : 14-Jan-11, 15:49:48      Inj       :    4
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846						Hydrogen
3.529	BB	73.04916	2.47335e-3	1.80676e-1		Oxygen
4.000						Nitrogen
5.258						Carbon monoxide
7.385						Methane
9.388	BB	127.44795	1.42168e-3	1.81191e-1		Carbon dioxide

Totals : 3.61867e-1

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221						Methane
1.463						Ethane
2.299						Propane
4.949						Butane
6.483						Pentane
7.389						Hexane
8.071						Heptane

Totals : 0.00000

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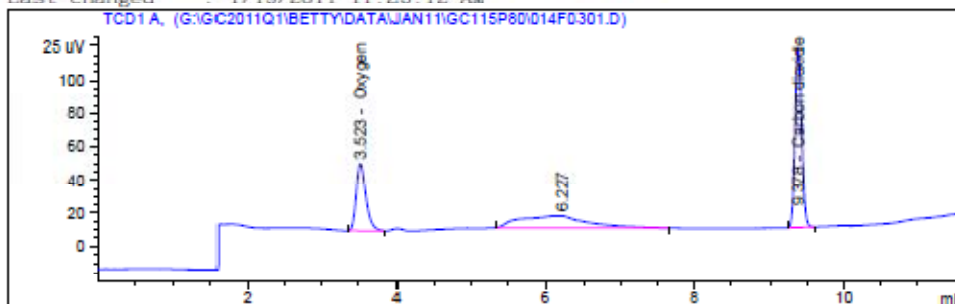
Instrument 1 1/19/2011 12:43:22 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0301.D  
Sample Name: gc115p80 #FG6 ENV(1=1271.99,2=159.17)

=====

Acq. Operator : tbo	Seq. Line : 3
Acq. Instrument : Betty	Location : Vial 14
Injection Date : 14-Jan-11, 13:26:09	Inj : 1
	Inj Volume : External
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M	
Last changed : 11/5/2010 9:38:55 PM	
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M	
Last changed : 1/19/2011 11:25:12 AM	



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846		-	-	-		Hydrogen
3.523	BB	369.18857	2.56780e-3	9.48001e-1		Oxygen
4.000		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.385		-	-	-		Methane
9.378	BB	678.73358	1.46498e-3	9.94330e-1		Carbon dioxide

Totals : 1.94233

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

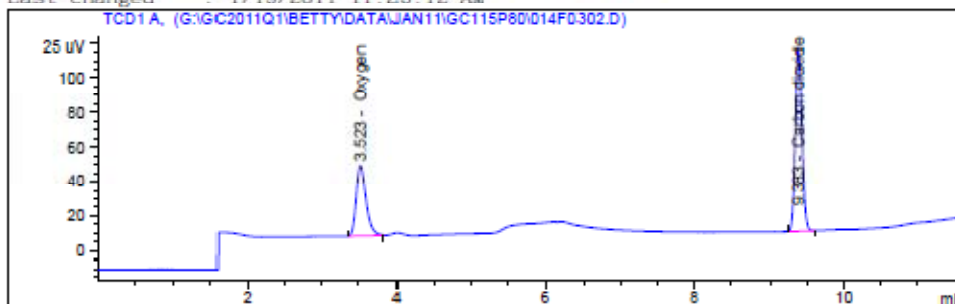
EA# 0511-68 Page 143 of 560

Instrument 1 1/19/2011 11:41:38 AM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0302.D  
Sample Name: gc115p80 #FG6 ENV(1=1271.99,2=159.17)

=====  
Acq. Operator : tbo Seq. Line : 3  
Acq. Instrument : Betty Location : Vial 14  
Injection Date : 14-Jan-11, 13:50:45 Inj : 2  
Inj Volume : External  
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M  
Last changed : 11/5/2010 9:38:55 PM  
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M  
Last changed : 1/19/2011 11:25:12 AM  
=====



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

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846		-	-	-		Hydrogen
3.523	BB	376.14343	2.56823e-3	9.66023e-1		Oxygen
4.000		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.385		-	-	-		Methane
9.383	BB	670.00586	1.46485e-3	9.81456e-1		Carbon dioxide

Totals : 1.94748

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

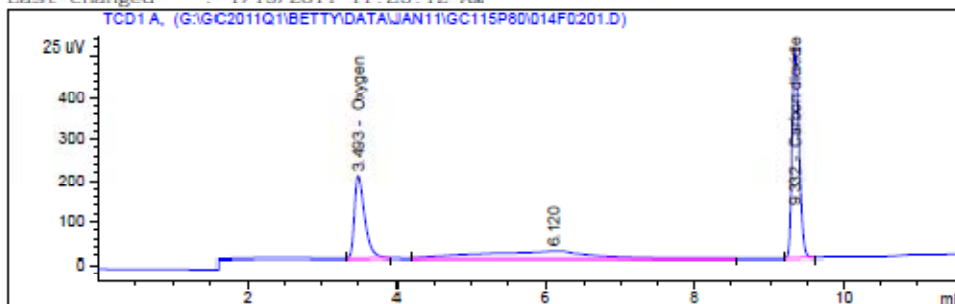
EA# 0511-68 Page 144 of 560

Instrument 1 1/19/2011 12:43:06 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0201.D  
Sample Name: gc115p80 #FG7 ENV(1=636,2=716.28)

```
=====
Acq. Operator   : tbo                      Seq. Line :    2
Acq. Instrument : Betty                   Location  : Vial 14
Injection Date  : 14-Jan-11, 12:36:45      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846		-	-	-		Hydrogen
3.493	BB	1894.65234	2.58672e-3	4.90094		Oxygen
4.000		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.385		-	-	-		Methane
9.332	BB	3341.34692	1.47300e-3	4.92180		Carbon dioxide

Totals : 9.82274

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

EA# 0511-68 Page 145 of 560

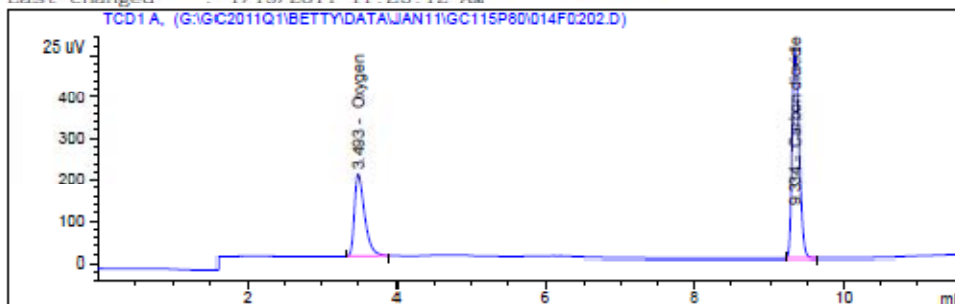
Instrument 1 1/19/2011 11:41:27 AM

Page 1 of 2



Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0202.D  
Sample Name: gc115p80 #FG7 ENV(1=636,2=716.28)

```
=====
Acq. Operator   : tbo                      Seq. Line :    2
Acq. Instrument : Betty                   Location  : Vial 14
Injection Date  : 14-Jan-11, 13:01:28      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846		-	-	-		Hydrogen
3.493	BB	1896.93701	2.58673e-3	4.90686		Oxygen
4.000		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.385		-	-	-		Methane
9.334	BB	3348.56470	1.47300e-3	4.93244		Carbon dioxide

Totals : 9.83931

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

EA# 0511-68 Page 146 of 560

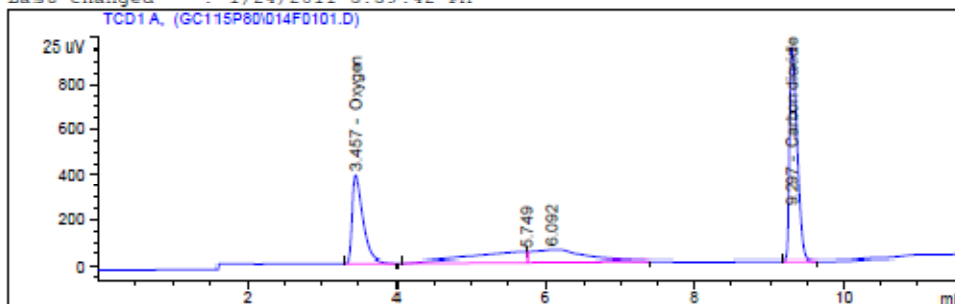
Instrument 1 1/19/2011 11:41:32 AM

Page 1 of 2



Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0101.D  
Sample Name: gc115p80 #FG8 ENV(1=0,2=358.14)

```
=====
Acq. Operator   : tbo                      Seq. Line :    1
Acq. Instrument : Betty                   Location  : Vial 14
Injection Date  : 14-Jan-11, 11:46:47      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/8/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/24/2011 3:39:42 PM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/24/2011 3:39:04 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.845		-	-	-		Hydrogen
3.457	BB	3858.56592	2.58761e-3	9.98447		Oxygen
4.024		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.297	BB	6713.76709	1.47402e-3	9.89626		Carbon dioxide

Totals : 19.88073

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

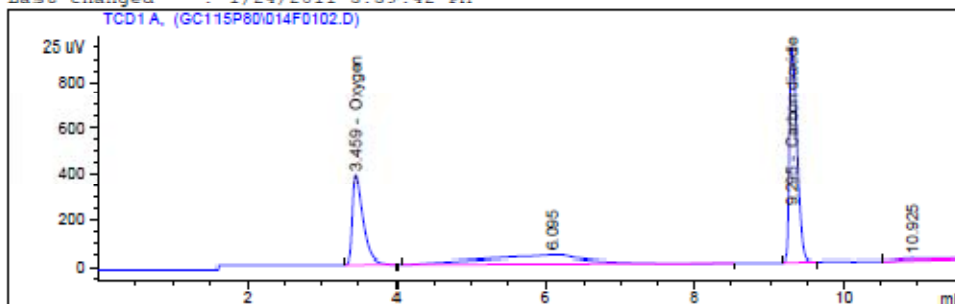
EA# 0511-68 Page 147 of 560

Betty 2/3/2011 2:34:42 PM TBO

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0102.D  
Sample Name: gc115p80 #FG8 ENV(1=0,2=358.14)

```
=====
Acq. Operator   : tbo                      Seq. Line :    1
Acq. Instrument : Betty                   Location  : Vial 14
Injection Date  : 14-Jan-11, 12:11:53      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/8/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/24/2011 3:39:42 PM
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/24/2011 3:39:04 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.845		-	-	-		Hydrogen
3.459	BB	3855.66748	2.58761e-3	9.97697		Oxygen
4.024		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.295	BB	6654.02734	1.47402e-3	9.80814		Carbon dioxide

Totals : 19.78511

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

EA# 0511-68 Page 148 of 560

Betty 2/3/2011 2:34:55 PM TBO

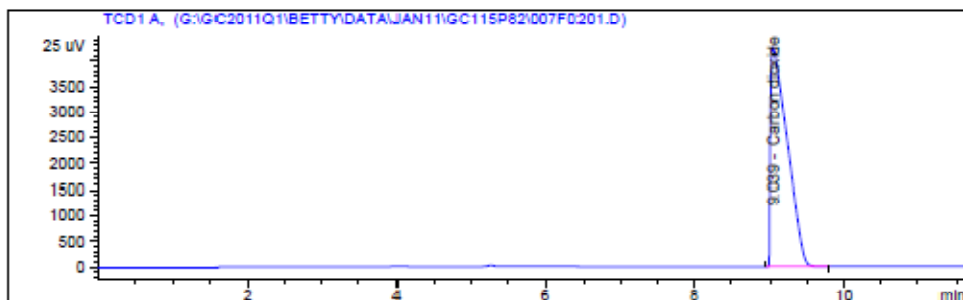
Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P82\007F0201.D  
Sample Name: 99.0% Carbon Dioxide

99.8%

```
=====
Acq. Operator   : cjt                               Seq. Line :    2
Acq. Instrument : Betty                             Location  : Vial 7
Injection Date  : 17-Jan-11, 14:21:01                Inj       :    1
                                                    Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Aldrich Batch# 01629AJ
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	-	-	-	-	-	Hydrogen
3.150	-	-	-	-	-	Oxygen
4.000	-	-	-	-	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.385	-	-	-	-	-	Methane
9.039	BB S	6.67765e4	1.47494e-3	98.49137	-	Carbon dioxide

Totals : 98.49137

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221	-	-	-	-	-	Methane
1.463	-	-	-	-	-	Ethane
2.299	-	-	-	-	-	Propane
4.949	-	-	-	-	-	Butane
6.483	-	-	-	-	-	Pentane
7.389	-	-	-	-	-	Hexane
8.071	-	-	-	-	-	Heptane

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Instrument 1 1/19/2011 12:45:27 PM

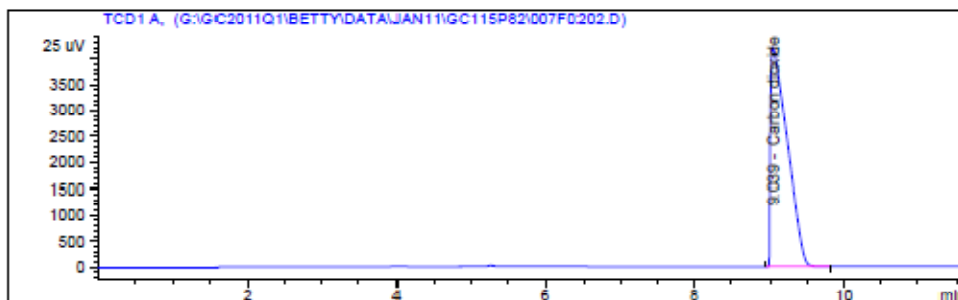
Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P82\007F0202.D  
Sample Name: 99.0% Carbon Dioxide

99.8%

```
=====
Acq. Operator   : cjt                               Seq. Line :    2
Acq. Instrument : Betty                             Location  : Vial 7
Injection Date  : 17-Jan-11, 14:42:32                Inj       :    2
                                                    Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Aldrich Batch# 01629AJ
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	-	-	-	-	-	Hydrogen
3.150	-	-	-	-	-	Oxygen
4.000	-	-	-	-	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.385	-	-	-	-	-	Methane
9.039 BB S	-	6.62307e4	1.47494e-3	97.68619	-	Carbon dioxide

Totals : 97.68619

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221	-	-	-	-	-	Methane
1.463	-	-	-	-	-	Ethane
2.299	-	-	-	-	-	Propane
4.949	-	-	-	-	-	Butane
6.483	-	-	-	-	-	Pentane
7.389	-	-	-	-	-	Hexane
8.071	-	-	-	-	-	Heptane

EA# 0511-68 Page 150 of 560

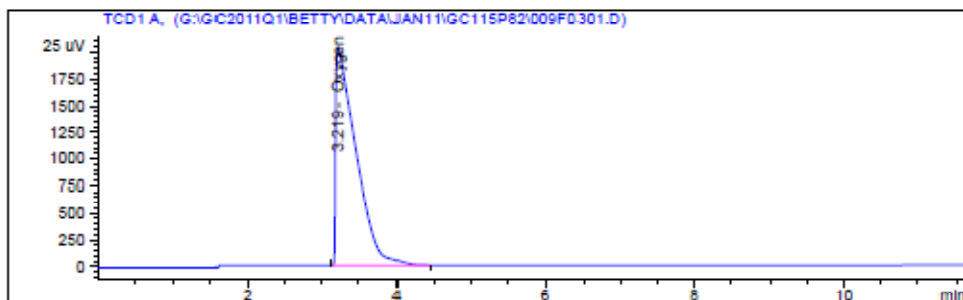
Instrument 1 1/19/2011 12:45:33 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P82\009F0301.D  
Sample Name: 100% Oxygen

```
=====
Acq. Operator   : cjt                               Seq. Line :    3
Acq. Instrument : Betty                             Location  : Vial 9
Injection Date  : 17-Jan-11, 15:04:00                Inj       :    1
                                                    Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Matheson Lot# 1059413064
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846		-	-	-		Hydrogen
3.219	BB	3.86257e4	2.59108e-3	100.08229		Oxygen
4.000		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.385		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 100.08229

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

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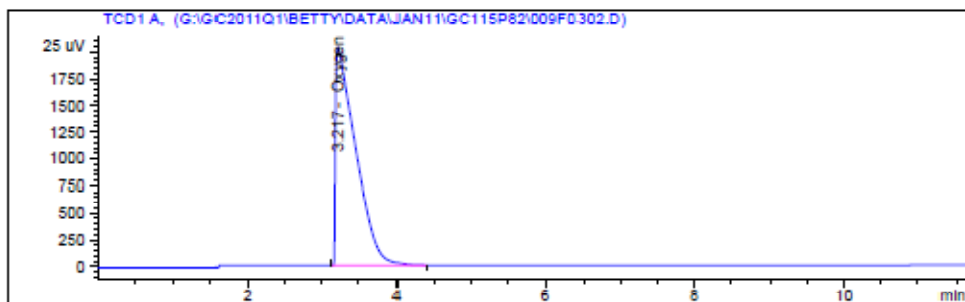
Instrument 1 1/19/2011 12:45:40 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P82\009F0302.D  
Sample Name: 100% Oxygen

```
=====
Acq. Operator   : cjt                               Seq. Line :    3
Acq. Instrument : Betty                             Location  : Vial 9
Injection Date  : 17-Jan-11, 15:25:24                Inj       :    2
                                                    Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Matheson Lot# 1059413064
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846		-	-	-		Hydrogen
3.217	BB	3.85374e4	2.59108e-3	99.85338		Oxygen
4.000		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.385		-	-	-		Methane
9.070		-	-	-		Carbon dioxide

Totals : 99.85338

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

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Instrument 1 1/19/2011 12:45:46 PM

Page 1 of 2

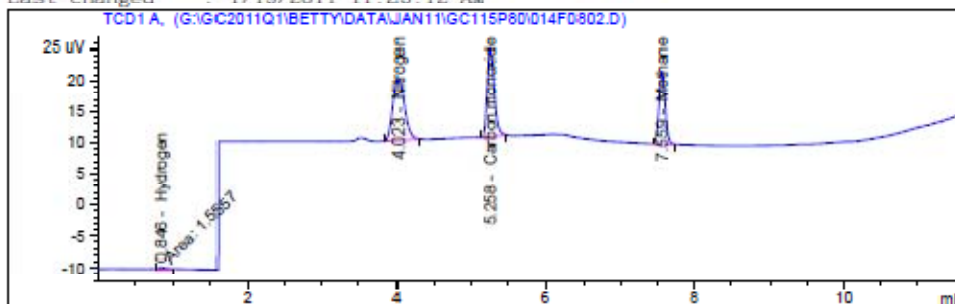


Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0802.D  
Sample Name: gc115p80 #FG1 ENV(1=692.53,4=16.73)

=====

Acq. Operator : tbo	Seq. Line : 8
Acq. Instrument : Betty	Location : Vial 14
Injection Date : 14-Jan-11, 21:31:40	Inj : 2
	Inj Volume : External
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M	
Last changed : 11/5/2010 9:38:55 PM	
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M	
Last changed : 1/19/2011 11:25:12 AM	

=====



External Standard Report

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	MM	1.55570	1.05406e-1	1.63980e-1		Hydrogen <b>Manual Int. "II" (CJT)</b>
3.150		-	-	-		Oxygen
4.023	BB	96.64458	2.07236e-3	2.00282e-1		Nitrogen
5.258	BB	92.91468	2.15684e-3	2.00402e-1		Carbon monoxide
7.559	BB	67.17511	2.38540e-3	1.60239e-1		Methane
9.070		-	-	-		Carbon dioxide

Totals : 7.24903e-1

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

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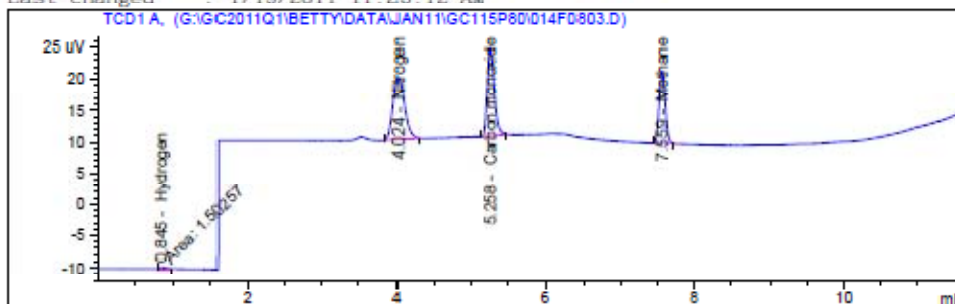
Instrument 1 1/19/2011 12:44:20 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0803.D  
Sample Name: gc115p80 #FG1 ENV(1=692.53,4=16.73)

=====

Acq. Operator : tbo	Seq. Line : 8
Acq. Instrument : Betty	Location : Vial 14
Injection Date : 14-Jan-11, 21:56:14	Inj : 3
	Inj Volume : External
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M	
Last changed : 11/5/2010 9:38:55 PM	
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M	
Last changed : 1/19/2011 11:25:12 AM	



External Standard Report

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.845	MM	1.50257	1.05402e-1	1.58374e-1		Hydrogen
3.150		-	-	-		Oxygen
4.024	BB	96.44145	2.07189e-3	1.99816e-1		Nitrogen
5.258	BB	91.93511	2.15682e-3	1.98287e-1		Carbon monoxide
7.559	BB	66.18882	2.38521e-3	1.57874e-1		Methane
9.070		-	-	-		Carbon dioxide

Manual Int. "IP" (CJT)

Totals : 7.14352e-1

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

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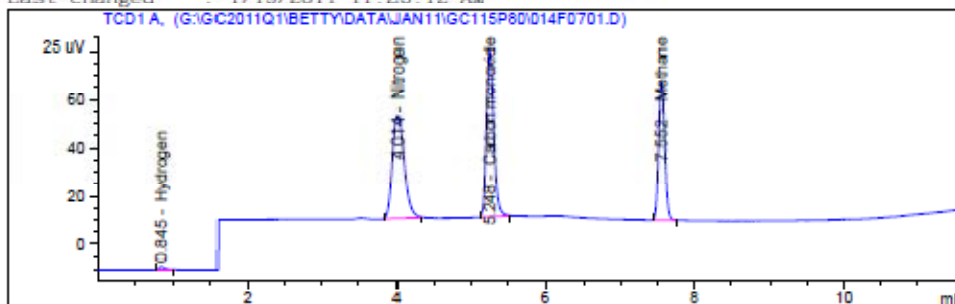
Instrument 1 1/19/2011 12:44:26 PM

Page 1 of 2



Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0701.D  
Sample Name: gc115p80 #FG2 ENV(1=636,4=83.66)

=====  
Acq. Operator : tbo Seq. Line : 7  
Acq. Instrument : Betty Location : Vial 14  
Injection Date : 14-Jan-11, 20:18:11 Inj : 1  
Inj Volume : External  
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M  
Last changed : 11/5/2010 9:38:55 PM  
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M  
Last changed : 1/19/2011 11:25:12 AM  
=====



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

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.845	BB	7.32600	1.05522e-1	7.73052e-1		Hydrogen
3.150						Oxygen
4.014	BB	422.34094	2.37569e-3	1.00335		Nitrogen
5.248	BB	470.87659	2.16364e-3	1.01881		Carbon monoxide
7.552	BB	330.28137	2.48961e-3	8.22271e-1		Methane
9.070						Carbon dioxide

Totals : 3.61748

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

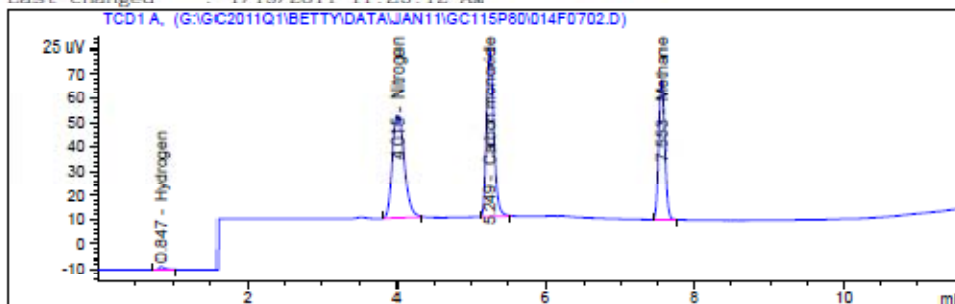
EA# 0511-68 Page 155 of 560

Instrument 1 1/19/2011 12:44:01 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0702.D  
Sample Name: gcl15p80 #FG2 ENV(1=636,4=83.66)

=====  
Acq. Operator : tbo Seq. Line : 7  
Acq. Instrument : Betty Location : Vial 14  
Injection Date : 14-Jan-11, 20:42:40 Inj : 2  
Inj Volume : External  
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M  
Last changed : 11/5/2010 9:38:55 PM  
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M  
Last changed : 1/19/2011 11:25:12 AM  
=====



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

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.847	BB	7.21282	1.05521e-1	7.61105e-1		Hydrogen
3.150		-	-	-		Oxygen
4.015	BB	420.05280	2.37520e-3	9.97708e-1		Nitrogen
5.249	BB	470.21097	2.16364e-3	1.01737		Carbon monoxide
7.553	BB	332.21661	2.48976e-3	8.27140e-1		Methane
9.070		-	-	-		Carbon dioxide

Totals : 3.60332

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

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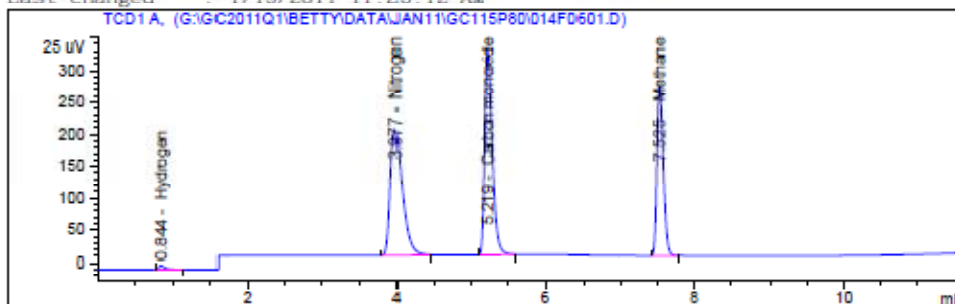
Instrument 1 1/19/2011 12:44:10 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0601.D  
Sample Name: gcl15p80 #FG3 ENV(1=318,3=376.47)

=====

Acq. Operator : tbo	Seq. Line : 6
Acq. Instrument : Betty	Location : Vial 14
Injection Date : 14-Jan-11, 19:29:13	Inj : 1
	Inj Volume : External
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M	
Last changed : 11/5/2010 9:38:55 PM	
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M	
Last changed : 1/19/2011 11:25:12 AM	



External Standard Report

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.844	BB	38.42260	1.05547e-1	4.05539		Hydrogen
3.150						Oxygen
3.977	BB	2038.76733	2.44705e-3	4.98896		Nitrogen
5.219	BB	2303.93726	2.16498e-3	4.98797		Carbon monoxide
7.525	BB	1596.07581	2.51071e-3	4.00728		Methane
9.070						Carbon dioxide

Totals : 18.03960

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

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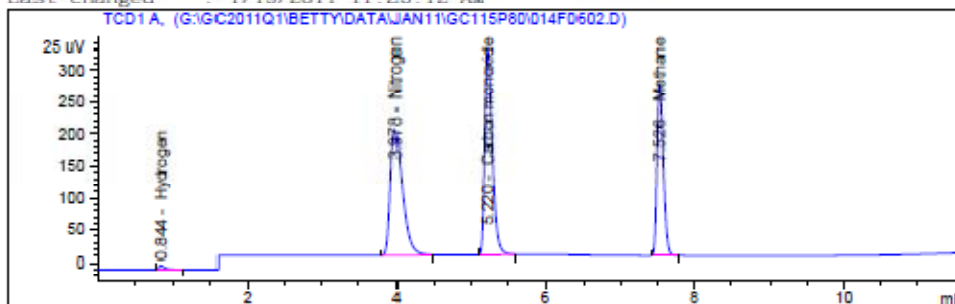
Instrument 1 1/19/2011 12:43:45 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0602.D  
Sample Name: gcl15p80 #FG3 ENV(1=318,3=376.47)

=====

Acq. Operator : tbo	Seq. Line : 6
Acq. Instrument : Betty	Location : Vial 14
Injection Date : 14-Jan-11, 19:53:41	Inj : 2
	Inj Volume : External
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M	
Last changed : 11/5/2010 9:38:55 PM	
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M	
Last changed : 1/19/2011 11:25:12 AM	



External Standard Report

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.844	BB	38.15152	1.05547e-1	4.02678		Hydrogen
3.150		-	-	-		Oxygen
3.978	BB	2030.53162	2.44697e-3	4.96865		Nitrogen
5.220	BB	2301.91406	2.16498e-3	4.98359		Carbon monoxide
7.526	BB	1604.82910	2.51074e-3	4.02931		Methane
9.070		-	-	-		Carbon dioxide

Totals : 18.00833

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

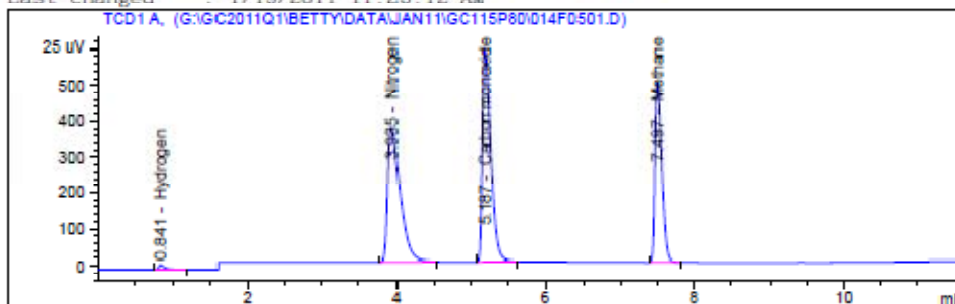
EA# 0511-68 Page 158 of 560

Instrument 1 1/19/2011 12:43:51 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0501.D  
Sample Name: gc115p80 #FG4 ENV(1=0,3=376.47)

=====  
Acq. Operator : tbo Seq. Line : 5  
Acq. Instrument : Betty Location : Vial 14  
Injection Date : 14-Jan-11, 18:40:08 Inj : 1  
Inj Volume : External  
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M  
Last changed : 11/5/2010 9:38:55 PM  
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M  
Last changed : 1/19/2011 11:25:12 AM  
=====



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

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.841	BB	77.55135	1.05550e-1	8.18554		Hydrogen
3.150						Oxygen
3.935	BB	4031.82422	2.45626e-3	9.90323		Nitrogen
5.187	BB	4547.25635	2.16515e-3	9.84547		Carbon monoxide
7.497	BB	3162.09521	2.51344e-3	7.94772		Methane
9.070						Carbon dioxide

Totals : 35.88196

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

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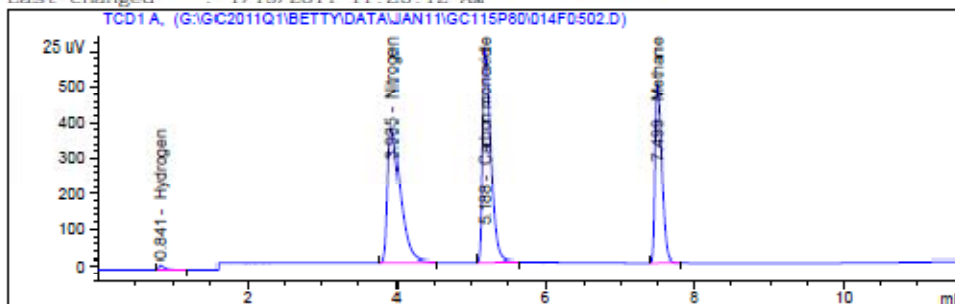
Instrument 1 1/19/2011 12:43:32 PM

Page 1 of 2



Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\014F0502.D  
Sample Name: gc115p80 #FG4 ENV(1=0,3=376.47)

=====  
Acq. Operator : tbo Seq. Line : 5  
Acq. Instrument : Betty Location : Vial 14  
Injection Date : 14-Jan-11, 19:04:40 Inj : 2  
Inj Volume : External  
Acq. Method : G:\GC2011Q1\BETTY\METHODS\GC115P025.M  
Last changed : 11/5/2010 9:38:55 PM  
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M  
Last changed : 1/19/2011 11:25:12 AM  
=====



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

Sorted By : Signal  
Calib. Data Modified : 1/19/2011 11:24:06 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.841	BB	77.60278	1.05550e-1	8.19097		Hydrogen
3.150						Oxygen
3.935	BB	4064.35645	2.45634e-3	9.98344		Nitrogen
5.188	BB	4594.47998	2.16515e-3	9.94773		Carbon monoxide
7.499	BB	3185.78735	2.51346e-3	8.00734		Methane
9.070						Carbon dioxide

Totals : 36.12947

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221		-	-	-		Methane
1.463		-	-	-		Ethane
2.299		-	-	-		Propane
4.949		-	-	-		Butane
6.483		-	-	-		Pentane
7.389		-	-	-		Hexane
8.071		-	-	-		Heptane

Totals : 0.00000

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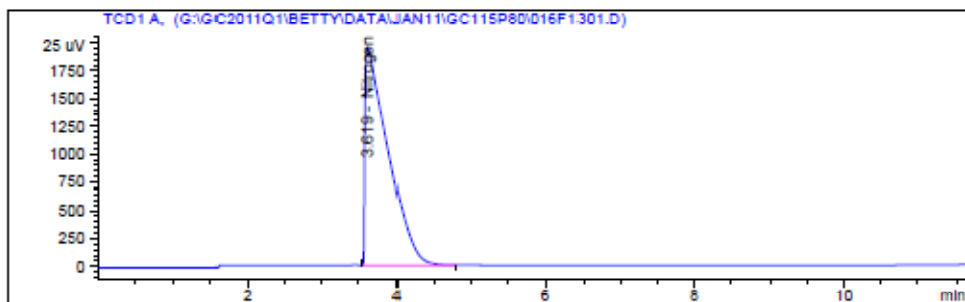
Instrument 1 1/19/2011 12:43:37 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\016F1301.D  
Sample Name: 100% Nitrogen

```
=====
Acq. Operator   : tbo                      Seq. Line : 13
Acq. Instrument : Betty                   Location  : Vial 16
Injection Date  : 15-Jan-11, 10:08:28      Inj       : 1
                                           Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Airgas Lot # 7951-N-7310-17-10-7469
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	-	-	-	-	-	Hydrogen
3.150	-	-	-	-	-	Oxygen
3.619	VB	4.12403e4	2.46477e-3	101.64791	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.385	-	-	-	-	-	Methane
9.070	-	-	-	-	-	Carbon dioxide

Totals : 101.64791

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221	-	-	-	-	-	Methane
1.463	-	-	-	-	-	Ethane
2.299	-	-	-	-	-	Propane
4.949	-	-	-	-	-	Butane
6.483	-	-	-	-	-	Pentane
7.389	-	-	-	-	-	Hexane
8.071	-	-	-	-	-	Heptane

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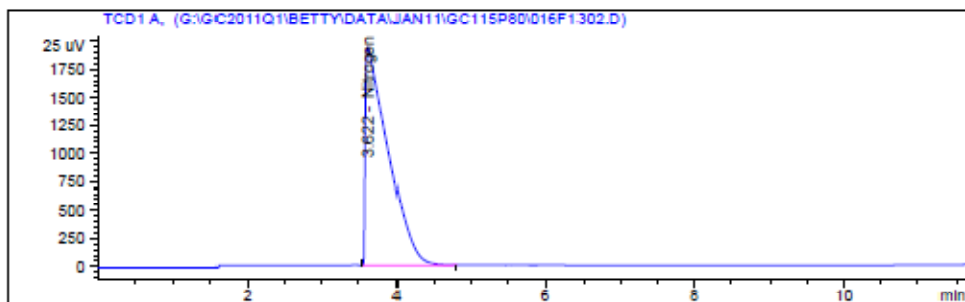
Instrument 1 1/19/2011 12:44:35 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P80\016F1302.D  
Sample Name: 100% Nitrogen

```
=====
Acq. Operator   : tbo                      Seq. Line : 13
Acq. Instrument : Betty                   Location  : Vial 16
Injection Date  : 15-Jan-11, 10:30:31      Inj       : 2
                                           Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Airgas Lot # 7951-N-7310-17-10-7469
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	-	-	-	-	-	Hydrogen
3.150	-	-	-	-	-	Oxygen
3.622	VB	4.06513e4	2.46476e-3	100.19569	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.385	-	-	-	-	-	Methane
9.070	-	-	-	-	-	Carbon dioxide

Totals : 100.19569

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221	-	-	-	-	-	Methane
1.463	-	-	-	-	-	Ethane
2.299	-	-	-	-	-	Propane
4.949	-	-	-	-	-	Butane
6.483	-	-	-	-	-	Pentane
7.389	-	-	-	-	-	Hexane
8.071	-	-	-	-	-	Heptane

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Instrument 1 1/19/2011 12:44:42 PM

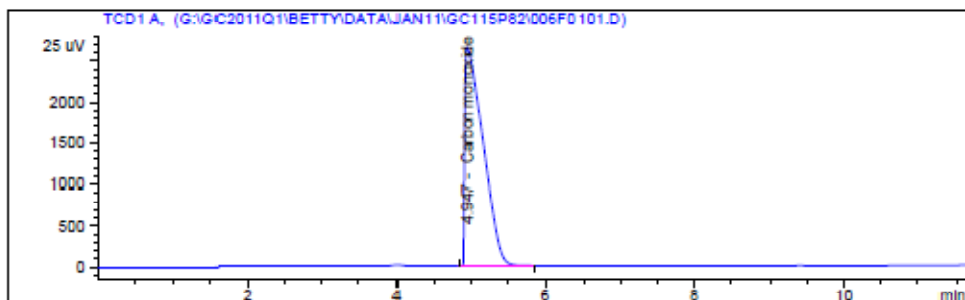
Page 1 of 2



Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P82\006F0101.D  
Sample Name: 99.0% Carbon Monoxide

```
=====
Acq. Operator   : cjt                               Seq. Line :    1
Acq. Instrument : Betty                             Location  : Vial 6
Injection Date  : 17-Jan-11, 13:37:30                Inj       :    1
                                                    Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Aldrich Batch# 03611BJ
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	-	-	-	-	-	Hydrogen
3.150	-	-	-	-	-	Oxygen
4.000	-	-	-	-	-	Nitrogen
4.947	BB	4.56701e4	2.16530e-3	98.88948	-	Carbon monoxide
7.385	-	-	-	-	-	Methane
9.070	-	-	-	-	-	Carbon dioxide

Totals : 98.88948

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221	-	-	-	-	-	Methane
1.463	-	-	-	-	-	Ethane
2.299	-	-	-	-	-	Propane
4.949	-	-	-	-	-	Butane
6.483	-	-	-	-	-	Pentane
7.389	-	-	-	-	-	Hexane
8.071	-	-	-	-	-	Heptane

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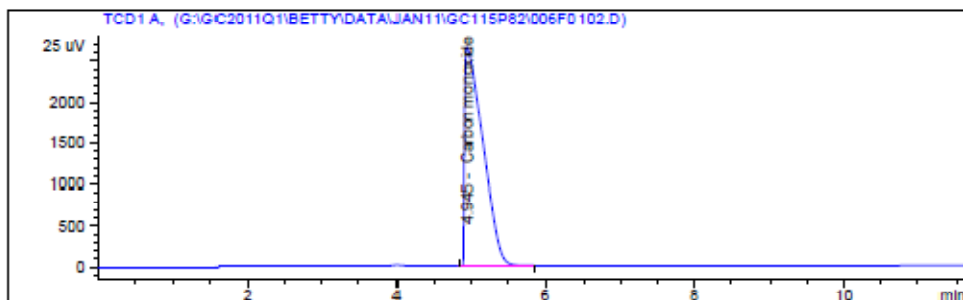
Instrument 1 1/19/2011 12:44:54 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P82\006F0102.D  
Sample Name: 99.0% Carbon Monoxide

```
=====
Acq. Operator   : cjt                               Seq. Line :    1
Acq. Instrument : Betty                             Location  : Vial 6
Injection Date  : 17-Jan-11, 13:59:23                Inj       :    2
                                                    Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Aldrich Batch# 03611BJ
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	-	-	-	-	-	Hydrogen
3.150	-	-	-	-	-	Oxygen
4.000	-	-	-	-	-	Nitrogen
4.945	BB	4.56249e4	2.16530e-3	98.79158	-	Carbon monoxide
7.385	-	-	-	-	-	Methane
9.070	-	-	-	-	-	Carbon dioxide

Totals : 98.79158

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221	-	-	-	-	-	Methane
1.463	-	-	-	-	-	Ethane
2.299	-	-	-	-	-	Propane
4.949	-	-	-	-	-	Butane
6.483	-	-	-	-	-	Pentane
7.389	-	-	-	-	-	Hexane
8.071	-	-	-	-	-	Heptane

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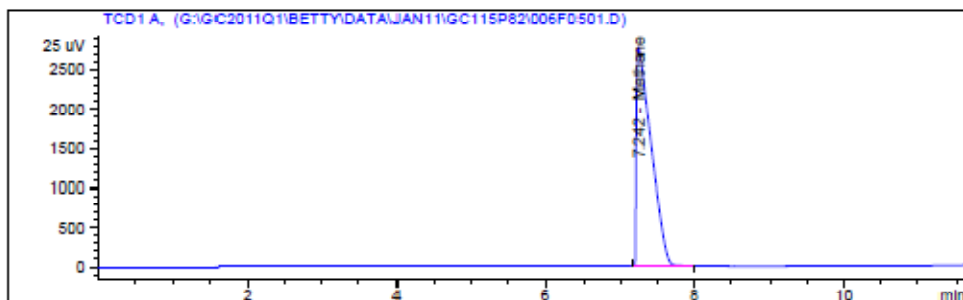
Instrument 1 1/19/2011 12:45:01 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P82\006F0501.D  
Sample Name: 99.0% Methane

```
=====
Acq. Operator   : cjt                               Seq. Line :    5
Acq. Instrument : Betty                             Location  : Vial 6
Injection Date  : 17-Jan-11, 16:29:45                Inj       :    1
                                                    Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Aldrich Batch# MKBB4558
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	-	-	-	-	-	Hydrogen
3.150	-	-	-	-	-	Oxygen
4.000	-	-	-	-	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.242 BB	-	3.84313e4	2.51599e-3	96.69269	-	Methane
9.070	-	-	-	-	-	Carbon dioxide

Totals : 96.69269

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221	-	-	-	-	-	Methane
1.463	-	-	-	-	-	Ethane
2.299	-	-	-	-	-	Propane
4.949	-	-	-	-	-	Butane
6.483	-	-	-	-	-	Pentane
7.389	-	-	-	-	-	Hexane
8.071	-	-	-	-	-	Heptane

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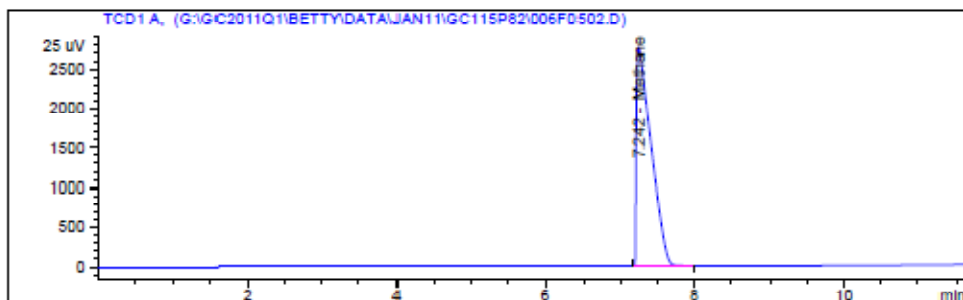
Instrument 1 1/19/2011 12:45:11 PM

Page 1 of 2

Data File G:\GC2011Q1\BETTY\DATA\JAN11\GC115P82\006F0502.D  
Sample Name: 99.0% Methane

```
=====
Acq. Operator   : cjt                               Seq. Line :    5
Acq. Instrument : Betty                             Location  : Vial 6
Injection Date  : 17-Jan-11, 16:51:10                Inj       :    2
                                                    Inj Volume: External

Acq. Method     : G:\GC2011Q1\BETTY\METHODS\GC115P025.M
Last changed    : 11/5/2010 9:38:55 PM
Analysis Method : G:\GC2011Q1\BETTY\METHODS\GC115P80.M
Last changed    : 1/19/2011 11:25:12 AM
Sample Info     : Aldrich Batch# MKBB4558
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 1/19/2011 11:24:06 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.846	-	-	-	-	-	Hydrogen
3.150	-	-	-	-	-	Oxygen
4.000	-	-	-	-	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.242 BB	-	3.81890e4	2.51598e-3	96.08287	-	Methane
9.070	-	-	-	-	-	Carbon dioxide

Totals : 96.08287

Signal 2: FID2 B, not found

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [%]	Grp	Name
1.221	-	-	-	-	-	Methane
1.463	-	-	-	-	-	Ethane
2.299	-	-	-	-	-	Propane
4.949	-	-	-	-	-	Butane
6.483	-	-	-	-	-	Pentane
7.389	-	-	-	-	-	Hexane
8.071	-	-	-	-	-	Heptane

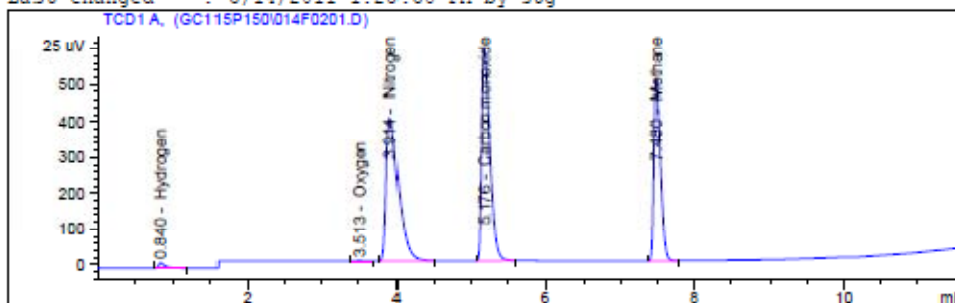
EA# 0511-68 Page 166 of 560

Instrument 1 1/19/2011 12:45:18 PM

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\014F0201.D  
Sample Name: gc115p80 #FG4

```
=====
Acq. Operator   : cjt                               Seq. Line :    2
Acq. Instrument : Betty                             Location  : Vial 14
Injection Date  : 01-Jun-11, 20:13:00                Inj       :    1
                                                    Inj Volume: External
Method          : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.840	BB	82.91087	9.21970e-2	7.64413		Hydrogen
3.513	BB	10.58397	2.47362e-3	2.61807e-2		Oxygen
3.914	BB	4320.35059	2.45689e-3	10.61464		Nitrogen
5.176	BB	4530.60352	2.16514e-3	9.80941		Carbon monoxide
7.480	BB	3180.31543	2.51345e-3	7.99357		Methane
9.070		-	-	-		Carbon dioxide

Totals : 36.08794

2 Warnings or Errors :

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

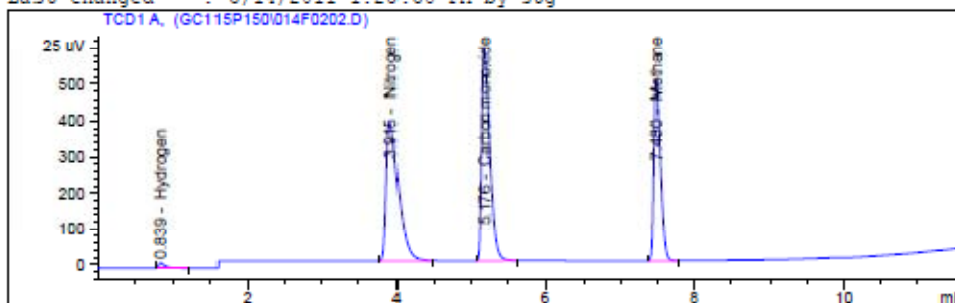
\*\*\* End of Report \*\*\*

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\014F0202.D  
Sample Name: gc115p80 #FG4

=====

Acq. Operator : cjt	Seq. Line : 2
Acq. Instrument : Betty	Location : Vial 14
Injection Date : 01-Jun-11, 20:37:09	Inj : 2
	Inj Volume : External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.839	BB	82.69646	9.21981e-2	7.62446		Hydrogen
3.180		-	-	-		Oxygen
3.915	BB	4159.52539	2.45655e-3	10.21810		Nitrogen
5.176	BB	4515.27539	2.16514e-3	9.77622		Carbon monoxide
7.480	BB	3160.26172	2.51343e-3	7.94311		Methane
9.070		-	-	-		Carbon dioxide

Totals : 35.56189

2 Warnings or Errors :

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

=====

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

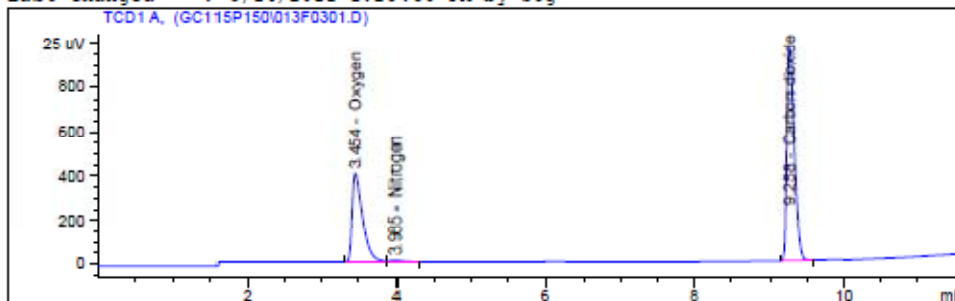
EA# 0511-68 Page 168 of 560

Instrument 2 6/8/2011 3:04:01 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\013F0301.D  
Sample Name: gc115p98 #FG8

```
=====
Acq. Operator   : cjt                               Seq. Line :    3
Acq. Instrument : Betty                             Location  : Vial 13
Injection Date  : 01-Jun-11, 21:01:33                Inj       :    1
                                                    Inj Volume: External
Method          : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, May 11, 2011 6:20:46 PM
Multiplier:      :      1.0000
Dilution:        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.854		-	-	-		Hydrogen
3.454	BV	3986.09155	2.58768e-3	10.31474		Oxygen
3.985	VB	69.58145	2.07189e-3	1.44165e-1		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.258	BB	6896.84570	1.47405e-3	10.16631		Carbon dioxide

Totals : 20.62522

2 Warnings or Errors :

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

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

EA# 0511-68 Page 169 of 560

Instrument 2 6/8/2011 3:04:28 PM cjt

Page 1 of 1

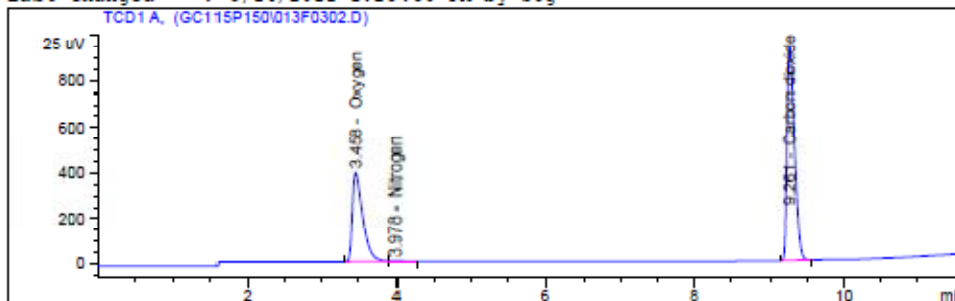


Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\013F0302.D  
Sample Name: gc115p98 #FG8

=====

Acq. Operator	: cjt	Seq. Line	: 3
Acq. Instrument	: Betty	Location	: Vial 13
Injection Date	: 01-Jun-11, 21:25:59	Inj	: 2
		Inj Volume	: External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.854		-	-	-		Hydrogen
3.458	BB	3874.69604	2.58762e-3	10.02625		Oxygen
3.978	BB	41.47799	2.07189e-3	8.59379e-2		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.261	BB	6678.99121	1.47402e-3	9.84496		Carbon dioxide

Totals : 19.95715

2 Warnings or Errors :

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

=====

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

EA# 0511-68 Page 170 of 560

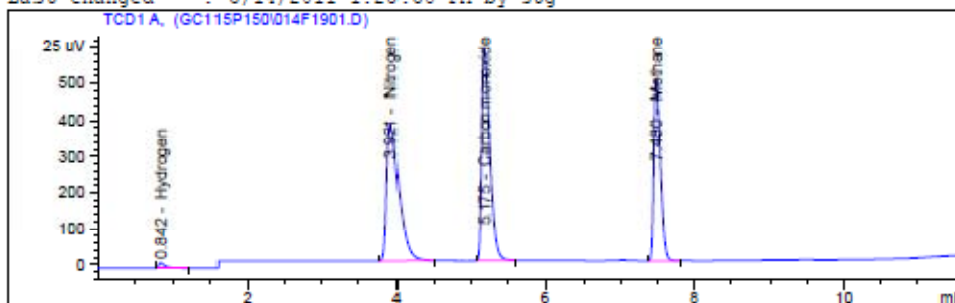
Instrument 2 6/8/2011 3:04:36 PM cjt

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\014F1901.D  
Sample Name: gc115p80 #FG4

```
=====
Acq. Operator   : cjt                               Seq. Line :   19
Acq. Instrument : Betty                             Location  : Vial 14
Injection Date  : 02-Jun-11, 18:07:48                Inj       :    1
                                                    Inj Volume: External
Method          : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.842	BB	82.78009	9.21977e-2	7.63213		Hydrogen
3.180		-	-	-		Oxygen
3.921	BB	4077.51807	2.45637e-3	10.01589		Nitrogen
5.175	BB	4463.86426	2.16514e-3	9.66490		Carbon monoxide
7.480	BB	3147.38477	2.51342e-3	7.91071		Methane
9.070		-	-	-		Carbon dioxide

Totals : 35.22363

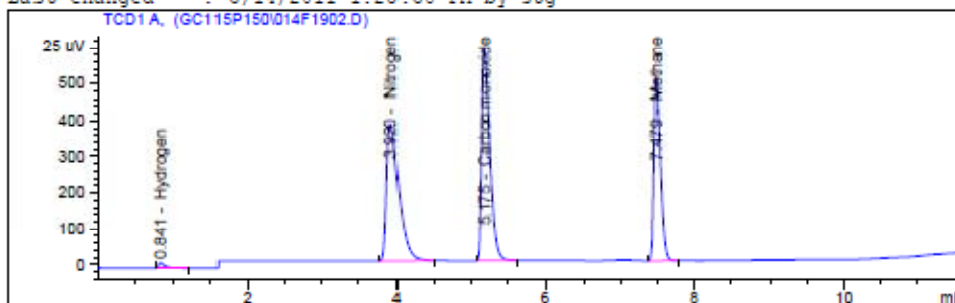
2 Warnings or Errors :

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

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\014F1902.D  
Sample Name: gc115p80 #FG4

```
=====
Acq. Operator   : cjt                               Seq. Line :   19
Acq. Instrument : Betty                             Location  : Vial 14
Injection Date  : 02-Jun-11, 18:27:48                Inj       :    2
                                                    Inj Volume: External
Method          : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, May 11, 2011 6:20:46 PM
Multiplier:      :      1.0000
Dilution:        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.841	BB	83.34718	9.21947e-2	7.68417		Hydrogen
3.180		-	-	-		Oxygen
3.920	BB	4085.78638	2.45639e-3	10.03628		Nitrogen
5.175	BB	4479.20703	2.16514e-3	9.69812		Carbon monoxide
7.479	BB	3187.56250	2.51346e-3	8.01180		Methane
9.070		-	-	-		Carbon dioxide

Totals : 35.43038

2 Warnings or Errors :

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

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

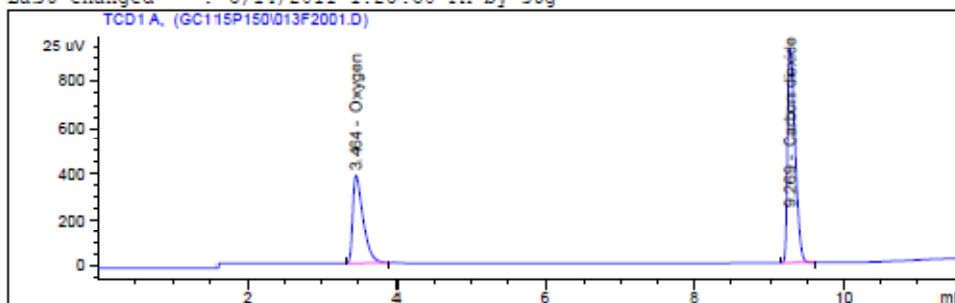
EA# 0511-68 Page 172 of 560

Instrument 2 6/8/2011 3:08:48 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\013F2001.D  
Sample Name: gc115p98 #FG8

```
=====
Acq. Operator   : cjt                               Seq. Line :   20
Acq. Instrument : Betty                             Location  : Vial 13
Injection Date  : 02-Jun-11, 18:50:49                Inj       :    1
                                                    Inj Volume: External
Method          : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.854		-	-	-		Hydrogen
3.464	BB	3744.49512	2.58754e-3	9.68905		Oxygen
4.054		-	-	-		Nitrogen
5.258		-	-	-		Carbon monoxide
7.559		-	-	-		Methane
9.269	BB	6647.13623	1.47401e-3	9.79798		Carbon dioxide

Totals : 19.48703

2 Warnings or Errors :

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

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

EA# 0511-68 Page 173 of 560

Instrument 2 6/8/2011 3:09:13 PM cjt

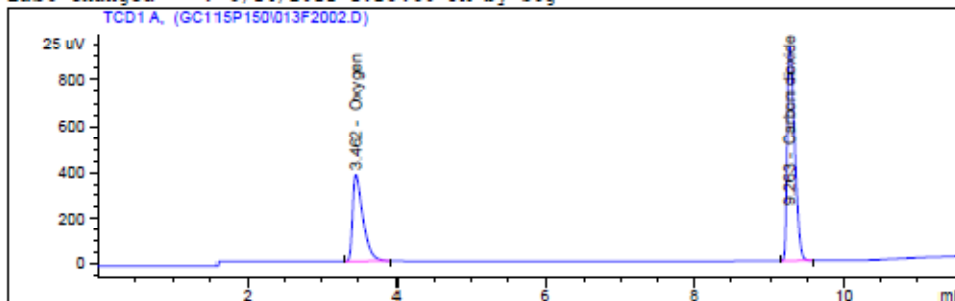
Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\013F2002.D  
Sample Name: gc115p98 #FG8

=====

Acq. Operator	: cjt	Seq. Line	: 20
Acq. Instrument	: Betty	Location	: Vial 13
Injection Date	: 02-Jun-11, 19:10:56	Inj	: 2
		Inj Volume	: External

Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, May 11, 2011 6:20:46 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
0.854	-	-	-	-	-	Hydrogen
3.462	BB	3700.14282	2.58752e-3	9.57418	-	Oxygen
4.054	-	-	-	-	-	Nitrogen
5.258	-	-	-	-	-	Carbon monoxide
7.559	-	-	-	-	-	Methane
9.263	BB	6647.16895	1.47401e-3	9.79802	-	Carbon dioxide

Totals : 19.37221

2 Warnings or Errors :

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

=====

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

EA# 0511-68 Page 174 of 560

Instrument 2 6/8/2011 3:09:21 PM cjt

Page 1 of 1

method: G:\GC2010Q3\BETTY\METHODS\GC115P025.M  
Modified on: 8/17/2010 at 9:45:44 AM

# Injection Source and Location

Injection Source: 6890 GC Valve

Injection Location: Dual

## 6890 GC METHOD

### OVEN

Initial temp: -10 'C (On)	Maximum temp: 280 'C
Initial time: 4.00 min	Equilibration time: 0.20 min
Ramps:	
# Rate Final temp Final time	CRYO (N2)
1 40.00 210 0.50	Cryo: On
2 35.00 260 0.20	Cryo fault: On
3 0.0 (Off)	Cryo timeout: 30.00 min (On)
Post temp: 50 'C	Quick cryo cool: Off
Post time: 0.00 min	Ambient temp: 5 'C
Run time: 11.63 min	

### FRONT INLET (SPLIT/SPLITLESS)

Mode: Splitless  
Initial temp: 150 'C (On)  
Pressure: 44.00 psi (On)  
Purge flow: 0.0 mL/min  
Purge time: 0.00 min  
Total flow: 15.4 mL/min  
Gas saver: Off  
Gas type: Helium

### BACK INLET (SPLIT/SPLITLESS)

Mode: Split  
Initial temp: 200 'C (On)  
Pressure: 5.83 psi (On)  
Split ratio: 7:1  
Split flow: 21.9 mL/min  
Total flow: 31.7 mL/min  
Gas saver: Off  
Gas type: Hydrogen

### COLUMN 1

Packed Column  
Model Number: Restek 19808  
Shin Carbon ST 2m x 1mm  
Max temperature: 330 'C  
Mode: constant pressure  
Pressure: 44.00 psi  
Inlet: Front Inlet  
Outlet: Front Detector  
Outlet pressure: ambient

### COLUMN 2

Capillary Column  
Model Number: Restek 10198  
Rtx-1 30m x 0.32mm x 0.4 um SN450928  
Max temperature: 280 'C  
Nominal length: 30.0 m  
Nominal diameter: 320.00 um  
Nominal film thickness: 4.00 um  
Mode: constant flow  
Initial flow: 3.1 mL/min  
Nominal init pressure: 5.83 psi  
Average velocity: 50 cm/sec  
Inlet: Back Inlet  
Outlet: Back Detector  
Outlet pressure: ambient

### FRONT DETECTOR (TCD)

Temperature: 275 'C (On)  
Reference flow: 25.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 7.0 mL/min (On)  
Makeup Gas Type: Helium  
Filament: On  
Negative polarity: On

### BACK DETECTOR (FID)

Temperature: 300 'C (On)  
Hydrogen flow: 40.0 mL/min (On)  
Air flow: 450.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 45.0 mL/min (On)  
Makeup Gas Type: Nitrogen  
Flame: On  
Electrometer: On  
Lit offset: 2.0

### SIGNAL 1

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method: G:\GC2010Q3\BETTY\METHODS\GC115P025.M  
Modified on: 8/17/2010 at 9:45:44 AM

Data rate: 20 Hz	Data rate: 20 Hz
Type: front detector	Type: back detector
Save Data: On	Save Data: On
Zero: 0.0 (Off)	Zero: 0.0 (Off)
Range: 0	Range: 0
Fast Peaks: Off	Fast Peaks: Off
Attenuation: 0	Attenuation: 0

COLUMN COMP 1  
Derive from front detector

COLUMN COMP 2  
Derive from back detector

#### THERMAL AUX 1

Use: Valve Box Heater  
Description:  
Initial temp: 150 'C (On)  
Initial time: 0.00 min  
# Rate Final temp Final time  
1 0.0 (Off)

#### VALVES

Valve 1 Gas Sampling  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Back Inlet  
Valve 2 Gas Sampling  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Front Inlet

#### POST RUN

Post Time: 0.00 min

#### TIME TABLE

Time	Specifier	Parameter & Setpoint
1.60		Front Detector Polarity: Off

#### GC Injector

##### Front Injector:

Injector not configured, use these parameters if it becomes configured

Sample Washes	0
Sample Pumps	0
Injection Volume	1.00 microliters
Syringe Size	10.0 microliters
PostInj Solvent A Washes	0
PostInj Solvent B Washes	0
Viscosity Delay	0 seconds
Plunger Speed	Fast

##### Back Injector:

Injector not configured, use these parameters if it becomes configured

Sample Washes	0
Sample Pumps	0
Injection Volume	1.00 microliters
Syringe Size	10.0 microliters
PostInj Solvent A Washes	0
PostInj Solvent B Washes	0
Viscosity Delay	0 seconds
Plunger Speed	Fast

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method: G:\GC2011Q1\BETTY\METHODS\GC115P80.M  
Modified on: 1/19/2011 at 11:25:12 AM

=====

6890 GC METHOD

=====

OVEN

Initial temp: -10 'C (On)	Maximum temp: 280 'C
Initial time: 4.00 min	Equilibration time: 0.20 min
Ramps:	
# Rate Final temp Final time	CRYO (N2)
1 40.00 210 0.50	Cryo: On
2 35.00 260 0.20	Cryo fault: On
3 0.0 (Off)	Cryo timeout: 30.00 min (On)
Post temp: 50 'C	Quick cryo cool: Off
Post time: 0.00 min	Ambient temp: 37 'C
Run time: 11.63 min	

FRONT INLET (SPLIT/SPLITLESS)

Mode: Splitless  
Initial temp: 150 'C (On)  
Pressure: 44.00 psi (On)  
Purge flow: 0.0 mL/min  
Purge time: 0.00 min  
Total flow: 15.4 mL/min  
Gas saver: Off  
Gas type: Helium

BACK INLET (SPLIT/SPLITLESS)

Mode: Split  
Initial temp: 200 'C (On)  
Pressure: 5.83 psi (On)  
Split ratio: 7:1  
Split flow: 21.9 mL/min  
Total flow: 31.7 mL/min  
Gas saver: Off  
Gas type: Hydrogen

COLUMN 1

Packed Column  
Model Number: Restek 19808  
Shin Carbon ST 2m x 1mm  
Max temperature: 330 'C  
Mode: constant pressure  
Pressure: 44.00 psi  
Inlet: Front Inlet  
Outlet: Front Detector  
Outlet pressure: ambient

COLUMN 2

Capillary Column  
Model Number: Restek 10198  
Rtx-1 30m x 0.32mm x 0.4 um SN450928  
Max temperature: 280 'C  
Nominal length: 30.0 m  
Nominal diameter: 320.00 um  
Nominal film thickness: 4.00 um  
Mode: constant flow  
Initial flow: 3.1 mL/min  
Nominal init pressure: 5.83 psi  
Average velocity: 50 cm/sec  
Inlet: Back Inlet  
Outlet: Back Detector  
Outlet pressure: ambient

FRONT DETECTOR (TCD)

Temperature: 275 'C (On)  
Reference flow: 25.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 7.0 mL/min (On)  
Makeup Gas Type: Helium  
Filament: On  
Negative polarity: On

BACK DETECTOR (FID)

Temperature: 300 'C (On)  
Hydrogen flow: 40.0 mL/min (On)  
Air flow: 450.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 45.0 mL/min (On)  
Makeup Gas Type: Nitrogen  
Flame: On  
Electrometer: On  
Lit offset: 2.0

SIGNAL 1

Data rate: 20 Hz  
Type: front detector  
Save Data: On  
Zero: 0.0 (Off)  
Range: 0  
Fast Peaks: Off  
Attenuation: 0

SIGNAL 2

Data rate: 20 Hz  
Type: back detector  
Save Data: On  
Zero: 0.0 (Off)  
Range: 0  
Fast Peaks: Off  
Attenuation: 0

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method: G:\GC2011Q1\BETTY\METHODS\GC115P80.M  
Modified on: 1/19/2011 at 11:25:12 AM  
COLUMN COMP 1                      COLUMN COMP 2  
    Derive from front detector              Derive from back detector

THERMAL AUX 1  
Use: Valve Box Heater  
Description:  
Initial temp: 150 'C (On)  
Initial time: 0.00 min  
# Rate Final temp Final time  
1 0.0(Off)

VALVES                      POST RUN  
Valve 1 Gas Sampling              Post Time: 0.00 min  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Back Inlet  
Valve 2 Gas Sampling  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Front Inlet

TIME TABLE  
Time              Specifier              Parameter & Setpoint  
1.60                              Front Detector Polarity:              Off

#### GC Injector

Front Injector:  
Injector not configured, use these parameters if it becomes configured  
Sample Washes              0  
Sample Pumps              0  
Injection Volume              1.00 microliters  
Syringe Size              10.0 microliters  
PostInj Solvent A Washes              0  
PostInj Solvent B Washes              0  
Viscosity Delay              0 seconds  
Plunger Speed              Fast

Back Injector:  
Injector not configured, use these parameters if it becomes configured  
Sample Washes              0  
Sample Pumps              0  
Injection Volume              1.00 microliters  
Syringe Size              10.0 microliters  
PostInj Solvent A Washes              0  
PostInj Solvent B Washes              0  
Viscosity Delay              0 seconds  
Plunger Speed              Fast



method: G:\GC2011Q1\BETTY\METHODS\GC115P80F.M  
Modified on: 2/10/2011 at 3:25:07 PM

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6890 GC METHOD

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OVEN

Initial temp: -10 'C (On)	Maximum temp: 280 'C
Initial time: 4.00 min	Equilibration time: 0.20 min
Ramps:	
# Rate Final temp Final time	CRYO (N2)
1 40.00 210 0.50	Cryo: On
2 35.00 260 0.20	Cryo fault: On
3 0.0 (Off)	Cryo timeout: 30.00 min (On)
Post temp: 50 'C	Quick cryo cool: Off
Post time: 0.00 min	Ambient temp: 37 'C
Run time: 11.63 min	

FRONT INLET (SPLIT/SPLITLESS)

Mode: Splitless  
Initial temp: 150 'C (On)  
Pressure: 44.00 psi (On)  
Purge flow: 0.0 mL/min  
Purge time: 0.00 min  
Total flow: 15.4 mL/min  
Gas saver: Off  
Gas type: Helium

BACK INLET (SPLIT/SPLITLESS)

Mode: Split  
Initial temp: 200 'C (On)  
Pressure: 5.83 psi (On)  
Split ratio: 7:1  
Split flow: 21.9 mL/min  
Total flow: 31.7 mL/min  
Gas saver: Off  
Gas type: Hydrogen

COLUMN 1

Packed Column  
Model Number: Restek 19808  
Shin Carbon ST 2m x 1mm  
Max temperature: 330 'C  
Mode: constant pressure  
Pressure: 44.00 psi  
Inlet: Front Inlet  
Outlet: Front Detector  
Outlet pressure: ambient

COLUMN 2

Capillary Column  
Model Number: Restek 10198  
Rtx-1 30m x 0.32mm x 0.4 um SN450928  
Max temperature: 280 'C  
Nominal length: 30.0 m  
Nominal diameter: 320.00 um  
Nominal film thickness: 4.00 um  
Mode: constant flow  
Initial flow: 3.1 mL/min  
Nominal init pressure: 5.83 psi  
Average velocity: 50 cm/sec  
Inlet: Back Inlet  
Outlet: Back Detector  
Outlet pressure: ambient

FRONT DETECTOR (TCD)

Temperature: 275 'C (On)  
Reference flow: 25.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 7.0 mL/min (On)  
Makeup Gas Type: Helium  
Filament: On  
Negative polarity: On

BACK DETECTOR (FID)

Temperature: 300 'C (On)  
Hydrogen flow: 40.0 mL/min (On)  
Air flow: 450.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 45.0 mL/min (On)  
Makeup Gas Type: Nitrogen  
Flame: On  
Electrometer: On  
Lit offset: 2.0

SIGNAL 1

Data rate: 20 Hz  
Type: front detector  
Save Data: On  
Zero: 0.0 (Off)  
Range: 0  
Fast Peaks: Off  
Attenuation: 0

SIGNAL 2

Data rate: 20 Hz  
Type: back detector  
Save Data: On  
Zero: 0.0 (Off)  
Range: 0  
Fast Peaks: Off  
Attenuation: 0

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method: G:\GC2011Q1\BETTY\METHODS\GC115P80F.M  
Modified on: 2/10/2011 at 3:25:07 PM  
COLUMN COMP 1                      COLUMN COMP 2  
Derive from front detector              Derive from back detector

THERMAL AUX 1  
Use: Valve Box Heater  
Description:  
Initial temp: 150 'C (On)  
Initial time: 0.00 min  
# Rate Final temp Final time  
1 0.0(Off)

VALVES                      POST RUN  
Valve 1 Gas Sampling              Post Time: 0.00 min  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Back Inlet  
Valve 2 Gas Sampling  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Front Inlet

TIME TABLE  
Time              Specifier              Parameter & Setpoint  
1.60                              Front Detector Polarity:              Off

#### GC Injector

Front Injector:  
Injector not configured, use these parameters if it becomes configured  
Sample Washes              0  
Sample Pumps              0  
Injection Volume              1.00 microliters  
Syringe Size              10.0 microliters  
PostInj Solvent A Washes              0  
PostInj Solvent B Washes              0  
Viscosity Delay              0 seconds  
Plunger Speed              Fast

Back Injector:  
Injector not configured, use these parameters if it becomes configured  
Sample Washes              0  
Sample Pumps              0  
Injection Volume              1.00 microliters  
Syringe Size              10.0 microliters  
PostInj Solvent A Washes              0  
PostInj Solvent B Washes              0  
Viscosity Delay              0 seconds  
Plunger Speed              Fast

method: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Modified on: 5/14/2011 at 1:23:58 PM

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6890 GC METHOD

=====

OVEN

Initial temp: -10 'C (On)	Maximum temp: 280 'C
Initial time: 4.00 min	Equilibration time: 0.20 min
Ramps:	
# Rate Final temp Final time	CRYO (N2)
1 40.00 210 0.50	Cryo: On
2 35.00 260 0.20	Cryo fault: On
3 0.0 (Off)	Cryo timeout: 30.00 min (On)
Post temp: 50 'C	Quick cryo cool: Off
Post time: 0.00 min	Ambient temp: 37 'C
Run time: 11.63 min	

FRONT INLET (SPLIT/SPLITLESS)

Mode: Splitless  
Initial temp: 150 'C (On)  
Pressure: 44.00 psi (On)  
Purge flow: 0.0 mL/min  
Purge time: 0.00 min  
Total flow: 15.4 mL/min  
Gas saver: Off  
Gas type: Helium

BACK INLET (SPLIT/SPLITLESS)

Mode: Split  
Initial temp: 200 'C (On)  
Pressure: 5.83 psi (On)  
Split ratio: 7:1  
Split flow: 21.9 mL/min  
Total flow: 31.7 mL/min  
Gas saver: Off  
Gas type: Hydrogen

COLUMN 1

Packed Column  
Model Number: Restek 19808  
Shin Carbon ST 2m x 1mm  
Max temperature: 330 'C  
Mode: constant pressure  
Pressure: 44.00 psi  
Inlet: Front Inlet  
Outlet: Front Detector  
Outlet pressure: ambient

COLUMN 2

Capillary Column  
Model Number: Restek 10198  
Rtx-1 30m x 0.32mm x 0.4 um SN450928  
Max temperature: 280 'C  
Nominal length: 30.0 m  
Nominal diameter: 320.00 um  
Nominal film thickness: 4.00 um  
Mode: constant flow  
Initial flow: 3.1 mL/min  
Nominal init pressure: 5.83 psi  
Average velocity: 50 cm/sec  
Inlet: Back Inlet  
Outlet: Back Detector  
Outlet pressure: ambient

FRONT DETECTOR (TCD)

Temperature: 275 'C (On)  
Reference flow: 25.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 7.0 mL/min (On)  
Makeup Gas Type: Helium  
Filament: On  
Negative polarity: On

BACK DETECTOR (FID)

Temperature: 300 'C (On)  
Hydrogen flow: 40.0 mL/min (On)  
Air flow: 450.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 45.0 mL/min (On)  
Makeup Gas Type: Nitrogen  
Flame: On  
Electrometer: On  
Lit offset: 2.0

SIGNAL 1

Data rate: 20 Hz  
Type: front detector  
Save Data: On  
Zero: 0.0 (Off)  
Range: 0  
Fast Peaks: Off  
Attenuation: 0

SIGNAL 2

Data rate: 20 Hz  
Type: back detector  
Save Data: On  
Zero: 0.0 (Off)  
Range: 0  
Fast Peaks: Off  
Attenuation: 0

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method: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Modified on: 5/14/2011 at 1:23:58 PM  
COLUMN COMP 1                      COLUMN COMP 2  
Derive from front detector              Derive from back detector

THERMAL AUX 1  
Use: Valve Box Heater  
Description:  
Initial temp: 150 'C (On)  
Initial time: 0.00 min  
# Rate Final temp Final time  
1 0.0(Off)

VALVES                      POST RUN  
Valve 1 Gas Sampling              Post Time: 0.00 min  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Back Inlet  
Valve 2 Gas Sampling  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Front Inlet

TIME TABLE  
Time              Specifier              Parameter & Setpoint  
1.60                              Front Detector Polarity:              Off

#### GC Injector

Front Injector:  
Injector not configured, use these parameters if it becomes configured  
Sample Washes              0  
Sample Pumps              0  
Injection Volume              1.00 microliters  
Syringe Size              10.0 microliters  
PostInj Solvent A Washes              0  
PostInj Solvent B Washes              0  
Viscosity Delay              0 seconds  
Plunger Speed              Fast

Back Injector:  
Injector not configured, use these parameters if it becomes configured  
Sample Washes              0  
Sample Pumps              0  
Injection Volume              1.00 microliters  
Syringe Size              10.0 microliters  
PostInj Solvent A Washes              0  
PostInj Solvent B Washes              0  
Viscosity Delay              0 seconds  
Plunger Speed              Fast

Sequence: G:\gc2011q1\Betty\sequences\gc115p80.bt

Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 14	gc115p80 #FG8 ENV(1=0,2=358.14)	GC115P025	2	Sample
2	Vial 14	gc115p80 #FG7 ENV(1=4836.2=718.28)	GC115P025	2	Sample
3	Vial 14	gc115p80 #FG6 ENV(1=1271.09,2=159.17)	GC115P025	2	Sample
4	Vial 14	gc115p80 #FG5 ENV(1=4854.78,2=103.63)	GC115P025	10	Sample
5	Vial 14	gc115p80 #FG4 ENV(1=0,3=376.47)	GC115P025	2	Sample
6	Vial 14	gc115p80 #FG3 ENV(1=318,3=376.47)	GC115P025	2	Sample
7	Vial 14	gc115p80 #FG2 ENV(1=636,4=83.66)	GC115P025	2	Sample
8	Vial 14	gc115p80 #FG1 ENV(1=602.53,4=16.73)	GC115P025	8	Sample
9	Vial 1	He Blank	GC115P025	3	Sample
10	Vial 2	Pause	PAUSE	1	Sample
11	Vial 14	gc115p075 #FGA C ENV(1,358.71,377.39,0)	GC115P025	2	Sample
12	Vial 2	Pause	PAUSE	1	Sample
13	Vial 16	100% Nitrogen	GC115P025	2	Sample
14	Vial 2	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q1\Betty\sequences\gc115p80.bt

Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 30	gc115p80 #FG8 ENV(1=0,2=358.14)	GC115P025	2	Sample
2	Vial 30	gc115p80 #FG7 ENV(1=4836.2=718.28)	GC115P025	2	Sample
3	Vial 30	gc115p80 #FG6 ENV(1=1271.09,2=159.17)	GC115P025	2	Sample
4	Vial 30	gc115p80 #FG5 ENV(1=4854.78,2=103.63)	GC115P025	10	Sample
5	Vial 30	gc115p80 #FG4 ENV(1=0,3=376.47)	GC115P025	2	Sample
6	Vial 30	gc115p80 #FG3 ENV(1=318,3=376.47)	GC115P025	2	Sample
7	Vial 30	gc115p80 #FG2 ENV(1=636,4=83.66)	GC115P025	2	Sample
8	Vial 30	gc115p80 #FG1 ENV(1=602.53,4=16.73)	GC115P025	8	Sample
9	Vial 17	He Blank	GC115P025	3	Sample
10	Vial 18	Pause	PAUSE	1	Sample
11	Vial 30	gc115p075 #FGA C ENV(1,358.71,377.39,0)	GC115P025	2	Sample
12	Vial 18	Pause	PAUSE	1	Sample
13	Vial 32	100% Nitrogen	GC115P025	2	Sample
14	Vial 18	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q1\Betty\sequence\gc115p82.txt

Sequence Table (Front Injector)

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 6	99.0% Carbon Monoxide	GC115P025	2	Sample
2	Vial 7	99.0% Carbon Dioxide	GC115P025	2	Sample
3	Vial 9	100% Oxygen	GC115P025	2	Sample
4	Vial 6	99.0% Methane	GC115P025	2	Sample
5	Vial 6	99.0% Methane	GC115P025	2	Sample
6	Vial 9	100% Hydrogen	GC115P025	2	Sample
7	Vial 9	100% Hydrogen	GC115P025	1	Sample
8	Vial 9	100% Hydrogen	GC115P025	1	Sample
9	Vial 2	Pause	PAUSE	1	Sample
10	Vial 14	gc115p82 #C5 ENV(1=0.2=801.2)	GC115P025	3	Sample
11	Vial 14	gc115p82 #C5 ENV(1=0.2=801.2)	GC115P025	3	Sample
12	Vial 14	gc115p82 #C4 ENV(1=424.2=400.68)	GC115P025	3	Sample
13	Vial 14	gc115p82 #C3 ENV(1=836.2=100.17)	GC115P025	3	Sample
14	Vial 14	gc115p82 #C2 ENV(1=1342.66,2=100.17)	GC115P025	3	Sample
15	Vial 14	gc115p82 #C1 ENV(1=2755.99,2=100.17)	GC115P025	3	Sample
16	Vial 2	Pause	PAUSE	1	Sample
17	Vial 14	gc115p82 #C4 ENV(1=848.2=801.36)	GC115P025	3	Sample
18	Vial 14	gc115p82 #C4 ENV(1=848.2=801.36)	GC115P025	1	Sample
19	Vial 14	gc115p82 #C4 ENV(1=848.2=801.36)	GC115P025	1	Sample
20	Vial 2	Pause	PAUSE	1	Sample
21	Vial 14	gc115p82 #C8 ENV(1=0.2=422.12)	GC115P025	3	Sample
22	Vial 14	gc115p82 #C7 ENV(1=848.2=844.24)	GC115P025	3	Sample
23	Vial 14	gc115p82 #C6 ENV(1=836.2=105.53)	GC115P025	3	Sample
24	Vial 2	Pause	PAUSE	1	Sample
25	Vial 14	gc115p82 #C10 ENV(1=0.3=488.44)	GC115P025	3	Sample
26	Vial 14	gc115p82 #C9 ENV(1=848.3=936.88)	GC115P025	3	Sample
27	Vial 14	gc115p82 #C1 ENV(1=2755.99,2=100.17)	GC115P025	10	Sample
28	Vial 2	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q1\Betty\sequence\gc115p82.txt

Sequence Table (Back Injector)

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 22	99.0% Carbon Monoxide	GC115P025	2	Sample
2	Vial 2	99.0% Carbon Dioxide	GC115P025	2	Sample
3	Vial 25	100% Oxygen	GC115P025	2	Sample
4	Vial 22	99.0% Methane	GC115P025	2	Sample
5	Vial 22	99.0% Methane	GC115P025	2	Sample
6	Vial 25	100% Hydrogen	GC115P025	2	Sample
7	Vial 25	100% Hydrogen	GC115P025	1	Sample
8	Vial 25	100% Hydrogen	GC115P025	1	Sample
9	Vial 18	Pause	PAUSE	1	Sample
10	Vial 30	gc115p82 #C5 ENV(1=0.2=801.2)	GC115P025	3	Sample
11	Vial 30	gc115p82 #C5 ENV(1=0.2=801.2)	GC115P025	3	Sample
12	Vial 30	gc115p82 #C4 ENV(1=424.2=400.68)	GC115P025	3	Sample
13	Vial 30	gc115p82 #C3 ENV(1=836.2=100.17)	GC115P025	3	Sample
14	Vial 30	gc115p82 #C2 ENV(1=1342.66,2=100.17)	GC115P025	3	Sample
15	Vial 30	gc115p82 #C1 ENV(1=2755.99,2=100.17)	GC115P025	3	Sample
16	Vial 18	Pause	PAUSE	1	Sample
17	Vial 30	gc115p82 #C4 ENV(1=848.2=801.36)	GC115P025	3	Sample
18	Vial 30	gc115p82 #C4 ENV(1=848.2=801.36)	GC115P025	1	Sample
19	Vial 30	gc115p82 #C4 ENV(1=848.2=801.36)	GC115P025	1	Sample
20	Vial 18	Pause	PAUSE	1	Sample
21	Vial 30	gc115p82 #C8 ENV(1=0.2=422.12)	GC115P025	3	Sample
22	Vial 30	gc115p82 #C7 ENV(1=848.2=844.24)	GC115P025	3	Sample
23	Vial 30	gc115p82 #C6 ENV(1=836.2=105.53)	GC115P025	3	Sample
24	Vial 18	Pause	PAUSE	1	Sample
25	Vial 30	gc115p82 #C10 ENV(1=0.3=488.44)	GC115P025	3	Sample
26	Vial 30	gc115p82 #C9 ENV(1=848.3=936.88)	GC115P025	3	Sample
27	Vial 30	gc115p82 #C1 ENV(1=2755.99,2=100.17)	GC115P025	10	Sample
28	Vial 18	Pause	PAUSE	1	Sample



Sequence: C:\ChemS2\sequence\gc115p08.txt

Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 14	gc115p08 #FG3 ENV(1=318,2=376.47)	GC115P80	2	Sample
2	Vial 14	gc115p08 #FG7 ENV(1=636,3=717.03)	GC115P80	2	Sample
3	Vial 9	gc115p02 #C5	GC115P80	3	Sample
4	Vial 2	Pause	PAUSE	1	Sample
5	Vial 9	gc115p02 #C5	GC115P80	3	Sample
6	Vial 9	gc115p02 #C5	GC115P80	3	Sample
7	Vial 2	Pause	PAUSE	1	Sample
8	Vial 3	EC Flare Bag 1 SPK 0111-45	GC115P80	3	Sample
9	Vial 4	TO Inlet Run 1 0211-19	GC115P80	3	Sample
10	Vial 5	TO Inlet Run 2 0211-19	GC115P80	3	Sample
11	Vial 6	TO Inlet Run 3 0211-19	GC115P80	3	Sample
12	Vial 13	gc115p02 #E5	GC115P80	3	Sample
13	Vial 12	Run 1 Can 1361 0211-01	GC115P80	3	Sample
14	Vial 15	Run 2 Can 1100 0211-01	GC115P80	3	Sample
15	Vial 16	Run 3 Can 1122 0211-01	GC115P80	3	Sample
16	Vial 1	He Blank	GC115P80	3	Sample
17	Vial 14	gc115p08 #FG3 ENV(1=318,2=376.47)	GC115P80	2	Sample
18	Vial 14	gc115p08 #FG7 ENV(1=636,3=717.03)	GC115P80	2	Sample
19	Vial 9	gc115p02 #C5	GC115P80	2	Sample
20	Vial 9	gc115p02 #C5	GC115P80	1	Sample
21	Vial 13	gc115p02 #E5	GC115P80	3	Sample
22	Vial 9	gc115p02 #C5	GC115P80	3	Sample
23	Vial 14	gc115p08 #FG3 ENV(1=318,2=376.47)	GC115P80	2	Sample
24	Vial 14	gc115p08 #FG7 ENV(1=636,3=717.03)	GC115P80	2	Sample
25	Vial 2	Pause	PAUSE	1	Sample
26	Vial 8	EC Flare 1 baseline *101 0111-45	GC115P80	3	Sample
27	Vial 2	Pause	PAUSE	1	Sample
28	Vial 8	EC Flare 1 baseline *101 0111-45	GC115P80	3	Sample
29	Vial 2	Pause	PAUSE	1	Sample
30	Vial 7	TO Inlet R1 *31 0211-19	GC115P80	3	Sample
31	Vial 8	TO Inlet R2 *31 0211-19	GC115P80	3	Sample
32	Vial 10	TO Inlet R3 *31 0211-19	GC115P80	3	Sample
33	Vial 9	gc115p02 #C5	GC115P80	3	Sample
34	Vial 2	Pause	PAUSE	1	Sample

Sequence: C:\ChemS2\sequence\gc115p08.txt

Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 30	gc115p08 #FG3 ENV(1=318,2=376.47)	GC115P80	2	Sample
2	Vial 30	gc115p08 #FG7 ENV(1=636,3=717.03)	GC115P80	2	Sample
3	Vial 25	gc115p02 #C5	GC115P80	3	Sample
4	Vial 18	Pause	PAUSE	1	Sample
5	Vial 25	gc115p02 #C5	GC115P80	3	Sample
6	Vial 25	gc115p02 #C5	GC115P80	3	Sample
7	Vial 18	Pause	PAUSE	1	Sample
8	Vial 19	EC Flare Bag 1 SPK 0111-45	GC115P80	3	Sample
9	Vial 20	TO Inlet Run 1 0211-19	GC115P80	3	Sample
10	Vial 21	TO Inlet Run 2 0211-19	GC115P80	3	Sample
11	Vial 22	TO Inlet Run 3 0211-19	GC115P80	3	Sample
12	Vial 29	gc115p02 #E5	GC115P80	3	Sample
13	Vial 28	Run 1 Can 1361 0211-01	GC115P80	3	Sample
14	Vial 31	Run 2 Can 1100 0211-01	GC115P80	3	Sample
15	Vial 32	Run 3 Can 1122 0211-01	GC115P80	3	Sample
16	Vial 17	He Blank	GC115P80	2	Sample
17	Vial 30	gc115p08 #FG3 ENV(1=318,2=376.47)	GC115P80	2	Sample
18	Vial 30	gc115p08 #FG7 ENV(1=636,3=717.03)	GC115P80	2	Sample
19	Vial 25	gc115p02 #C5	GC115P80	2	Sample
20	Vial 29	gc115p02 #E5	GC115P80	3	Sample
21	Vial 29	gc115p02 #E5	GC115P80	2	Sample
22	Vial 25	gc115p02 #C5	GC115P80	3	Sample
23	Vial 30	gc115p08 #FG3 ENV(1=318,2=376.47)	GC115P80	2	Sample
24	Vial 30	gc115p08 #FG7 ENV(1=636,3=717.03)	GC115P80	2	Sample
25	Vial 18	Pause	PAUSE	1	Sample
26	Vial 24	EC Flare 1 baseline *101 0111-45	GC115P80	3	Sample
27	Vial 18	Pause	PAUSE	1	Sample
28	Vial 24	EC Flare 1 baseline *101 0111-45	GC115P80	3	Sample
29	Vial 18	Pause	PAUSE	1	Sample
30	Vial 23	TO Inlet R1 *31 0211-19	GC115P80	3	Sample
31	Vial 24	TO Inlet R2 *31 0211-19	GC115P80	3	Sample
32	Vial 26	TO Inlet R3 *31 0211-19	GC115P80	3	Sample
33	Vial 25	gc115p02 #C5	GC115P80	3	Sample
34	Vial 18	Pause	PAUSE	1	Sample

Sequence: G:\gc2011\q2b\ethy\sequence\gc115p136.txt

Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 3	Can 1122 *501 0411-135	GC115P80F-59	1	Sample
2	Vial 4	Can 1365 *201 0411-135	GC115P80F-59	1	Sample
3	Vial 5	Can 1622 *201 0411-108	GC115P80F-59	1	Sample
4	Vial 6	Can 1304 *401 0311-108	GC115P80F-59	1	Sample
5	Vial 7	Can 1035 *031 0311-108	GC115P80F-59	1	Sample
6	Vial 8	Can 1057 *501 0311-108	GC115P80F-59	1	Sample
7	Vial 1	Hi Blank	GC115P80F-59	3	Sample
8	Vial 2	Pause	PAUSE	1	Sample
9	Vial 3	Can 1122 *501 0411-135	GC115P80F-59	1	Sample
10	Vial 3	Can 1122 *501 0411-135	GC115P80F-59	2	Sample
11	Vial 4	Can 1365 *201 0411-135	GC115P80F-59	3	Sample
12	Vial 5	Can 1622 *201 0411-108	GC115P80F-59	2	Sample
13	Vial 5	Can 1622 *201 0411-108	GC115P80F-59	3	Sample
14	Vial 7	Can 1035 *031 0311-108	GC115P80F-59	3	Sample
15	Vial 8	Can 1057 *501 0311-108	GC115P80F-59	3	Sample
16	Vial 12	gc115p02 #E4 ENV(1+565.33,2+800)	GC115P80F-59	3	Sample
17	Vial 12	gc115p136 #H7 ENV(1+0.3+445.5)	GC115P80_SHORT	2	Sample
18	Vial 12	gc115p136 #H5 ENV(1+530.3+495)	GC115P80_SHORT	2	Sample
19	Vial 12	gc115p136 #H5 ENV(1+565.33,3+198)	GC115P80_SHORT	2	Sample
20	Vial 12	gc115p136 #H4 ENV(1+690.13,4+79.2)	GC115P80_SHORT	2	Sample
21	Vial 12	gc115p136 #H3 ENV(1+678.4,4+39.6)	GC115P80_SHORT	2	Sample
22	Vial 12	gc115p136 #H2 ENV(1+1401.31,4+16.83)	GC115P80_SHORT	2	Sample
23	Vial 12	gc115p136 #H1 ENV(1+4231.5,4+11.88)	GC115P80_SHORT	8	Sample
24	Vial 2	Pause	PAUSE	1	Sample
25	Vial 6	Can 1304 *401 0311-108	GC115P80F-59	3	Sample
26	Vial 12	gc115p02 #E4 ENV(1+565.33,2+800)	GC115P80F-59	3	Sample

Sequence: G:\gc2011\q2b\ethy\sequence\gc115p136.txt

Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 19	Can 1122 *501 0411-135	GC115P80B_ETHYLENPRO	1	Sample
2	Vial 20	Can 1365 *201 0411-135	GC115P80B_ETHYLENPRO	1	Sample
3	Vial 21	Can 1622 *201 0411-108	GC115P80B_ETHYLENPRO	1	Sample
4	Vial 22	Can 1304 *401 0311-108	GC115P80B_ETHYLENPRO	1	Sample
5	Vial 23	Can 1035 *031 0311-108	GC115P80B_ETHYLENPRO	1	Sample
6	Vial 24	Can 1057 *501 0311-108	GC115P80B_ETHYLENPRO	1	Sample
7	Vial 17	Hi Blank	GC115P80B_ETHYLENPRO	3	Sample
8	Vial 18	Pause	PAUSE	1	Sample
9	Vial 19	Can 1122 *501 0411-135	GC115P80B_ETHYLENPRO	1	Sample
10	Vial 19	Can 1122 *501 0411-135	GC115P80B_ETHYLENPRO	2	Sample
11	Vial 20	Can 1365 *201 0411-135	GC115P80B_ETHYLENPRO	3	Sample
12	Vial 21	Can 1622 *201 0411-108	GC115P80B_ETHYLENPRO	2	Sample
13	Vial 21	Can 1622 *201 0411-108	GC115P80B_ETHYLENPRO	3	Sample
14	Vial 23	Can 1035 *031 0311-108	GC115P80B_ETHYLENPRO	3	Sample
15	Vial 24	Can 1057 *501 0311-108	GC115P80B_ETHYLENPRO	3	Sample
16	Vial 28	gc115p02 #E4 ENV(1+565.33,2+800)	GC115P80B_ETHYLENPRO	3	Sample
17	Vial 28	gc115p136 #H7 ENV(1+0.3+445.5)	GC115P80B	2	Sample
18	Vial 28	gc115p136 #H5 ENV(1+530.3+495)	GC115P80B	2	Sample
19	Vial 28	gc115p136 #H5 ENV(1+565.33,3+198)	GC115P80B	2	Sample
20	Vial 28	gc115p136 #H4 ENV(1+690.13,4+79.2)	GC115P80B	2	Sample
21	Vial 28	gc115p136 #H3 ENV(1+678.4,4+39.6)	GC115P80B	2	Sample
22	Vial 28	gc115p136 #H2 ENV(1+1401.31,4+16.83)	GC115P80B	2	Sample
23	Vial 28	gc115p136 #H1 ENV(1+4231.5,4+11.88)	GC115P80B	8	Sample
24	Vial 18	Pause	PAUSE	1	Sample
25	Vial 22	Can 1304 *401 0311-108	GC115P80B_ETHYLENPRO	3	Sample
26	Vial 28	gc115p02 #E4 ENV(1+565.33,2+800)	GC115P80B_ETHYLENPRO	3	Sample



Sequence: G:\gc2011q2\Betty\sequence\gc115p150.txt

Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 18	gc115p119 #C5	GC115P136F	3	Sample
2	Vial 14	gc115p80 #FQ4	GC115P136F	2	Sample
3	Vial 13	gc115p98 #FQ8	GC115P136F	2	Sample
4	Vial 4	Run 1 Can 1158 0511-108	GC115P136F	3	Sample
5	Vial 5	Run 2 Can 1384 0511-108	GC115P136F	3	Sample
6	Vial 6	Run 3 Can 1638 0511-108	GC115P136F	3	Sample
7	Vial 1	He Blank	GC115P136F	3	Sample
8	Vial 15	gc115p119 #C5	GC115P136F	3	Sample
9	Vial 14	gc115p80 #FQ4	GC115P136F	2	Sample
10	Vial 13	gc115p98 #FQ8	GC115P136F	2	Sample
11	Vial 2	PAUSE	PAUSE	1	Sample
12	Vial 7	051811-FUEL-1 Can 1412 0511-68	GC115P136F	3	Sample
13	Vial 8	051811-FUEL-2 Can 1452 0511-68	GC115P136F	3	Sample
14	Vial 9	051811-FUEL-3 Can 1031 0511-68	GC115P136F	3	Sample
15	Vial 15	gc115p119 #C5	GC115P136F	3	Sample
16	Vial 2	PAUSE	PAUSE	1	Sample
17	Vial 4	Producer Gas 1 0611-37	GC115P136F	2	Sample
18	Vial 5	Producer Gas 2 0611-37	GC115P136F	2	Sample
19	Vial 14	gc115p80 #FQ4	GC115P136F	2	Sample
20	Vial 13	gc115p98 #FQ8	GC115P136F	2	Sample
21	Vial 12	gc115p104 #B4 ENV(1=848,2=600)	GC115P136F	3	Sample
22	Vial 2	PAUSE	PAUSE	1	Sample

Sequence: G:\gc2011q2\Betty\sequence\gc115p150.txt

Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 31	gc115p119 #C5	GC115P146B	3	Sample
2	Vial 30	gc115p80 #FQ4	GC115P146B	2	Sample
3	Vial 29	gc115p98 #FQ8	GC115P146B	2	Sample
4	Vial 20	Run 1 Can 1158 0511-108	GC115P146B	3	Sample
5	Vial 21	Run 2 Can 1384 0511-108	GC115P146B	3	Sample
6	Vial 22	Run 3 Can 1638 0511-108	GC115P146B	3	Sample
7	Vial 17	He Blank	GC115P146B	3	Sample
8	Vial 31	gc115p119 #C5	GC115P146B	3	Sample
9	Vial 30	gc115p80 #FQ4	GC115P146B	2	Sample
10	Vial 29	gc115p98 #FQ8	GC115P146B	2	Sample
11	Vial 18	PAUSE	PAUSE	1	Sample
12	Vial 23	051811-FUEL-1 Can 1412 0511-68	GC115P146B	3	Sample
13	Vial 24	051811-FUEL-2 Can 1452 0511-68	GC115P146B	3	Sample
14	Vial 25	051811-FUEL-3 Can 1031 0511-68	GC115P146B	3	Sample
15	Vial 31	gc115p119 #C5	GC115P146B	3	Sample
16	Vial 18	PAUSE	PAUSE	1	Sample
17	Vial 20	Producer Gas 1 0611-37	GC115P146B	2	Sample
18	Vial 21	Producer Gas 2 0611-37	GC115P146B	2	Sample
19	Vial 30	gc115p80 #FQ4	GC115P146B	2	Sample
20	Vial 29	gc115p98 #FQ8	GC115P146B	2	Sample
21	Vial 28	gc115p104 #B4 ENV(1=848,2=600)	GC115P146B	3	Sample
22	Vial 18	PAUSE	PAUSE	1	Sample



**MATHESON  
TRI-GAS**  
ask...The Gas Professionals™

***Certified Mixture Grade***

Matheson Tri-Gas Inc.  
6874 S. Main Street  
Morrow GA 30260  
Phone: 770-961 4606  
Fax: 770-968 1268

TO: Enthalpy Analytical  
2202 Ellis Rd Suite A  
Durham, NC 27703

TO AVOID BACKFILL, CYLINDER PRESSURE MUST BE  
GREATER THAN PROCESS PRESSURE

PHONE:  
FAX:

SALES ORDER NUMBER: 534738  
P.O. NUMBER: C715KMJCB  
LOT NUMBER: 1050616843

**PRODUCT:**

CYLINDER NUMBER: AH50255  
SIZE: 1A  
CGA/DISS OUTLET: 590  
CONTENT: 210.1 cu. ft.  
PRESSURE: 2000 psig

FILL DATE: Jul 20, 2010  
CERTIFICATION DATE: Jul 20, 2010  
EXPIRATION DATE: Jul 20, 2013

COMPONENT	REQUESTED CONCENTRATION	BLEND TOLERANCE (+/-)	CERTIFIED CONCENTRATION	CERTIFICATION ACCURACY
Oxygen	10 %	5 %	9.8 %	+/- 2%
Carbon Dioxide	10 %	5 %	9.8 %	+/- 2%
Helium, Balance				

TRACEABLE TO REFERENCE STANDARD SOURCE/NUMBER:  
TRACEABLE TO NIST TRACEABLE WEIGHT CERTIFICATE: 513987

**SPECIAL INFORMATION / ADDITIONAL COMMENTS**

The product listed above and furnished under the referenced purchase order has been tested and found to contain the component concentration listed above. All values in mole/mole basis gas phase unless otherwise indicated. Matheson Tri-Gas Inc. warrants that the above product(s) conform at the time of shipment to the above description. Matheson Tri-Gas Inc. liability does not exceed the value of the product purchased.

Derek Stuck  
ANALYST

  
SIGNATURE

Jul 20, 2010  
DATE SIGNED



**MATHESON  
TRI-GAS**

ask... The Gas Professionals™

***Certified Mixture Grade***

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Morrow GA 30260

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Fax: 770-968 1268

TO: Enthalpy Analytical  
2202 Ellis Rd Suite A  
Durham, NC: 27703

**TO AVOID BACKFILL, CYLINDER PRESSURE MUST BE  
GREATER THAN PROCESS PRESSURE**

PHONE:  
FAX:

SALES ORDER NUMBER: 534738

P.O. NUMBER: G715KMJGB

LOT NUMBER: 1050616842

PRODUCT:

CYLINDER NUMBER: AH16330

SIZE: 1A

CGA/DISS OUTLET: 350

CONTENT: 175.1 cu. ft.

PRESSURE: 1667 psig

FILL DATE: Jul 20, 2010

CERTIFICATION DATE: Jul 20, 2010

EXPIRATION DATE: Jul 20, 2012

COMPONENT	REQUESTED CONCENTRATION	BLEND TOLERANCE (+/-)	CERTIFIED CONCENTRATION	CERTIFICATION ACCURACY
Nitrogen	10 %	5 %	10.0 %	+/- 2%
Hydrogen	8 %	10 %	8.0 %	+/- 2%
Carbon Monoxide	10 %	5 %	10.0 %	+/- 2%
Methane	8 %	10 %	8.0 %	+/- 2%
Helium, Balance				

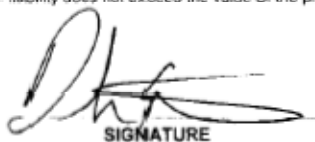
TRACEABLE TO REFERENCE STANDARD SOURCE/NUMBER:

TRACEABLE TO NIST TRACEABLE WEIGHT CERTIFICATE: 513987

SPECIAL INFORMATION / ADDITIONAL COMMENTS

The product listed above and furnished under the referenced purchase order has been tested and found to contain the component concentration listed above. All values in mole/mole basis gas phase unless otherwise indicated. Matheson Tri-Gas Inc. warrants that the above product(s) conform at the time of shipment to the above description. Matheson Tri-Gas Inc. liability does not exceed the value of the product purchased.

Derek Stuck  
ANALYST

  
SIGNATURE

Jul 20, 2010  
DATE SIGNED

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**MATHESON  
TRI-GAS**  
ask...The Gas Professionals™

Matheson Tri-Gas Inc.  
6874 S. Main Street  
Morrow GA 30260  
Phone: 770-961 4606  
Fax: 770-968 1268

***Certified Mixture Grade***

TO: Enthalpy Analytical  
2202 Ellis Rd Suite A  
Durham, NC 27703

TO AVOID BACKFILL, CYLINDER PRESSURE MUST BE  
GREATER THAN PROCESS PRESSURE

PHONE:  
FAX:

SALES ORDER NUMBER: 556494  
P.O. NUMBER: C02011105GAT  
LOT NUMBER: 10516183R6

PRODUCT:

CYLINDER NUMBER: 79850  
SIZE: 1A  
CGA/DISS OUTLET: 590  
CONTENT: 210.1 cu. ft.  
PRESSURE: 2000 psig

FILL DATE: Feb 7, 2011  
CERTIFICATION DATE: Feb 7, 2011  
EXPIRATION DATE: Feb 7, 2014

COMPONENT	REQUESTED CONCENTRATION	BLEND TOLERANCE (+/-)	CERTIFIED CONCENTRATION	CERTIFICATION ACCURACY
Oxygen	10 %	5 %	10.0 %	+/- 2%
Carbon Dioxide	10 %	5 %	10.0 %	+/- 2%
Helium, Balance				

TRACEABLE TO REFERENCE STANDARD SOURCE/NUMBER:  
TRACEABLE TO NIST TRACEABLE WEIGHT CERTIFICATE: 513987

SPECIAL INFORMATION / ADDITIONAL COMMENTS

The product listed above and furnished under the referenced purchase order has been tested and found to contain the component concentration listed above. All values in mole/mole basis gas phase unless otherwise indicated. Matheson Tri-Gas Inc. warrants that the above product(s) conform at the time of shipment to the above description. Matheson Tri-Gas Inc. liability does not exceed the value of the product purchased.

Derek Stuck  
ANALYST

  
SIGNATURE

Feb 7, 2011  
DATE SIGNED

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01/21/2011  
Date

# Airgas Merchant Gases

## Certificate of Analysis

All Nitrogen delivered from an Airgas Merchant Gases ASU, when used in a medical application or by medical customers properly registered with the FDA, is classified as NF Nitrogen

Shipped From:  
Airgas Merchant Gases Chester  
13501 Allied Road  
Chester, VA 23836  
Phone: 8045303252

Company Name: **Airgas Merchant Gases**

Operator: **SRG**

Product: **Nitrogen, NF**

Product Code: **104009**

Driver: **D. Jones**

Tractor No: **47**

Trailer No: **7469**

Load No: **82061**

Certificate No: **102862**

Loaded From Tank: **7310**

Time In: **7:47:17 am**

Time Out: **8:17:08 am**

Certificate Date: **1/7/2011 8:15:24AM**

Tare Weight: **35,040 lbs**

Gross Weight: **78,680 lbs**

Net Weight: **43,640 lbs**

Airgas Lot Number: **7951-N-7310-17-10-7469** Produced By: **Air Liquefaction**

Assay per NF requirements is by difference of O2 only

	Results	Units	USP / NF Specifications	AMG Specifications
Purity Pre-Fill:	Pass *		Pass *	Pass *
Purity Post-Fill: (Assay, By Difference)	99.999990	%	>= 99.0%	>= 99.999%
O2:	0.10	ppm/V	<= 1.0%	<= 5.0 ppm
O2 Tested By: teledyne 3000TA-XI Electrochemical				
CO:	0.20	ppm/V	<= 10.0 ppm	<= 10.0 ppm
CO Tested By: Servomex 4100 Gfx transducer				
Odor:	None		None	None
Odor Tested By: Organoleptic				
Identity:	Nitrogen		Nitrogen	Nitrogen
Identity Tested By: N/A N/A MGIF 315 AMG1				
Moisture:	0.100000	ppm/V	N/A	N/A
Moisture Tested By: Meeco Aquamatic Electrolytic				
Dew Point:	-130.00	deg. F	N/A	N/A

\* The Pre-Fill is tested against AMG and USP / NF specifications and a Pass indicated that the results met and exceeded the applicable specifications. The results of the Pre-Fill tests are kept on file.

### HAZARDOUS MATERIAL SHIPPING INFORMATION

HM XX Nitrogen, Refrigerated Liquid (Cryogenic Liquid) 2.2 UN1977

Quantity: 43,640 Gallons: 6,463.08 Cubic Feet: 602,362.92

NON-FLAMMABLE GAS

Spill, Leak, Fire, Exposure, or accident:

Chemical Emergency: Call Chemtrec 800-424-9300

Airgas Analyst: I declare that this analysis was completed within all AMG policy and procedures and that the product meets all AMG and USP/NF specifications.

Signed: [Signature] Date: 1/7/2011

Product Release Specialist / Released By: I declare that this certificate is accurate, complete and compliant with all applicable policies and procedures and that the product meets all AMG and USP/NF specifications.

Signed: [Signature] Date: 1/7/2011

Picked Up By: I declare that I have received the required documentation for shipment of this product.

Signed: [Signature] Date: 1/7/2011

Rev # 1.0 - Jan 1 2010 12:00AM

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# Calibration Curve Chromatograms



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Calibration Table

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Calib. Data Modified : 6/10/2011 9:38:42 AM

Rel. Reference Window : 0.050 %  
 Abs. Reference Window : 0.050 min  
 Rel. Non-ref. Window : 0.050 %  
 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: TCD1 A,  
 Signal 2: FID2 B,

RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref Grp Name
1.254	2 21	2.50000	5.99300e-1	4.17154	Methane
	22	5.00000	1.14046	4.38421	
	23	10.00000	2.24662	4.45113	
	24	40.00000	9.02006	4.43456	
	25	100.00000	22.31772	4.48074	
	26	1002.00000	224.46744	4.46390	
	27	4008.00000	921.66585	4.34865	
	28	1.00200e4	2396.01693	4.18194	
1.447	2 21	2.50000	1.08495	2.30425	Ethane
	22	5.00000	2.11358	2.36566	
	23	10.00000	4.23221	2.36283	
	24	40.00000	16.65642	2.40148	
	25	100.00000	41.11378	2.43227	
	26	999.00000	398.75786	2.50528	
	27	3996.00000	1637.65165	2.44008	
	28	9990.00000	4275.59896	2.33651	
	29	1.24150e4	4789.19938	2.59229	
	30	4.96600e4	2.10018e4	2.36456	
2.255	2 21	2.50000	1.64071	1.52373	Propane
	22	5.00000	3.19954	1.56272	
	23	10.00000	6.40791	1.56057	
	24	40.00000	25.25913	1.58359	
	25	100.00000	62.14455	1.60915	
	26	1002.00000	565.61796	1.77151	
	27	4008.00000	2323.44352	1.72503	
	28	1.00200e4	6067.51953	1.65142	
	29	1.24825e4	7277.09325	1.71581	

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RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref Grp Name
----- ----- ----- ----- ----- -----					
4.885	2	30 4.99300e4	3.19441e4	1.56304	Butane
	21	2.50000	2.13170	1.17277	
	22	5.00000	4.09702	1.22040	
	23	10.00000	8.21620	1.21711	
	24	40.00000	33.15980	1.20628	
	25	100.00000	82.02928	1.21908	
	26	999.00000	770.00675	1.29739	
	29	2455.00000	1913.81262	1.28278	
	27	3996.00000	3162.97510	1.26337	
	30	9820.00000	8405.38102	1.16830	
6.439	2	21 2.50000	2.60763	9.58725e-1	Pentane
	22	5.00000	5.05740	9.88650e-1	
	23	10.00000	10.08064	9.92001e-1	
	24	40.00000	40.80702	9.80224e-1	
	25	100.00000	101.24457	9.87707e-1	
	29	500.50000	485.83914	1.03018	
	30	2002.00000	2133.61572	9.38313e-1	
	2	21 2.50000	3.10431	8.05332e-1	Hexane
	22	5.00000	6.06970	8.23764e-1	
	23	10.00000	12.09300	8.26924e-1	
	24	40.00000	48.58238	8.23344e-1	
	25	100.00000	121.43669	8.23474e-1	
	29	250.65000	288.87170	8.67686e-1	
	30	1002.60000	1267.33341	7.91110e-1	
7.775	2	1 2.04000	2.49446	8.17814e-1	Benzene
	2	5.10000	6.29337	8.10377e-1	
	3	10.20000	12.59579	8.09795e-1	
	4	34.00000	41.34478	8.22353e-1	
	5	102.00000	125.56017	8.12360e-1	
8.037	2	21 2.50000	3.55947	7.02351e-1	Heptane
	22	5.00000	7.07595	7.06619e-1	
	23	10.00000	14.13115	7.07656e-1	
	24	40.00000	55.30438	7.23270e-1	
	25	100.00000	141.43942	7.07016e-1	
	29	123.52500	165.38603	7.46889e-1	
30		494.10000	722.72524	6.83662e-1	

More compound-specific settings:

Compound: Methane

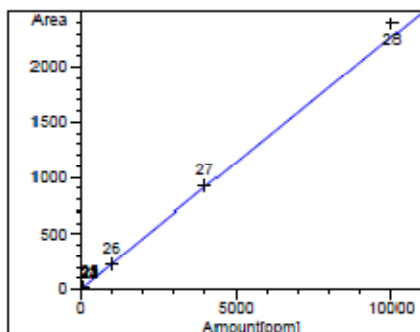
Time Window : From 1.174 min To 1.366 min

Compound: Heptane

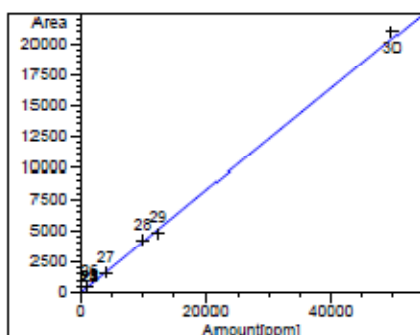
Time Window : From 7.994 min To 8.104 min

=====						
Peak Sum Table						
=====						
Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
----- ----- ----- ----- ----- ----- -----						
as Ethane	1.260	1.850	None	2.4105	1.0000	None
as Propane	1.850	3.600	None	1.6266	1.0000	None
as Butane	3.600	5.700	None	1.2261	1.0000	None
as Pentane	5.700	6.950	None	9.8226e-1	1.0000	None
as Hexane	6.950	7.750	None	8.2309e-1	1.0000	None
as Heptane	7.750	11.600	None	7.1107e-1	1.0000	None
=====						

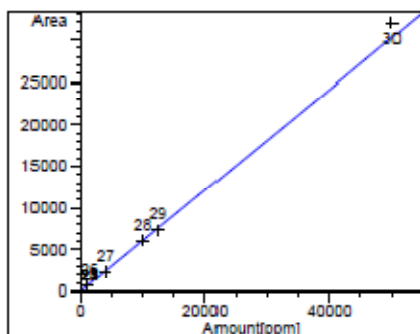
Calibration Curves



Methane at exp. RT: 1.254  
FID2 B,  
Correlation: 0.99959  
Residual Std. Dev.: 49.21587  
Formula:  $y = mx + b$   
m: 2.27146e-1  
b: 2.31951e-2  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 21 : 1  
Level 22 : 0.25  
Level 23 : 0.0625  
Level 24 : 0.003906  
Level 25 : 0.000625  
Level 26 : 6.22507e-006  
Level 27 : 3.89067e-007  
Level 28 : 6.22507e-008

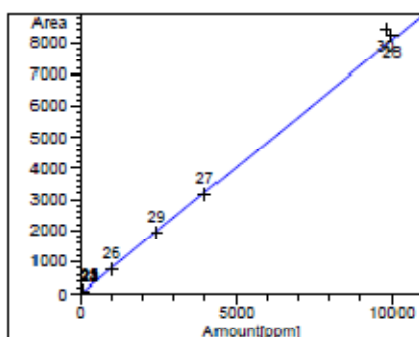


Ethane at exp. RT: 1.447  
FID2 B,  
Correlation: 0.99950  
Residual Std. Dev.: 247.78391  
Formula:  $y = mx + b$   
m: 4.10742e-1  
b: 6.20332e-2  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 21 : 1  
Level 22 : 0.25  
Level 23 : 0.0625  
Level 24 : 0.003906  
Level 25 : 0.000625  
Level 26 : 6.26252e-006  
Level 27 : 3.91407e-007  
Level 28 : 6.26252e-008  
Level 29 : 4.05496e-008  
Level 30 : 2.53435e-009

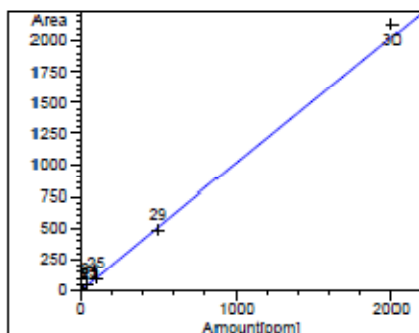


Propane at exp. RT: 2.255  
FID2 B,  
Correlation: 0.99903  
Residual Std. Dev.: 620.31079  
Formula:  $y = mx + b$   
m: 6.05145e-1  
b: 1.50649e-1  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 21 : 1  
Level 22 : 0.25  
Level 23 : 0.0625  
Level 24 : 0.003906  
Level 25 : 0.000625  
Level 26 : 6.22507e-006  
Level 27 : 3.89067e-007  
Level 28 : 6.22507e-008  
Level 29 : 4.01122e-008  
Level 30 : 2.50791e-009

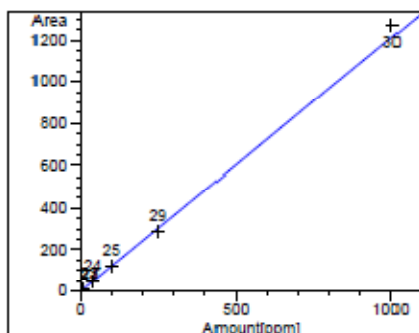
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Butane at exp. RT: 4.885  
 FID2 B,  
 Correlation: 0.99942  
 Residual Std. Dev.: 175.51821  
 Formula:  $y = mx + b$   
 m:  $8.09014e-1$   
 b:  $1.01410e-1$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 :  $6.26252e-006$   
 Level 29 :  $1.037e-006$   
 Level 27 :  $3.91407e-007$   
 Level 30 :  $6.48122e-008$   
 Level 28 :  $6.26252e-008$

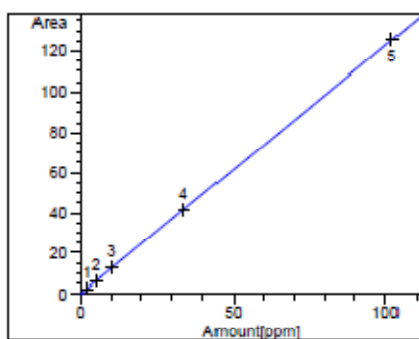


Pentane at exp. RT: 6.439  
 FID2 B,  
 Correlation: 0.99946  
 Residual Std. Dev.: 47.95675  
 Formula:  $y = mx + b$   
 m: 1.01322  
 b:  $5.30284e-2$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 29 : 0.000025  
 Level 30 :  $1.55938e-006$

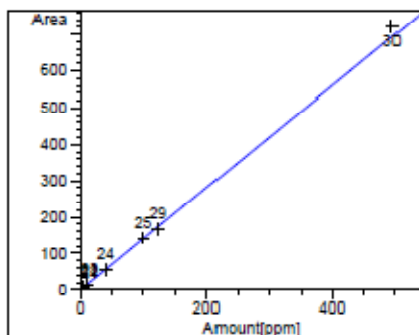


Hexane at exp. RT: 7.354  
 FID2 B,  
 Correlation: 0.99950  
 Residual Std. Dev.: 25.66263  
 Formula:  $y = mx + b$   
 m: 1.20850  
 b:  $6.87921e-2$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 29 : 0.000099  
 Level 30 :  $6.21763e-006$

Method G:\GC2011Q2\BETTY\METHODS\GC115P152B\_0511-68.M



Benzene at exp. RT: 7.775  
FID2 B,  
Correlation: 0.99997  
Residual Std. Dev.: 0.28628  
Formula:  $y = mx + b$   
m: 1.22860  
b: -5.29541e-3  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 1 : 1  
Level 2 : 0.16  
Level 3 : 0.04  
Level 4 : 0.0036  
Level 5 : 0.0004



Heptane at exp. RT: 8.037  
FID2 B,  
Correlation: 0.99952  
Residual Std. Dev.: 14.07442  
Formula:  $y = mx + b$   
m: 1.40092  
b: 5.94036e-2  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 21 : 1  
Level 22 : 0.25  
Level 23 : 0.0625  
Level 24 : 0.003906  
Level 25 : 0.000625  
Level 29 : 0.00041  
Level 30 : 0.000026

=====

=====

Calibration Table

=====

Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM

Rel. Reference Window : 0.050 %  
 Abs. Reference Window : 0.050 min  
 Rel. Non-ref. Window : 0.050 %  
 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: TCD1 A,  
 Signal 2: FID2 B,

RetTime	Lvl	Amount	Area	Amt/Area	Ref Grp Name
[min]	Sig	[ppm]			
1.197	2 21	2.50000	5.99300e-1	4.17154	Methane
	22	5.00000	1.14046	4.38421	
	23	10.00000	2.24662	4.45113	
	24	40.00000	9.02006	4.43456	
	25	100.00000	22.31772	4.48074	
	26	1002.00000	224.46744	4.46390	
	27	4008.00000	921.66585	4.34865	
	28	1.00200e4	2396.01693	4.18194	
1.435	2 21	2.50000	1.08495	2.30425	Ethane
	22	5.00000	2.11358	2.36566	
	23	10.00000	4.23221	2.36283	
	24	40.00000	16.65642	2.40148	
	25	100.00000	41.11378	2.43227	
	26	999.00000	398.75786	2.50528	
	27	3996.00000	1637.65165	2.44008	
	28	9990.00000	4275.59896	2.33651	
	29	1.24150e4	4789.19938	2.59229	
	30	4.96600e4	2.10018e4	2.36456	
2.240	2 21	2.50000	1.64071	1.62373	Propane
	22	5.00000	3.19954	1.56272	
	23	10.00000	6.40791	1.56057	
	24	40.00000	25.25913	1.58359	
	25	100.00000	62.14455	1.60915	
	26	1002.00000	565.61796	1.77151	
	27	4008.00000	2323.44352	1.72503	
	28	1.00200e4	6067.51953	1.65142	
	29	1.24825e4	7277.09325	1.71581	

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Method G:\GC2011Q2\BETTY\METHODS\GC115P152B.M

RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref Grp Name
4.885	2	30 4.99300e4	3.19441e4	1.56304	
		21 2.50000	2.13170	1.17277	Butane
		22 5.00000	4.09702	1.22040	
		23 10.00000	8.21620	1.21711	
		24 40.00000	33.15980	1.20628	
		25 100.00000	82.02928	1.21908	
		26 999.00000	770.00675	1.29739	
		29 2455.00000	1913.81262	1.28278	
		27 3996.00000	3162.97510	1.26337	
		30 9820.00000	8405.38102	1.16830	
		28 9990.00000	8232.28711	1.21351	
6.439	2	21 2.50000	2.60763	9.58725e-1	Pentane
		22 5.00000	5.05740	9.88650e-1	
		23 10.00000	10.08064	9.92001e-1	
		24 40.00000	40.80702	9.80224e-1	
		25 100.00000	101.24457	9.87707e-1	
		29 500.50000	485.83914	1.03018	
		30 2002.00000	2133.61572	9.38313e-1	
7.263	2	11 1.00300	1.18569	8.45919e-1	1-Hexene
		12 4.01200	4.81775	8.32753e-1	
		13 20.06000	23.97436	8.36727e-1	
		14 100.30000	118.15166	8.48909e-1	
		15 200.60000	236.89395	8.46792e-1	
7.354	2	21 2.50000	3.10431	8.05332e-1	Hexane
		22 5.00000	6.06970	8.23764e-1	
		23 10.00000	12.09300	8.26924e-1	
		24 40.00000	48.58238	8.23344e-1	
		25 100.00000	121.43669	8.23474e-1	
		29 250.65000	288.87170	8.67686e-1	
		30 1002.60000	1267.33341	7.91110e-1	
7.775	2	1 2.04000	2.49446	8.17814e-1	Benzene
		2 5.10000	6.29337	8.10377e-1	
		3 10.20000	12.59579	8.09795e-1	
		4 34.00000	41.34478	8.22353e-1	
		5 102.00000	125.56017	8.12360e-1	
8.037	2	21 2.50000	3.55947	7.02351e-1	Heptane
		22 5.00000	7.07595	7.06619e-1	
		23 10.00000	14.13115	7.07656e-1	
		24 40.00000	55.30438	7.23270e-1	
		25 100.00000	141.43942	7.07016e-1	
		29 123.52500	165.38603	7.46889e-1	
		30 494.10000	722.72524	6.83662e-1	
8.447	2	1 2.02000	2.86773	7.04389e-1	Toluene
		2 5.05000	7.22925	6.98551e-1	
		3 10.10000	14.32750	7.04938e-1	
		4 33.67000	47.32449	7.11471e-1	
		5 101.00000	142.42669	7.09137e-1	
8.648	2	11 1.00300	2.06499	4.85716e-1	Octane
		12 4.01200	6.72740	5.96368e-1	
		13 20.06000	31.99486	6.26976e-1	
		14 100.30000	154.84826	6.47731e-1	
		15 200.60000	308.34983	6.50560e-1	
9.010	2	1 1.97800	3.28536	6.02065e-1	Ethylbenzene
		2 4.94500	8.25260	5.99205e-1	
		3 9.89000	15.97692	6.19018e-1	
		4 32.97000	53.85119	6.12243e-1	
		5 98.90000	159.80637	6.18874e-1	
9.050	2	1 3.96400	6.67926	5.93479e-1	m+p-Xylene
		2 9.91000	16.58986	5.97353e-1	
		3 19.82000	32.12328	6.16998e-1	
		4 66.07000	108.78615	6.07338e-1	
		5 198.20000	323.69555	6.12794e-1	

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RetTime	Lvl	Amount	Area	Amt/Area	Ref Grp Name
[min]	Sig	[ppm]			
9.200	2	1	2.00000	3.42970	5.83141e-1
		2	5.00000	8.48391	5.89351e-1
		3	10.00000	16.40812	6.09454e-1
		4	33.33000	55.42743	6.01327e-1
		5	100.00000	164.67796	6.07246e-1

More compound-specific settings:

Compound: Methane

Time Window : From 1.117 min To 1.308 min

Compound: Heptane

Time Window : From 7.994 min To 8.104 min

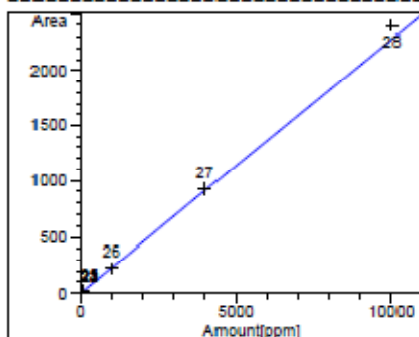
1 Warnings or Errors :

Warning : Overlapping peak time windows at 9.01 min, signal 2

#### Peak Sum Table

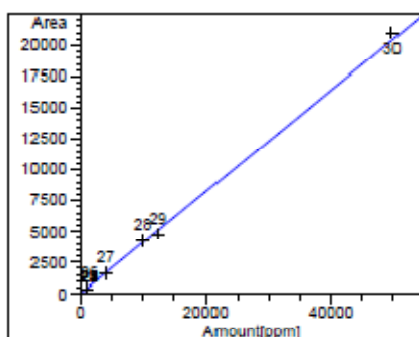
Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.260	1.850	None	2.4105	1.0000	None
as Propane	1.850	3.600	None	1.6266	1.0000	None
as Butane	3.600	5.700	None	1.2261	1.0000	None
as Pentane	5.700	6.950	None	9.8226e-1	1.0000	None
as Hexane	6.950	7.750	None	8.2309e-1	1.0000	None
as Heptane	7.750	11.600	None	7.1107e-1	1.0000	None

#### Calibration Curves

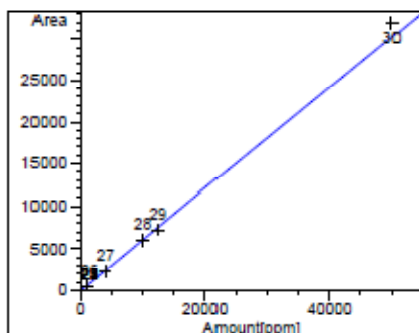


Methane at exp. RT: 1.197  
 FID2 B,  
 Correlation: 0.99959  
 Residual Std. Dev.: 49.21587  
 Formula:  $y = mx + b$   
 m: 2.27146e-1  
 b: 2.31951e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 : 6.22507e-006  
 Level 27 : 3.89067e-007  
 Level 28 : 6.22507e-008

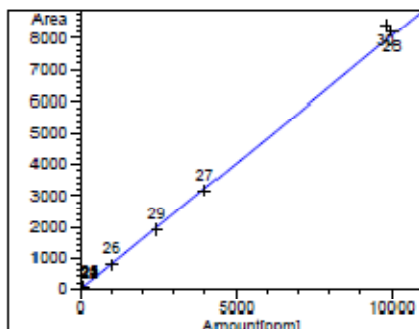




Ethane at exp. RT: 1.435  
 FID2 B,  
 Correlation: 0.99950  
 Residual Std. Dev.: 247.78391  
 Formula:  $y = mx + b$   
 m:  $4.10742e-1$   
 b:  $6.20332e-2$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 :  $6.26252e-006$   
 Level 27 :  $3.91407e-007$   
 Level 28 :  $6.26252e-008$   
 Level 29 :  $4.05496e-008$   
 Level 30 :  $2.53435e-009$



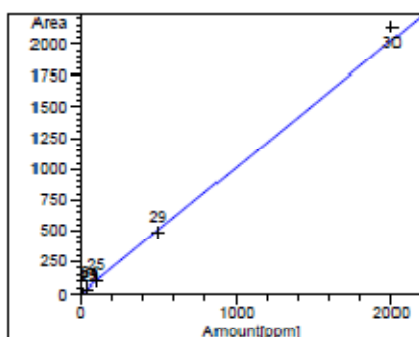
Propane at exp. RT: 2.240  
 FID2 B,  
 Correlation: 0.99903  
 Residual Std. Dev.: 620.31079  
 Formula:  $y = mx + b$   
 m:  $6.05145e-1$   
 b:  $1.50649e-1$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 :  $6.22507e-006$   
 Level 27 :  $3.89067e-007$   
 Level 28 :  $6.22507e-008$   
 Level 29 :  $4.01122e-008$   
 Level 30 :  $2.50701e-009$



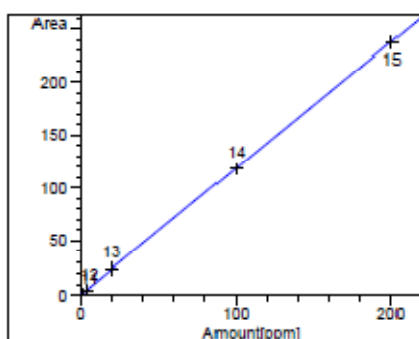
Butane at exp. RT: 4.885  
 FID2 B,  
 Correlation: 0.99942  
 Residual Std. Dev.: 175.51821  
 Formula:  $y = mx + b$   
 m:  $8.09014e-1$   
 b:  $1.01410e-1$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 :  $6.26252e-006$   
 Level 27 :  $1.037e-006$   
 Level 28 :  $3.91407e-007$   
 Level 29 :  $6.48122e-008$   
 Level 30 :  $6.26252e-008$

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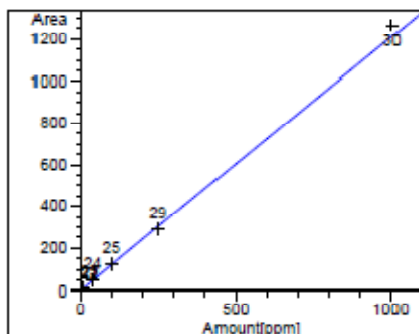




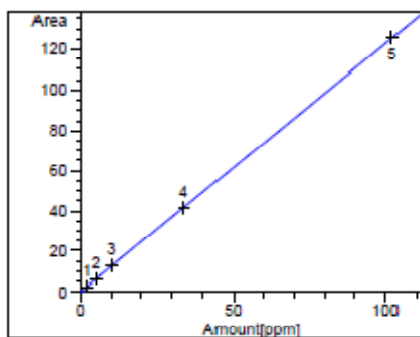
Pentane at exp. RT: 6.439  
 FID2 B,  
 Correlation: 0.99946  
 Residual Std. Dev.: 47.95675  
 Formula:  $y = mx + b$   
 m: 1.01322  
 b: 5.30284e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 29 : 0.000025  
 Level 30 : 1.55938e-006



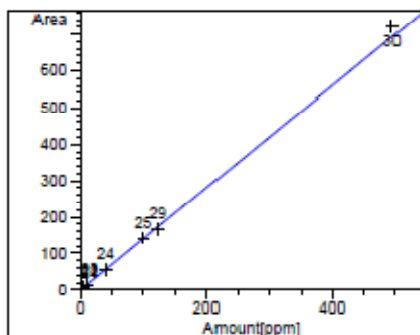
1-Hexene at exp. RT: 7.263  
 FID2 B,  
 Correlation: 0.99996  
 Residual Std. Dev.: 1.00653  
 Formula:  $y = mx + b$   
 m: 1.18800  
 b: -2.28855e-3  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 11 : 1  
 Level 12 : 0.0625  
 Level 13 : 0.0025  
 Level 14 : 0.0001  
 Level 15 : 0.000025



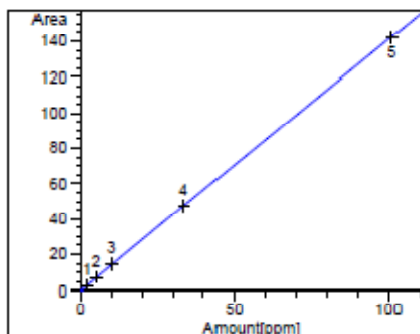
Hexane at exp. RT: 7.354  
 FID2 B,  
 Correlation: 0.99950  
 Residual Std. Dev.: 25.66263  
 Formula:  $y = mx + b$   
 m: 1.20850  
 b: 6.87921e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 29 : 0.000099  
 Level 30 : 6.21763e-006



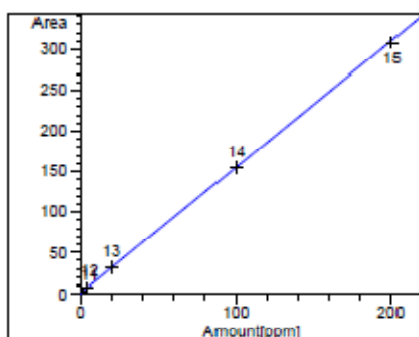
Benzene at exp. RT: 7.775  
 FID2 B,  
 Correlation: 0.99997  
 Residual Std. Dev.: 0.28628  
 Formula:  $y = mx + b$   
 m: 1.22860  
 b: -5.29541e-3  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.16  
 Level 3 : 0.04  
 Level 4 : 0.0036  
 Level 5 : 0.0004



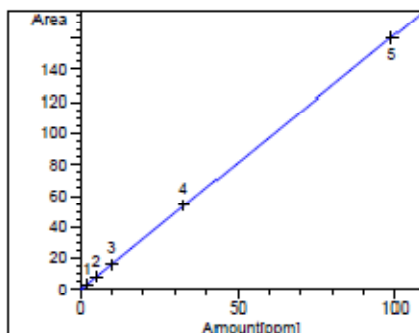
Heptane at exp. RT: 8.037  
 FID2 B,  
 Correlation: 0.99952  
 Residual Std. Dev.: 14.07442  
 Formula:  $y = mx + b$   
 m: 1.40092  
 b: 5.94036e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 29 : 0.00041  
 Level 30 : 0.000026



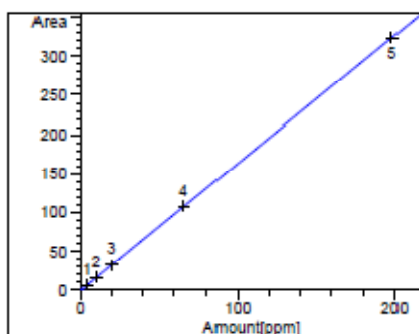
Toluene at exp. RT: 8.447  
 FID2 B,  
 Correlation: 0.99997  
 Residual Std. Dev.: 0.24350  
 Formula:  $y = mx + b$   
 m: 1.41299  
 b: 2.46810e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.16  
 Level 3 : 0.04  
 Level 4 : 0.003599  
 Level 5 : 0.0004



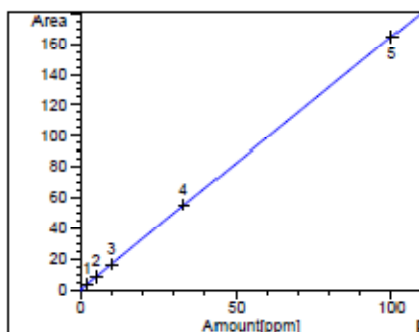
Octane at exp. RT: 8.648  
FID2 B,  
Correlation: 0.99996  
Residual Std. Dev.: 1.60376  
Formula:  $y = mx + b$   
m: 1.54752  
b: 5.14060e-1  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 11 : 1  
Level 12 : 0.0625  
Level 13 : 0.0025  
Level 14 : 0.0001  
Level 15 : 0.000025



Ethylbenzene at exp. RT: 9.010  
FID2 B,  
Correlation: 0.99991  
Residual Std. Dev.: 0.54133  
Formula:  $y = mx + b$   
m: 1.62388  
b: 8.83638e-2  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 1 : 1  
Level 2 : 0.16  
Level 3 : 0.04  
Level 4 : 0.003599  
Level 5 : 0.0004



m+p-Xylene at exp. RT: 9.050  
FID2 B,  
Correlation: 0.99993  
Residual Std. Dev.: 0.49947  
Formula:  $y = mx + b$   
m: 1.63350  
b: 2.17058e-1  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 1 : 1  
Level 2 : 0.16  
Level 3 : 0.04  
Level 4 : 0.0036  
Level 5 : 0.0004



o-Xylene at exp. RT: 9.200  
FID2 B,  
Correlation: 0.99993  
Residual Std. Dev.: 0.31266  
Formula:  $y = mx + b$   
m: 1.64894  
b: 1.39908e-1  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 1 : 1  
Level 2 : 0.16  
Level 3 : 0.04  
Level 4 : 0.003604  
Level 5 : 0.0004

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Method G:\GC2011Q2\BETTY\METHODS\GC115P1S2B.M

Level 5 : 0.0004

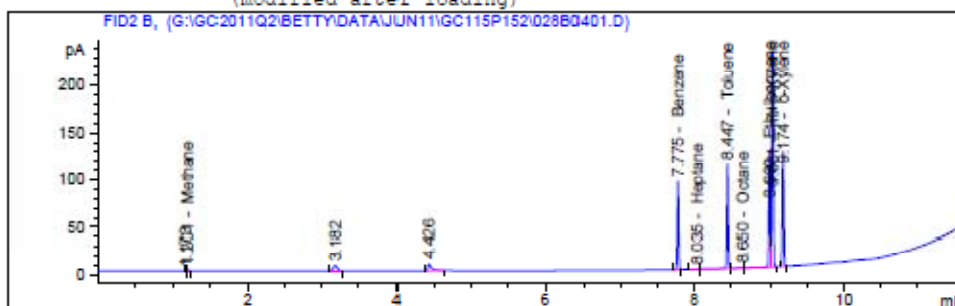
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Instrument 2 6/7/2011 2:38:36 PM cjt

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Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0401.D  
Sample Name: gc115p104 #B5 ENV(1=0,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :    4
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 06-Jun-11, 20:41:03      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.201	PB	1.84382	4.34706	8.01520		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	125.21958	8.13967e-1	101.92464		Benzene
8.035	BV	1.65767e-1	7.01912e-1	1.16354e-1		Heptane
8.447	VB	141.58495	7.07596e-1	100.18493		Toluene
8.650	BV	4.75384e-1	4.85426e-1	2.30764e-1		Octane
8.990	VV	158.43004	6.15464e-1	97.50805		Ethylbenzene
9.031	VB	320.61624	6.11768e-1	196.14281		m+p-Xylene
9.174	BB	163.16110	6.05931e-1	98.86436		o-Xylene

Totals : 602.98711

2 Warnings or Errors :

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

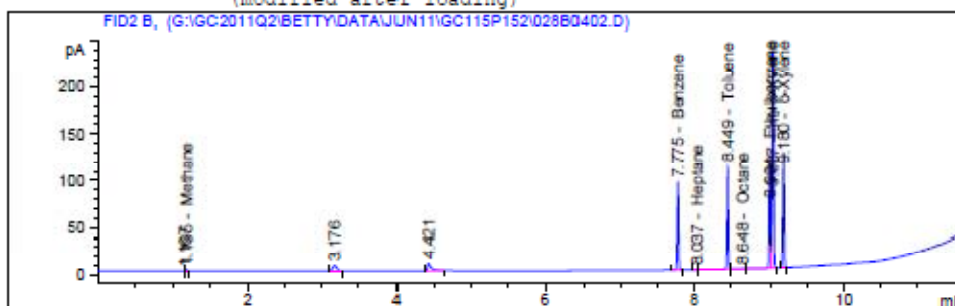
\*\*\* End of Report \*\*\*  
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Instrument 2 6/7/2011 1:50:05 PM cjt

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Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0402.D  
Sample Name: gc115p104 #B5 ENV(1=0,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :    4
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 06-Jun-11, 21:06:21      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.195	PB	8.74780e-1	4.28571	3.74906		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	126.14829	8.13967e-1	102.68055		Benzene
8.037	BV	1.04563e-1	7.01912e-1	7.33940e-2		Heptane
8.449	VV	143.08820	7.07597e-1	101.24681		Toluene
8.648	VV	3.60032e-1	4.85426e-1	1.74769e-1		Octane
8.994	VV	161.08147	6.15470e-1	99.14082		Ethylbenzene
9.037	VB	326.04749	6.11775e-1	199.46772		m+p-Xylene
9.180	BB	165.89111	6.05939e-1	100.51998		o-Xylene

Totals : 607.05510

2 Warnings or Errors :

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

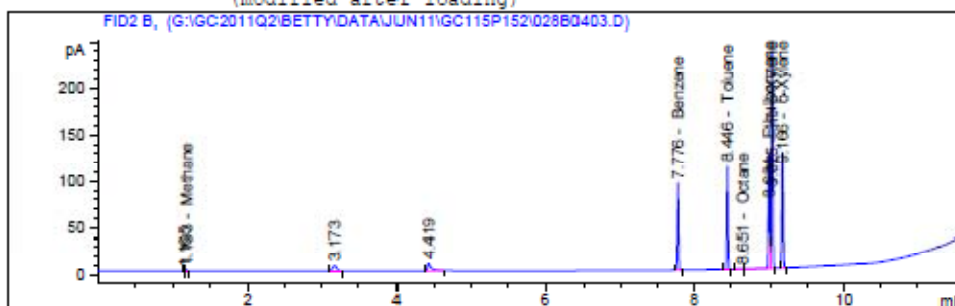
\*\*\* End of Report \*\*\*  
E# 0511-68 Page 208 of 560

Instrument 2 6/7/2011 1:50:14 PM cjt

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Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0403.D  
Sample Name: gc115p104 #B5 ENV(1=0,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :    4
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 06-Jun-11, 21:31:41      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.193	PB	8.45676e-1	4.28170	3.62093		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.776	BB	125.31264	8.13967e-1	102.00038		Benzene
8.037		-	-	-		Heptane
8.446	BB	142.60692	7.07597e-1	100.90820		Toluene
8.651	BV	3.02486e-1	4.85426e-1	1.46835e-1		Octane
8.984	VV	159.90759	6.15468e-1	98.41794		Ethylbenzene
9.025	VB	324.42319	6.11773e-1	198.47336		m+p-Xylene
9.166	BB	164.98167	6.05937e-1	99.96845		o-Xylene

Totals : 603.53609

2 Warnings or Errors :

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

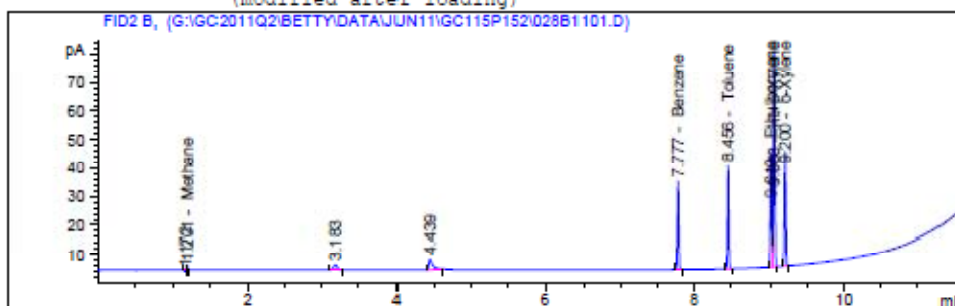
\*\*\* End of Report \*\*\*  
Page 209 of 560

Instrument 2 6/7/2011 1:50:21 PM cjt

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Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B1101.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line : 11
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 09:25:27      Inj       : 1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 1:51:59 PM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.201	PB	1.32296	4.32526	5.72215		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.777	BB	41.28946	8.14037e-1	33.61115		Benzene
8.037		-	-	-		Heptane
8.456	BB	47.23104	7.07349e-1	33.40885		Toluene
8.648		-	-	-		Octane
9.010	BV	53.66334	6.14794e-1	32.99189		Ethylbenzene
9.053	VB	108.40164	6.10957e-1	66.22872		m+p-Xylene
9.200	BB	55.23188	6.04915e-1	33.41058		o-Xylene

Totals : 205.37335

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
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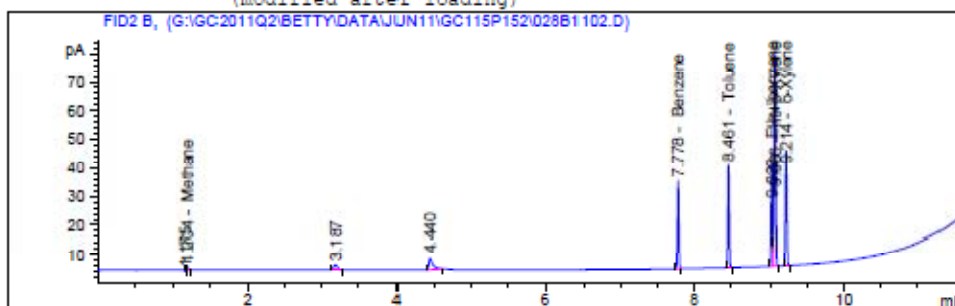
Instrument 2 6/7/2011 1:52:02 PM cjt

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Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B1102.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :   11
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 09:51:06      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 1:51:59 PM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.204	PB	9.57563e-1	4.29581	4.11350		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.778	BB	41.30017	8.14037e-1	33.61988		Benzene
8.037		-	-	-		Heptane
8.461	BB	47.27990	7.07350e-1	33.44343		Toluene
8.648		-	-	-		Octane
9.022	BV	53.78556	6.14796e-1	33.06716		Ethylbenzene
9.066	VB	108.75535	6.10961e-1	66.44525		m+p-Xylene
9.214	BB	55.41622	6.04920e-1	33.52237		o-Xylene

Totals : 204.21160

2 Warnings or Errors :

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

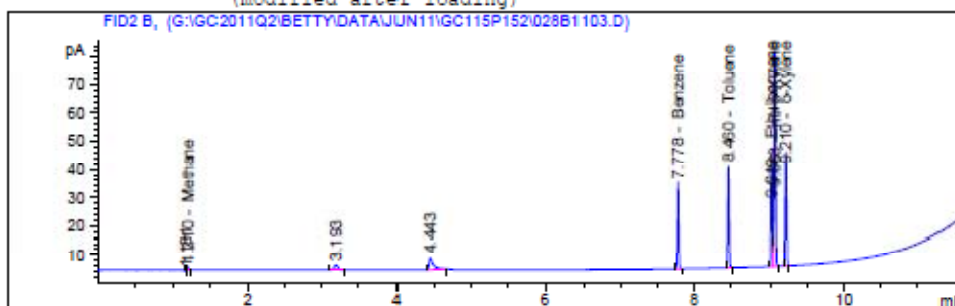
\*\*\* End of Report \*\*\*  
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Instrument 2 6/7/2011 1:52:09 PM cjt

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Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B1103.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :   11
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 10:16:37      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 1:51:59 PM by cjt
                  (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.210	PB	9.31312e-1	4.29280	3.99793		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.778	BB	41.44471	8.14037e-1	33.73752		Benzene
8.037		-	-	-		Heptane
8.460	BB	47.46253	7.07351e-1	33.57268		Toluene
8.648		-	-	-		Octane
9.019	BV	54.10468	6.14802e-1	33.26367		Ethylbenzene
9.063	VB	109.20146	6.10966e-1	66.71836		m+p-Xylene
9.210	BB	55.63420	6.04926e-1	33.65457		o-Xylene

Totals : 204.94473

2 Warnings or Errors :

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

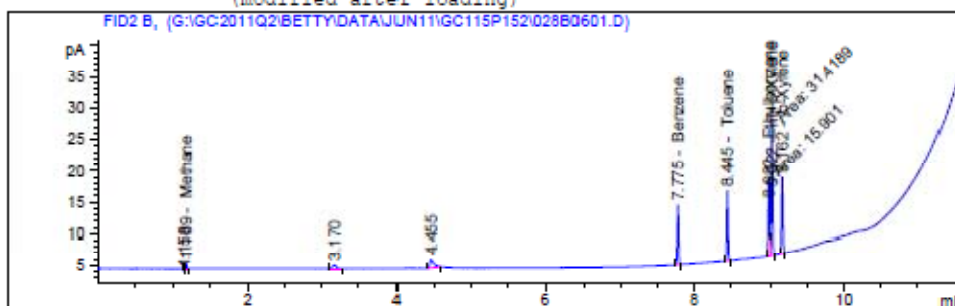
\*\*\* End of Report \*\*\*

Instrument 2 6/7/2011 2:41:29 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0601.D  
Sample Name: gc115p104 #B3 ENV(1=636,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    6
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 06-Jun-11, 23:14:00      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.189	PB	6.90889e-1	4.25464	2.93949		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	12.54661	8.14276e-1	10.21641		Benzene
8.037		-	-	-		Heptane
8.445	BB	14.19589	7.06489e-1	10.02924		Toluene
8.648		-	-	-		Octane
8.982	MF	15.90102	6.12386e-1	9.73756		Ethylbenzene
9.022	FM	31.41888	6.07953e-1	19.10121		m+p-Xylene
9.162	BB	16.03030	6.01158e-1	9.63675		o-Xylene

Totals : 61.66065

2 Warnings or Errors :

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

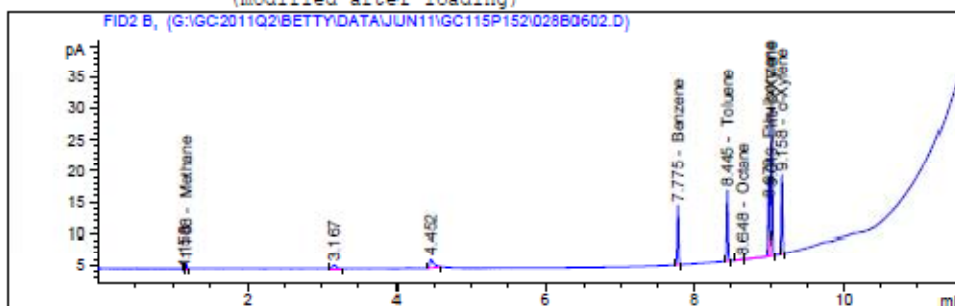
\*\*\* End of Report \*\*\*  
Page 213 of 560

Instrument 2 6/7/2011 1:50:32 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0602.D  
Sample Name: gc115p104 #B3 ENV(1=636,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    6
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 06-Jun-11, 23:39:37      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.188	PB	6.85010e-1	4.25338	2.91361		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	12.59776	8.14275e-1	10.25804		Benzene
8.037		-	-	-		Heptane
8.445	BB	14.34133	7.06501e-1	10.13217		Toluene
8.648	BV	3.17776e-1	4.85426e-1	1.54257e-1		Octane
8.978	VV	15.68691	6.12333e-1	9.60570		Ethylbenzene
9.019	VB	32.23737	6.08061e-1	19.60228		m+p-Xylene
9.158	BB	16.49084	6.01306e-1	9.91604		o-Xylene

Totals : 62.58209

2 Warnings or Errors :

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

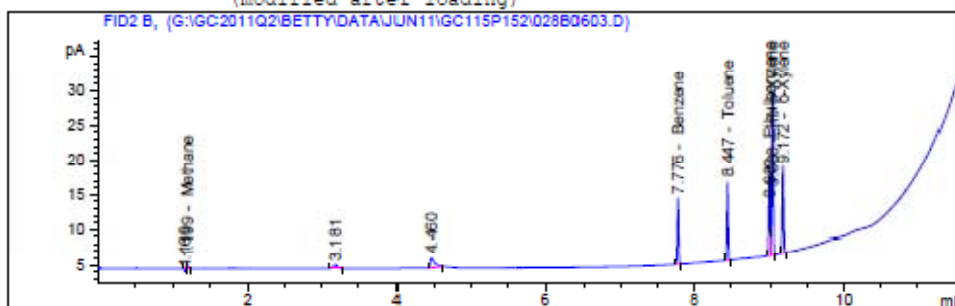
\*\*\* End of Report \*\*\*  
Page 214 of 560

Instrument 2 6/7/2011 1:50:39 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0603.D  
Sample Name: gc115p104 #B3 ENV(1=636,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    6
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 00:05:19      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.199	PB	7.11094e-1	4.25884	3.02844		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.776	BB	12.64299	8.14274e-1	10.29485		Benzene
8.037		-	-	-		Heptane
8.447	BB	14.44529	7.06510e-1	10.20574		Toluene
8.648		-	-	-		Octane
8.989	BV	16.34282	6.12478e-1	10.00962		Ethylbenzene
9.030	VB	32.71360	6.08121e-1	19.89382		m+p-Xylene
9.172	BB	16.70321	6.01371e-1	10.04483		o-Xylene

Totals : 63.47730

2 Warnings or Errors :

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

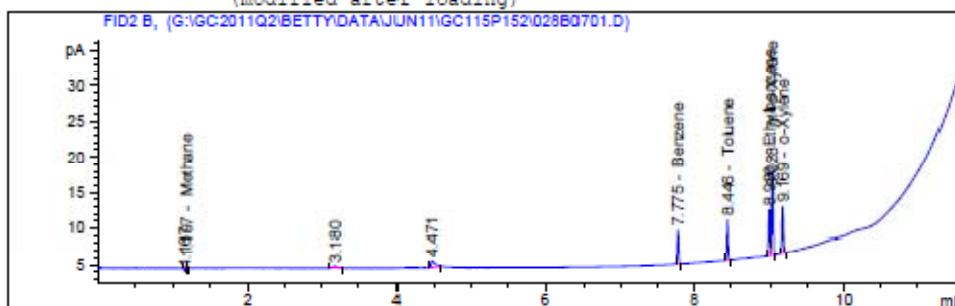
\*\*\* End of Report \*\*\*  
E# 0511-68 Page 215 of 560

Instrument 2 6/7/2011 1:50:45 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0701.D  
Sample Name: gc115p104 #B2 ENV(1=1342.66,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    7
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 00:31:02      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.197	PB	6.90137e-1	4.25448	2.93618		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	6.28651	8.14618e-1	5.12111		Benzene
8.037		-	-	-		Heptane
8.446	BB	7.22374	7.05301e-1	5.09492		Toluene
8.648		-	-	-		Octane
8.986	BV	8.24746	6.09210e-1	5.02444		Ethylbenzene
9.028	VB	16.54406	6.04151e-1	9.99511		m+p-Xylene
9.169	BB	8.45392	5.96414e-1	5.04204		o-Xylene

Totals : 33.21379

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
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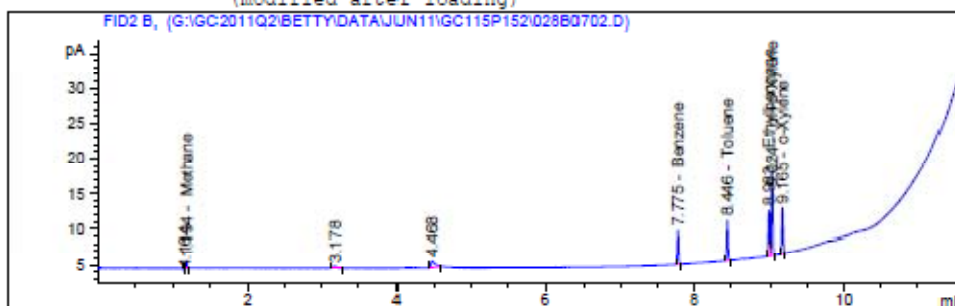
Instrument 2 6/7/2011 1:50:56 PM cjt

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0702.D  
Sample Name: gc115p104 #B2 ENV(1=1342.66,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    7
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 00:56:46      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.194	PB	7.44251e-1	4.26524	3.17441		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	6.30361	8.14617e-1	5.13502		Benzene
8.037		-	-	-		Heptane
8.446	BB	7.23665	7.05306e-1	5.10405		Toluene
8.648		-	-	-		Octane
8.983	BV	8.24032	6.09204e-1	5.02004		Ethylbenzene
9.024	VB	16.59915	6.04177e-1	10.02883		m+p-Xylene
9.165	BB	8.50031	5.96469e-1	5.07018		o-Xylene

Totals : 33.53253

2 Warnings or Errors :

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

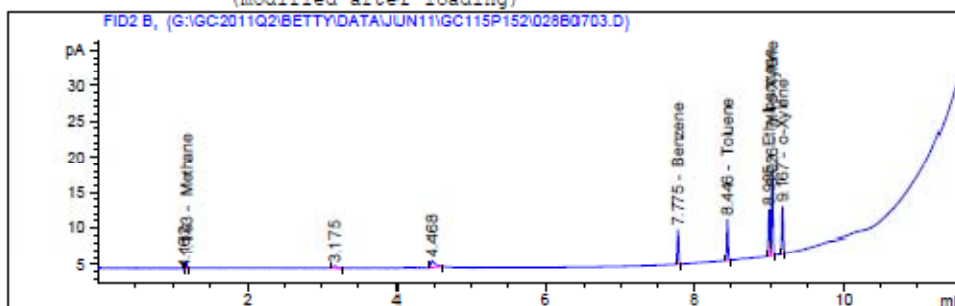
\*\*\* End of Report \*\*\*  
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Instrument 2 6/7/2011 1:51:02 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0703.D  
Sample Name: gc115p104 #B2 ENV(1=1342.66,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    7
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 01:22:35      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.193	PB	6.99023e-1	4.25636	2.97530		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	6.28998	8.14618e-1	5.12393		Benzene
8.037		-	-	-		Heptane
8.446	BB	7.22737	7.05302e-1	5.09748		Toluene
8.648		-	-	-		Octane
8.985	BV	8.27003	6.09228e-1	5.03833		Ethylbenzene
9.026	VB	16.62638	6.04191e-1	10.04550		m+p-Xylene
9.167	BB	8.49750	5.96466e-1	5.06847		o-Xylene

Totals : 33.34901

2 Warnings or Errors :

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

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

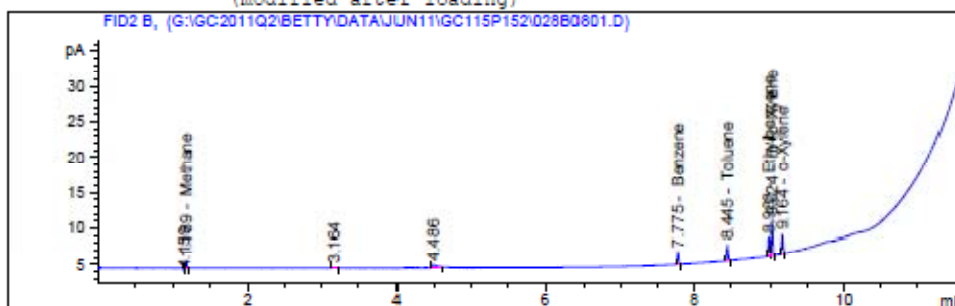
Instrument 2 6/7/2011 1:51:09 PM cjt

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0801.D  
Sample Name: gc115p104 #B1 ENV(1=3462.65,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    8
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 01:48:29      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.189	PB	7.84701e-1	4.27231	3.35249		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	2.47810	8.15656e-1	2.02127		Benzene
8.037		-	-	-		Heptane
8.445	BB	2.88085	7.01656e-1	2.02137		Toluene
8.648		-	-	-		Octane
8.982	BV	3.28928	5.99320e-1	1.97133		Ethylbenzene
9.024	VB	6.69762	5.92343e-1	3.96728		m+p-Xylene
9.164	BB	3.43255	5.81770e-1	1.99696		o-Xylene

Totals : 15.33070

2 Warnings or Errors :

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

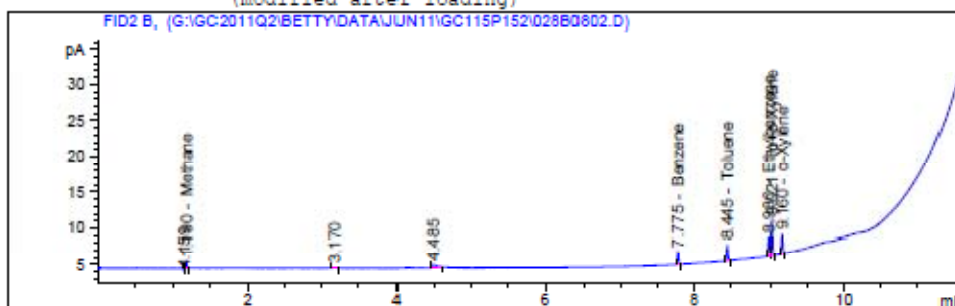
\*\*\* End of Report \*\*\*  
Page 219 of 560

Instrument 2 6/7/2011 1:51:20 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0802.D  
Sample Name: gc115p104 #B1 ENV(1=3462.65,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    8
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 02:14:25      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.190	PB	7.75347e-1	4.27074	3.31131		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	2.50084	8.15656e-1	2.03982		Benzene
8.037		-	-	-		Heptane
8.445	BB	2.86816	7.01652e-1	2.01245		Toluene
8.648		-	-	-		Octane
8.980	BV	3.28483	5.99320e-1	1.96867		Ethylbenzene
9.021	VB	6.65492	5.92327e-1	3.94189		m+p-Xylene
9.160	BB	3.42956	5.81770e-1	1.99522		o-Xylene

Totals : 15.26935

2 Warnings or Errors :

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

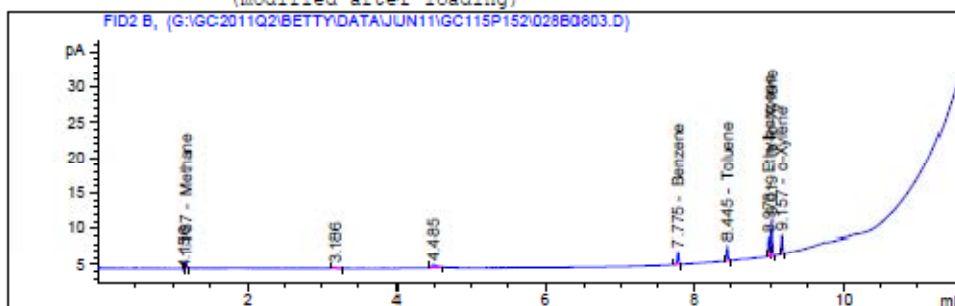
\*\*\* End of Report \*\*\*  
Page 220 of 560

Instrument 2 6/7/2011 1:51:27 PM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B0803.D  
Sample Name: gc115p104 #B1 ENV(1=3462.65,2=100)

```
=====
Acq. Operator   : tbo                      Seq. Line :    8
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 07-Jun-11, 02:40:20      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B.M
Last changed    : 6/7/2011 11:58:05 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 07, 2011 11:58:04 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.187	PB	7.86575e-1	4.27262	3.36074		Methane
1.435		-	-	-		Ethane
2.240		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.263		-	-	-		1-Hexene
7.354		-	-	-		Hexane
7.775	BB	2.50444	8.15654e-1	2.04275		Benzene
8.037		-	-	-		Heptane
8.445	BB	2.85419	7.01652e-1	2.00265		Toluene
8.648		-	-	-		Octane
8.978	BV	3.28197	5.99320e-1	1.96695		Ethylbenzene
9.019	VB	6.68525	5.92327e-1	3.95986		m+p-Xylene
9.157	BB	3.42699	5.81770e-1	1.99372		o-Xylene

Totals : 15.32667

2 Warnings or Errors :

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

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

Instrument 2 6/7/2011 1:51:34 PM cjt

Page 1 of 1

=====

Calibration Table

=====

Calib. Data Modified : 5/31/2011 11:37:39 AM

Rel. Reference Window : 0.050 %  
 Abs. Reference Window : 0.050 min  
 Rel. Non-ref. Window : 0.050 %  
 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: TCD1 A,  
 Signal 2: FID2 B,

RetTime	Lvl	Amount	Area	Amt/Area	Ref Grp Name
[min]	Sig	[ppm]			
1.224	2 21	2.50000	5.99300e-1	4.17154	Methane
	22	5.00000	1.14046	4.38421	
	23	10.00000	2.24662	4.45113	
	24	40.00000	9.02006	4.43456	
	25	100.00000	22.31772	4.48074	
	26	1002.00000	224.46744	4.46390	
	27	4008.00000	921.66585	4.34865	
	28	1.00200e4	2396.01693	4.18194	
1.435	2 21	2.50000	1.08495	2.30425	Ethane
	22	5.00000	2.11358	2.36566	
	23	10.00000	4.23221	2.36283	
	24	40.00000	16.65642	2.40148	
	25	100.00000	41.11378	2.43227	
	26	999.00000	398.75786	2.50528	
	27	3996.00000	1637.65165	2.44008	
	28	9990.00000	4275.59896	2.33651	
	29	1.24150e4	4789.19938	2.59229	
	30	4.96600e4	2.10018e4	2.36456	
2.240	2 21	2.50000	1.64071	1.62373	Propane
	22	5.00000	3.19954	1.56272	
	23	10.00000	6.40791	1.56057	
	24	40.00000	25.25913	1.58359	
	25	100.00000	62.14455	1.60915	
	26	1002.00000	565.61796	1.77151	
	27	4008.00000	2323.44352	1.72503	
	28	1.00200e4	6067.51953	1.65142	
	29	1.24825e4	7277.09325	1.71581	

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Instrument 1 5/31/2011 11:44:51 AM cjt

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RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref Grp Name
----- ----- ----- ----- ----- -----					
4.885	2	30 4.99300e4	3.19441e4	1.56304	Butane
	21	2.50000	2.13170	1.17277	
	22	5.00000	4.09702	1.22040	
	23	10.00000	8.21620	1.21711	
	24	40.00000	33.15980	1.20628	
	25	100.00000	82.02928	1.21908	
	26	999.00000	770.00675	1.29739	
	29	2455.00000	1913.81262	1.28278	
	27	3996.00000	3162.97510	1.26337	
	30	9820.00000	8405.38102	1.16830	
6.439	2	29 9990.00000	8232.28711	1.21351	Pentane
	21	2.50000	2.60763	9.58725e-1	
	22	5.00000	5.05740	9.88650e-1	
	23	10.00000	10.08064	9.92001e-1	
	24	40.00000	40.80702	9.80224e-1	
	25	100.00000	101.24457	9.87707e-1	
	29	500.50000	485.83914	1.03018	
7.263	2	30 2002.00000	2133.61572	9.38313e-1	1-Hexene
	11	1.00300	1.18569	8.45919e-1	
	12	4.01200	4.81775	8.32753e-1	
	13	20.06000	23.97436	8.36727e-1	
	14	100.30000	118.15166	8.48909e-1	
	15	200.60000	236.89395	8.46792e-1	
	7.351	2	21 2.50000	3.10431	
22		5.00000	6.06970	8.23764e-1	
23		10.00000	12.09300	8.26924e-1	
24		40.00000	48.58238	8.23344e-1	
25		100.00000	121.43669	8.23474e-1	
29		250.65000	288.87170	8.67686e-1	
30		1002.60000	1267.33341	7.91110e-1	
7.777	2	1 2.00000	2.67407	7.47925e-1	Benzene
	2	5.00000	6.68419	7.48034e-1	
	3	10.20000	13.43705	7.59095e-1	
	4	34.00000	42.45451	8.00857e-1	
	5	102.00000	128.52218	7.93637e-1	
8.040	2	21 2.50000	3.55947	7.02351e-1	Heptane
	22	5.00000	7.07595	7.06619e-1	
	23	10.00000	14.13115	7.07656e-1	
	24	40.00000	55.30438	7.23270e-1	
	25	100.00000	141.43942	7.07016e-1	
	29	123.52500	165.38603	7.46889e-1	
	30	494.10000	722.72524	6.83662e-1	
8.451	2	1 1.97600	3.34492	5.90746e-1	Toluene
	2	4.94000	7.96314	6.20358e-1	
	3	10.10000	15.97207	6.32354e-1	
	4	33.67000	47.97475	7.01828e-1	
	5	101.00000	144.44438	6.99231e-1	
8.624	2	11 1.00300	2.06499	4.85716e-1	Octane
	12	4.01200	6.72740	5.96368e-1	
	13	20.06000	31.99486	6.26976e-1	
	14	100.30000	154.84826	6.47731e-1	
	15	200.60000	308.34983	6.50560e-1	

More compound-specific settings:

Compound: Methane  
Time Window : From 1.144 min To 1.336 min

Compound: Heptane  
Time Window : From 7.997 min To 8.107 min

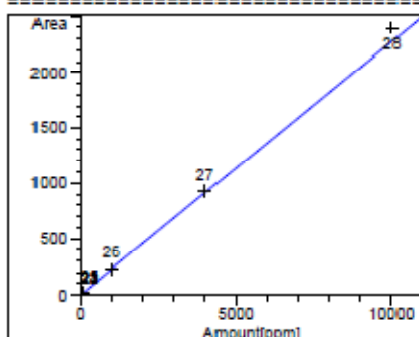
1 Warnings or Errors : EA# 0511-68 Page 223 of 560

Warning : Overlapping peak time windows

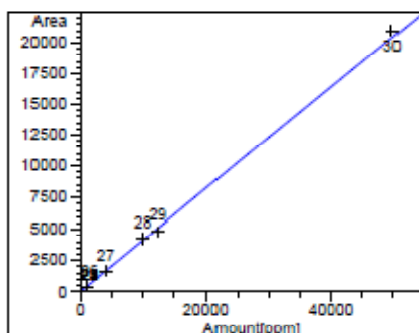
## Peak Sum Table

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.260	1.850	None	2.4105	1.0000	None
as Propane	1.850	3.600	None	1.6266	1.0000	None
as Butane	3.600	5.700	None	1.2261	1.0000	None
as Pentane	5.700	6.950	None	9.8226e-1	1.0000	None
as Hexane	6.950	7.750	None	8.2309e-1	1.0000	None
as Heptane	7.750	11.600	None	7.1107e-1	1.0000	None

## Calibration Curves

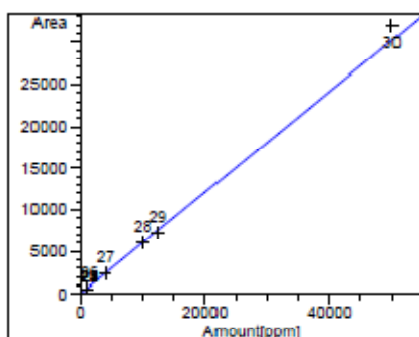


Methane at exp. RT: 1.224  
FID2 B,  
Correlation: 0.99959  
Residual Std. Dev.: 49.21587  
Formula:  $y = mx + b$   
m: 2.27146e-1  
b: 2.31951e-2  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 21 : 1  
Level 22 : 0.25  
Level 23 : 0.0625  
Level 24 : 0.003906  
Level 25 : 0.000625  
Level 26 : 6.22507e-006  
Level 27 : 3.89067e-007  
Level 28 : 6.22507e-008

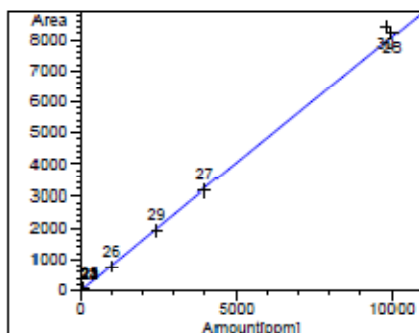


Ethane at exp. RT: 1.435  
FID2 B,  
Correlation: 0.99950  
Residual Std. Dev.: 247.78391  
Formula:  $y = mx + b$   
m: 4.10742e-1  
b: 6.20332e-2  
x: Amount  
y: Area  
Calibration Level Weights:  
Level 21 : 1  
Level 22 : 0.25  
Level 23 : 0.0625  
Level 24 : 0.003906  
Level 25 : 0.000625  
Level 26 : 6.26252e-006  
Level 27 : 3.91407e-007  
Level 28 : 6.26252e-008  
Level 29 : 4.05496e-008  
Level 30 : 2.53435e-009

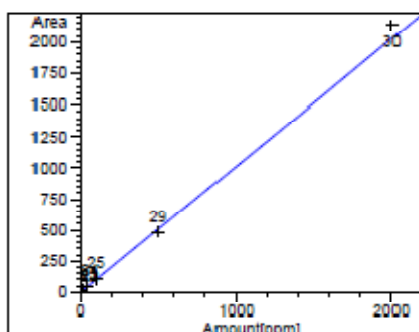




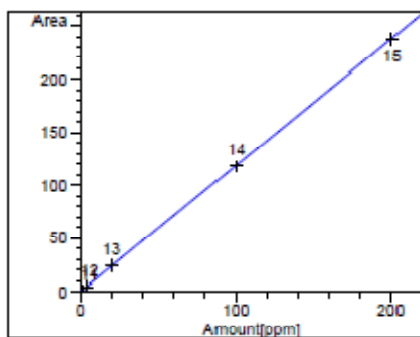
Propane at exp. RT: 2.240  
 FID2 B,  
 Correlation: 0.99903  
 Residual Std. Dev.: 620.31079  
 Formula:  $y = mx + b$   
 m: 6.05145e-1  
 b: 1.50649e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 : 6.22507e-006  
 Level 27 : 3.89067e-007  
 Level 28 : 6.22507e-008  
 Level 29 : 4.01122e-008  
 Level 30 : 2.50701e-009



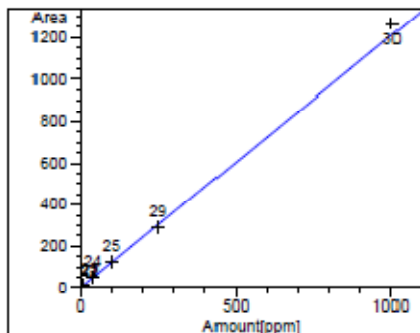
Butane at exp. RT: 4.885  
 FID2 B,  
 Correlation: 0.99942  
 Residual Std. Dev.: 175.51821  
 Formula:  $y = mx + b$   
 m: 8.09014e-1  
 b: 1.01410e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 : 6.26252e-006  
 Level 29 : 1.037e-006  
 Level 27 : 3.91407e-007  
 Level 30 : 6.48122e-008  
 Level 28 : 6.26252e-008



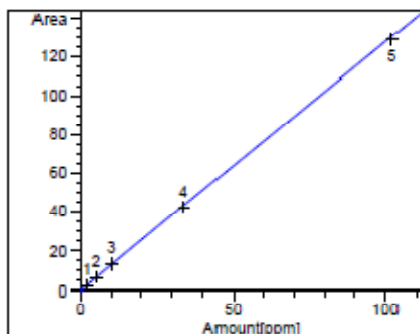
Pentane at exp. RT: 6.439  
 FID2 B,  
 Correlation: 0.99946  
 Residual Std. Dev.: 47.95675  
 Formula:  $y = mx + b$   
 m: 1.01322  
 b: 5.30284e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 29 : 0.000025  
 Level 30 : 1.55938e-006



1-Hexene at exp. RT: 7.263  
 FID2 B,  
 Correlation: 0.99996  
 Residual Std. Dev.: 1.00653  
 Formula:  $y = mx + b$   
 m: 1.18800  
 b: -2.28855e-3  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 11 : 1  
 Level 12 : 0.0625  
 Level 13 : 0.0025  
 Level 14 : 0.0001  
 Level 15 : 0.000025

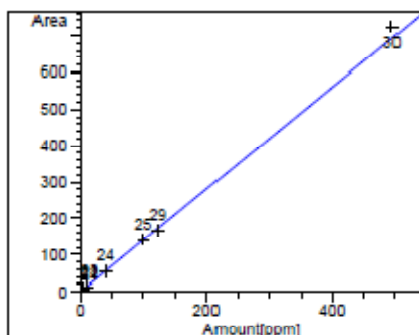


Hexane at exp. RT: 7.351  
 FID2 B,  
 Correlation: 0.99950  
 Residual Std. Dev.: 25.66263  
 Formula:  $y = mx + b$   
 m: 1.20850  
 b: 6.87921e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 29 : 0.000099  
 Level 30 : 6.21763e-006

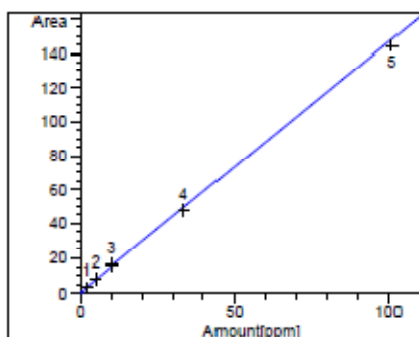


Benzene at exp. RT: 7.777  
 FID2 B,  
 Correlation: 0.99964  
 Residual Std. Dev.: 1.05582  
 Formula:  $y = mx + b$   
 m: 1.27315  
 b: 1.60242e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.16  
 Level 3 : 0.038447  
 Level 4 : 0.00346  
 Level 5 : 0.000384

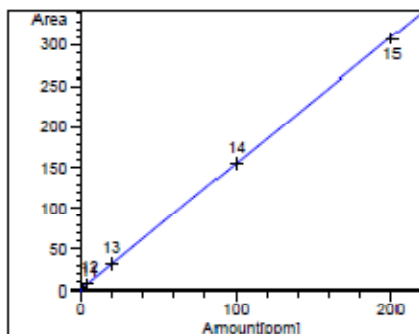




Heptane at exp. RT: 8.040  
 FID2 B,  
 Correlation: 0.99952  
 Residual Std. Dev.: 14.07442  
 Formula:  $y = mx + b$   
 m: 1.40092  
 b: 5.94036e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 29 : 0.00041  
 Level 30 : 0.000026



Toluene at exp. RT: 8.451  
 FID2 B,  
 Correlation: 0.99897  
 Residual Std. Dev.: 2.36808  
 Formula:  $y = mx + b$   
 m: 1.46111  
 b: 5.14185e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.16  
 Level 3 : 0.038276  
 Level 4 : 0.003444  
 Level 5 : 0.000383

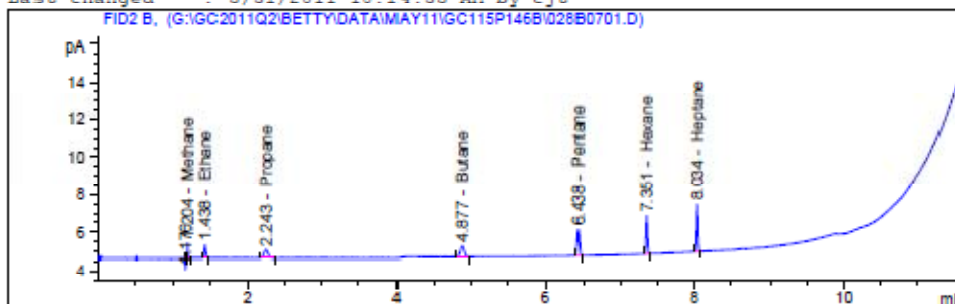


Octane at exp. RT: 8.624  
 FID2 B,  
 Correlation: 0.99996  
 Residual Std. Dev.: 1.60376  
 Formula:  $y = mx + b$   
 m: 1.54752  
 b: 5.14060e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 11 : 1  
 Level 12 : 0.0625  
 Level 13 : 0.0025  
 Level 14 : 0.0001  
 Level 15 : 0.000025

=====

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0701.D  
Sample Name: gc115p119 #C1 ENV(1=3900,2=100)

```
=====
Acq. Operator   : stg                      Seq. Line :    7
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 15:14:11      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.204	BB	5.80677e-1	4.22968	2.45608		Methane
1.438	BB	1.05294	2.29592	2.41747		Ethane
2.243	BB	1.64458	1.50284	2.47154		Propane
4.877	BB	2.13036	1.17723	2.50793		Butane
6.438	BB	2.58222	9.66712e-1	2.49626		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	3.06733	8.09048e-1	2.48162		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	3.51628	7.01912e-1	2.46812		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 17.29902

2 Warnings or Errors :

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

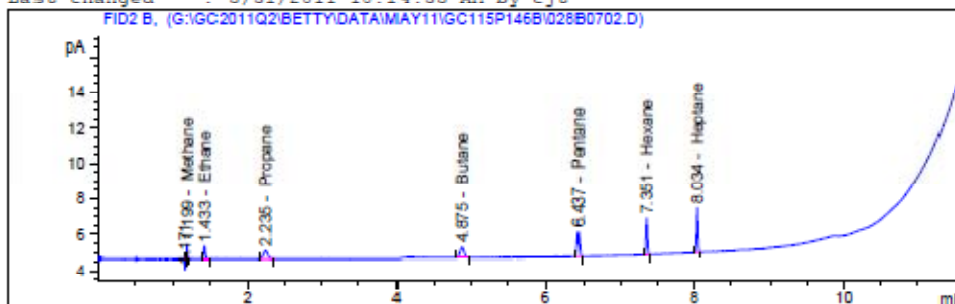
\*\*\* End of Report \*\*\*  
E# 0511-68 Page 228 of 560

Instrument 1 5/31/2011 10:15:34 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0702.D  
Sample Name: gc115p119 #C1 ENV(1=3900,2=100)

```
=====
Acq. Operator   : stg                      Seq. Line :    7
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 15:39:34      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.199	PB	5.96101e-1	4.23114	2.52219		Methane
1.433	BB	1.09772	2.29704	2.52150		Ethane
2.235	BB	1.62576	1.50284	2.44327		Propane
4.875	BB	2.12547	1.17710	2.50188		Butane
6.437	BB	2.60150	9.66832e-1	2.51521		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	3.10467	8.09135e-1	2.51210		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	3.55623	7.01912e-1	2.49616		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 17.51231

2 Warnings or Errors :

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

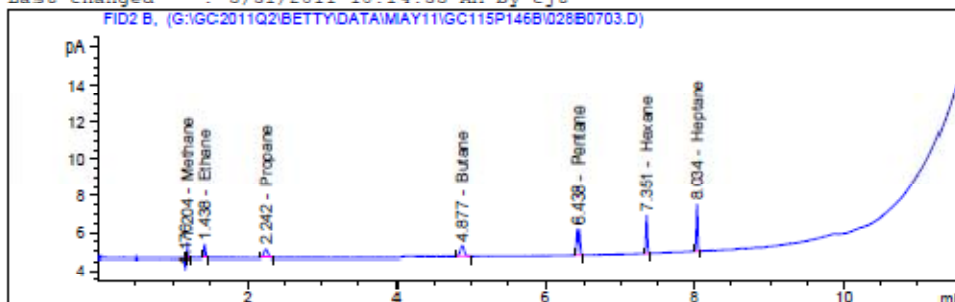
\*\*\* End of Report \*\*\*  
E# 051168 Page 229 of 560

Instrument 1 5/31/2011 10:15:45 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0703.D  
Sample Name: gc115p119 #C1 ENV(1=3900,2=100)

```
=====
Acq. Operator   : stg                      Seq. Line :    7
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 16:05:38      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.204	PB	6.21120e-1	4.23804	2.63233		Methane
1.438	BB	1.10420	2.29784	2.53728		Ethane
2.242	BB	1.65178	1.50284	2.48237		Propane
4.877	BB	2.13928	1.17748	2.51896		Butane
6.438	BB	2.63917	9.67119e-1	2.55239		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	3.14093	8.09347e-1	2.54210		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	3.60591	7.02058e-1	2.53156		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 17.79699

2 Warnings or Errors :

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

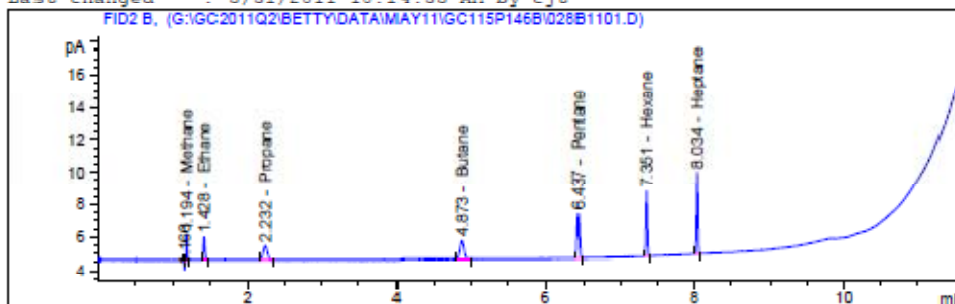
\*\*\* End of Report \*\*\*  
E# 051168 Page 230 of 560

Instrument 1 5/31/2011 10:15:59 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1101.D  
Sample Name: gc115p119 #C2 ENV(1=1900,2=100)

```
=====
Acq. Operator   : stg                      Seq. Line : 11
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 20:48:33      Inj       : 1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.194	PB	1.13501	4.31248	4.89471		Methane
1.428	BB	2.11406	2.36318	4.99591		Ethane
2.232	BB	3.19177	1.57450	5.02545		Propane
4.873	BB	4.09852	1.20549	4.94072		Butane
6.437	BB	5.06581	9.76619e-1	4.94736		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	6.08265	8.18112e-1	4.97629		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	7.09491	7.07841e-1	5.02207		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 34.80252

2 Warnings or Errors :

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

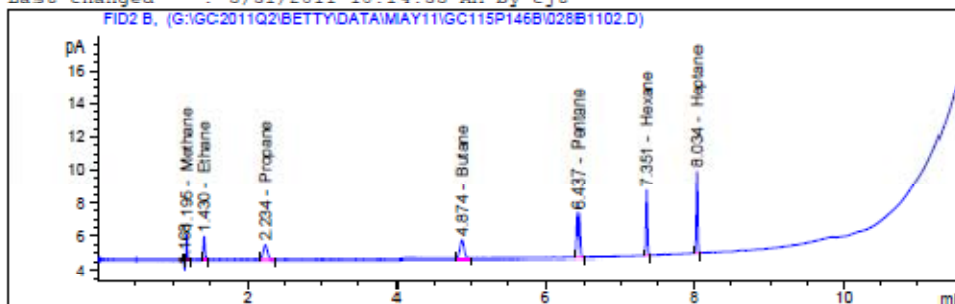
\*\*\* End of Report \*\*\*  
E# 051168 Page 231 of 560

Instrument 1 5/31/2011 10:20:55 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1102.D  
Sample Name: gc115p119 #C2 ENV(1=1900,2=100)

```
=====
Acq. Operator   : stg                      Seq. Line : 11
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 21:15:31      Inj       : 2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.195	BB	1.14502	4.31326	4.93878		Methane
1.430	BB	2.11369	2.36317	4.99500		Ethane
2.234	BB	3.24064	1.57568	5.10620		Propane
4.874	BB	4.08836	1.20541	4.92816		Butane
6.437	BB	5.05041	9.76587e-1	4.93216		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	6.05559	8.18070e-1	4.95389		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	7.05456	7.07806e-1	4.99326		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 34.84746

2 Warnings or Errors :

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

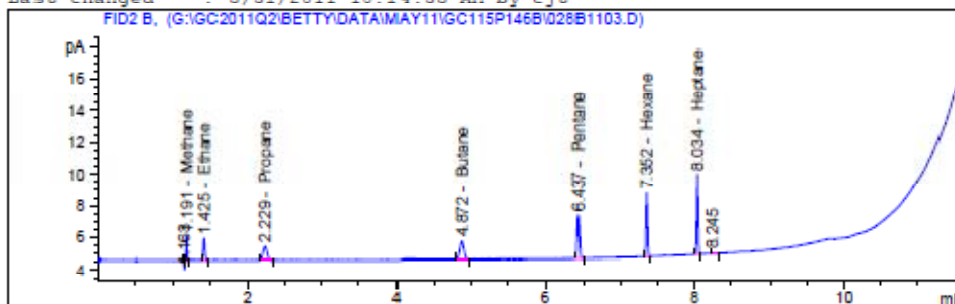
\*\*\* End of Report \*\*\*  
E# 051168 Page 232 of 560

Instrument 1 5/31/2011 10:21:06 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1103.D  
Sample Name: gc115p119 #C2 ENV(1=1900,2=100)

```
=====
Acq. Operator   : stg                      Seq. Line : 11
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 21:40:14      Inj       : 3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.191	PB	1.14133	4.31298	4.92254		Methane
1.425	BB	2.11297	2.36314	4.99326		Ethane
2.229	BB	3.16621	1.57387	4.98321		Propane
4.872	BB	4.10417	1.20553	4.94771		Butane
6.437	BB	5.05599	9.76599e-1	4.93767		Pentane
7.263		-	-	-		1-Hexene
7.352	BB	6.07086	8.18093e-1	4.96653		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	7.07837	7.07827e-1	5.01026		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 34.76118

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
E# 051168 Page 233 of 560

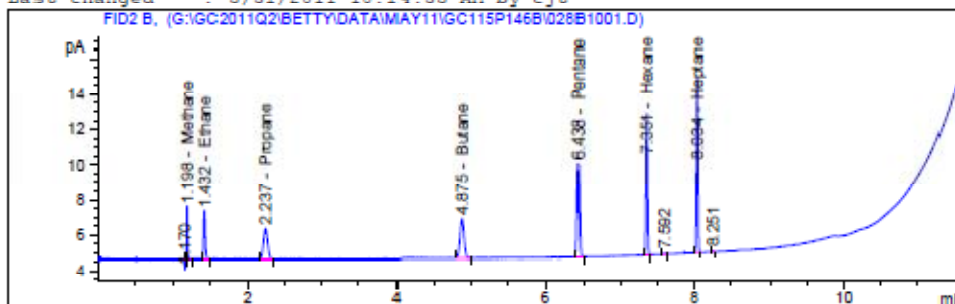
Instrument 1 5/31/2011 10:21:15 AM cjt

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1001.D  
Sample Name: gc115p119 #C3 ENV(1=900,2=100)

```
=====
Acq. Operator   : stg                      Seq. Line :   10
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 19:32:02      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.198	BB	2.26566	4.35738	9.87233		Methane
1.432	BB	4.26351	2.39920	10.22899		Ethane
2.237	BB	6.49324	1.61416	10.48111		Propane
4.875	BB	8.23874	1.22086	10.05834		Butane
6.438	BB	10.09774	9.81767e-1	9.91362		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	12.12108	8.22774e-1	9.97290		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	14.14162	7.10819e-1	10.05212		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 70.57942

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
E# 051168 Page 234 of 560

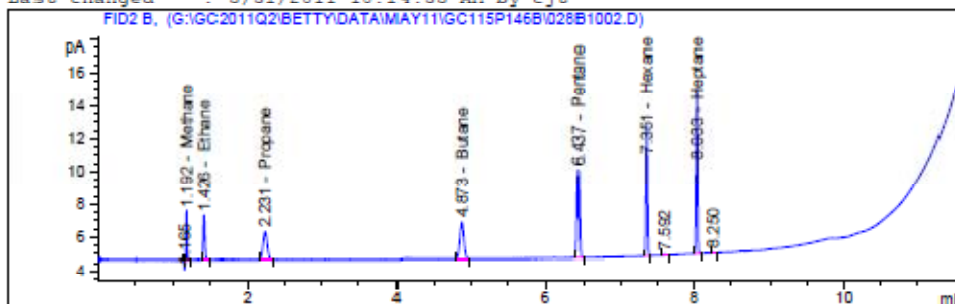
Instrument 1 5/31/2011 10:20:20 AM cjt

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1002.D  
Sample Name: gc115p119 #C3 ENV(1=900,2=100)

```
=====
Acq. Operator   : stg                      Seq. Line   : 10
Acq. Instrument : Betty                   Location    : Vial 28
Injection Date  : 19-May-11, 19:56:56      Inj         : 2
                                           Inj Volume  : External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.192	BB	2.24280	4.35692	9.77171		Methane
1.426	BB	4.22945	2.39891	10.14609		Ethane
2.231	BB	6.37346	1.61344	10.28317		Propane
4.873	BB	8.19926	1.22079	10.00954		Butane
6.437	BB	10.07255	9.81754e-1	9.88876		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	12.07783	8.22757e-1	9.93711		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.033	BB	14.12247	7.10815e-1	10.03846		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 70.07484

2 Warnings or Errors :

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

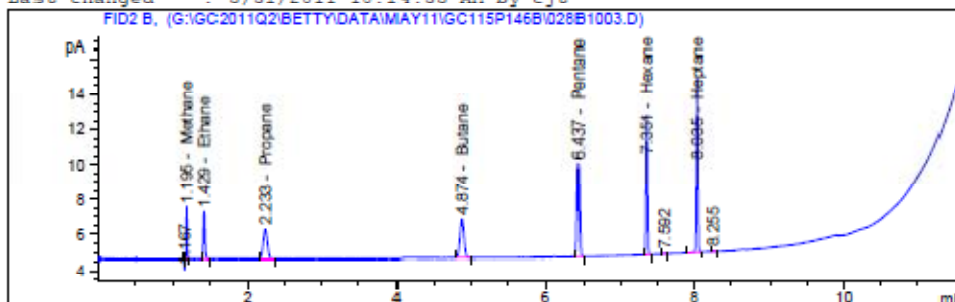
\*\*\* End of Report \*\*\*  
Page 235 of 560

Instrument 1 5/31/2011 10:20:31 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1003.D  
Sample Name: gc115p119 #C3 ENV(1=900,2=100)

=====  
Acq. Operator : stg Seq. Line : 10  
Acq. Instrument : Betty Location : Vial 28  
Injection Date : 19-May-11, 20:23:48 Inj : 3  
Inj Volume : External  
Acq. Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg  
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M  
Last changed : 5/31/2011 10:14:35 AM by cjt



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

Sorted By : Signal  
Calib. Data Modified : 5/31/2011 10:14:16 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.195	PB	2.23140	4.35668	9.72149		Methane
1.429	BB	4.20366	2.39869	10.08328		Ethane
2.233	BB	6.35703	1.61333	10.25601		Propane
4.874	BB	8.21059	1.22081	10.02354		Butane
6.437	BB	10.07164	9.81754e-1	9.88786		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	12.08011	8.22758e-1	9.93900		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.035	BB	14.12936	7.10816e-1	10.04338		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 69.95456

2 Warnings or Errors :

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

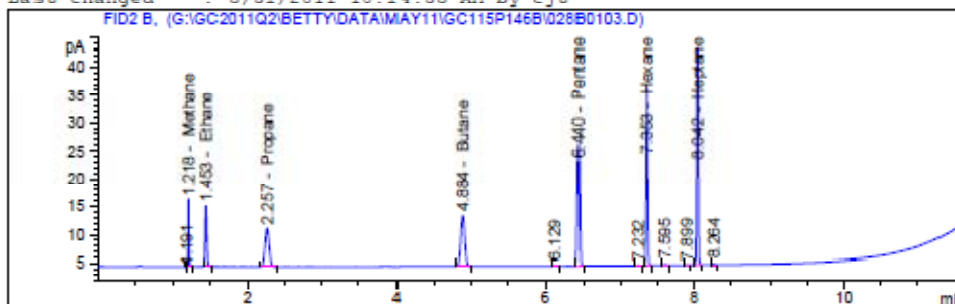
=====  
\*\*\* End of Report \*\*\*  
Page 236 of 560

Instrument 1 5/31/2011 10:20:41 AM cjt

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Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0103.D  
Sample Name: gc115p119 #C4 ENV(1=600,2=400)

```
=====
Acq. Operator   : stg                      Seq. Line :    1
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 18-May-11, 17:13:29      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.218	BB	8.97385	4.39107	39.40476		Methane
1.453	BB	16.68422	2.42557	40.46870		Ethane
2.257	BB	25.39139	1.64269	41.71020		Propane
4.884	BB	33.08843	1.23228	40.77438		Butane
6.440	BB	40.52907	9.85659e-1	39.94782		Pentane
7.263		-	-	-		1-Hexene
7.353	BB	48.29094	8.26291e-1	39.90238		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.042	BB	54.99695	7.13046e-1	39.21536		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 281.42360

2 Warnings or Errors :

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

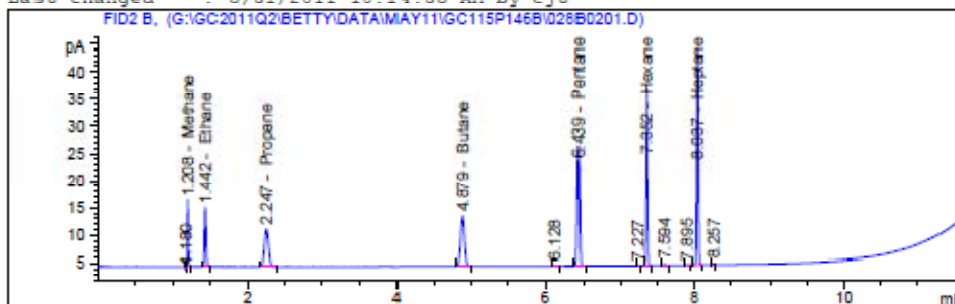
\*\*\* End of Report \*\*\*  
Page 237 of 560

Instrument 1 5/31/2011 10:14:43 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0201.D  
Sample Name: gc115p119 #C4 ENV(1=600,2=400)

```
=====
Acq. Operator   : stg                      Seq. Line :    2
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 18-May-11, 17:36:56      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.208	BB	9.09329	4.39122	39.93062		Methane
1.442	BB	16.73461	2.42559	40.59138		Ethane
2.247	BB	25.37112	1.64268	41.67671		Propane
4.879	BB	33.42011	1.23232	41.18435		Butane
6.439	BB	41.15246	9.85678e-1	40.56308		Pentane
7.263		-	-	-		1-Hexene
7.352	BB	48.99816	8.26308e-1	40.48757		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.037	BB	55.95652	7.13059e-1	39.90032		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 284.33404

2 Warnings or Errors :

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

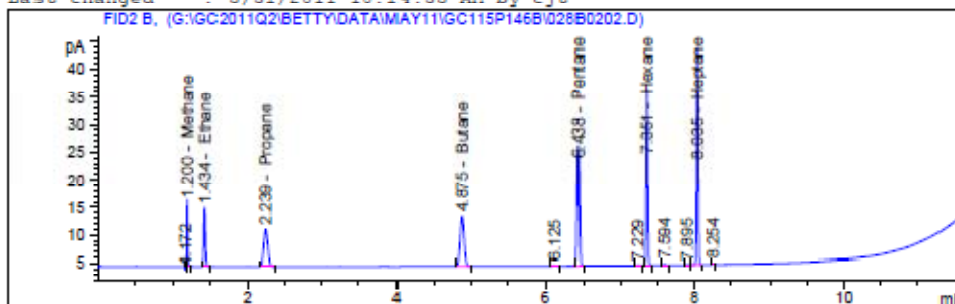
\*\*\* End of Report \*\*\*  
Page 238 of 560

Instrument 1 5/31/2011 10:15:06 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0202.D  
Sample Name: gc115p119 #C4 ENV(1=600,2=400)

```
=====
Acq. Operator   : stg                      Seq. Line :    2
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 18-May-11, 18:03:07      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.200	PB	8.99305	4.39109	39.48932		Methane
1.434	BB	16.55042	2.42549	40.14295		Ethane
2.239	BB	25.01488	1.64254	41.08803		Propane
4.875	BB	32.97086	1.23227	40.62904		Butane
6.438	BB	40.73952	9.85665e-1	40.15553		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	48.45803	8.26295e-1	40.04063		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.035	VB	54.95967	7.13046e-1	39.18875		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 280.73426

2 Warnings or Errors :

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

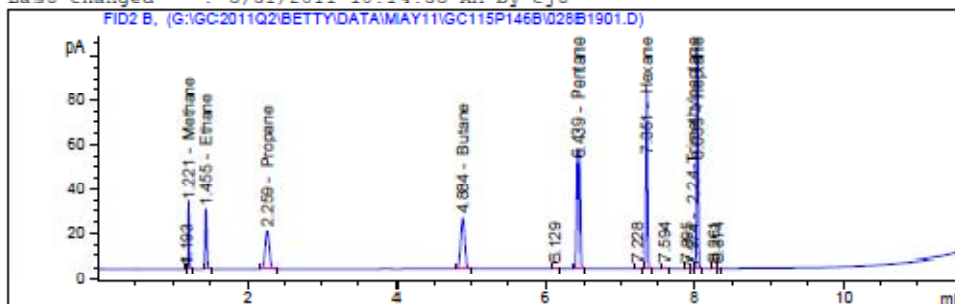
\*\*\* End of Report \*\*\*  
Page 239 of 560

Instrument 1 5/31/2011 10:15:18 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1901.D  
Sample Name: gc115p119 #C5 ENV(1=0,2=450)

```
=====
Acq. Operator   : stg                      Seq. Line :   19
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 20-May-11, 15:19:15      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.221	PB	22.33198	4.39787	98.21321		Methane
1.455	BB	41.29714	2.43096	100.39178		Ethane
2.259	BB	62.41464	1.64851	102.89095		Propane
4.884	BB	82.15972	1.23455	101.43009		Butane
6.439	BB	101.04016	9.86432e-1	99.66924		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	121.16751	8.27000e-1	100.20554		Hexane
7.777		-	-	-		Benzene
7.974	VV	9.77422e-2	4.85429e-1	4.74469e-2		2,2,4-Trimethylpentane
8.039	VB	141.09416	7.13517e-1	100.67303		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 703.52129

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
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Instrument 1 5/31/2011 10:19:33 AM cjt

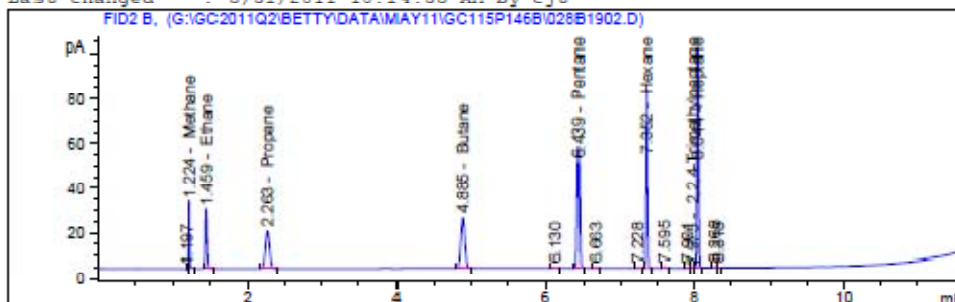
Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1902.D  
Sample Name: gc115p119 #C5 ENV(1=0,2=450)

=====

Acq. Operator	: stg	Seq. Line	: 19
Acq. Instrument	: Betty	Location	: Vial 28
Injection Date	: 20-May-11, 15:45:25	Inj	: 2
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M		
Last changed	: 5/14/2011 1:23:58 PM by stg		
Analysis Method	: G:\GC2011Q2\BETTY\METHODS\GC115P146B.M		
Last changed	: 5/31/2011 10:14:35 AM by cjt		



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : 5/31/2011 10:14:16 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.224	PB	22.26654	4.39786	97.92515		Methane
1.459	BB	40.99392	2.43094	99.65356		Ethane
2.263	BB	61.96814	1.64848	102.15311		Propane
4.885	BB	81.85515	1.23454	101.05361		Butane
6.439	BB	101.13014	9.86432e-1	99.75805		Pentane
7.263		-	-	-		1-Hexene
7.352	BB	121.32198	8.27001e-1	100.33335		Hexane
7.777		-	-	-		Benzene
7.975	VV	1.01070e-1	4.85429e-1	4.90625e-2		2,2,4-Trimethylpentane
8.044	VB	141.26674	7.13517e-1	100.79622		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 701.72212

2 Warnings or Errors :

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

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

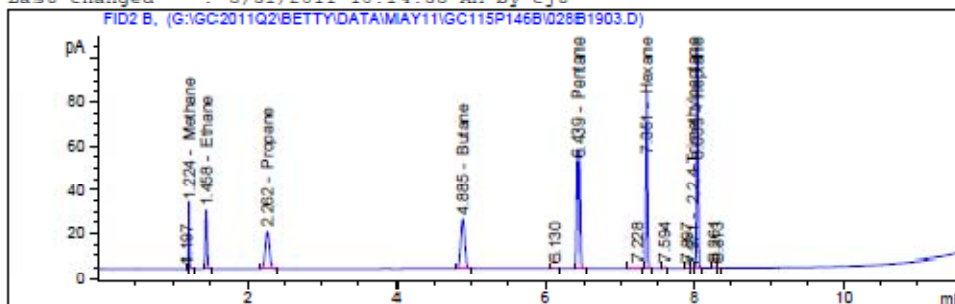
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Instrument 1 5/31/2011 10:19:43 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1903.D  
Sample Name: gc115p119 #C5 ENV(1=0,2=450)

```
=====
Acq. Operator   : stg                      Seq. Line :   19
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 20-May-11, 16:11:24      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.224	PB	22.35463	4.39788	98.31296		Methane
1.458	BB	41.05029	2.43094	99.79080		Ethane
2.262	BB	62.05089	1.64848	102.28986		Propane
4.885	BB	82.07298	1.23455	101.32286		Butane
6.439	BB	101.56341	9.86435e-1	100.18566		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	121.82059	8.27003e-1	100.74595		Hexane
7.777		-	-	-		Benzene
7.971	VV	9.78492e-2	4.85429e-1	4.74989e-2		2,2,4-Trimethylpentane
8.039	VB	141.95737	7.13518e-1	101.28920		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 703.98478

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
E# 051168 Page 242 of 560

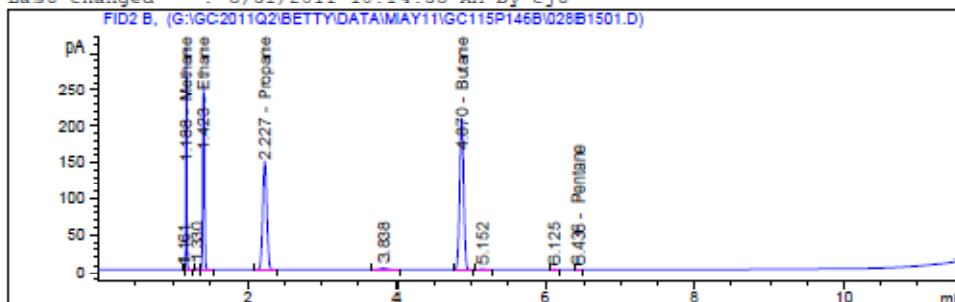
Instrument 1 5/31/2011 10:19:55 AM cjt

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1501.D  
Sample Name: gc115p119 #C6 ENV(1=900,3=100)

```
=====
Acq. Operator   : stg                      Seq. Line :   15
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 20-May-11, 01:54:48      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.188	PB	225.07463	4.40199	990.77685		Methane
1.423	VB	399.93799	2.43424	973.54572		Ethane
2.227	BB	567.37726	1.65206	937.33933		Propane
4.870	BB	772.27301	1.23591	954.46069		Butane
6.436	BB	6.91456e-2	9.66712e-1	6.68439e-2		Pentane
7.263		-	-	-		1-Hexene
7.351		-	-	-		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.040		-	-	-		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 3856.18944

2 Warnings or Errors :

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

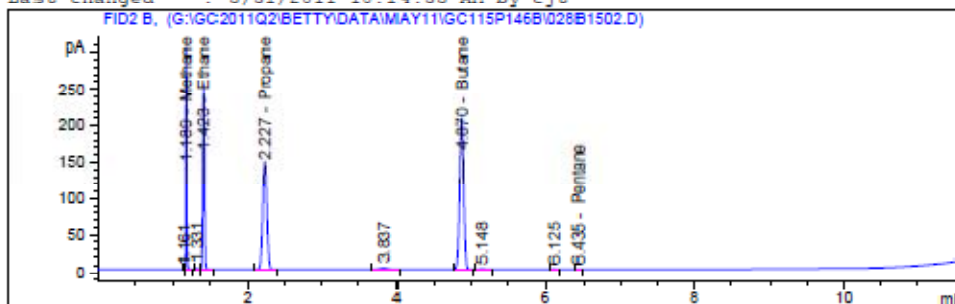
\*\*\* End of Report \*\*\*  
Page 243 of 560

Instrument 1 5/31/2011 10:23:24 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1502.D  
Sample Name: gc115p119 #C6 ENV(1=900,3=100)

```
=====
Acq. Operator   : stg                      Seq. Line :   15
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 20-May-11, 02:22:10      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.189	PB	224.84171	4.40199	989.75140		Methane
1.423	VB	399.36365	2.43424	972.14742		Ethane
2.227	BB	566.40955	1.65206	935.74019		Propane
4.870	BB	771.15826	1.23591	953.08278		Butane
6.435	BB	7.94569e-2	9.66712e-1	7.68120e-2		Pentane
7.263		-	-	-		1-Hexene
7.351		-	-	-		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.040		-	-	-		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 3850.79862

2 Warnings or Errors :

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

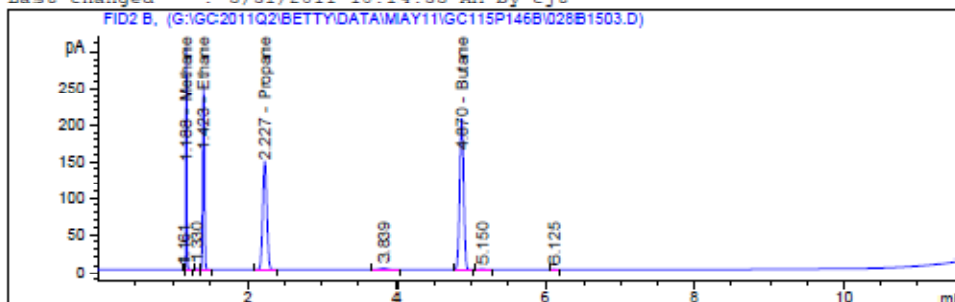
\*\*\* End of Report \*\*\*  
Page 244 of 560

Instrument 1 5/31/2011 10:23:35 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1503.D  
Sample Name: gc115p119 #C6 ENV(1=900,3=100)

```
=====
Acq. Operator   : stg                      Seq. Line :   15
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 20-May-11, 02:49:39      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.188	PB	223.48598	4.40199	983.78288		Methane
1.423	VB	396.97195	2.43424	966.32456		Ethane
2.227	BB	563.06708	1.65205	930.21678		Propane
4.870	BB	766.58899	1.23591	947.43483		Butane
6.439	-	-	-	-		Pentane
7.263	-	-	-	-		1-Hexene
7.351	-	-	-	-		Hexane
7.777	-	-	-	-		Benzene
7.971	-	-	-	-		2,2,4-Trimethylpentane
8.040	-	-	-	-		Heptane
8.451	-	-	-	-		Toluene
8.624	-	-	-	-		Octane
8.992	-	-	-	-		Ethylbenzene
9.033	-	-	-	-		m/p-xylene
9.176	-	-	-	-		o-xylene

Totals : 3827.75905

2 Warnings or Errors :

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

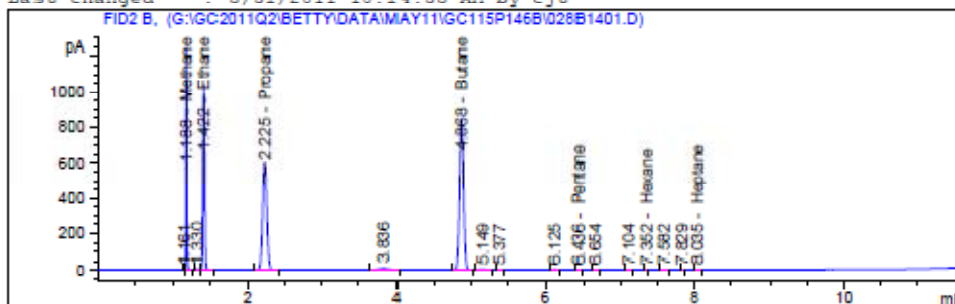
\*\*\* End of Report \*\*\*  
Page 245 of 560

Instrument 1 5/31/2011 10:23:49 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1401.D  
Sample Name: gc115p119 #C7 ENV(1=600,3=422.12)

```
=====
Acq. Operator   : stg                      Seq. Line :   14
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 20-May-11, 00:38:36      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



# External Standard Report

```
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.188	PB	922.79535	4.40234	4062.45480		Methane
1.422	VB	1639.99902	2.43453	3992.62227		Ethane
2.225	BB	2326.70728	1.65239	3844.62400		Propane
4.868	BB	3167.32666	1.23603	3914.92254		Butane
6.436	BB	2.60024e-1	9.66712e-1	2.51369e-1		Pentane
7.263		-	-	-		1-Hexene
7.352	BV	1.09434e-1	8.09048e-1	8.85371e-2		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.035	BB	9.54420e-2	7.01912e-1	6.69918e-2		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 1.58150e4

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
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Instrument 1 5/31/2011 10:22:44 AM cjt

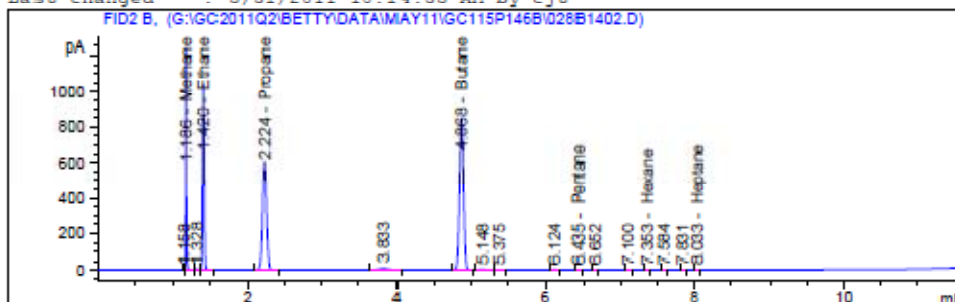
Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1402.D  
Sample Name: gc115p119 #C7 ENV(1=600,3=422.12)

=====

Acq. Operator	: stg	Seq. Line	: 14
Acq. Instrument	: Betty	Location	: Vial 28
Injection Date	: 20-May-11, 01:02:10	Inj	: 2
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M		
Last changed	: 5/14/2011 1:23:58 PM by stg		
Analysis Method	: G:\GC2011Q2\BETTY\METHODS\GC115P146B.M		
Last changed	: 5/31/2011 10:14:35 AM by cjt		

FID2 B, (G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1402.D)



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : 5/31/2011 10:14:16 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.186	PB	920.91370	4.40234	4054.17092		Methane
1.420	VB	1636.09607	2.43453	3983.12007		Ethane
2.224	BB	2321.43579	1.65239	3835.91289		Propane
4.868	BB	3160.30933	1.23603	3906.24860		Butane
6.435	BB	2.20230e-1	9.66712e-1	2.12899e-1		Pentane
7.263		-	-	-		1-Hexene
7.353	BB	4.62306e-2	8.09048e-1	3.74028e-2		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.033	BB	5.00043e-2	7.01912e-1	3.50986e-2		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 1.57797e4

2 Warnings or Errors :

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

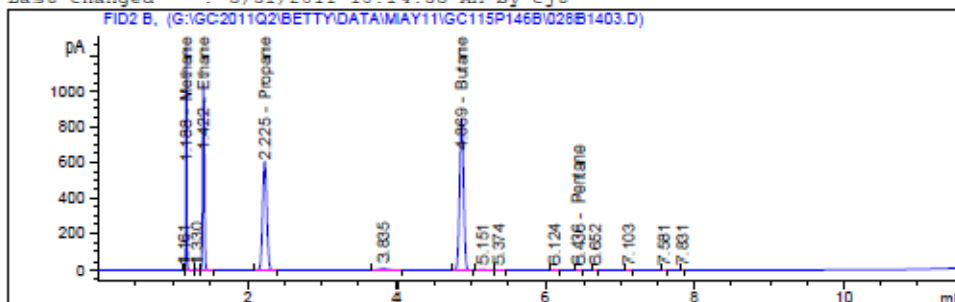
\*\*\* End of Report \*\*\*  
Page 247 of 560

Instrument 1 5/31/2011 10:22:55 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1403.D  
Sample Name: gc115p119 #C7 ENV(1=600,3=422.12)

```
=====
Acq. Operator   : stg                      Seq. Line :   14
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 20-May-11, 01:27:47      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.188	PB	921.28851	4.40234	4055.82103		Methane
1.422	VB	1636.85986	2.43453	3984.97962		Ethane
2.225	BB	2322.18750	1.65239	3837.15509		Propane
4.869	BB	3161.28931	1.23603	3907.45993		Butane
6.436	BB	1.89754e-1	9.66712e-1	1.83437e-1		Pentane
7.263		-	-	-		1-Hexene
7.351		-	-	-		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.040		-	-	-		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 1.57856e4

2 Warnings or Errors :

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

```
=====
```

\*\*\* End of Report \*\*\*  
Page 248 of 560

Instrument 1 5/31/2011 10:23:06 AM cjt

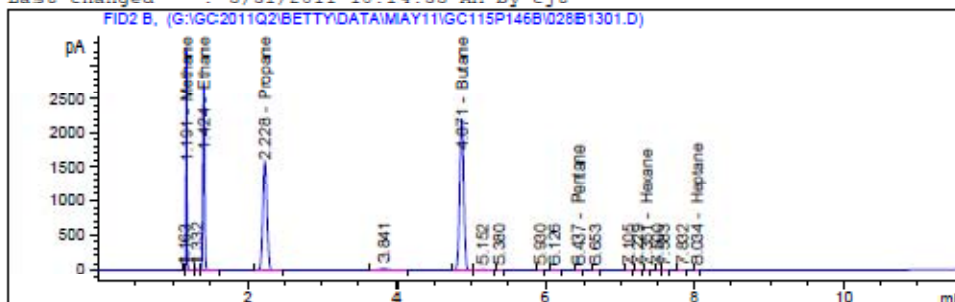
Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1301.D  
Sample Name: gc115p119 #C8 ENV(1=0,3=467.78)

=====

Acq. Operator	: stg	Seq. Line	: 13
Acq. Instrument	: Betty	Location	: Vial 28
Injection Date	: 19-May-11, 23:23:30	Inj	: 1
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M		
Last changed	: 5/14/2011 1:23:58 PM by stg		
Analysis Method	: G:\GC2011Q2\BETTY\METHODS\GC115P146B.M		
Last changed	: 5/31/2011 10:14:35 AM by cjt		



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : 5/31/2011 10:14:16 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.191	PV	2397.21216	4.40240	1.05535e4		Methane
1.424	VB S	4300.35889	2.43458	1.04696e4		Ethane
2.228	BB	6102.04736	1.65245	1.00834e4		Propane
4.871	BV	8245.55664	1.23606	1.01920e4		Butane
6.437	BB	3.69414	9.72783e-1	3.59359		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	2.01829	8.09048e-1	1.63289		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	1.27157	7.01912e-1	8.92528e-1		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 4.13045e4

2 Warnings or Errors :

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

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

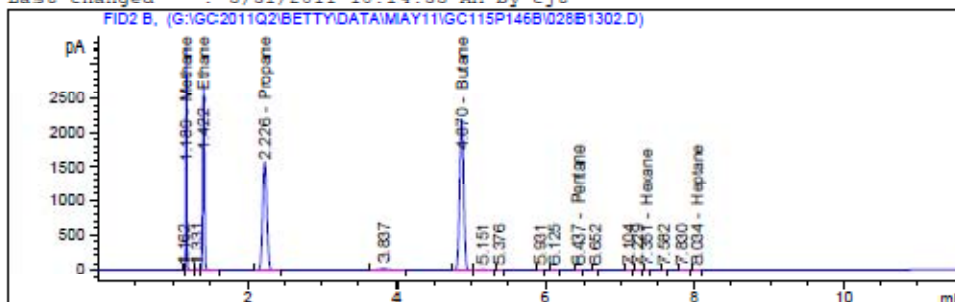
Page 249 of 560

Instrument 1 5/31/2011 10:22:04 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1302.D  
Sample Name: gc115p119 #C8 ENV(1=0,3=467.78)

```
=====
Acq. Operator   : stg                      Seq. Line :   13
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 23:50:38      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



# External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.189	PV	2400.05005	4.40240	1.05660e4		Methane
1.422	VB S	4274.99707	2.43458	1.04078e4		Ethane
2.226	BB	6067.17139	1.65245	1.00257e4		Propane
4.870	BV	8243.61523	1.23606	1.01896e4		Butane
6.437	BB	1.46128	9.66712e-1	1.41264		Pentane
7.263		-	-	-		1-Hexene
7.351	BV	7.02892e-1	8.09048e-1	5.68674e-1		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	5.29311e-1	7.01912e-1	3.71530e-1		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 4.11915e4

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
Page 250 of 560

Instrument 1 5/31/2011 10:22:14 AM cjt

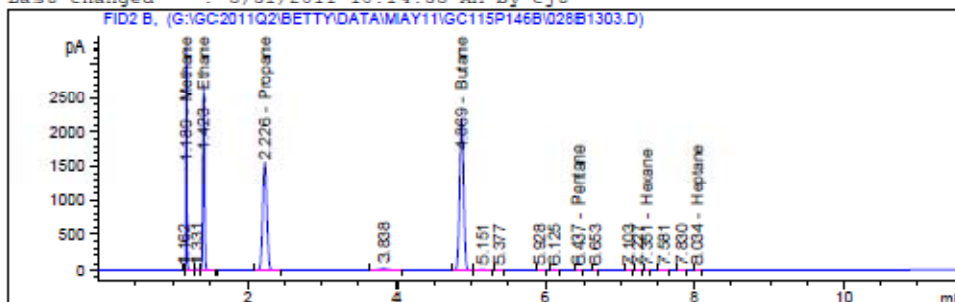
Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1303.D  
Sample Name: gc115p119 #C8 ENV(1=0,3=467.78)

=====

Acq. Operator	: stg	Seq. Line	: 13
Acq. Instrument	: Betty	Location	: Vial 28
Injection Date	: 20-May-11, 00:15:04	Inj	: 3
		Inj Volume	: External
Acq. Method	: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M		
Last changed	: 5/14/2011 1:23:58 PM by stg		
Analysis Method	: G:\GC2011Q2\BETTY\METHODS\GC115P146B.M		
Last changed	: 5/31/2011 10:14:35 AM by cjt		



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : 5/31/2011 10:14:16 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.189	PV	2390.78857	4.40240	1.05252e4		Methane
1.423	VB S	4251.44092	2.43458	1.03505e4		Ethane
2.226	BB	6033.33984	1.65245	9969.81706		Propane
4.869	BV	8207.68945	1.23606	1.01452e4		Butane
6.437	BB	8.79181e-1	9.66712e-1	8.49915e-1		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	3.36212e-1	8.09048e-1	2.72012e-1		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.034	BB	2.46366e-1	7.01912e-1	1.72927e-1		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 4.09920e4

2 Warnings or Errors :

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

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

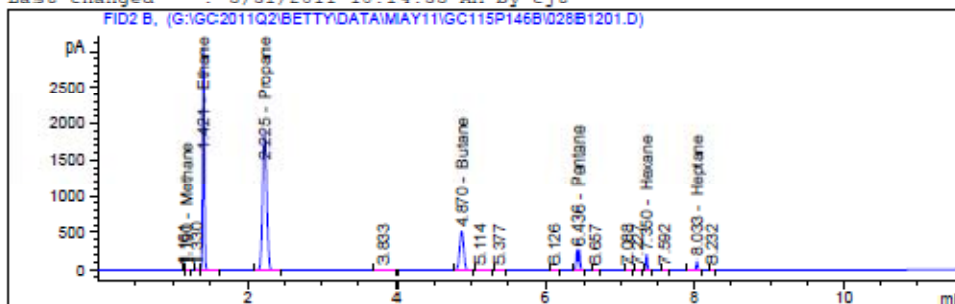
Page 251 of 560

Instrument 1 5/31/2011 10:22:32 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1201.D  
Sample Name: gc115p119 #C9 ENV(1=1200,4=467.78)

```
=====
Acq. Operator   : stg                      Seq. Line : 12
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 22:07:20      Inj       : 1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.190	PB	6.96519e-2	4.22968	2.94605e-1		Methane
1.421	VB S	4779.36865	2.43459	1.16358e4		Ethane
2.225	BB	7263.14014	1.65246	1.20021e4		Propane
4.870	BB	1910.45630	1.23601	2361.33866		Butane
6.436	BB	485.08508	9.86842e-1	478.70235		Pentane
7.263		-	-	-		1-Hexene
7.350	BB	288.45770	8.27273e-1	238.63313		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.033	BB	165.04520	7.13560e-1	117.76969		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 2.68346e4

2 Warnings or Errors :

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

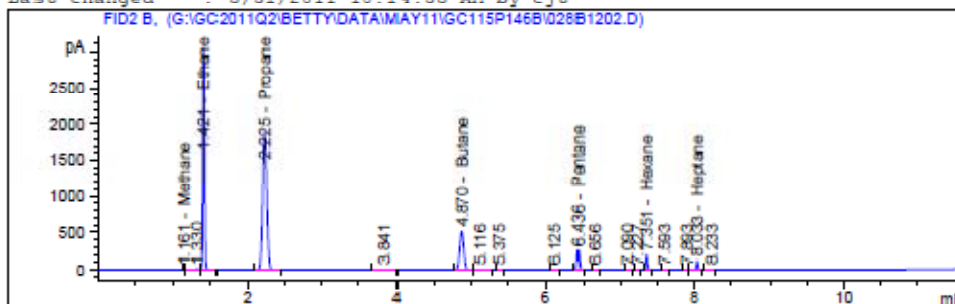
\*\*\* End of Report \*\*\*  
E# 051168 Page 252 of 560

Instrument 1 5/31/2011 10:21:30 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1202.D  
Sample Name: gc115p119 #C9 ENV(1=1200,4=467.78)

```
=====
Acq. Operator   : stg                      Seq. Line : 12
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 22:31:54      Inj       : 2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.161	BP N	3.51233e-1	4.22968	1.48560		Methane
1.421	VB S	4797.84033	2.43459	1.16808e4		Ethane
2.225	BB	7290.04541	1.65246	1.20465e4		Propane
4.870	BB	1917.01807	1.23601	2369.44948		Butane
6.436	BB	486.54935	9.86842e-1	480.14751		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	289.29269	8.27273e-1	239.32406		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.033	VB	165.69470	7.13561e-1	118.23332		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 2.69359e4

2 Warnings or Errors :

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

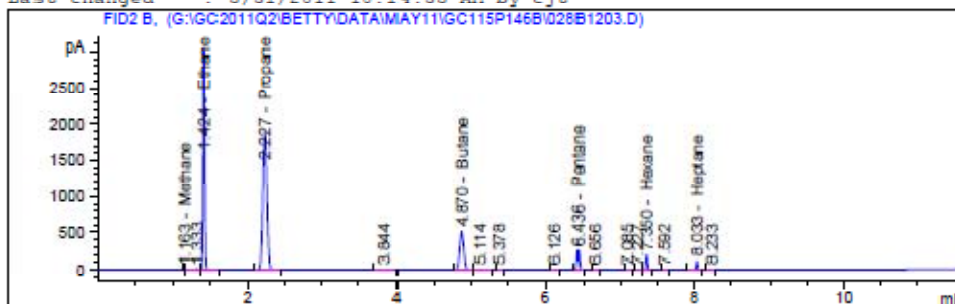
\*\*\* End of Report \*\*\*  
E# 051168 Page 253 of 560

Instrument 1 5/31/2011 10:21:42 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B1203.D  
Sample Name: gc115p119 #C9 ENV(1=1200,4=467.78)

=====  
Acq. Operator : stg Seq. Line : 12  
Acq. Instrument : Betty Location : Vial 28  
Injection Date : 19-May-11, 22:59:00 Inj : 3  
Inj Volume : External  
Acq. Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg  
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M  
Last changed : 5/31/2011 10:14:35 AM by cjt



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

Sorted By : Signal  
Calib. Data Modified : 5/31/2011 10:14:16 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.163	BP N	3.41293e-1	4.22968	1.44356		Methane
1.424	VB S	4790.38916	2.43459	1.16626e4		Ethane
2.227	BB	7278.09424	1.65246	1.20268e4		Propane
4.870	BB	1913.96350	1.23601	2365.67382		Butane
6.436	BB	485.88300	9.86842e-1	479.48985		Pentane
7.263		-	-	-		1-Hexene
7.350	BB	288.86472	8.27273e-1	238.96992		Hexane
7.777		-	-	-		Benzene
7.971		-	-	-		2,2,4-Trimethylpentane
8.033	BB	165.41820	7.13561e-1	118.03594		Heptane
8.451		-	-	-		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 2.68930e4

2 Warnings or Errors :

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

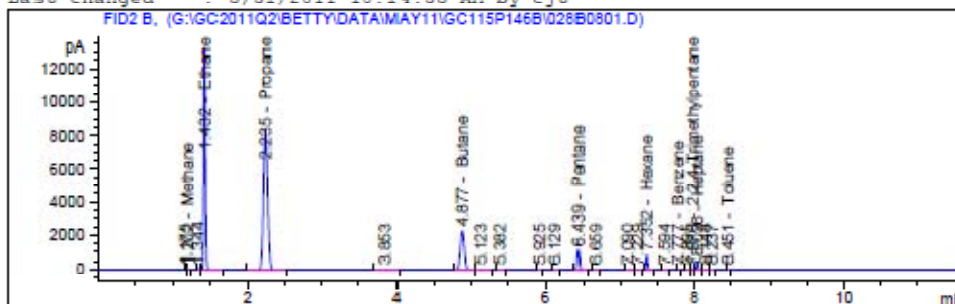
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\*\*\* End of Report \*\*\*  
E# 051168 Page 254 of 560

Instrument 1 5/31/2011 10:21:52 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0801.D  
Sample Name: gc115p119 #C10 ENV(1=0,4=400)

=====  
Acq. Operator : stg Seq. Line : 8  
Acq. Instrument : Betty Location : Vial 28  
Injection Date : 19-May-11, 16:30:54 Inj : 1  
Inj Volume : External  
Acq. Method : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Last changed : 5/14/2011 1:23:58 PM by stg  
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M  
Last changed : 5/31/2011 10:14:35 AM by cjt



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

Sorted By : Signal  
Calib. Data Modified : 5/31/2011 10:14:16 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.202	PB	1.21948e-1	4.22968	5.15799e-1		Methane
1.432	VB S	2.10371e4	2.43461	5.12172e4		Ethane
2.235	BB S	3.20033e4	1.65249	5.28851e4		Propane
4.877	BV	8420.74023	1.23606	1.04085e4		Butane
6.439	BB	2136.99414	9.86925e-1	2109.05389		Pentane
7.263		-	-	-		1-Hexene
7.352	BB	1268.45117	8.27425e-1	1049.54817		Hexane
7.777	BB	4.62748e-2	7.38950e-1	3.41948e-2		Benzene
7.970	VV	5.43492e-1	4.85429e-1	2.63827e-1		2,2,4-Trimethylpentane
8.036	VB	721.45251	7.13758e-1	514.94277		Heptane
8.451	BB	1.11005e-1	5.80947e-1	6.44883e-2		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 1.18185e5

2 Warnings or Errors :

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

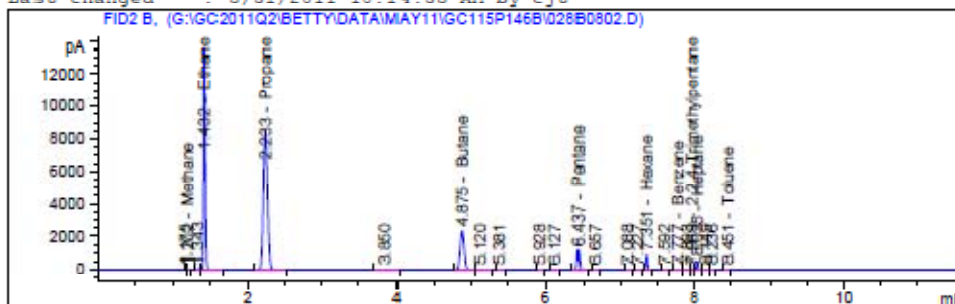
=====  
\*\*\* End of Report \*\*\*  
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Instrument 1 5/31/2011 10:16:39 AM cjt

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0802.D  
Sample Name: gc115p119 #C10 ENV(1=0,4=400)

```
=====
Acq. Operator   : stg                      Seq. Line :    8
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 16:57:18     Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.202	PB	6.77623e-2	4.22968	2.86613e-1		Methane
1.432	VB S	2.15263e4	2.43461	5.24083e4		Ethane
2.233	BB S	3.27394e4	1.65249	5.41015e4		Propane
4.875	BV	8615.77930	1.23606	1.06496e4		Butane
6.437	BB	2187.23511	9.86926e-1	2158.63921		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	1299.46863	8.27426e-1	1075.21418		Hexane
7.777	BB	4.38644e-2	7.38950e-1	3.24136e-2		Benzene
7.969	VV	5.68898e-1	4.85429e-1	2.76160e-1		2,2,4-Trimethylpentane
8.035	VB	741.72577	7.13760e-1	529.41417		Heptane
8.451	BB	7.30314e-2	5.80947e-1	4.24274e-2		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 1.20923e5

2 Warnings or Errors :

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

\*\*\* End of Report \*\*\*  
E# 051168 Page 256 of 560

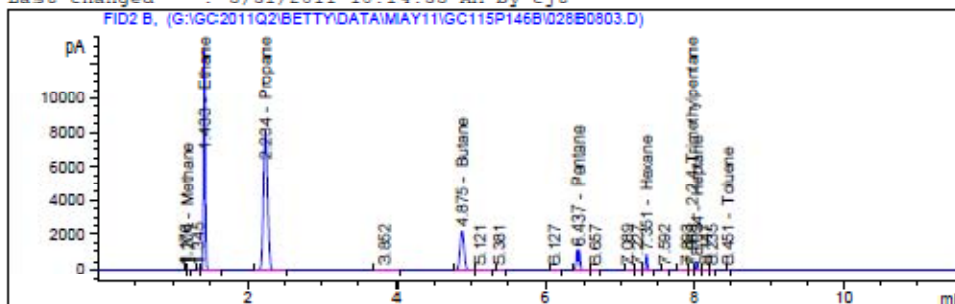
Instrument 1 5/31/2011 10:16:50 AM cjt

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P146B\028B0803.D  
Sample Name: gc115p119 #C10 ENV(1=0,4=400)

```
=====
Acq. Operator   : stg                      Seq. Line :    8
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 19-May-11, 17:22:28      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P146B.M
Last changed    : 5/31/2011 10:14:35 AM by cjt
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 5/31/2011 10:14:16 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.204	PB	5.91618e-2	4.22968	2.50235e-1		Methane
1.433	VB S	2.04418e4	2.43461	4.97679e4		Ethane
2.234	BB S	3.10895e4	1.65249	5.13750e4		Propane
4.875	BV	8179.62354	1.23606	1.01105e4		Butane
6.437	BV	2076.61792	9.86925e-1	2049.46558		Pentane
7.263		-	-	-		1-Hexene
7.351	BB	1234.08044	8.27424e-1	1021.10743		Hexane
7.777		-	-	-		Benzene
7.968	VV	5.36155e-1	4.85429e-1	2.60265e-1		2,2,4-Trimethylpentane
8.034	VB	704.99744	7.13757e-1	503.19685		Heptane
8.451	BB	5.14263e-2	5.80947e-1	2.98760e-2		Toluene
8.624		-	-	-		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 1.14828e5

2 Warnings or Errors :

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

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

Instrument 1 5/31/2011 10:17:01 AM cjt

Page 1 of 1

=====

Calibration Table

=====

Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM

Rel. Reference Window : 0.050 %  
 Abs. Reference Window : 0.050 min  
 Rel. Non-ref. Window : 0.050 %  
 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: TCD1 A,  
 Signal 2: FID2 B,

RetTime	Lvl	Amount	Area	Amt/Area	Ref Grp Name
[min]	Sig	[ppm]			
1.186	2 21	2.50000	6.89228e-1	3.62726	Methane
22		5.00000	1.31732	3.79558	
23		10.00000	2.59068	3.85999	
24		40.00000	9.29012	4.30565	
25		100.00000	22.63083	4.41875	
26		1002.00000	248.87603	4.02610	
27		4008.00000	981.68278	4.08279	
28		1.00200e4	2406.52287	4.16368	
1.416	2 21	2.50000	1.07427	2.32716	Ethane
22		5.00000	2.12438	2.35262	
23		10.00000	4.25607	2.34958	
24		40.00000	16.99610	2.35348	
25		100.00000	41.57786	2.40513	
26		999.00000	442.98926	2.25513	
27		3996.00000	1745.08176	2.28985	
28		9990.00000	4284.55697	2.33163	
29		1.24150e4	5217.17171	2.37964	
30		4.96600e4	2.05210e4	2.41996	
2.218	2 21	2.50000	1.64754	1.61742	Propane
22		5.00000	3.21347	1.55595	
23		10.00000	6.46481	1.54683	
24		40.00000	25.74404	1.55376	
25		100.00000	62.92187	1.58927	
26		1002.00000	629.22229	1.59244	
27		4008.00000	2476.93880	1.61813	
28		1.00200e4	6081.31820	1.64767	
29		1.24150e4	7931.83854	1.57253	

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RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref Grp Name
4.861	2 21	2.50000	2.26198	1.10523	Butane
	22	5.00000	4.44261	1.12547	
	23	10.00000	8.72721	1.14584	
	24	40.00000	34.28025	1.16685	
	25	100.00000	83.70162	1.19472	
	26	999.00000	858.22396	1.18403	
	29	2455.00000	2089.19613	1.17509	
	27	3996.00000	3373.93058	1.18438	
	30	9820.00000	8204.97829	1.19697	
	28	9990.00000	8251.41829	1.21070	
6.429	2 21	2.50000	2.73001	9.15748e-1	Pentane
	22	5.00000	5.39646	9.26534e-1	
	23	10.00000	10.74244	9.30887e-1	
	24	40.00000	42.22217	9.47370e-1	
	25	100.00000	102.32407	9.77287e-1	
	29	500.50000	531.21134	9.42186e-1	
	30	2002.00000	2079.93268	9.62531e-1	
7.263	2 11	1.00300	1.18569	8.45919e-1	1-Hexene
	12	4.01200	4.81775	8.32753e-1	
	13	20.06000	23.97436	8.36727e-1	
	14	100.30000	118.15166	8.48909e-1	
	15	200.60000	236.89395	8.46792e-1	
7.347	2 21	2.50000	3.24052	7.71481e-1	Hexane
	22	5.00000	6.43127	7.77452e-1	
	23	10.00000	12.85922	7.77652e-1	
	24	40.00000	50.75540	7.88094e-1	
	25	100.00000	122.62387	8.15502e-1	
	29	250.65000	316.67920	7.91495e-1	
	30	1002.60000	1232.59054	8.13409e-1	
7.772	2 1	2.00000	2.67407	7.47926e-1	Benzene
	2	5.00000	6.68419	7.48034e-1	
	3	10.20000	13.43705	7.59095e-1	
	4	34.00000	42.45451	8.00857e-1	
	5	102.00000	128.52218	7.93637e-1	
7.986	2 11	1.00300	2.06600	4.86714e-1	2,2,4-Trimethylpentane
	12	4.01200	6.72700	5.96403e-1	
	13	20.06000	31.99500	6.26973e-1	
	14	100.30000	154.85000	6.47724e-1	
	15	200.60000	308.95000	6.50559e-1	
8.035	2 21	2.50000	3.00597	6.56966e-1	Heptane
	22	5.00000	7.57644	6.59941e-1	
	23	10.00000	15.16167	6.59558e-1	
	24	40.00000	59.40402	6.73355e-1	
	25	100.00000	142.34942	7.02497e-1	
	29	123.52500	182.01407	6.78656e-1	
	30	494.10000	689.37177	7.06491e-1	
8.446	2 1	1.97600	3.34492	5.90746e-1	Toluene
	2	4.94000	7.96314	6.20358e-1	
	3	10.10000	15.97207	6.32354e-1	
	4	33.67000	47.97475	7.01828e-1	
	5	101.00000	144.44438	6.99231e-1	
8.624	2 11	1.00300	2.06499	4.85716e-1	Octane
	12	4.01200	6.72740	5.96368e-1	
	13	20.06000	31.99486	6.26976e-1	
	14	100.30000	154.84826	6.47731e-1	
	15	200.60000	308.34983	6.50560e-1	
8.992	2 1	1.99000	3.06646	5.14609e-1	Ethylbenzene
	2	4.95000	9.14004	5.41573e-1	
	3	9.89000	18.20062	5.43388e-1	
	4	32.97000	53.10119	6.20890e-1	
	5	98.90000	158.59751	6.16694e-1	

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RetTime [min]	Lvl Sig	Amount [ppm]	Area	Amt/Area	Ref Grp Name
9.033	2	2.01200	4.96062	4.05594e-1	m/p-xylene
	2	5.03000	11.00098	4.57232e-1	
	3	19.82000	37.92149	5.22659e-1	
	4	66.07000	106.15308	6.22403e-1	
	5	198.20000	317.63295	6.22507e-1	
9.176	2	2.04000	3.99668	5.10424e-1	o-xylene
	2	5.10000	9.33723	5.46200e-1	
	3	10.00000	18.64547	5.36323e-1	
	4	33.33000	53.92633	6.18065e-1	
	5	100.00000	162.25704	6.16306e-1	

More compound-specific settings:

Compound: Methane

Time Window : From 1.106 min To 1.297 min

Compound: Heptane

Time Window : From 7.992 min To 8.102 min

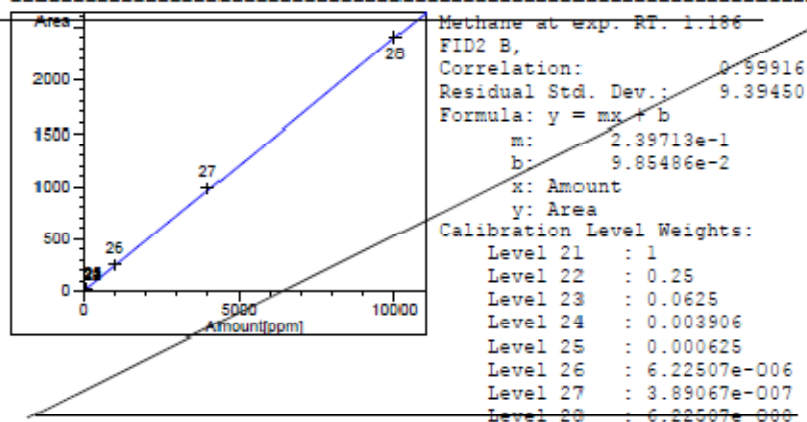
1 Warnings or Errors :

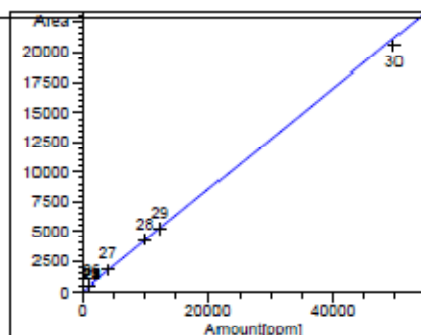
Warning : Cal. table open and changed while report was generated.

#### Peak Sum Table

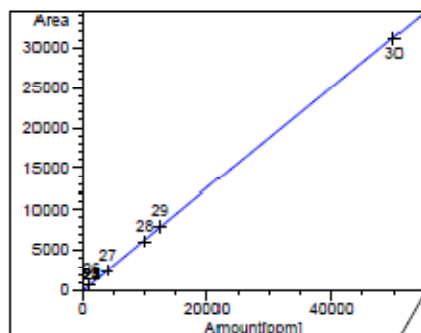
Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.260	1.850	None	2.3466	1.0000	None
as Propane	1.850	3.600	None	1.5795	1.0000	None
as Butane	3.600	5.700	None	1.1669	1.0000	None
as Pentane	5.700	6.950	None	9.4300e-1	1.0000	None
as Hexane	6.950	7.750	None	7.6840e-1	1.0000	None
as Heptane	7.750	11.600	None	6.7700e-1	1.0000	None

#### Calibration Curves

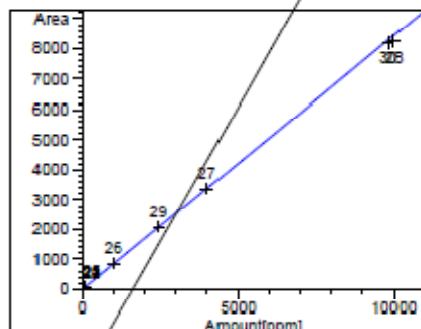




Ethane at exp. RT: 1.416  
 FID2 B,  
 Correlation: 0.99973  
 Residual Std. Dev.: 225.22567  
 Formula:  $y = mx + b$   
 m: 4.25931e-1  
 b: 5.50665e-3  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 : 6.26252e-006  
 Level 27 : 3.91407e-007  
 Level 28 : 6.26252e-008  
 Level 29 : 4.05496e-008  
 Level 30 : 2.53435e-009

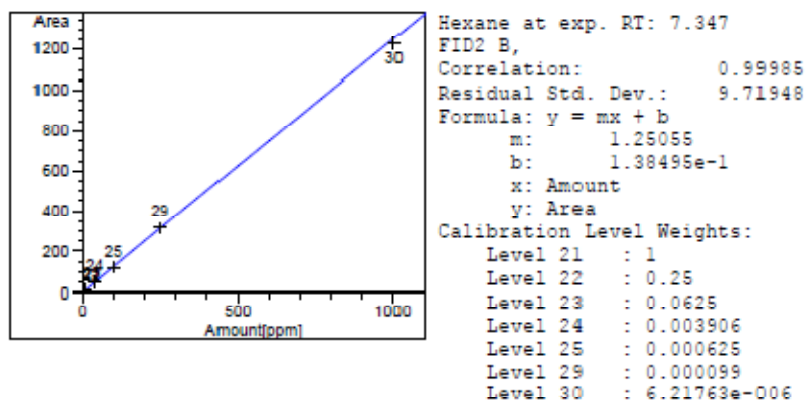
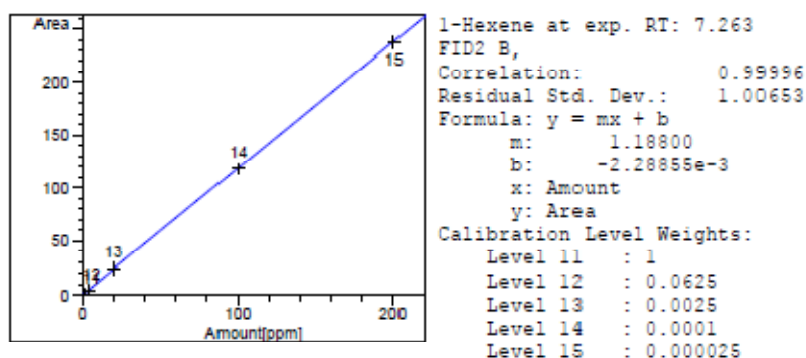
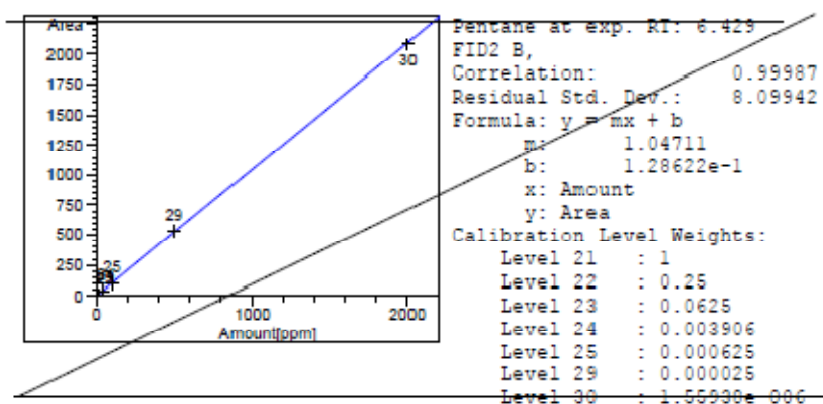


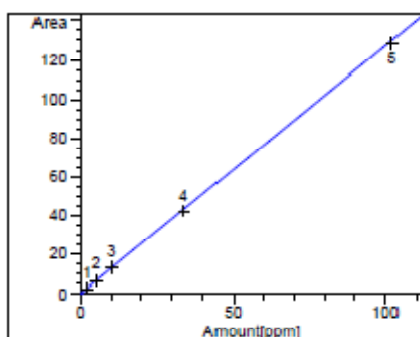
Propane at exp. RT: 2.218  
 FID2 B,  
 Correlation: 0.99985  
 Residual Std. Dev.: 89.98191  
 Formula:  $y = mx + b$   
 m: 6.27016e-1  
 b: 8.69183e-2  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 : 6.22507e-006  
 Level 27 : 3.89067e-007  
 Level 28 : 6.22507e-008  
 Level 29 : 4.01122e-008  
 Level 30 : 2.50701e-009



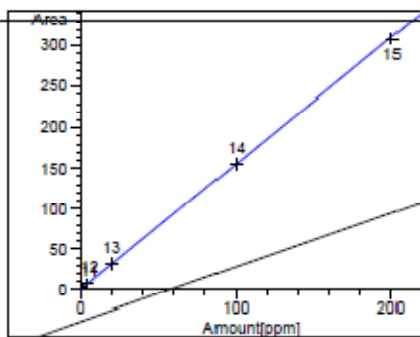
Butane at exp. RT: 4.861  
 FID2 B,  
 Correlation: 0.99990  
 Residual Std. Dev.: 76.19314  
 Formula:  $y = mx + b$   
 m: 8.45175e-1  
 b: 1.68457e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 : 6.26252e-006  
 Level 27 : 1.037e-006  
 Level 28 : 3.91407e-007  
 Level 29 : 6.48122e-008  
 Level 30 : 6.26252e-008

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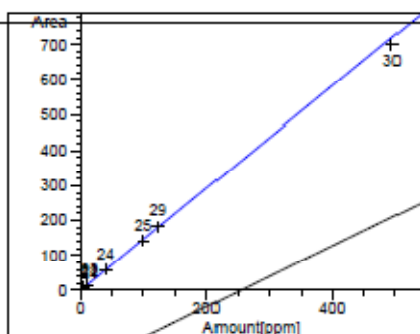




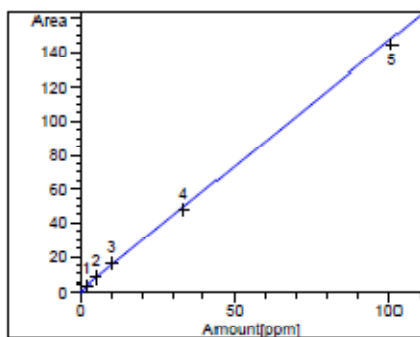
Benzene at exp. RT: 7.772  
 FID2 B,  
 Correlation: 0.99964  
 Residual Std. Dev.: 1.05582  
 Formula:  $y = mx + b$   
 m: 1.27315  
 b: 1.60242e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.16  
 Level 3 : 0.038447  
 Level 4 : 0.00346  
 Level 5 : 0.000384



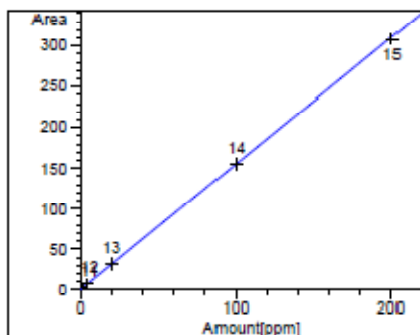
2,2,4-Trimethylpentane at exp. RT: 7.996  
 FID2 B,  
 Correlation: 0.99996  
 Residual Std. Dev.: 1.80168  
 Formula:  $y = mx + b$   
 m: 1.54751  
 b: 5.14061e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 11 : 1  
 Level 12 : 0.0625  
 Level 13 : 0.0025  
 Level 14 : 0.0001  
 Level 15 : 0.000025



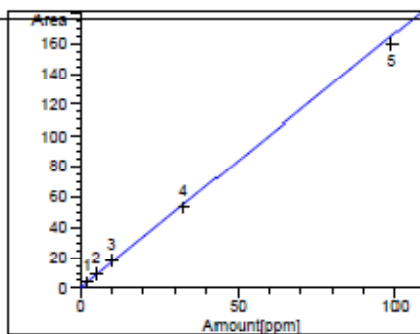
Heptane at exp. RT: 8.036  
 FID2 B,  
 Correlation: 0.99968  
 Residual Std. Dev.: 9.28013  
 Formula:  $y = mx + b$   
 m: 1.45618  
 b: 2.11860e-1  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 21 : 1  
 Level 22 : 0.25  
 Level 23 : 0.0625  
 Level 24 : 0.003906  
 Level 25 : 0.000625  
 Level 26 : 0.00041  
 Level 29 : 0.000026



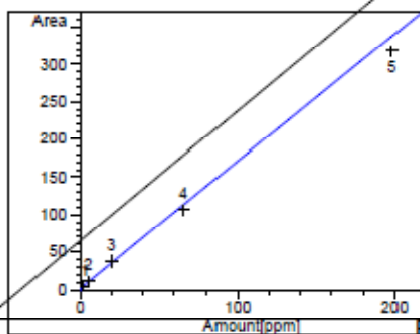
Toluene at exp. RT: 8.446  
 FID2 B,  
 Correlation: 0.99897  
 Residual Std. Dev.: 2.36808  
 Formula:  $y = mx + b$   
 m: 1.46111  
 b:  $5.14185e-1$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.16  
 Level 3 : 0.038276  
 Level 4 : 0.003444  
 Level 5 : 0.000383



Octane at exp. RT: 8.624  
 FID2 B,  
 Correlation: 0.99996  
 Residual Std. Dev.: 1.60376  
 Formula:  $y = mx + b$   
 m: 1.54752  
 b:  $5.14060e-1$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 11 : 1  
 Level 12 : 0.0625  
 Level 13 : 0.0025  
 Level 14 : 0.0001  
 Level 15 : 0.000025



Ethylbenzene at exp. RT: 8.992  
 FID2 B,  
 Correlation: 0.99826  
 Residual Std. Dev.: 3.55163  
 Formula:  $y = mx + b$   
 m: 1.66348  
 b:  $6.34220e-1$   
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.16162  
 Level 3 : 0.040487  
 Level 4 : 0.003643  
 Level 5 : 0.000405



m/p-xylene at exp. RT: 9.033  
 FID2 B,  
 Correlation: 0.99592  
 Residual Std. Dev.: 12.53086  
 Formula:  $y = mx + b$   
 m: 1.69574  
 b: 1.69149  
 x: Amount  
 y: Area  
 Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.16  
 Level 3 : 0.010305

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Method G:\GC2011Q2\BETTY\METHODS\GC115P129B.M

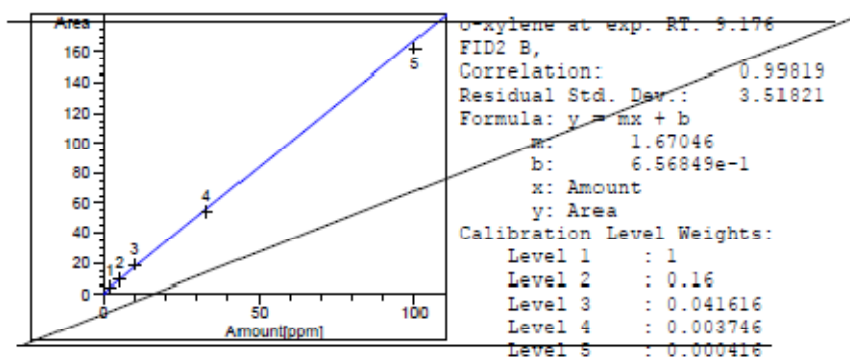
~~Level 5 : 0.000100~~

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Instrument 1 4/18/2011 5:05:58 PM tbo

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Method G:\GC2011Q2\BETTY\METHODS\GC115P129B.M



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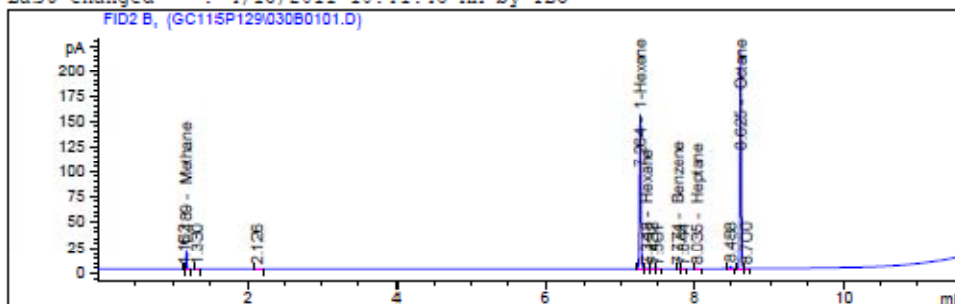
Instrument 1 4/18/2011 5:05:58 PM tbo

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0101.D  
Sample Name: gc115p129 #OC5 ENV(1=0,2=400)

```
=====
Acq. Operator   : TBO                               Seq. Line :    1
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 18:13:33                Inj       :    1
                                                    Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.189	PB	14.43742	4.14319	59.81693		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.264	BV	232.67339	8.41756e-1	195.85414		1-Hexene
7.348	VV	9.80434e-1	7.65728e-1	7.50746e-1		Hexane
7.774	BB	1.09790e-1	7.38950e-1	8.11294e-2		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035	BB	9.39913e-2	6.48960e-1	6.09966e-2		Heptane
8.446		-	-	-		Toluene
8.625	BV	300.05402	6.45087e-1	193.56091		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 450.12486

2 Warnings or Errors :

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

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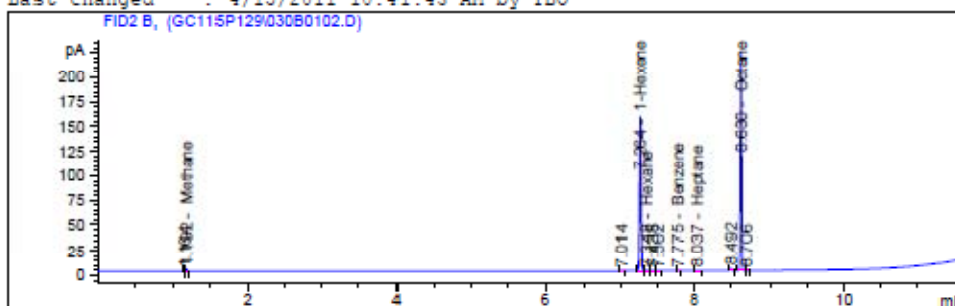
Instrument 1 4/18/2011 5:33:46 PM tbo

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0102.D  
Sample Name: gc115p129 #OC5 ENV(1=0,2=400)

```
=====
Acq. Operator   : TBO                               Seq. Line :    1
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 18:41:31                Inj       :    2
                                                    Inj Volume: External

Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.192	PB	1.68151	3.92717	6.60358		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.264	BV	237.82016	8.41755e-1	200.18642		1-Hexene
7.348	VV	9.84861e-1	7.65728e-1	7.54135e-1		Hexane
7.775	BB	2.55818e-2	7.38950e-1	1.89037e-2		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.037	BB	5.66881e-2	6.48960e-1	3.67883e-2		Heptane
8.446		-	-	-		Toluene
8.630	BB	310.35437	6.45124e-1	200.21694		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 407.81677

2 Warnings or Errors :

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

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Instrument 1 4/18/2011 5:33:56 PM tbo

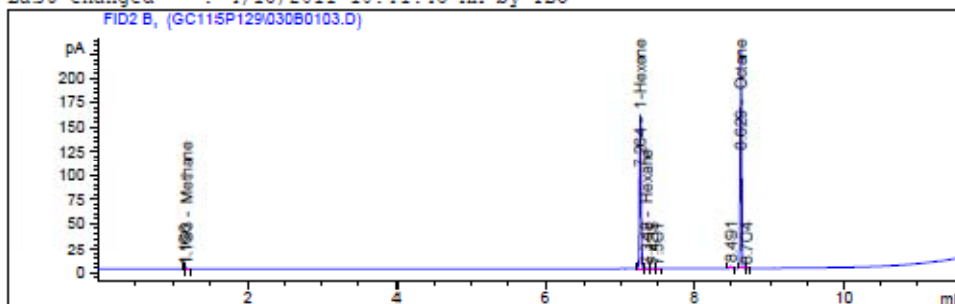
Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0103.D  
Sample Name: gc115p129 #OC5 ENV(1=0,2=400)

=====

Acq. Operator : TBO	Seq. Line : 1
Acq. Instrument : Betty	Location : Vial 30
Injection Date : 13-Apr-11, 19:09:06	Inj : 3
	Inj Volume : External

Sequence File : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S  
Acq. Method : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M  
Last changed : 3/30/2011 9:10:29 AM by stg  
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M  
Last changed : 4/15/2011 10:41:43 AM by TBO



External Standard Report

Sorted By : Signal  
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.193	PB	6.32449e-1	3.58253	2.26577		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.264	BV	240.18829	8.41755e-1	202.17979		1-Hexene
7.348	VV	9.64267e-1	7.65728e-1	7.38366e-1		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.629	BV	314.64111	6.45138e-1	202.98701		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 408.17094

2 Warnings or Errors :

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

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Instrument 1 4/18/2011 5:34:05 PM tbo

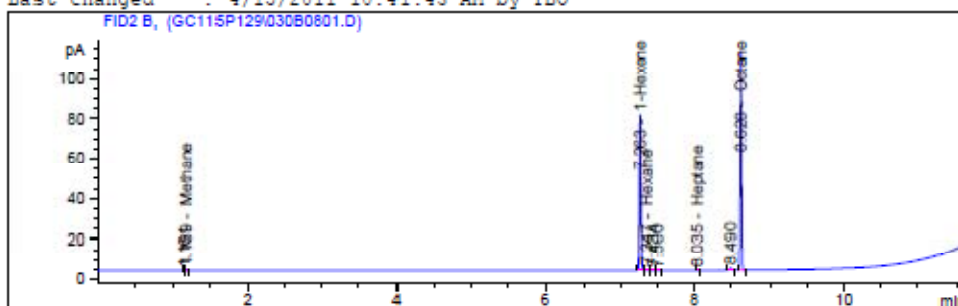
Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0801.D  
Sample Name: gc115p129 #OC4 ENV(1=318,2=450)

=====

Acq. Operator	: TBO	Seq. Line	: 8
Acq. Instrument	: Betty	Location	: Vial 30
Injection Date	: 14-Apr-11, 10:05:02	Inj	: 1
		Inj Volume	: External

Sequence File : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S  
Acq. Method : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M  
Last changed : 3/30/2011 9:10:29 AM by stg  
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M  
Last changed : 4/15/2011 10:41:43 AM by TBO



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B,

RetTime	Type	Area	Amt/Area	Amount	Grp	Name
[min]		[pA*s]		[ppm]		
1.189	PB	3.52760e-1	3.58253	1.26377		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.263	BV	117.42013	8.41764e-1	98.84001		1-Hexene
7.347	VV	5.06686e-1	7.65728e-1	3.87984e-1		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035	BB	5.16572e-2	6.48960e-1	3.35234e-2		Heptane
8.446		-	-	-		Toluene
8.628	BB	152.70042	6.44019e-1	98.34191		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 198.86720

2 Warnings or Errors :

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

=====

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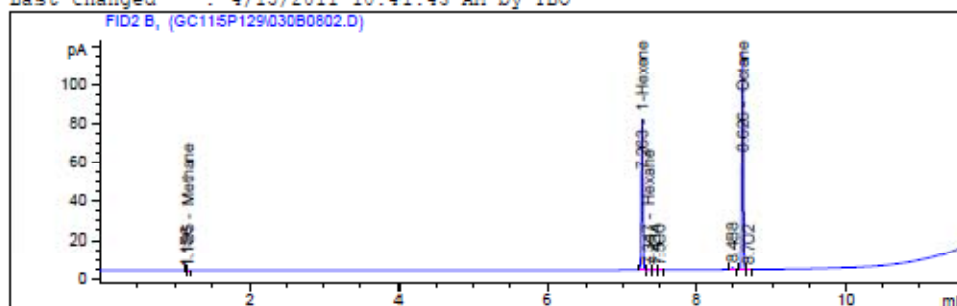
Instrument 1 4/18/2011 5:37:36 PM tbo

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0802.D  
Sample Name: gc115p129 #OC4 ENV(1=318,2=450)

```
=====
Acq. Operator   : TBO                               Seq. Line :    8
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 14-Apr-11, 10:33:07              Inj       :    2
                                                    Inj Volume: External

Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.185	PB	8.33949e-2	3.58253	2.98765e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.263	BV	118.71532	8.41764e-1	99.93024		1-Hexene
7.347	VV	4.66687e-1	7.65728e-1	3.57355e-1		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.626	BB	156.03000	6.44065e-1	100.49346		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 201.07982

2 Warnings or Errors :

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

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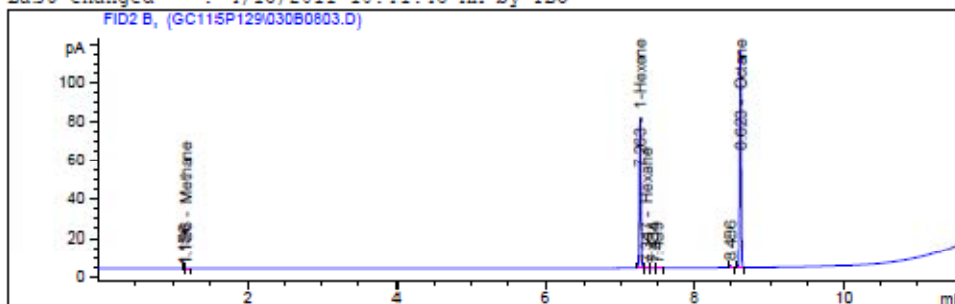
Instrument 1 4/18/2011 5:37:42 PM tbo

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0803.D  
Sample Name: gc115p129 #OC4 ENV(1=318,2=450)

```
=====
Acq. Operator   : TBO                               Seq. Line :    8
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 14-Apr-11, 11:00:53                Inj       :    3
                                                    Inj Volume: External

Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.186	PB	6.06335e-2	3.58253	2.17222e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.263	BV	118.31953	8.41764e-1	99.59709		1-Hexene
7.347	VV	4.93249e-1	7.65728e-1	3.77695e-1		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.623	BB	155.81435	6.44062e-1	100.35411		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 200.54611

2 Warnings or Errors :

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

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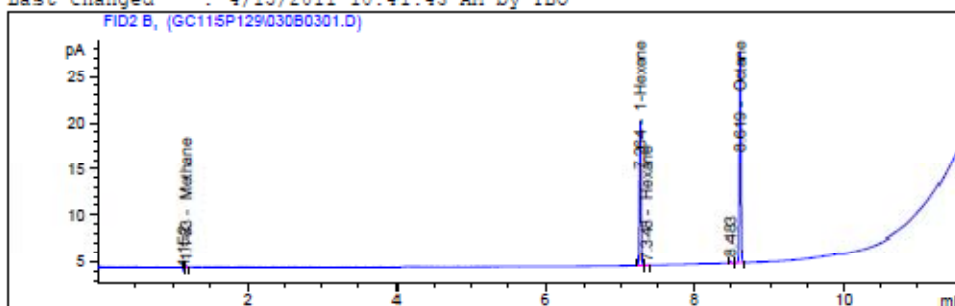
Instrument 1 4/18/2011 5:37:47 PM tbo

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0301.D  
Sample Name: gc115p129 #OC3 ENV(1=636,2=100)

```
=====
Acq. Operator   : TBO                               Seq. Line :    3
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 20:59:51                Inj       :    1
                                                    Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.183	PB	1.69422e-1	3.58253	6.06959e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.264	BB	23.79674	8.41828e-1	20.03277		1-Hexene
7.348	BB	1.12335e-1	7.65728e-1	8.60177e-2		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.619	BB	31.50140	6.35649e-1	20.02383		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 40.74968

2 Warnings or Errors :

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

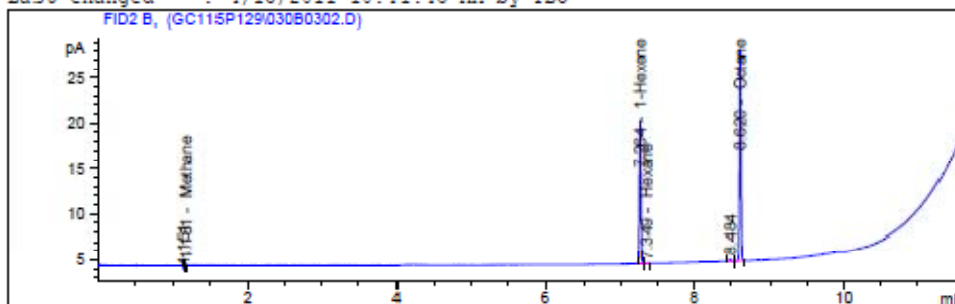
EA# 0511-68 Page 273 of 560

Instrument 1 4/18/2011 5:34:40 PM tbo

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0302.D  
Sample Name: gc115p129 #OC3 ENV(1=636,2=100)

```
=====
Acq. Operator   : TBO                               Seq. Line :    3
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 21:27:47                Inj       :    2
                                                    Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.181	PB	1.62283e-1	3.58253	5.81383e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.264	BB	23.98413	8.41828e-1	20.19051		1-Hexene
7.349	BB	1.06305e-1	7.65728e-1	8.14005e-2		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.620	BB	32.11652	6.35851e-1	20.42132		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 41.27461

2 Warnings or Errors :

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

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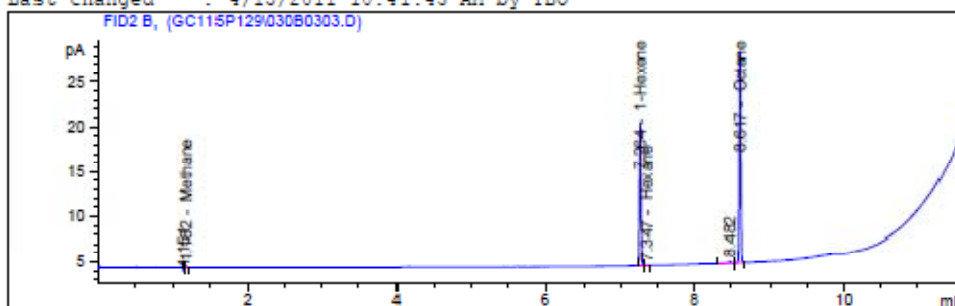
Instrument 1 4/18/2011 5:34:52 PM tbo

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0303.D  
Sample Name: gc115p129 #OC3 ENV(1=636,2=100)

```
=====
Acq. Operator   : TBO                               Seq. Line :    3
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 21:55:31                Inj       :    3
                                                    Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.182	PB	1.45629e-1	3.58253	5.21720e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.264	BB	24.14220	8.41827e-1	20.32356		1-Hexene
7.347	BB	9.50085e-2	7.65728e-1	7.27507e-2		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.617	VB	32.36667	6.35931e-1	20.58297		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 41.50100

2 Warnings or Errors :

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

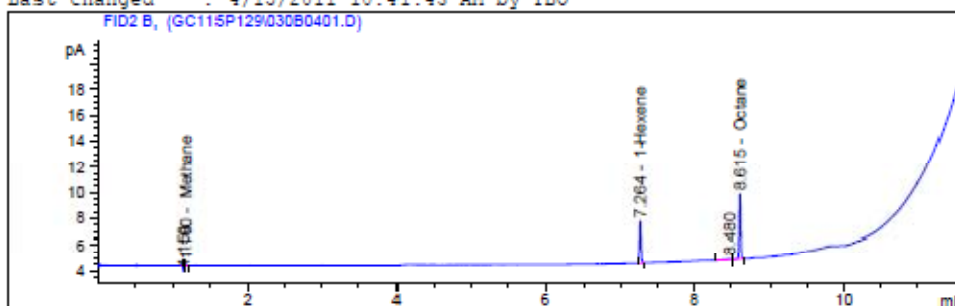
EA# 0511-68 Page 275 of 560

Instrument 1 4/18/2011 5:34:57 PM tbo

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0401.D  
Sample Name: gc115p129 #OC2 ENV(1=692.53,2=20)

```
=====
Acq. Operator   : TBO                               Seq. Line :    4
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 22:23:21                Inj       :    1
                                                    Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.180	PB	1.24180e-1	3.58253	4.44880e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.264	BB	4.89135	8.42141e-1	4.11921		1-Hexene
7.347		-	-	-		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.615	VB	6.93801	5.98315e-1	4.15112		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 8.71621

2 Warnings or Errors :

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

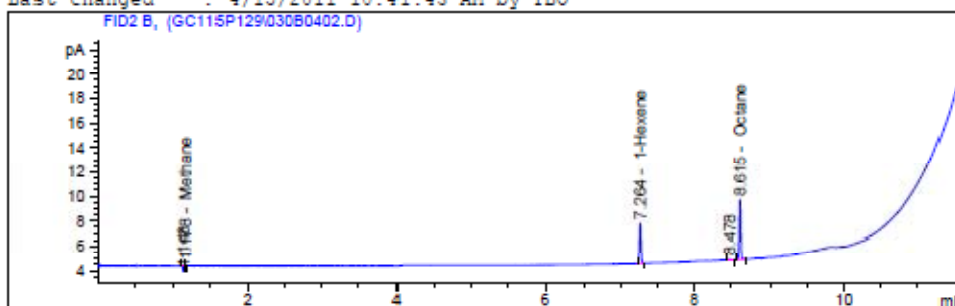
EA# 0511-68 Page 276 of 560

Instrument 1 4/18/2011 5:35:03 PM tbo

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0402.D  
Sample Name: gc115p129 #OC2 ENV(1=692.53,2=20)

```
=====
Acq. Operator   : TBO                               Seq. Line :    4
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 22:51:24                Inj       :    2
                                                    Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.178	PB	1.11356e-1	3.58253	3.98935e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.264	BB	4.80246	8.42149e-1	4.04439		1-Hexene
7.347		-	-	-		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.615	BB	6.70356	5.96641e-1	3.99962		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 8.44294

2 Warnings or Errors :

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

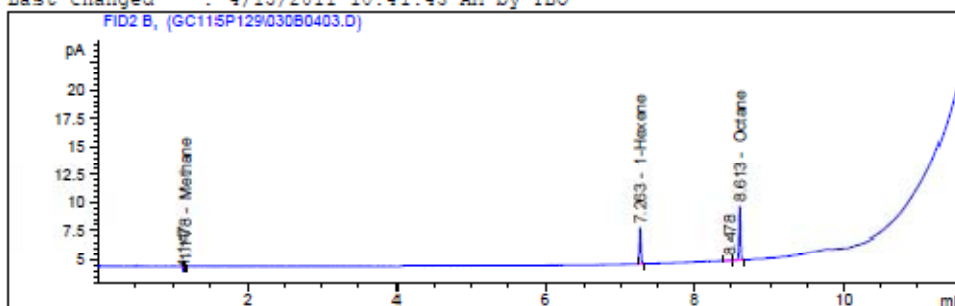
EA# 0511-68 Page 277 of 560

Instrument 1 4/18/2011 5:35:09 PM tbo

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0403.D  
Sample Name: gc115p129 #OC2 ENV(1=692.53,2=20)

```
=====
Acq. Operator   : TBO                               Seq. Line :    4
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 23:19:24                Inj       :    3
                                                    Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.178	PB	1.13708e-1	3.58253	4.07361e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.263	BB	4.75944	8.42152e-1	4.00818		1-Hexene
7.347		-	-	-		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.613	VB	6.54061	5.95406e-1	3.89432		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 8.30986

2 Warnings or Errors :

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

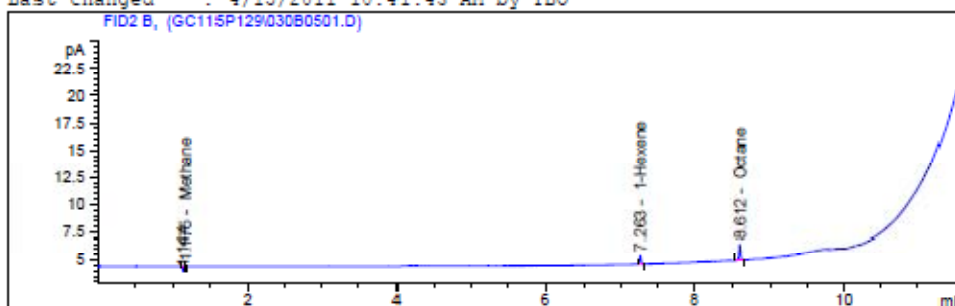
EA# 0511-68 Page 278 of 560

Instrument 1 4/18/2011 5:35:14 PM tbo

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0501.D  
Sample Name: gc115p129 #OC1 ENV(1=3515.65,2=25)

```
=====
Acq. Operator   : TBO                               Seq. Line :    5
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 13-Apr-11, 23:47:31                Inj       :    1
                                                Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.175	PB	1.10876e-1	3.58253	3.97218e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.263	BB	1.19235	8.43363e-1	1.00558		1-Hexene
7.347		-	-	-		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.612	BB	2.11317	4.88997e-1	1.03333		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 2.43613

2 Warnings or Errors :

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

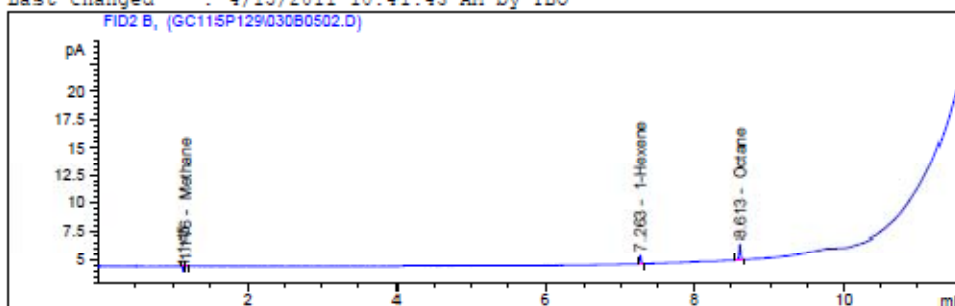
EA# 0511-68 Page 279 of 560

Instrument 1 4/18/2011 5:35:20 PM tbo

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Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0502.D  
Sample Name: gc115p129 #OC1 ENV(1=3515.65,2=25)

```
=====
Acq. Operator   : TBO                               Seq. Line :    5
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 14-Apr-11, 00:15:47                Inj       :    2
                                                Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:     : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.176	PB	9.65770e-2	3.58253	3.45991e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.263	BB	1.18507	8.43367e-1	9.99449e-1		1-Hexene
7.347		-	-	-		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.613	BB	2.11066	4.88811e-1	1.03171		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 2.37715

2 Warnings or Errors :

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

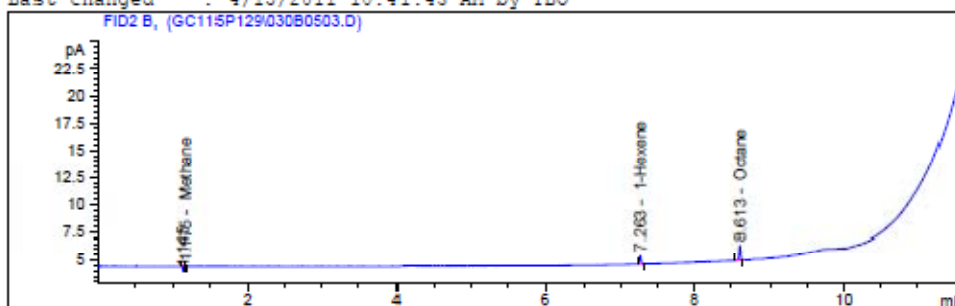
EA# 0511-68 Page 280 of 560

Instrument 1 4/18/2011 5:35:26 PM tbo

Page 1 of 1

Data File G:\GC2011Q2\BETTY\DATA\APR11\GC115P129\030B0503.D  
Sample Name: gc115p129 #OC1 ENV(1=3515.65,2=25)

```
=====
Acq. Operator   : TBO                               Seq. Line :    5
Acq. Instrument : Betty                             Location  : Vial 30
Injection Date  : 14-Apr-11, 00:44:11              Inj       :    3
                                                    Inj Volume: External
Sequence File   : G:\GC2011Q2\BETTY\SEQUENCE\GC115P129.S
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P80F.M
Last changed    : 3/30/2011 9:10:29 AM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P129B.M
Last changed    : 4/15/2011 10:41:43 AM by TBO
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Friday, April 15, 2011 10:41:19 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.175	PB	8.51058e-2	3.58253	3.04894e-1		Methane
1.416		-	-	-		Ethane
2.218		-	-	-		Propane
4.861		-	-	-		Butane
6.429		-	-	-		Pentane
7.263	BB	1.17966	8.43367e-1	9.94886e-1		1-Hexene
7.347		-	-	-		Hexane
7.772		-	-	-		Benzene
7.996		-	-	-		2,2,4-Trimethylpentane
8.035		-	-	-		Heptane
8.446		-	-	-		Toluene
8.613	BB	1.97115	4.85426e-1	9.56849e-1		Octane
8.992		-	-	-		Ethylbenzene
9.033		-	-	-		m/p-xylene
9.176		-	-	-		o-xylene

Totals : 2.25663

2 Warnings or Errors :

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

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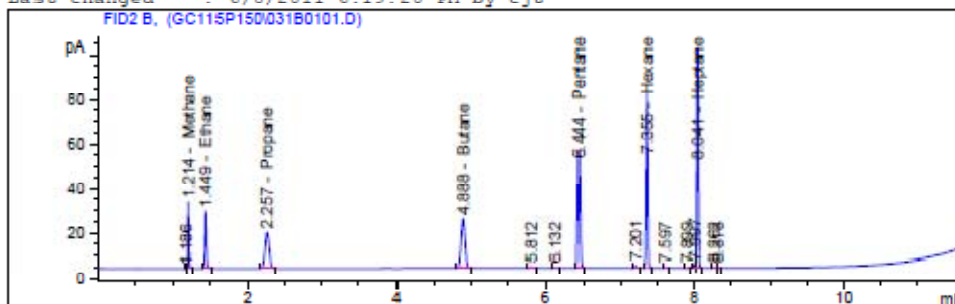
Instrument 1 4/18/2011 5:35:32 PM tbo

Page 1 of 1



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B0101.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : cjt                               Seq. Line :    1
Acq. Instrument : Betty                             Location  : Vial 31
Injection Date  : 01-Jun-11, 19:02:40                Inj       :    1
                                                    Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.214	PB	21.80976	4.39776	95.91420		Methane
1.449	BB	39.85282	2.43083	96.87542		Ethane
2.257	BB	60.16279	1.64836	99.16978		Propane
4.888	BB	80.05755	1.23451	98.83165		Butane
6.444	BB	99.41716	9.86424e-1	98.06742		Pentane
7.355	BB	119.36000	8.26993e-1	98.70988		Hexane
7.775		-	-	-		Benzene
8.041	VB	139.73886	7.13514e-1	99.70559		Heptane

Totals : 687.27395

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	2.18094	2.1422
as Hexane	6.950	7.355	2.3323	2.3323

E# 0511-68 Page 282 of 560

Instrument 2 6/8/2011 6:37:28 PM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B0101.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	3.10174	2.2056

Totals : 6.6601

Final Summed Peaks Report

Signal 1: FID2 B,

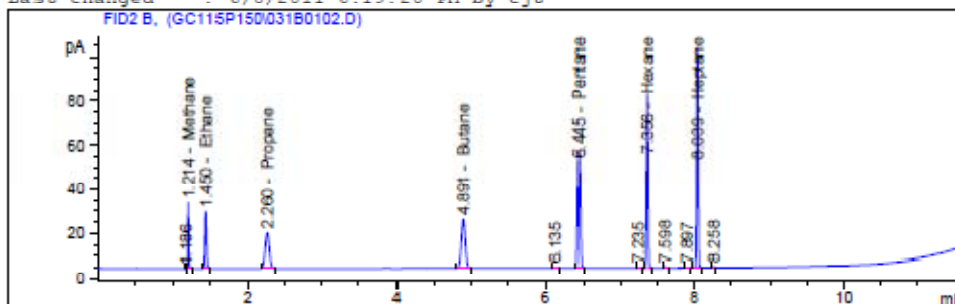
Name	Total Area [pA*s]	Amount [ppm]
as Pentane	2.18094	2.1422
as Hexane	2.80924	2.3123
as Heptane	3.10174	2.2056
Methane	21.80976	95.9142
Ethane	39.85282	96.8754
Propane	60.16279	99.1698
Butane	80.05755	98.8316
Pentane	99.41716	98.0674
Hexane	119.36000	98.7099
Benzene	0.00000	0.0000
Heptane	139.73886	99.7056

Totals : 693.9340

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B0102.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : cjt                               Seq. Line :    1
Acq. Instrument : Betty                             Location  : Vial 31
Injection Date  : 01-Jun-11, 19:26:50                Inj       :    2
                                                Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.214	PB	21.91281	4.39779	96.36785		Methane
1.450	BB	39.93779	2.43084	97.08228		Ethane
2.260	BB	60.30988	1.64837	99.41285		Propane
4.891	BB	80.26224	1.23451	99.08466		Butane
6.445	BB	99.62891	9.86425e-1	98.27641		Pentane
7.356	BB	119.64894	8.26994e-1	98.94897		Hexane
7.775		-	-	-		Benzene
8.039	BB	139.70822	7.13514e-1	99.68372		Heptane

Totals : 688.85673

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

## Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.48865e-1	0.6374
as Hexane	6.950	7.356	6.61588e-1	0.7217

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Instrument 2 6/8/2011 6:37:35 PM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B0102.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	8.95530e-1	0.6368

Totals : 2.0659

Final Summed Peaks Report

Signal 1: FID2 B,

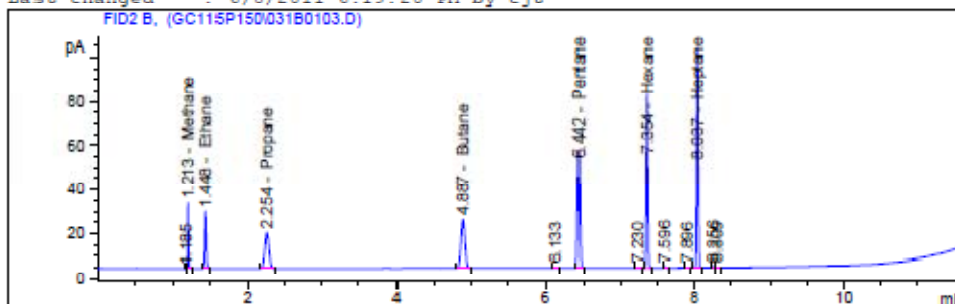
Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.48865e-1	0.6374
as Hexane	9.61909e-1	0.7917
as Heptane	8.95530e-1	0.6368
Methane	21.91281	96.3679
Ethane	39.93779	97.0823
Propane	60.30988	99.4128
Butane	80.26224	99.0847
Pentane	99.62891	98.2764
Hexane	119.64894	98.9490
Benzene	0.00000	0.0000
Heptane	139.70822	99.6837

Totals : 690.9226

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B0103.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : cjt                               Seq. Line :    1
Acq. Instrument : Betty                             Location  : Vial 31
Injection Date  : 01-Jun-11, 19:49:30                Inj       :    3
                                                    Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.213	PB	21.95399	4.39779	96.54915		Methane
1.448	BB	40.12108	2.43086	97.52853		Ethane
2.254	BB	60.58465	1.64839	99.86691		Propane
4.887	BB	80.65047	1.23452	99.56455		Butane
6.442	BB	100.10722	9.86427e-1	98.74848		Pentane
7.354	BB	120.19218	8.26996e-1	99.39848		Hexane
7.775		-	-	-		Benzene
8.037	BB	140.30461	7.13515e-1	100.10943		Heptane

Totals : 691.76554

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.25138e-1	0.6140
as Hexane	6.950	7.354	9.86427e-1	0.9822

EA# 0511-68 Page 288 of 560

Instrument 2 6/8/2011 6:37:43 PM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B0103.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1.01087	0.7188

Totals : 2.1649

Final Summed Peaks Report

Signal 1: FID2 B,

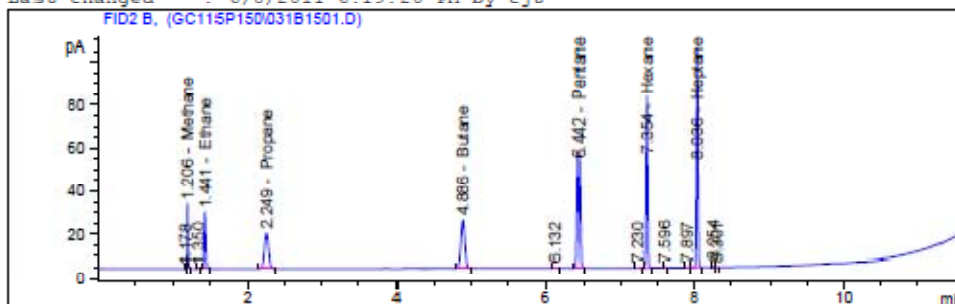
Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.25138e-1	0.6140
as Hexane	1.01083	0.8320
as Heptane	1.01087	0.7188
Methane	21.95399	96.5491
Ethane	40.12108	97.5285
Propane	60.58465	99.8669
Butane	80.65047	99.5645
Pentane	100.10722	98.7485
Hexane	120.19218	99.3985
Benzene	0.00000	0.0000
Heptane	140.30461	100.1094

Totals : 693.9304

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B1501.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : cjt                               Seq. Line :   15
Acq. Instrument : Betty                             Location  : Vial 31
Injection Date  : 02-Jun-11, 13:36:51                Inj       :    1
                                                Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.206	PB	22.21342	4.39785	97.69127		Methane
1.441	BB	40.36691	2.43088	98.12702		Ethane
2.249	BB	60.76439	1.64840	100.16392		Propane
4.886	BB	80.69350	1.23452	99.61773		Butane
6.442	BB	100.32543	9.86428e-1	98.96384		Pentane
7.354	BB	120.85015	8.26999e-1	99.94293		Hexane
7.775		-	-	-		Benzene
8.036	BB	142.23648	7.13519e-1	101.48844		Heptane

Totals : 695.99514

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.260	1.850	9.98209e-2	0.2406
as Pentane	5.700	6.950	6.44386e-1	9.2352

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Instrument 2 6/8/2011 6:38:06 PM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B1501.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Hexane	6.950	7.750	1.08195	0.8905
as Heptane	7.750	11.600	1.05017	0.7467
Totals :				2.6031

=====

Final Summed Peaks Report

=====

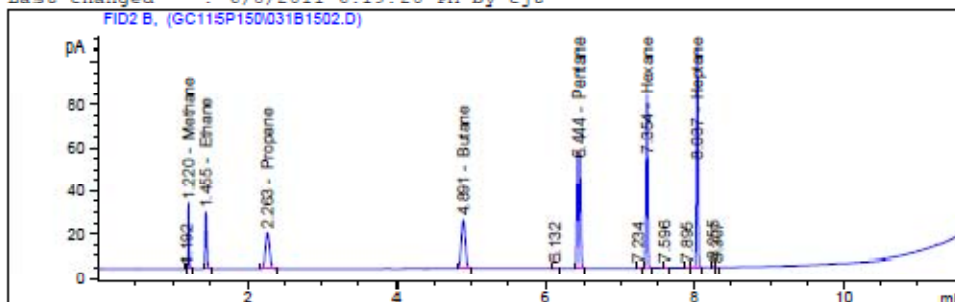
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Ethane	9.98209e-2	0.2406
as Pentane	7.38306e-1	0.7252
as Hexane	1.08195	0.8905
as Heptane	1.05017	0.7467
Methane	22.21342	97.6913
Ethane	40.36691	98.1270
Propane	60.76439	100.1639
Butane	80.69350	99.6177
Pentane	100.32543	98.9638
Hexane	120.85015	99.9429
Benzene	0.00000	0.0000
Heptane	142.23648	101.4884
Totals :	698.5983	

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B1502.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : cjt                               Seq. Line :   15
Acq. Instrument : Betty                             Location  : Vial 31
Injection Date  : 02-Jun-11, 14:01:05                Inj       :    2
                                                Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method  : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.220	PB	22.22055	4.39785	97.72266		Methane
1.455	BB	40.40541	2.43088	98.22078		Ethane
2.263	BB	60.91935	1.64841	100.42000		Propane
4.891	BB	81.02731	1.23453	100.03034		Butane
6.444	BB	100.67041	9.86430e-1	99.30432		Pentane
7.354	BB	121.17353	8.27000e-1	100.21052		Hexane
7.775		-	-	-		Benzene
8.037	BB	142.37331	7.13519e-1	101.58610		Heptane

Totals : 697.49472

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

# Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.78468e-1	0.6664
as Hexane	6.950	7.350	1.68875e-1	0.1669

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Instrument 2 6/8/2011 6:38:13 PM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B1502.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1.04523	0.7432

Totals : 2.2564

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

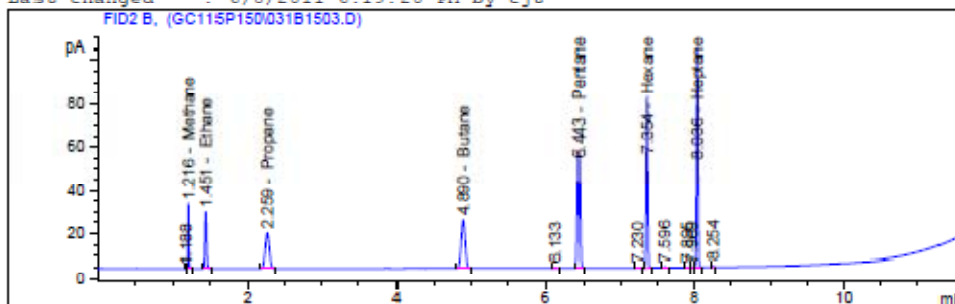
Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.78468e-1	0.6664
as Hexane	1.02875	0.8468
as Heptane	1.04523	0.7432
Methane	22.22055	97.7227
Ethane	40.40541	98.2208
Propane	60.91935	100.4200
Butane	81.02731	100.0303
Pentane	100.67041	99.3043
Hexane	121.17353	100.2105
Benzene	0.00000	0.0000
Heptane	142.37331	101.5861

Totals : 699.7511

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

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B1503.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : cjt                               Seq. Line :   15
Acq. Instrument : Betty                             Location  : Vial 31
Injection Date  : 02-Jun-11, 14:24:45                Inj       :    3
                                                    Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/8/2011 6:19:20 PM by cjt
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/8/2011 5:30:07 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.216	PB	22.08315	4.39782	97.11775		Methane
1.451	BB	40.14468	2.43086	97.58598		Ethane
2.259	BB	60.63934	1.64839	99.95727		Propane
4.890	BB	80.60788	1.23452	99.51190		Butane
6.443	BB	100.10898	9.86427e-1	98.75021		Pentane
7.354	BB	120.34039	8.26997e-1	99.52112		Hexane
7.775		-	-	-		Benzene
8.036	VB	140.92465	7.13516e-1	100.55203		Heptane

Totals : 692.99626

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

# Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.80413e-1	0.6683
as Hexane	6.950	7.354	9.86427e-1	0.9673

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Instrument 2 6/8/2011 6:38:20 PM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\MAY11\GC115P150\031B1503.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Heptane	7.750	11.600	1.07513	0.7645

Totals : 2.2707

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

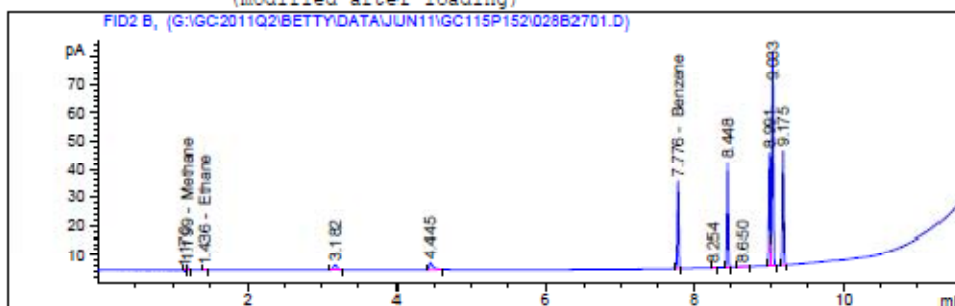
Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.80413e-1	0.6683
as Hexane	1.01791	0.8378
as Heptane	1.07513	0.7645
Methane	22.08315	97.1178
Ethane	40.14468	97.5860
Propane	60.63934	99.9573
Butane	80.60788	99.5119
Pentane	100.10898	98.7502
Hexane	120.34039	99.5211
Benzene	0.00000	0.0000
Heptane	140.92465	100.5520

Totals : 695.2669

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B2701.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line : 27
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 08-Jun-11, 09:07:50      Inj       : 1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.199	PB	1.45604	4.33231	6.30801		Methane
1.436	BB	1.88004e-1	2.29592	4.31642e-1		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.776	BB	41.46740	8.14037e-1	33.75599		Benzene
8.037		-	-	-		Heptane

Totals : 40.49565

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

# Summed Peaks Report

Signal 1: FID2 B,

EA# 0511-68 Page 294 of 560

Instrument 2 6/10/2011 9:46:47 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B2701.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.94355	11.2944
as Butane	3.600	5.700	8.80124	10.7912
as Heptane	7.750	11.600	261.18530	185.7210
Totals :				207.8067

=====

Final Summed Peaks Report

=====

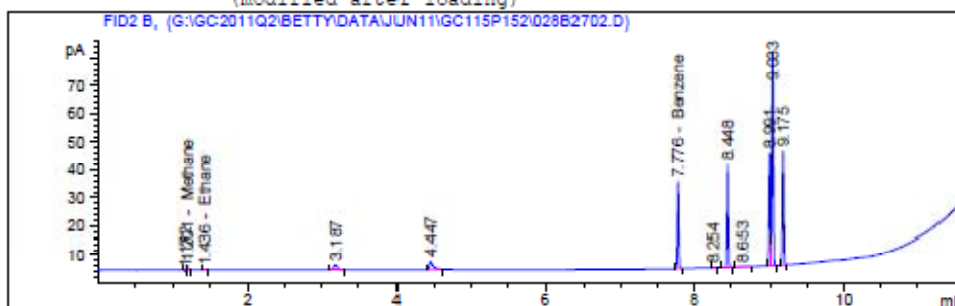
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.94355	11.2944
as Butane	8.80124	10.7912
as Heptane	261.18530	185.7210
Methane	1.45604	6.3080
Ethane	1.88004e-1	0.4316
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.46740	33.7560
Heptane	0.00000	0.0000
Totals :	248.3023	

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B2702.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :   27
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 08-Jun-11, 09:35:33      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.201	PB	1.21309	4.31827	5.23845		Methane
1.436	BB	1.45802e-1	2.29592	3.34750e-1		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.776	BB	41.37637	8.14037e-1	33.68190		Benzene
8.037		-	-	-		Heptane

Totals : 39.25510

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

EA# 0511-68 Page 296 of 560

Instrument 2 6/10/2011 9:46:55 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B2702.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.92765	11.2686
as Butane	3.600	5.700	10.33009	12.6657
as Heptane	7.750	11.600	262.17174	186.4225
Totals :				210.3568

=====

Final Summed Peaks Report

=====

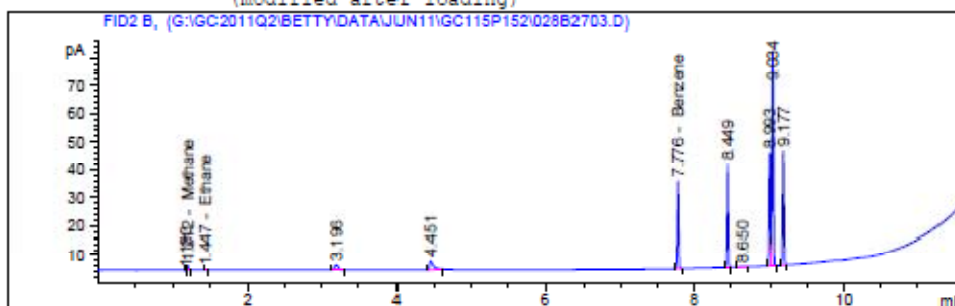
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.92765	11.2686
as Butane	10.33009	12.6657
as Heptane	262.17174	186.4225
Methane	1.21309	5.2385
Ethane	1.45802e-1	0.3348
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.37637	33.6819
Heptane	0.00000	0.0000
Totals :		249.6119

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B2703.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :   27
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 08-Jun-11, 10:03:09      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.212	PB	1.21853	4.31864	5.26241		Methane
1.447	BB	1.16287e-1	2.29592	2.66987e-1		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.776	BB	41.33073	8.14037e-1	33.64475		Benzene
8.037		-	-	-		Heptane

Totals : 39.17415

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

EA# 0511-68 Page 298 of 560

Instrument 2 6/10/2011 9:47:03 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\028B2703.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.87813	11.1880
as Butane	3.600	5.700	11.33552	13.8985
as Heptane	7.750	11.600	262.45604	186.6246
Totals :				211.7111

=====

Final Summed Peaks Report

=====

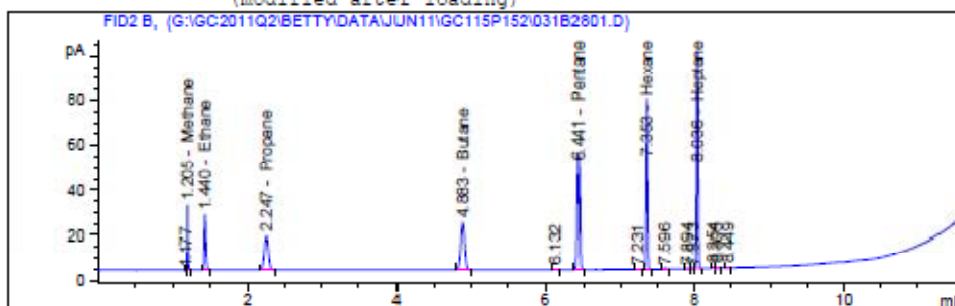
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.87813	11.1880
as Butane	11.33552	13.8985
as Heptane	262.45604	186.6246
Methane	1.21853	5.2624
Ethane	1.16287e-1	0.2670
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.33073	33.6447
Heptane	0.00000	0.0000
Totals :	250.8853	

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\031B2801.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line :   28
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 08-Jun-11, 10:29:01      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    :      1.0000
Dilution:      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.205	PB	21.30390	4.39765	93.68716		Methane
1.440	BB	38.57541	2.43070	93.76541		Ethane
2.247	BB	58.23212	1.64822	95.97936		Propane
4.883	BB	77.41808	1.23445	95.56908		Butane
6.441	BB	96.29237	9.86406e-1	94.98342		Pentane
7.353	BB	115.88699	8.26979e-1	95.83607		Hexane
7.775		-	-	-		Benzene
8.036	VB	135.97827	7.13505e-1	97.02122		Heptane

Totals : 666.84171

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

# Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:47:33 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\031B2801.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.15930e-1	0.6050
as Hexane	6.950	7.750	9.56749e-1	0.7875
as Heptane	7.750	11.600	1.39964	0.9952
Totals :				2.3877

=====

Final Summed Peaks Report

=====

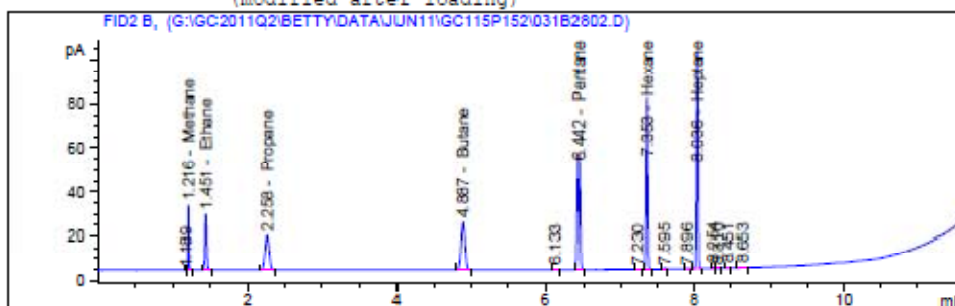
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.15930e-1	0.6050
as Hexane	9.56749e-1	0.7875
as Heptane	1.39964	0.9952
Methane	21.30390	93.6872
Ethane	38.57541	93.7654
Propane	58.23212	95.9794
Butane	77.41808	95.5691
Pentane	96.29237	94.9834
Hexane	115.88699	95.8361
Benzene	0.00000	0.0000
Heptane	135.97827	97.0212
Totals :	669.2294	

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\031B2802.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line :   28
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 08-Jun-11, 10:54:58      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.216	PB	21.87942	4.39778	96.22087		Methane
1.451	BB	39.63865	2.43081	96.35398		Ethane
2.258	BB	59.85101	1.64834	98.65457		Propane
4.887	BB	79.61031	1.23450	98.27882		Butane
6.442	BB	98.99070	9.86421e-1	97.64653		Pentane
7.353	BB	119.14307	8.26992e-1	98.53037		Hexane
7.775		-	-	-		Benzene
8.036	BB	139.92729	7.13514e-1	99.84010		Heptane

Totals : 685.52525

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:47:41 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\031B2802.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.36123e-1	0.6248
as Hexane	6.950	7.750	9.71147e-1	0.7993
as Heptane	7.750	11.600	1.62866	1.1581
Totals :				2.5823

=====

Final Summed Peaks Report

=====

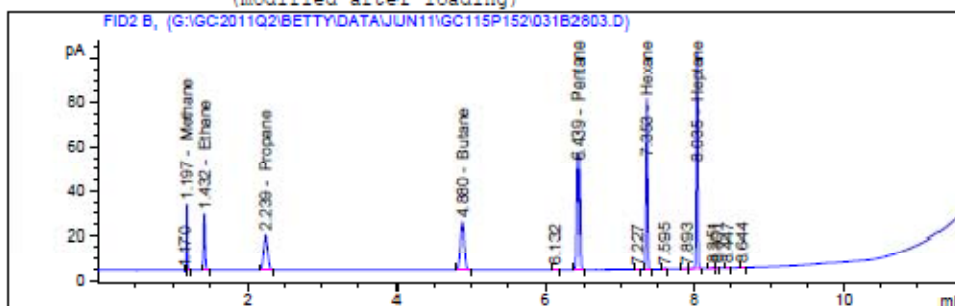
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.36123e-1	0.6248
as Hexane	9.71147e-1	0.7993
as Heptane	1.62866	1.1581
Methane	21.87942	96.2209
Ethane	39.63865	96.3540
Propane	59.85101	98.6546
Butane	79.61031	98.2788
Pentane	98.99070	97.6465
Hexane	119.14307	98.5304
Benzene	0.00000	0.0000
Heptane	139.92729	99.8401
Totals :	688.1075	

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\031B2803.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line :   28
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 08-Jun-11, 11:20:53      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.197	PB	21.67901	4.339774	95.33856		Methane
1.432	BB	39.25940	2.43077	95.43067		Ethane
2.239	BB	59.31506	1.64830	97.76891		Propane
4.880	BB	78.89185	1.23448	97.39076		Butane
6.439	BB	97.99375	9.86416e-1	96.66259		Pentane
7.353	BB	117.79127	8.26987e-1	97.41180		Hexane
7.775		-	-	-		Benzene
8.035	VB	137.92947	7.13510e-1	98.41402		Heptane

Totals : 678.41732

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:47:49 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P152\031B2803.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.22461e-1	0.6114
as Hexane	6.950	7.750	9.40170e-1	0.7738
as Heptane	7.750	11.600	1.50515	1.0703
Totals :				2.4555

=====

Final Summed Peaks Report

=====

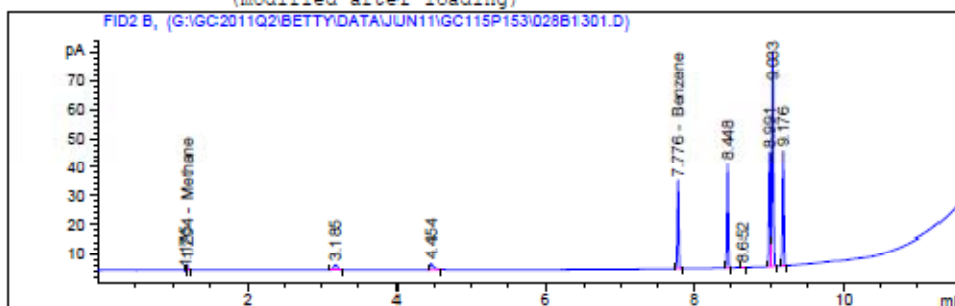
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.22461e-1	0.6114
as Hexane	9.40170e-1	0.7738
as Heptane	1.50515	1.0703
Methane	21.67901	95.3386
Ethane	39.25940	95.4307
Propane	59.31506	97.7689
Butane	78.89185	97.3908
Pentane	97.99375	96.6626
Hexane	117.79127	97.4118
Benzene	0.00000	0.0000
Heptane	137.92947	98.4140
Totals :	680.8728	

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B1301.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :   13
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 09-Jun-11, 08:08:17      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    :      1.0000
Dilution:      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.204	PB	1.52655	4.33555	6.61842		Methane
1.447		-	-	-		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.776	BB	41.33732	8.14037e-1	33.65011		Benzene
8.037		-	-	-		Heptane

Totals : 40.26853

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:48:32 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B1301.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.89649	11.2179
as Butane	3.600	5.700	7.15404	8.7716
as Heptane	7.750	11.600	257.66185	183.2156
Totals :				203.2051

=====

Final Summed Peaks Report

=====

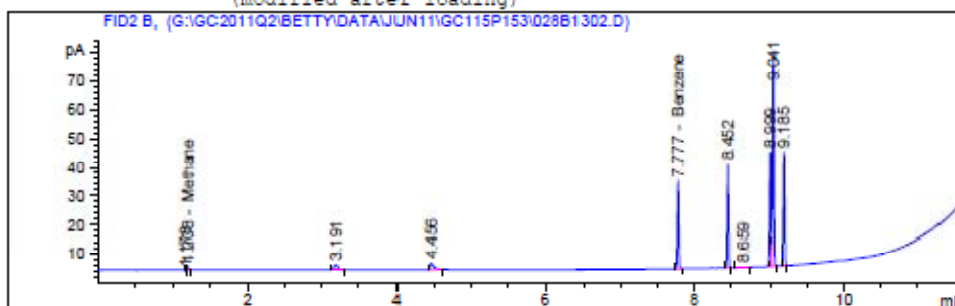
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.89649	11.2179
as Butane	7.15404	8.7716
as Heptane	257.66185	183.2156
Methane	1.52655	6.6184
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.33732	33.6501
Heptane	0.00000	0.0000
Totals :		243.4736

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B1302.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :   13
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 09-Jun-11, 08:36:25      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.208	PB	9.96948e-1	4.30002	4.28690		Methane
1.447		-	-	-		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.777	BB	41.24570	8.14037e-1	33.57554		Benzene
8.037		-	-	-		Heptane

Totals : 37.86243

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:48:40 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B1302.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.96111	11.3230
as Butane	3.600	5.700	7.92288	9.7142
as Heptane	7.750	11.600	259.65917	184.6358

Totals : 205.6731

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

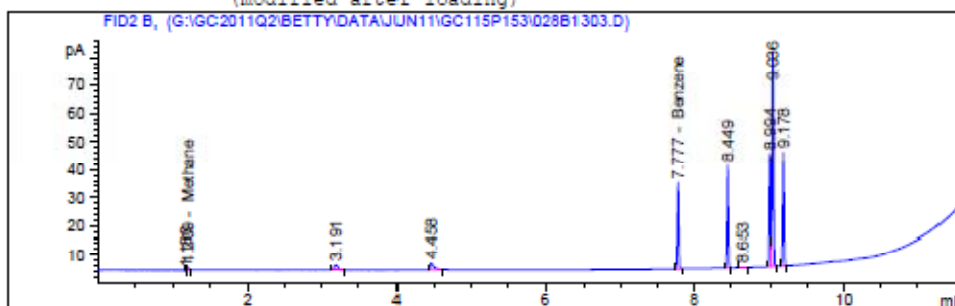
Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.96111	11.3230
as Butane	7.92288	9.7142
as Heptane	259.65917	184.6358
Methane	9.96948e-1	4.2869
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.24570	33.5755
Heptane	0.00000	0.0000

Totals : 243.5355

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B1303.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :   13
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 09-Jun-11, 09:04:34      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.209	PB	8.87554e-1	4.28739	3.80529		Methane
1.447		-	-	-		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.777	BB	41.59895	8.14036e-1	33.86307		Benzene
8.037		-	-	-		Heptane

Totals : 37.66836

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

EA# 0511-68 Page 310 of 560

Instrument 2 6/10/2011 9:48:49 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B1303.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.99692	11.3813
as Butane	3.600	5.700	8.14747	9.9896
as Heptane	7.750	11.600	262.74518	186.8302

Totals : 208.2011

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

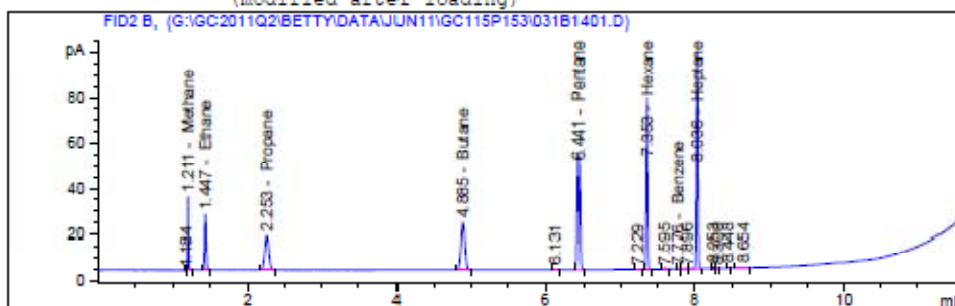
Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.99692	11.3813
as Butane	8.14747	9.9896
as Heptane	262.74518	186.8302
Methane	8.87554e-1	3.8053
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.59895	33.8631
Heptane	0.00000	0.0000

Totals : 245.8694

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B1401.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line :   14
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 09-Jun-11, 09:30:44      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.211	PB	23.79874	4.39816	104.67058		Methane
1.447	BB	38.13044	2.43066	92.68207		Ethane
2.253	BB	57.39263	1.64816	94.59211		Propane
4.885	BB	76.25401	1.23443	94.13019		Butane
6.441	BB	94.82096	9.86398e-1	93.53120		Pentane
7.353	BB	114.10471	8.26971e-1	94.36129		Hexane
7.776	BB	1.36854e-1	8.15656e-1	1.11626e-1		Benzene
8.036	VB	134.04895	7.13501e-1	95.64404		Heptane

Totals : 669.72310

# Summed Peaks Report

Signal 1: FID2 B,

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.70501e-1	0.6586
as Hexane	6.950	7.750	9.76516e-1	0.8038
as Heptane	7.750	11.600	1.57326	1.1187

Totals :

EA# 0511-68 Page 312 of 560

Instrument 2 6/10/2011 9:49:08 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B1401.D  
Sample Name: gc115p119 #C5

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.70501e-1	0.6586
as Hexane	9.76516e-1	0.8038
as Heptane	1.97926	1.1187
Methane	23.79874	104.6706
Ethane	38.13044	92.6821
Propane	57.39263	94.5921
Butane	76.25401	94.1302
Pentane	94.82096	93.5312
Hexane	114.10471	94.3613
Benzene	1.36854e-1	0.1116
Heptane	134.04895	95.6440

Totals : 672.3042

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

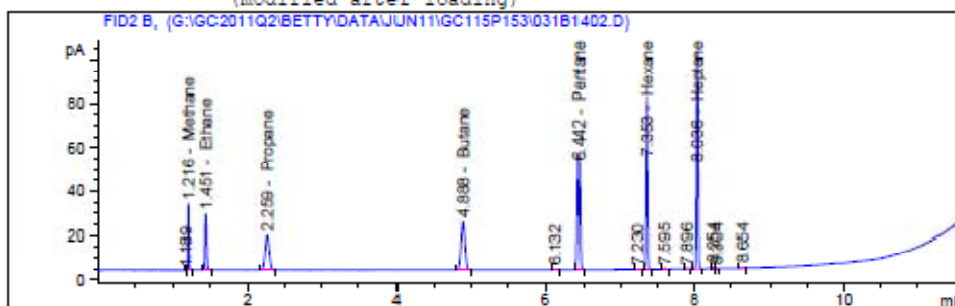
EA# 0511-68 Page 313 of 560

Instrument 2 6/10/2011 9:49:08 AM cjt

Page 2 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B1402.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line : 14
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 09-Jun-11, 09:56:58      Inj       : 2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.216	PB	22.39801	4.39789	98.50394		Methane
1.451	BB	39.75493	2.43082	96.63709		Ethane
2.259	BB	60.03522	1.64835	98.95898		Propane
4.888	BB	79.79521	1.23450	98.50738		Butane
6.442	BB	99.16148	9.86422e-1	97.81508		Pentane
7.353	BB	119.26894	8.26993e-1	98.63452		Hexane
7.775		-	-	-		Benzene
8.036	BB	139.72105	7.13514e-1	99.69288		Heptane

Totals : 688.74987

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

EA# 0511-68 Page 314 of 560

Instrument 2 6/10/2011 9:49:16 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B1402.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.37101e-1	0.6258
as Hexane	6.950	7.750	9.58892e-1	0.7893
as Heptane	7.750	11.600	1.24225	0.8833
Totals :				2.2984

=====

Final Summed Peaks Report

=====

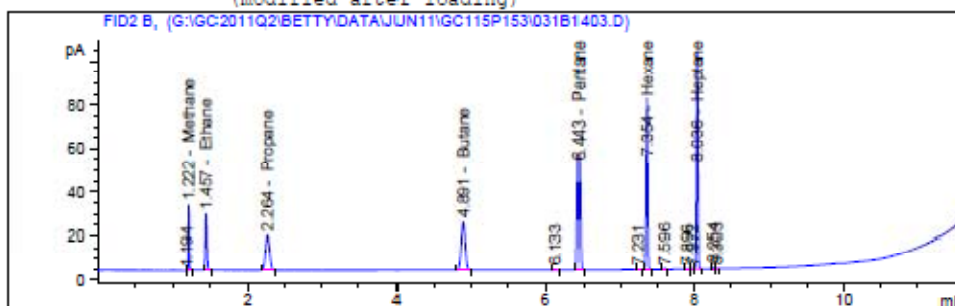
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.37101e-1	0.6258
as Hexane	9.58892e-1	0.7893
as Heptane	1.24225	0.8833
Methane	22.39801	98.5039
Ethane	39.75493	96.6371
Propane	60.03522	98.9590
Butane	79.79521	98.5074
Pentane	99.16148	97.8151
Hexane	119.26894	98.6345
Benzene	0.00000	0.0000
Heptane	139.72105	99.6929
Totals :	691.0483	

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B1403.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line :   14
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 09-Jun-11, 10:23:23      Inj       :    3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



# External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    :      1.0000
Dilution:      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.222	PB	22.17387	4.39784	97.51714		Methane
1.457	BB	40.07531	2.43085	97.41711		Ethane
2.264	BB	60.52179	1.64838	99.76303		Propane
4.891	BB	80.51714	1.23452	99.39973		Butane
6.443	BB	100.04020	9.86427e-1	98.68233		Pentane
7.354	BB	120.15961	8.26996e-1	99.37153		Hexane
7.775		-	-	-		Benzene
8.036	VB	140.40726	7.13515e-1	100.18270		Heptane

Totals : 692.33358

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

# Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:49:23 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B1403.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.49834e-1	0.6383
as Hexane	6.950	7.750	9.86965e-1	0.8124
as Heptane	7.750	11.600	1.16837	0.8308
Totals :				2.2815

=====

Final Summed Peaks Report

=====

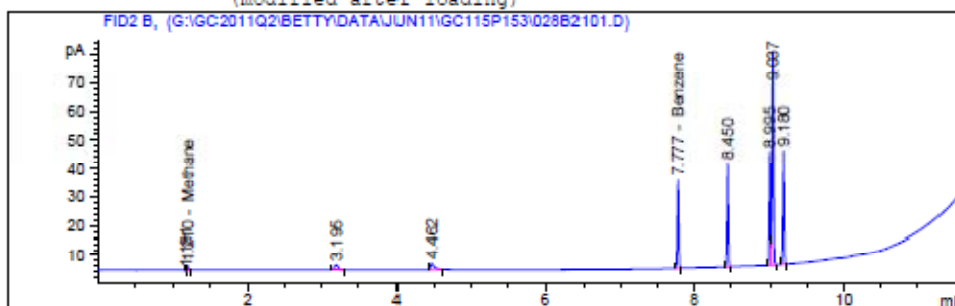
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.49834e-1	0.6383
as Hexane	9.86965e-1	0.8124
as Heptane	1.16837	0.8308
Methane	22.17387	97.5171
Ethane	40.07531	97.4171
Propane	60.52179	99.7630
Butane	80.51714	99.3997
Pentane	100.04020	98.6823
Hexane	120.15961	99.3715
Benzene	0.00000	0.0000
Heptane	140.40726	100.1827
Totals :	694.6150	

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B2101.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line : 21
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 09-Jun-11, 18:10:19      Inj       : 1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.210	PB	1.07387	4.30736	4.62554		Methane
1.447		-	-	-		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.777	BB	41.31762	8.14037e-1	33.63408		Benzene
8.037		-	-	-		Heptane

Totals : 38.25962

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:49:37 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B2101.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.90081	11.2249
as Butane	3.600	5.700	7.95649	9.7555
as Heptane	7.750	11.600	258.79027	184.0180
Totals :				204.9984

=====

Final Summed Peaks Report

=====

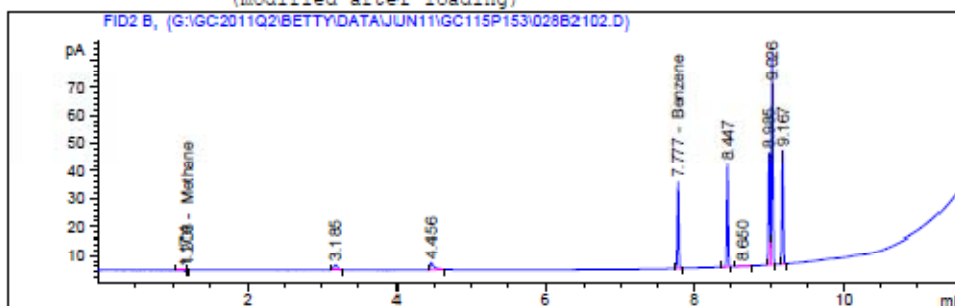
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.90081	11.2249
as Butane	7.95649	9.7555
as Heptane	258.79027	184.0180
Methane	1.07387	4.6255
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.31762	33.6341
Heptane	0.00000	0.0000
Totals :		243.2580

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B2102.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line :   21
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 09-Jun-11, 18:36:46      Inj       :    2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.203	PB	3.40747e-1	4.22968	1.44125		Methane
1.447		-	-	-		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.777	BB	41.35493	8.14037e-1	33.66445		Benzene
8.037		-	-	-		Heptane

Totals : 35.10570

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:49:48 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B2102.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.92331	11.2615
as Butane	3.600	5.700	9.50955	11.6597
as Heptane	7.750	11.600	260.98001	185.5751
Totals :				208.4962

=====

Final Summed Peaks Report

=====

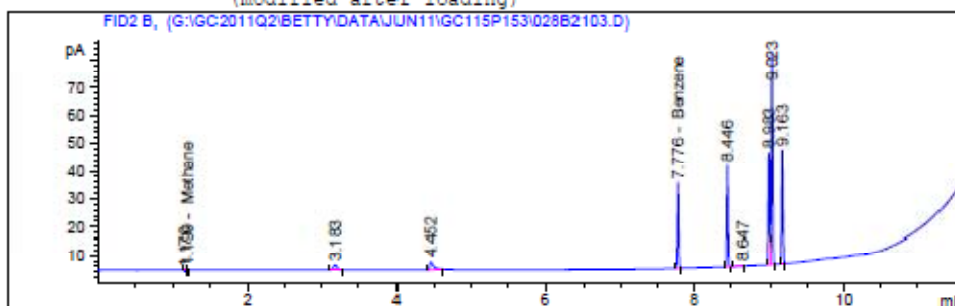
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.92331	11.2615
as Butane	9.50955	11.6597
as Heptane	260.98001	185.5751
Methane	3.40747e-1	1.4413
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.35493	33.6644
Heptane	0.00000	0.0000
Totals :		243.6019

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B2103.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

```
=====
Acq. Operator   : tbo                      Seq. Line : 21
Acq. Instrument : Betty                   Location  : Vial 28
Injection Date  : 09-Jun-11, 19:03:26      Inj       : 3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.199	PB	3.50439e-1	4.22968	1.48225		Methane
1.447		-	-	-		Ethane
2.255		-	-	-		Propane
4.885		-	-	-		Butane
6.439		-	-	-		Pentane
7.354		-	-	-		Hexane
7.776	BB	41.05456	8.14038e-1	33.41996		Benzene
8.037		-	-	-		Heptane

Totals : 34.90221

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:49:58 AM cjt

Page 1 of 2



Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\028B2103.D  
Sample Name: gc115p104 #B4 ENV(1=636,2=450)

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.850	3.600	6.87371	11.1808
as Butane	3.600	5.700	10.42225	12.7787
as Heptane	7.750	11.600	259.38855	184.4434
Totals :				208.4030

=====

Final Summed Peaks Report

=====

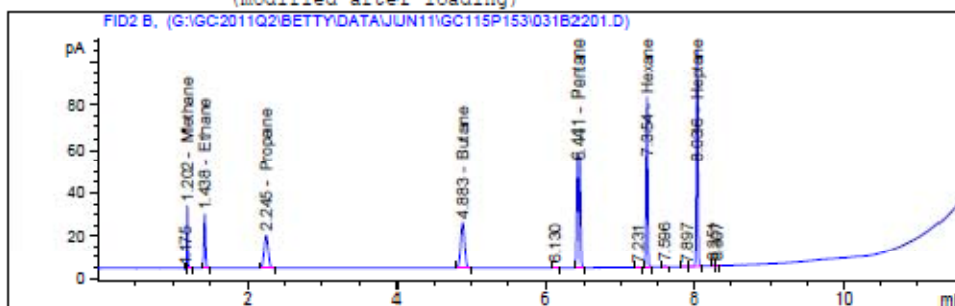
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Propane	6.87371	11.1808
as Butane	10.42225	12.7787
as Heptane	259.38855	184.4434
Methane	3.50439e-1	1.4822
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	41.05456	33.4200
Heptane	0.00000	0.0000
Totals :		243.3052

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B2201.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line :   22
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 09-Jun-11, 19:28:11      Inj       :    1
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.202	PB	21.94997	4.39779	96.53145		Methane
1.438	BB	39.87167	2.43083	96.92131		Ethane
2.245	BB	60.21010	1.64836	99.24796		Propane
4.883	BB	80.01417	1.23451	98.77803		Butane
6.441	BB	99.57662	9.86424e-1	98.22480		Pentane
7.354	BB	119.84791	8.26995e-1	99.11361		Hexane
7.775		-	-	-		Benzene
8.036	VB	140.53008	7.13515e-1	100.27037		Heptane

Totals : 689.08753

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:50:16 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B2201.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.28837e-1	0.6177
as Hexane	6.950	7.750	9.90799e-1	0.8155
as Heptane	7.750	11.600	1.04291	0.7416
Totals :				2.1748

Final Summed Peaks Report

Signal 1: FID2 B,  
Name

	Total Area [pA*s]	Amount [ppm]
as Pentane	6.28837e-1	0.6177
as Hexane	9.90799e-1	0.8155
as Heptane	1.04291	0.7416
Methane	21.94997	96.5314
Ethane	39.87167	96.9213
Propane	60.21010	99.2480
Butane	80.01417	98.7780
Pentane	99.57662	98.2248
Hexane	119.84791	99.1136
Benzene	0.00000	0.0000
Heptane	140.53008	100.2704
Totals :	691.2623	

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

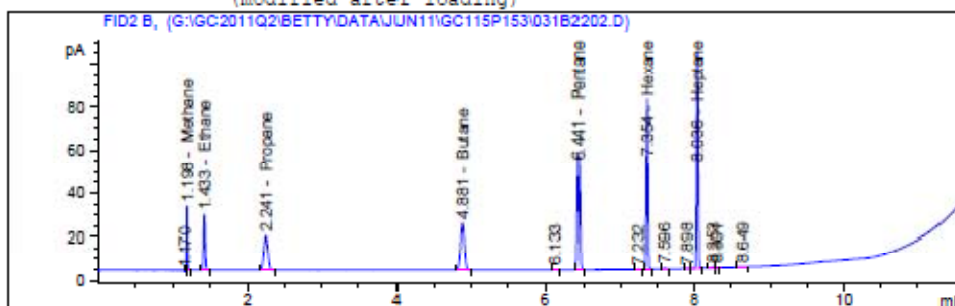
EA# 0511-68 Page 325 of 560

Instrument 2 6/10/2011 9:50:16 AM cjt

Page 2 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B2202.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line : 22
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 09-Jun-11, 19:53:01      Inj       : 2
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.198	PB	21.92650	4.39779	96.42812		Methane
1.433	BB	39.89815	2.43083	96.98578		Ethane
2.241	BB	60.23230	1.64836	99.28465		Propane
4.881	BB	80.12885	1.23451	98.91979		Butane
6.441	BB	99.64153	9.86425e-1	98.28886		Pentane
7.354	BB	119.89940	8.26995e-1	99.15621		Hexane
7.775		-	-	-		Benzene
8.036	VB	140.73538	7.13516e-1	100.41693		Heptane

Totals : 689.48033

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID2 B,

EA# 0511-68 Page 326 of 560

Instrument 2 6/10/2011 9:50:24 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B2202.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.49219e-1	0.6377
as Hexane	6.950	7.750	1.00070	0.8237
as Heptane	7.750	11.600	1.36846	0.9731
Totals :				2.4344

=====

Final Summed Peaks Report

=====

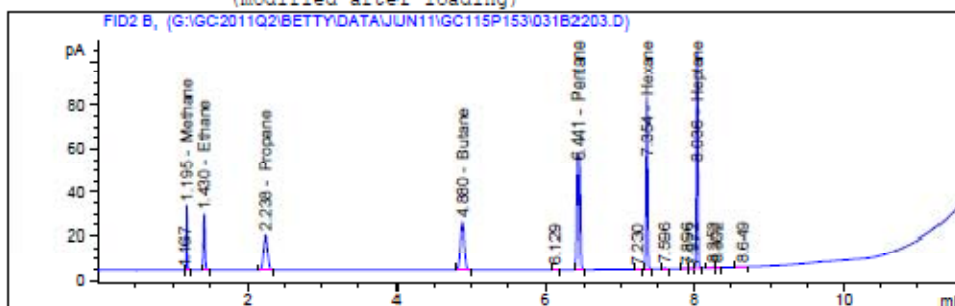
Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.49219e-1	0.6377
as Hexane	1.00070	0.8237
as Heptane	1.36846	0.9731
Methane	21.92650	96.4281
Ethane	39.89815	96.9858
Propane	60.23230	99.2846
Butane	80.12885	98.9198
Pentane	99.64153	98.2889
Hexane	119.89940	99.1562
Benzene	0.00000	0.0000
Heptane	140.73538	100.4169
Totals :	691.9148	

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

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B2203.D  
Sample Name: gc115p119 #C5

```
=====
Acq. Operator   : tbo                      Seq. Line : 22
Acq. Instrument : Betty                   Location  : Vial 31
Injection Date  : 09-Jun-11, 20:17:57      Inj       : 3
                                           Inj Volume: External
Acq. Method     : G:\GC2011Q2\BETTY\METHODS\GC115P136F.M
Last changed    : 5/14/2011 1:23:58 PM by stg
Analysis Method : G:\GC2011Q2\BETTY\METHODS\GC115P152B_0511-68.M
Last changed    : 6/10/2011 9:38:34 AM by cjt
                  (modified after loading)
=====
```



# External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/10/2011 9:38:42 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID2 B,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.195	PB	21.77630	4.39776	95.76689		Methane
1.430	BB	39.59523	2.43081	96.24828		Ethane
2.238	BB	59.80569	1.64833	98.57969		Propane
4.880	BB	79.57610	1.23450	98.23654		Butane
6.441	BB	98.89444	9.86421e-1	97.55152		Pentane
7.354	BB	118.81096	8.26991e-1	98.25556		Hexane
7.775		-	-	-		Benzene
8.036	VB	138.90248	7.13512e-1	99.10857		Heptane

Totals : 683.74706

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

# Summed Peaks Report

Signal 1: FID2 B,

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Instrument 2 6/10/2011 9:50:32 AM cjt

Page 1 of 2

Data File G:\GC2011Q2\BETTY\DATA\JUN11\GC115P153\031B2203.D  
Sample Name: gc115p119 #C5

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	5.700	6.950	6.41341e-1	0.6300
as Hexane	6.950	7.750	1.00064	0.8236
as Heptane	7.750	11.600	1.48533	1.0562
Totals :				2.5098

=====

Final Summed Peaks Report

=====

Signal 1: FID2 B,

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	6.41341e-1	0.6300
as Hexane	1.00064	0.8236
as Heptane	1.48533	1.0562
Methane	21.77630	95.7669
Ethane	39.59523	96.2483
Propane	59.80569	98.5797
Butane	79.57610	98.2365
Pentane	98.89444	97.5515
Hexane	118.81096	98.2556
Benzene	0.00000	0.0000
Heptane	138.90248	99.1086
Totals :	686.2568	

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

method: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Modified on: 5/14/2011 at 1:23:58 PM

# Injection Source and Location

Injection Source: 6890 GC Valve

Injection Location: Dual

## 6890 GC METHOD

### OVEN

Initial temp: -10 'C (On)	Maximum temp: 280 'C
Initial time: 4.00 min	Equilibration time: 0.20 min
Ramps:	
# Rate Final temp Final time	CRYO (N2)
1 40.00 210 0.50	Cryo: On
2 35.00 260 0.20	Cryo fault: On
3 0.0 (Off)	Cryo timeout: 30.00 min (On)
Post temp: 50 'C	Quick cryo cool: Off
Post time: 0.00 min	Ambient temp: 37 'C
Run time: 11.63 min	

### FRONT INLET (SPLIT/SPLITLESS)

Mode: Splitless  
Initial temp: 150 'C (On)  
Pressure: 44.00 psi (On)  
Purge flow: 0.0 mL/min  
Purge time: 0.00 min  
Total flow: 15.4 mL/min  
Gas saver: Off  
Gas type: Helium

### BACK INLET (SPLIT/SPLITLESS)

Mode: Split  
Initial temp: 200 'C (On)  
Pressure: 5.83 psi (On)  
Split ratio: 7:1  
Split flow: 21.9 mL/min  
Total flow: 31.7 mL/min  
Gas saver: Off  
Gas type: Hydrogen

### COLUMN 1

Packed Column  
Model Number: Restek 19808  
Shin Carbon ST 2m x 1mm  
Max temperature: 330 'C  
Mode: constant pressure  
Pressure: 44.00 psi  
Inlet: Front Inlet  
Outlet: Front Detector  
Outlet pressure: ambient

### COLUMN 2

Capillary Column  
Model Number: Restek 10198  
Rtx-1 30m x 0.32mm x 0.4 um SN450928  
Max temperature: 280 'C  
Nominal length: 30.0 m  
Nominal diameter: 320.00 um  
Nominal film thickness: 4.00 um  
Mode: constant flow  
Initial flow: 3.1 mL/min  
Nominal init pressure: 5.83 psi  
Average velocity: 50 cm/sec  
Inlet: Back Inlet  
Outlet: Back Detector  
Outlet pressure: ambient

### FRONT DETECTOR (TCD)

Temperature: 275 'C (On)  
Reference flow: 25.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 7.0 mL/min (On)  
Makeup Gas Type: Helium  
Filament: On  
Negative polarity: On

### BACK DETECTOR (FID)

Temperature: 300 'C (On)  
Hydrogen flow: 40.0 mL/min (On)  
Air flow: 450.0 mL/min (On)  
Mode: Constant makeup flow  
Makeup flow: 45.0 mL/min (On)  
Makeup Gas Type: Nitrogen  
Flame: On  
Electrometer: On  
Lit offset: 2.0

### SIGNAL 1

Betty 5/20/2011 5:51:16 PM stg

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method: G:\GC2011Q2\BETTY\METHODS\GC115P136F.M  
Modified on: 5/14/2011 at 1:23:58 PM

Data rate: 20 Hz	Data rate: 20 Hz
Type: front detector	Type: back detector
Save Data: On	Save Data: On
Zero: 0.0 (Off)	Zero: 0.0 (Off)
Range: 0	Range: 0
Fast Peaks: Off	Fast Peaks: Off
Attenuation: 0	Attenuation: 0

COLUMN COMP 1  
Derive from front detector

COLUMN COMP 2  
Derive from back detector

#### THERMAL AUX 1

Use: Valve Box Heater  
Description:  
Initial temp: 150 'C (On)  
Initial time: 0.00 min  
# Rate Final temp Final time  
1 0.0 (Off)

#### VALVES

Valve 1 Gas Sampling  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Back Inlet  
Valve 2 Gas Sampling  
Description:  
Loop Volume: 0.250 mL  
Load Time: 0.10 min  
Inject Time: 0.50 min  
Inlet: Front Inlet

#### POST RUN

Post Time: 0.00 min

#### TIME TABLE

Time	Specifier	Parameter & Setpoint
1.60		Front Detector Polarity: Off

#### GC Injector

##### Front Injector:

Injector not configured, use these parameters if it becomes configured

Sample Washes	0
Sample Pumps	0
Injection Volume	1.00 microliters
Syringe Size	10.0 microliters
PostInj Solvent A Washes	0
PostInj Solvent B Washes	0
Viscosity Delay	0 seconds
Plunger Speed	Fast

##### Back Injector:

Injector not configured, use these parameters if it becomes configured

Sample Washes	0
Sample Pumps	0
Injection Volume	1.00 microliters
Syringe Size	10.0 microliters
PostInj Solvent A Washes	0
PostInj Solvent B Washes	0
Viscosity Delay	0 seconds
Plunger Speed	Fast

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Betty 5/20/2011 5:51:16 PM stg

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Sequence: G:\gc2011q2\betty\sequence\GC115P129.TXT

Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 14	gc115p129 #OC5 ENV(1=0,2=400)	GC115P80F	3	Sample
2	Vial 14	gc115p129 #OC4 ENV(1=353.33,2=500)	GC115P80F	3	Sample
3	Vial 14	gc115p129 #OC3 ENV(1=636.2=100)	GC115P80F	3	Sample
4	Vial 14	gc115p129 #OC2 ENV(1=692.53,2=20)	GC115P80F	3	Sample
5	Vial 14	gc115p129 #OC1 ENV(1=3515.65,2=25)	GC115P80F	7	Sample
6	Vial 3	gc115p119 #C5	GC115P80F	3	Sample
7	Vial 2	Pause	PAUSE	1	Sample
8	Vial 14	gc115p129 #OC4 ENV(1=318,2=450)	GC115P80F	3	Sample
9	Vial 14	gc115p86 #T4 ENV(1=424,3=400)	GC115P80F	3	Sample
10	Vial 2	Pause	PAUSE	1	Sample
11	Vial 14	gc115p104 #B4 ENV(1=636,3=450)	GC115P80F	3	Sample
12	Vial 14	gc115p104 #B5 ENV(1=0,3=450)	GC115P80F	3	Sample
13	Vial 14	gc115p104 #B3 ENV(1=636,3=100)	GC115P80F	3	Sample
14	Vial 14	gc115p104 #B2 ENV(1=1342.66,3=100)	GC115P80F	3	Sample
15	Vial 14	gc115p104 #B1 ENV(1=3462.65,3=100)	GC115P80F	3	Sample
16	Vial 16	Isooctane RT	GC115P80F	2	Sample
17	Vial 4	R1 Can 1311 0311-185	GC115P80F	3	Sample
18	Vial 5	R2 Can 1606 0311-185	GC115P80F	3	Sample
19	Vial 8	R3 Can 1029 0311-185	GC115P80F	3	Sample
20	Vial 3	gc115p119 #C5	GC115P80F	3	Sample
21	Vial 14	gc115p104 #B4 ENV(1=636,3=450)	GC115P80F	3	Sample
22	Vial 14	gc115p129 #OC4 ENV(1=318,2=450)	GC115P80F	3	Sample
23	Vial 2	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q2\betty\sequence\GC115P129.TXT

Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 30	gc115p129 #OC5 ENV(1=0,2=400)	GC115P119B	3	Sample
2	Vial 30	gc115p129 #OC4 ENV(1=353.33,2=500)	GC115P119B	3	Sample
3	Vial 30	gc115p129 #OC3 ENV(1=636.2=100)	GC115P119B	3	Sample
4	Vial 30	gc115p129 #OC2 ENV(1=692.53,2=20)	GC115P119B	3	Sample
5	Vial 30	gc115p129 #OC1 ENV(1=3515.65,2=25)	GC115P119B	7	Sample
6	Vial 19	gc115p119 #C5	GC115P119B	3	Sample
7	Vial 18	Pause	PAUSE	1	Sample
8	Vial 30	gc115p129 #OC4 ENV(1=318,2=450)	GC115P119B	3	Sample
9	Vial 30	gc115p86 #T4 ENV(1=424,3=400)	GC115P119B	3	Sample
10	Vial 18	Pause	PAUSE	1	Sample
11	Vial 30	gc115p104 #B4 ENV(1=636,3=450)	GC115P119B	3	Sample
12	Vial 30	gc115p104 #B5 ENV(1=0,3=450)	GC115P119B	3	Sample
13	Vial 30	gc115p104 #B3 ENV(1=636,3=100)	GC115P119B	3	Sample
14	Vial 30	gc115p104 #B2 ENV(1=1342.66,3=100)	GC115P119B	3	Sample
15	Vial 30	gc115p104 #B1 ENV(1=3462.65,3=100)	GC115P119B	3	Sample
16	Vial 32	Isooctane RT	GC115P119B	2	Sample
17	Vial 20	R1 Can 1311 0311-185	GC115P119B	3	Sample
18	Vial 21	R2 Can 1606 0311-185	GC115P119B	3	Sample
19	Vial 24	R3 Can 1029 0311-185	GC115P119B	3	Sample
20	Vial 19	gc115p119 #C5	GC115P119B	3	Sample
21	Vial 30	gc115p104 #B4 ENV(1=636,3=450)	GC115P119B	3	Sample
22	Vial 30	gc115p129 #OC4 ENV(1=318,2=450)	GC115P129B	3	Sample
23	Vial 18	Pause	PAUSE	1	Sample

Sequence: G:\gc20111q2\beta\sequence\gc115p146b.bt  
Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 12	gc115p119 #C4 ENV(1=600,2=400)	GC115P136F	3	Sample
2	Vial 12	gc115p119 #C4 ENV(1=600,2=400)	GC115P136F	2	Sample
3	Vial 12	gc115p119 #C5 ENV(1=0,2=450)	GC115P136F	3	Sample
4	Vial 12	gc115p119 #C3 ENV(1=900,2=100)	GC115P136F	3	Sample
5	Vial 12	gc115p119 #C5 ENV(1=0,2=450)	GC115P136F	3	Sample
6	Vial 12	gc115p119 #C2 ENV(1=1900,2=100)	GC115P136F	3	Sample
7	Vial 12	gc115p119 #C1 ENV(1=3900,2=100)	GC115P136F	3	Sample
8	Vial 12	gc115p119 #C10 ENV(1=0,4=400)	GC115P136F	3	Sample
9	Vial 12	gc115p119 #C5 ENV(1=0,2=450)	GC115P136F	4	Sample
10	Vial 12	gc115p119 #C3 ENV(1=900,2=100)	GC115P136F	3	Sample
11	Vial 12	gc115p119 #C2 ENV(1=1900,2=100)	GC115P136F	3	Sample
12	Vial 12	gc115p119 #C9 ENV(1=1200,4=467.78)	GC115P136F	3	Sample
13	Vial 12	gc115p119 #C8 ENV(1=0,3=467.78)	GC115P136F	3	Sample
14	Vial 12	gc115p119 #C7 ENV(1=600,3=422.12)	GC115P136F	3	Sample
15	Vial 12	gc115p119 #C6 ENV(1=900,3=100)	GC115P136F	3	Sample
16	Vial 2	Pause	PAUSE	1	Sample
17	Vial 12	gc115p119 #C5 ENV(1=0,2=450)	GC115P136F	3	Sample
18	Vial 2	Pause	PAUSE	1	Sample
19	Vial 12	gc115p119 #C5 ENV(1=0,2=450)	GC115P136F	3	Sample
20	Vial 2	Pause	PAUSE	1	Sample

Sequence: G:\gc20111q2\beta\sequence\gc115p146b.bt  
Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 26	gc115p119 #C4 ENV(1=600,2=400)	GC115P80B	3	Sample
2	Vial 26	gc115p119 #C4 ENV(1=600,2=400)	GC115P80B	2	Sample
3	Vial 26	gc115p119 #C5 ENV(1=0,2=450)	GC115P80B	3	Sample
4	Vial 26	gc115p119 #C3 ENV(1=900,2=100)	GC115P80B	3	Sample
5	Vial 26	gc115p119 #C5 ENV(1=0,2=450)	GC115P80B	3	Sample
6	Vial 26	gc115p119 #C2 ENV(1=1900,2=100)	GC115P80B	3	Sample
7	Vial 26	gc115p119 #C1 ENV(1=3900,2=100)	GC115P80B	3	Sample
8	Vial 26	gc115p119 #C10 ENV(1=0,4=400)	GC115P80B	3	Sample
9	Vial 26	gc115p119 #C5 ENV(1=0,2=450)	GC115P80B	4	Sample
10	Vial 26	gc115p119 #C3 ENV(1=900,2=100)	GC115P80B	3	Sample
11	Vial 26	gc115p119 #C2 ENV(1=1900,2=100)	GC115P80B	3	Sample
12	Vial 26	gc115p119 #C9 ENV(1=1200,4=467.78)	GC115P80B	3	Sample
13	Vial 26	gc115p119 #C8 ENV(1=0,3=467.78)	GC115P80B	3	Sample
14	Vial 26	gc115p119 #C7 ENV(1=600,3=422.12)	GC115P80B	3	Sample
15	Vial 26	gc115p119 #C6 ENV(1=900,3=100)	GC115P80B	3	Sample
16	Vial 16	Pause	PAUSE	1	Sample
17	Vial 26	gc115p119 #C5 ENV(1=0,2=450)	GC115P80B	3	Sample
18	Vial 16	Pause	PAUSE	1	Sample
19	Vial 26	gc115p119 #C5 ENV(1=0,2=450)	GC115P80B	3	Sample
20	Vial 16	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q2\Betty\sequence\gc115p150.txt

Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 18	gc115p119 #C5	GC115P136F	3	Sample
2	Vial 14	gc115p80 #FQ4	GC115P136F	2	Sample
3	Vial 13	gc115p98 #FQ8	GC115P136F	2	Sample
4	Vial 4	Run 1 Can 1158 0511-108	GC115P136F	3	Sample
5	Vial 5	Run 2 Can 1384 0511-108	GC115P136F	3	Sample
6	Vial 6	Run 3 Can 1638 0511-108	GC115P136F	3	Sample
7	Vial 1	He Blank	GC115P136F	3	Sample
8	Vial 15	gc115p119 #C5	GC115P136F	3	Sample
9	Vial 14	gc115p80 #FQ4	GC115P136F	2	Sample
10	Vial 13	gc115p98 #FQ8	GC115P136F	2	Sample
11	Vial 2	PAUSE	PAUSE	1	Sample
12	Vial 7	051811-FUEL-1 Can 1412 0511-68	GC115P136F	3	Sample
13	Vial 8	051811-FUEL-2 Can 1452 0511-68	GC115P136F	3	Sample
14	Vial 9	051811-FUEL-3 Can 1031 0511-68	GC115P136F	3	Sample
15	Vial 15	gc115p119 #C5	GC115P136F	3	Sample
16	Vial 2	PAUSE	PAUSE	1	Sample
17	Vial 4	Producer Gas 1 0611-37	GC115P136F	2	Sample
18	Vial 5	Producer Gas 2 0611-37	GC115P136F	2	Sample
19	Vial 14	gc115p80 #FQ4	GC115P136F	2	Sample
20	Vial 13	gc115p98 #FQ8	GC115P136F	2	Sample
21	Vial 12	gc115p104 #B4 ENV(1=848,2=600)	GC115P136F	3	Sample
22	Vial 2	PAUSE	PAUSE	1	Sample

Sequence: G:\gc2011q2\Betty\sequence\gc115p150.txt

Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 31	gc115p119 #C5	GC115P146B	3	Sample
2	Vial 30	gc115p80 #FQ4	GC115P146B	2	Sample
3	Vial 29	gc115p98 #FQ8	GC115P146B	2	Sample
4	Vial 20	Run 1 Can 1158 0511-108	GC115P146B	3	Sample
5	Vial 21	Run 2 Can 1384 0511-108	GC115P146B	3	Sample
6	Vial 22	Run 3 Can 1638 0511-108	GC115P146B	3	Sample
7	Vial 17	He Blank	GC115P146B	3	Sample
8	Vial 31	gc115p119 #C5	GC115P146B	3	Sample
9	Vial 30	gc115p80 #FQ4	GC115P146B	2	Sample
10	Vial 29	gc115p98 #FQ8	GC115P146B	2	Sample
11	Vial 18	PAUSE	PAUSE	1	Sample
12	Vial 23	051811-FUEL-1 Can 1412 0511-68	GC115P146B	3	Sample
13	Vial 24	051811-FUEL-2 Can 1452 0511-68	GC115P146B	3	Sample
14	Vial 25	051811-FUEL-3 Can 1031 0511-68	GC115P146B	3	Sample
15	Vial 31	gc115p119 #C5	GC115P146B	3	Sample
16	Vial 18	PAUSE	PAUSE	1	Sample
17	Vial 20	Producer Gas 1 0611-37	GC115P146B	2	Sample
18	Vial 21	Producer Gas 2 0611-37	GC115P146B	2	Sample
19	Vial 30	gc115p80 #FQ4	GC115P146B	2	Sample
20	Vial 29	gc115p98 #FQ8	GC115P146B	2	Sample
21	Vial 28	gc115p104 #B4 ENV(1=848,2=600)	GC115P146B	3	Sample
22	Vial 18	PAUSE	PAUSE	1	Sample

Sequence: G:\gc2011q2\Betty\sequence\gc115p152.txt

Sequence Table (Front Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 13	gc115p119 #5	GC115P136F	3	Sample
2	Vial 13	gc115p08 #F08	GC115P136F	2	Sample
3	Vial 14	gc115p80 #F04	GC115P136F	2	Sample
4	Vial 12	gc115p104 #B5 ENV(1-0,2-450)	GC115P136F	3	Sample
5	Vial 12	gc115p104 #B4 ENV(1-848,2-800)	GC115P136F	3	Sample
6	Vial 12	gc115p104 #B3 ENV(1-836,2-100)	GC115P136F	3	Sample
7	Vial 12	gc115p104 #B2 ENV(1-1342.66,2-100)	GC115P136F	3	Sample
8	Vial 12	gc115p104 #B1 ENV(1-3482.65,2-100)	GC115P136F	3	Sample
9	Vial 1	He Blank	GC115P136F	3	Sample
10	Vial 1	Pause	PAUSE	1	Sample
11	Vial 12	gc115p104 #B4 ENV(1-836,2-450)	GC115P136F	3	Sample
12	Vial 3	051811-FUEL-1 Can 1412 *11 0511-88	GC115P136F	3	Sample
13	Vial 3	051811-FUEL-1 Can 1412 *11 0511-88	GC115P136F	3	Sample
14	Vial 4	051811-FUEL-2 Can 1452 *11 0511-88	GC115P136F	3	Sample
15	Vial 5	051811-FUEL-3 Can 1031 *11 0511-88	GC115P136F	3	Sample
16	Vial 15	gc115p119 #C5	GC115P136F	3	Sample
17	Vial 13	gc115p08 #F08	GC115P136F	2	Sample
18	Vial 14	gc115p80 #F04	GC115P136F	2	Sample
19	Vial 3	051811-FUEL-1 Can 1412 *11 0511-88	GC115P136F	3	Sample
20	Vial 8	R1 Outlet can 1371 0511-109	GC115P136F	3	Sample
21	Vial 7	R2 Outlet can 1358 0511-109	GC115P136F	3	Sample
22	Vial 8	R3 Outlet can 1042 0511-109	GC115P136F	3	Sample
23	Vial 9	R1 Inlet can 1323 0511-109	GC115P136F	3	Sample
24	Vial 10	R2 Inlet can 1011 0511-109	GC115P136F	3	Sample
25	Vial 11	R3 Inlet can 1320 0511-109	GC115P136F	3	Sample
26	Vial 16	Building 8 Inlet can 1010 0511-123	GC115P136F	3	Sample
27	Vial 12	gc115p104 #B4 ENV(1-836,2-450)	GC115P136F	3	Sample
28	Vial 15	gc115p119 #C5	GC115P136F	3	Sample
29	Vial 13	gc115p08 #F08	GC115P136F	2	Sample
30	Vial 14	gc115p80 #F04	GC115P136F	2	Sample
31	Vial 1	Pause	PAUSE	1	Sample

Sequence: G:\gc2011q2\Betty\sequence\gc115p152.txt

Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 31	gc115p119 #5	GC115P146B	3	Sample
2	Vial 29	gc115p08 #F08	GC115P146B	2	Sample
3	Vial 30	gc115p80 #F04	GC115P146B	2	Sample
4	Vial 28	gc115p104 #B5 ENV(1-0,2-450)	GC115P146B	3	Sample
5	Vial 28	gc115p104 #B4 ENV(1-848,2-800)	GC115P146B	3	Sample
6	Vial 28	gc115p104 #B3 ENV(1-836,2-100)	GC115P146B	3	Sample
7	Vial 28	gc115p104 #B2 ENV(1-1342.66,2-100)	GC115P146B	3	Sample
8	Vial 28	gc115p104 #B1 ENV(1-3482.65,2-100)	GC115P146B	3	Sample
9	Vial 17	He Blank	GC115P146B	3	Sample
10	Vial 17	Pause	PAUSE	1	Sample
11	Vial 28	gc115p104 #B4 ENV(1-836,2-450)	GC115P146B	3	Sample
12	Vial 19	051811-FUEL-1 Can 1412 0511-88	GC115P152B	3	Sample
13	Vial 19	051811-FUEL-1 Can 1412 *11 0511-88	GC115P152B	3	Sample
14	Vial 20	051811-FUEL-2 Can 1452 *11 0511-88	GC115P152B	3	Sample
15	Vial 21	051811-FUEL-3 Can 1031 *11 0511-88	GC115P152B	3	Sample
16	Vial 31	gc115p119 #C5	GC115P152B	3	Sample
17	Vial 29	gc115p08 #F08	GC115P152B	2	Sample
18	Vial 30	gc115p80 #F04	GC115P152B	2	Sample
19	Vial 19	051811-FUEL-1 Can 1412 *11 0511-88	GC115P152B	3	Sample
20	Vial 22	R1 Outlet can 1371 0511-109	GC115P152B	3	Sample
21	Vial 23	R2 Outlet can 1358 0511-109	GC115P152B	3	Sample
22	Vial 24	R3 Outlet can 1042 0511-109	GC115P152B	3	Sample
23	Vial 25	R1 Inlet can 1323 0511-109	GC115P152B	3	Sample
24	Vial 26	R2 Inlet can 1011 0511-109	GC115P152B	3	Sample
25	Vial 27	R3 Inlet can 1320 0511-109	GC115P152B	3	Sample
26	Vial 32	Building 6 Inlet can 1010 0511-123	GC115P152B	3	Sample
27	Vial 28	gc115p104 #B4 ENV(1-836,2-450)	GC115P152B	3	Sample
28	Vial 31	gc115p119 #C5	GC115P152B	3	Sample
29	Vial 29	gc115p08 #F08	GC115P152B	2	Sample
30	Vial 30	gc115p80 #F04	GC115P152B	2	Sample
31	Vial 17	Pause	PAUSE	1	Sample

Sequence: G:\gc2011\2\Betty\sequence\gc115p153.bt

Sequence Table (Front Injector):

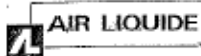
Line	Vial	Sample Name	Method	Inj	Type
1	Vial 1	He Blank	GC115P136F	3	Sample
2	Vial 9	R1 Inlet can 1323 *01 0511-109	GC115P136F	3	Sample
3	Vial 16	051811-FUEL-1 Can 1412 *11 0511-88	GC115P136F	3	Sample
4	Vial 10	R2 Inlet can 1011 *01 0511-109	GC115P136F	3	Sample
5	Vial 11	R3 Inlet can 1320 *01 0511-109	GC115P136F	3	Sample
6	Vial 1	Pause	PAUSE	1	Sample
7	Vial 3	Dow 1 Oxide 1 Can 4281 0611-31	GC115P136F	3	Sample
8	Vial 4	Dow 2 Oxide 1 Can 4882 0611-31	GC115P136F	3	Sample
9	Vial 5	Dow 3 Oxide 1 Can 4283 0611-31	GC115P136F	3	Sample
10	Vial 6	R1 Can 4279 0611-31	GC115P136F	3	Sample
11	Vial 7	R2 Can 4282 0611-31	GC115P136F	3	Sample
12	Vial 8	R3 Can 4280 0611-31	GC115P136F	3	Sample
13	Vial 12	gc115p104 #04 ENV(1+036,2+450)	GC115P136F	3	Sample
14	Vial 15	gc115p119 #C5	GC115P136F	3	Sample
15	Vial 13	gc115p08 #FG8	GC115P136F	2	Sample
16	Vial 14	gc115p80 #FG4	GC115P136F	2	Sample
17	Vial 1	Pause	PAUSE	1	Sample
18	Vial 9	051811-FUEL-2 Can 1452 *11 0511-88	GC115P136F	3	Sample
19	Vial 10	051811-FUEL-3 Can 1031 *11 0511-88	GC115P136F	3	Sample
20	Vial 7	Outlet can 1181 0511-123	GC115P136F	3	Sample
21	Vial 12	gc115p104 #04 ENV(1+036,2+450)	GC115P136F	3	Sample
22	Vial 15	gc115p119 #C5	GC115P136F	3	Sample
23	Vial 1	Pause	PAUSE	1	Sample

Sequence: G:\gc2011\2\Betty\sequence\gc115p153.bt

Sequence Table (Back Injector):

Line	Vial	Sample Name	Method	Inj	Type
1	Vial 17	He Blank	GC115P152B	3	Sample
2	Vial 25	R1 Inlet can 1323 *01 0511-109	GC115P152B	3	Sample
3	Vial 32	051811-FUEL-1 Can 1412 *11 0511-88	GC115P152B	3	Sample
4	Vial 26	R2 Inlet can 1011 *01 0511-109	GC115P152B	3	Sample
5	Vial 27	R3 Inlet can 1320 *01 0511-109	GC115P152B	3	Sample
6	Vial 17	Pause	PAUSE	1	Sample
7	Vial 16	Dow 1 Oxide 1 Can 4281 0611-31	GC115P152B	3	Sample
8	Vial 20	Dow 2 Oxide 1 Can 4882 0611-31	GC115P152B	3	Sample
9	Vial 21	Dow 3 Oxide 1 Can 4283 0611-31	GC115P152B	3	Sample
10	Vial 22	R1 Can 4279 0611-31	GC115P152B	3	Sample
11	Vial 23	R2 Can 4282 0611-31	GC115P152B	3	Sample
12	Vial 24	R3 Can 4280 0611-31	GC115P152B	3	Sample
13	Vial 28	gc115p104 #04 ENV(1+036,2+450)	GC115P136F	3	Sample
14	Vial 31	gc115p119 #C5	GC115P152B	3	Sample
15	Vial 29	gc115p08 #FG8	GC115P152B	2	Sample
16	Vial 30	gc115p80 #FG4	GC115P152B	2	Sample
17	Vial 17	Pause	PAUSE	1	Sample
18	Vial 25	051811-FUEL-2 Can 1452 *11 0511-88	GC115P152B	3	Sample
19	Vial 26	051811-FUEL-3 Can 1031 *11 0511-88	GC115P152B	3	Sample
20	Vial 23	Outlet can 1181 0511-123	GC115P152B	3	Sample
21	Vial 28	gc115p104 #04 ENV(1+036,2+450)	GC115P152B	3	Sample
22	Vial 31	gc115p119 #C5	GC115P152B	3	Sample
23	Vial 17	Pause	PAUSE	1	Sample





Air Liquide America  
Specialty Gases LLC



**CERTIFIED MASTER CLASS**  
*Single-Certified Calibration Standard*

6141 EASTON ROAD, ELDG 1, PLUMSTEADVILLE, PA 18949-0310

Phone: 800-331-4353 Fax: 215-763-7228

**CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard**

Product Information

Document #: 40863889-001  
Item No.: MN802890-P-44  
P.O. No.: 40860793/ENTHALPY

Cylinder Number: 1C1592  
Cylinder Size: 44  
Certification Date: 15Mar2011  
Expiration Date: 14Mar2013

Customer

ENTHALPY ANALYTICAL INC.  
2202 ELLIS RD.  
STE A  
DURHAM, NC 27704  
US

**CERTIFIED CONCENTRATION**

<u>Component Name</u>	<u>Concentration (Moles)</u>	<u>Accuracy (+/-%)</u>
N-BUTANE	100. PPM	2
ETHANE	100. PPM	2
N-HEPTANE	100. PPM	2
N-HEXANE	100. PPM	2
METHANE	100. PPM	2
N-PENTANE	100. PPM	2
PROPANE	100. PPM	2
NITROGEN	BALANCE	

**TRACEABILITY**

Traceable To

Scott Reference Standard

APPROVED BY:

WALTER SABITUS

DATE:

3/15/11

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### SPECIFICATIONS

Component Name	Requested Concentration (Moles)		Certified Concentration (Moles)		Blend Tolerance Result (+/- %)	Certified Accuracy Result (+/- %)
N-BUTANE	100.	PPM	100.	PPM	.0	2.00
ETHANE	100.	PPM	100.	PPM	.0	2.00
N-HEPTANE	100.	PPM	100.	PPM	.0	2.00
N-HEXANE	100.	PPM	100.	PPM	.0	2.00
METHANE	100.	PPM	100.	PPM	.0	2.00
N-PENTANE	100.	PPM	100.	PPM	.0	2.00
PROPANE	100.	PPM	100.	PPM	.0	2.00
NITROGEN		BAL		BAL		

### TRACEABILITY

Traceable To  
Scott Reference Standard

### PHYSICAL PROPERTIES

Cylinder Size: 44

Pressure: 2000 PSIG  
Expiration Date: 14Mar2013

### SPECIAL HANDLING INSTRUCTIONS

Do not use or store cylinder at or below the stated dew point temperature. Possible condensation of heavier components could result. In the event the cylinder has been exposed to temperatures at or below the dew point, place cylinder in heated area for 24 hours and then roll cylinder for 15 minutes to re-mix.

Use of calibration standards at or below dew point temperature may result in calibration error.





**MATHESON  
TRI-GAS**

ask...The Gas Professionals™

***Certified Mixture Grade***

Matheson Tri-Gas Inc.

6874 S. Main Street  
Morrow GA 30260

Phone: 770-961 4606

Fax: 770-968 1268

TO: Enthalpy Analytical  
2202 Ellis Rd Suite A  
Durham, NC 27703

**TO AVOID BACKFILL, CYLINDER PRESSURE MUST BE  
GREATER THAN PROCESS PRESSURE**

PHONE:

FAX:

SALES ORDER NUMBER: 555395

P.O. NUMBER: C012111C4GAT

LOT NUMBER: 1051618298

PRODUCT:

CYLINDER NUMBER: SX43651

SIZE: 1R

CGA/DISS OUTLET: 350

CONTENT: 30.5 cu. ft.

PRESSURE: 440 psig

FILL DATE: Jan 28, 2011

CERTIFICATION DATE: Jan 28, 2011

EXPIRATION DATE: Jan 28, 2014

COMPONENT	REQUESTED CONCENTRATION	BLEND TOLERANCE (+/-)	CERTIFIED CONCENTRATION	CERTIFICATION ACCURACY
Heptane	300 ppm	10 %	494.1 ppm	+/- 2%
Hexane	1000 ppm	10 %	1002.6 ppm	+/- 2%
Pentane	2000 ppm	10 %	2002.0 ppm	+/- 2%
Butane	1 %	10 %	0.98 %	+/- 2%
Propane	5 %	10 %	4.99 %	+/- 2%
Ethane	5 %	10 %	4.97 %	+/- 2%
Nitrogen, Balance				

TRACEABLE TO REFERENCE STANDARD SOURCE/NUMBER:

TRACEABLE TO NIST TRACEABLE WEIGHT CERTIFICATE: 513987

SPECIAL INFORMATION / ADDITIONAL COMMENTS

The product listed above and furnished under the referenced purchase order has been tested and found to contain the component concentration listed above. All values in mole/mole basis gas phase unless otherwise indicated. Matheson Tri-Gas Inc. warrants that the above product(s) conform at the time of shipment to the above description. Matheson Tri-Gas Inc. liability does not exceed the value of the product purchased.

Derek Stuck

ANALYST

  
SIGNATURE

Jan 28, 2011

DATE SIGNED

EA# U511-68 Page 339 of 560

Page 1 of 1

# 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 SG9127449BAL  
Cylinder Size/CGA: AL150/350  
Fill Pressure: 1400 PSIA  
Gas Volume: 2634 liters  
Date of Mfg: 3/26/09  
Expiration Date: 3/26/12

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	032609-001	CMD030909CJCB	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Methane	1 %	1.002 % +/- 0.02 %	Gravimetric Master Gas
Ethane	1 %	0.999 % +/- 0.02 %	
Propane	1 %	1.002 % +/- 0.02 %	
n-Butane	1 %	0.999 % +/- 0.02 %	
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.

EA# 0511-68 Page 340 of 560

**Cylinder Library**

Cylinder Name:  K-Factor:  ☒ Automatic ☐ Manual Creation Date:

Information:  Expiration Date:  ☒ No Expiration Date

**Contents:**

Interest	Balance	Gas Name	Symbol	Concentration	Units	K-Factor
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NITROGEN	N2	959980.00	ppm	1.000
<input checked="" type="checkbox"/>	<input type="checkbox"/>	METHANE	CH4	10020.00	ppm	0.7192
<input type="checkbox"/>	<input type="checkbox"/>	ETHANE	C2H6	9990.00	ppm	0.4805
<input type="checkbox"/>	<input type="checkbox"/>	PROPANE	C3H8	10020.00	ppm	0.3483
<input type="checkbox"/>	<input type="checkbox"/>	BUTANE	C4H10	9990.00	ppm	0.2554
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					

THE LINDE GROUP

*Linde*

SHIPPED TO: Enthalpy Analytical Inc.  
2202 Ellis Road  
Durham, NC 27703-5521

CERTIFICATE  
OF  
ANALYSIS

SALES#:	107437116	CYLINDER #:	CC-250076
PRODUCTION#:	1142713	CYLINDER PRES:	800 psig
CERTIFICATION DATE:	06/15/2010	CYLINDER VALVE:	CGA 350
P.O.#:	CMD602KMAJCB	PRODUCT EXPIRATION DATE:	06/15/2011
BLEND TYPE:	CERTIFIED		

ANALYTICAL ACCURACY: +/- 2%

COMPONENT	REQUESTED GAS CONC	ANALYSIS
Acetone	100 ppm	101 ppm
Benzene	100 ppm	100 ppm
Toluene	100 ppm	98.8 ppm
Ethylbenzene	100 ppm	99.5 ppm
p-Xylene	50.0 ppm	50.3 ppm
m-Xylene	50.0 ppm	50.3 ppm
o-xylene	100 ppm	102 ppm
Nitrogen	Balance	Balance

ANALYST:   
Lou Lorenzetti

DATE: 06/15/2010

Linde Gas North America LLC

(908) 454-7455 Main (908) 232-0611 Fax  
www.spectragases.com

EA# 0511-68 Page 342 of 560

THE LINDE GROUP



SHIPPED TO: Enthalpy Analytical Inc.  
2202 Ellis Road  
Durham, NC 27703-5521


CERTIFICATE  
OF  
ANALYSIS

SALES#:	107516775	CYLINDER # :	CC-133401
PRODUCTION#:	1146952	CYLINDER PRES:	800 psig
CERTIFICATION DATE:	07/27/2010	CYLINDER VALVE:	CGA 350
P.O.# :	C-BDT0710-03	PRODUCT EXPIRATION DATE:	07/27/2011
BLEND TYPE:	CERTIFIED		

ANALYTICAL ACCURACY: +/- 2%

COMPONENT	REQUESTED GAS CONC	ANALYSIS
Chloromethane	100 ppm	102 ppm
Methanol	100 ppm	98.0 ppm
Benzene	100 ppm	102 ppm
Toluene	100 ppm	101 ppm
Ethylbenzene	100 ppm	98.9 ppm
p-Xylene	100 ppm	99.1 ppm
m-xylene	100 ppm	99.1 ppm
o-xylene	100 ppm	100 ppm
Nitrogen	Balance	Balance

ANALYST:

  
Lou Lorenzetti

DATE: 07/27/2010

Linde Gas North America LLC

(908) 454-7455 Main (908) 252-0811 Fax  
www.spectragases.com

EA# 0511-68 Page 343 of 560



**MATHESON  
TRI-GAS**

ask...The Gas Professionals™

***Certified Mixture Grade***

Matheson Tri-Gas Inc.

6874 S. Main Street  
Morrow GA 30260

Phone: 770-961 4606

Fax: 770-968 1268

TO: Enthalpy Analytical  
2202 Ellis Rd Suite A  
Durham, NC 27703

TO AVOID BACKFILL, CYLINDER PRESSURE MUST BE  
GREATER THAN PROCESS PRESSURE

PHONE:

FAX:

SALES ORDER NUMBER: 553918

P.O. NUMBER: BDT0111-34

LOT NUMBER: 1051618217

PRODUCT:

CYLINDER NUMBER: SX53231

SIZE: 1R

CGA/DISS OUTLET: 350

CONTENT: 20.8 cu. ft.

PRESSURE: 300 psig

FILL DATE: Jan 21, 2011

CERTIFICATION DATE: Jan 21, 2011

EXPIRATION DATE: Jan 21, 2013

COMPONENT	REQUESTED CONCENTRATION	BLEND TOLERANCE (+/-)	CERTIFIED CONCENTRATION	CERTIFICATION ACCURACY
Octane	200 ppm	10 %	200.6 ppm	+/- 2%
1-Hexene	200 ppm	10 %	200.6 ppm	+/- 2%
Nitrogen, Balance				

TRACEABLE TO REFERENCE STANDARD SOURCE/NUMBER:

TRACEABLE TO NIST TRACEABLE WEIGHT CERTIFICATE: 513987

**SPECIAL INFORMATION / ADDITIONAL COMMENTS**

The product listed above and furnished under the referenced purchase order has been tested and found to contain the component concentration listed above. All values in mole/mole basis gas phase unless otherwise indicated. Matheson Tri-Gas Inc. warrants that the above product(s) conform at the time of shipment to the above description. Matheson Tri-Gas Inc. liability does not exceed the value of the product purchased.

Derek Stuck  
ANALYST

  
SIGNATURE

Jan 24, 2011  
DATE SIGNED

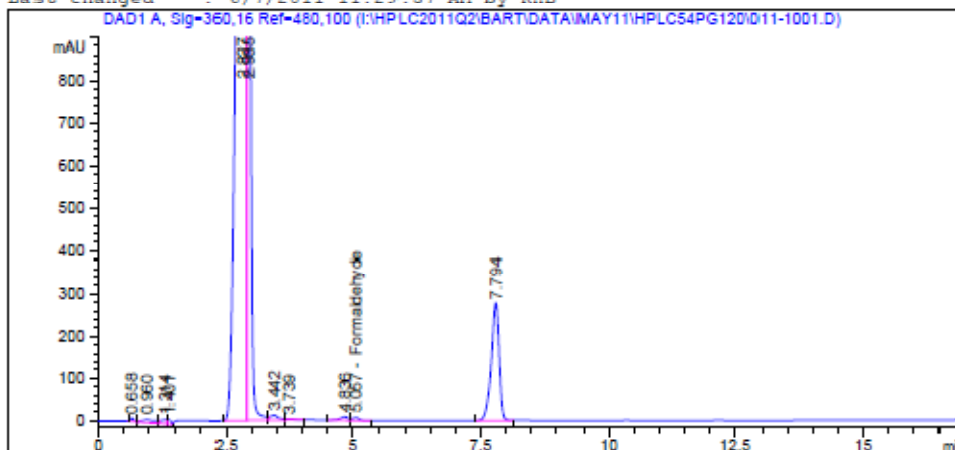
# Sample Chromatograms



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Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\011-1001.D  
Sample Name: 052011-0011U-1-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   10
Acq. Instrument : Bart                    Location  : Vial 11
Injection Date  : 5/28/2011 12:29:11 AM    Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057	VB	58.32299	2.42472e-3	1.41417e-1		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 1.41417e-1

2 Warnings or Errors :

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

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

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Instrument 2 6/7/2011 11:30:32 AM KHB

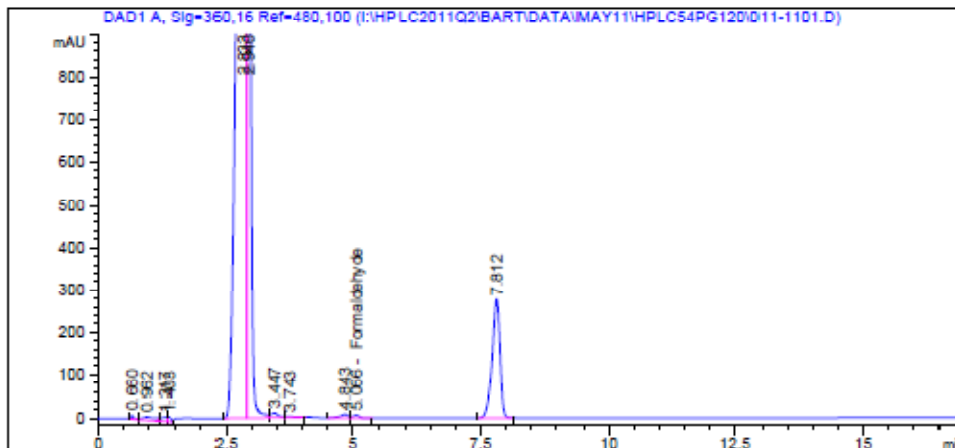
Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\011-1101.D  
Sample Name: 052011-0011U-1-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 11
Acq. Instrument : Bart                     Location  : Vial 11
Injection Date  : 5/28/2011 12:50:50 AM      Inj       : 1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
Sample Info     : Duplicate Injection
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.066	VB	58.30120	2.42472e-3	1.41364e-1		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 1.41364e-1

2 Warnings or Errors :

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

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

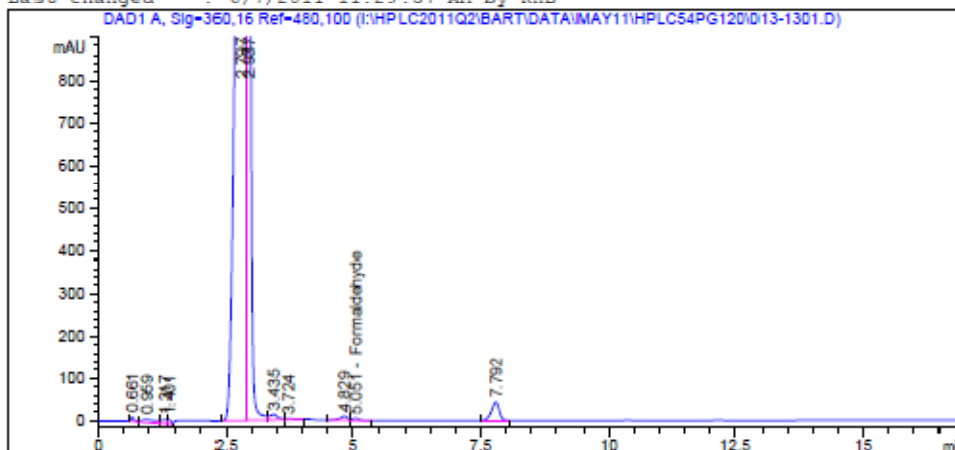
EA# 0511-68 Page 347 of 560

Instrument 2 6/7/2011 11:31:02 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\013-1301.D  
Sample Name: 052011-0011U-1-2 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   13
Acq. Instrument : Bart                    Location  : Vial 13
Injection Date  : 5/28/2011 1:34:05 AM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.051	VB	43.55254	2.42472e-3	1.05603e-1		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 1.05603e-1

2 Warnings or Errors :

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

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

EA# 0511-68 Page 348 of 560

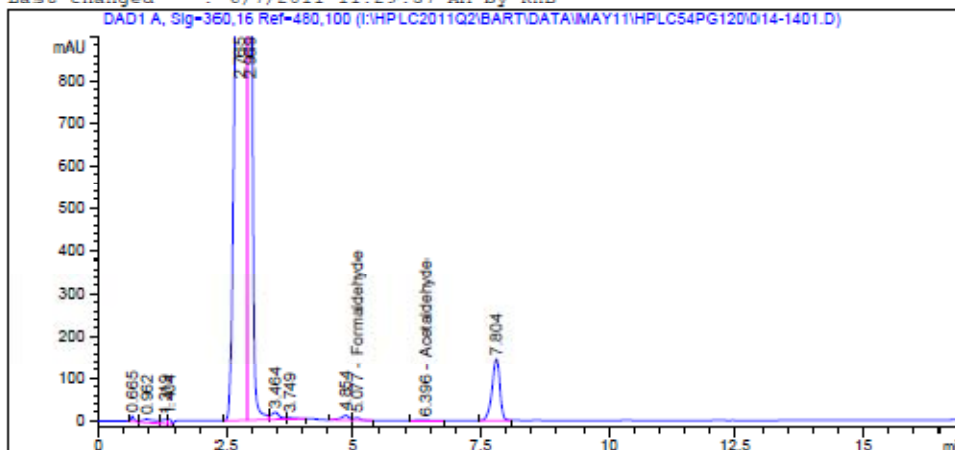
Instrument 2 6/7/2011 11:31:23 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\014-1401.D  
Sample Name: 052011-0011U-1-3 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   14
Acq. Instrument : Bart                    Location  : Vial 14
Injection Date  : 5/28/2011 1:55:42 AM      Inj       :    1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.077	VB	47.45031	2.42472e-3	1.15054e-1		Formaldehyde
6.396	BB	12.53370	3.41603e-3	4.28156e-2		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 1.57869e-1

2 Warnings or Errors :

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

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

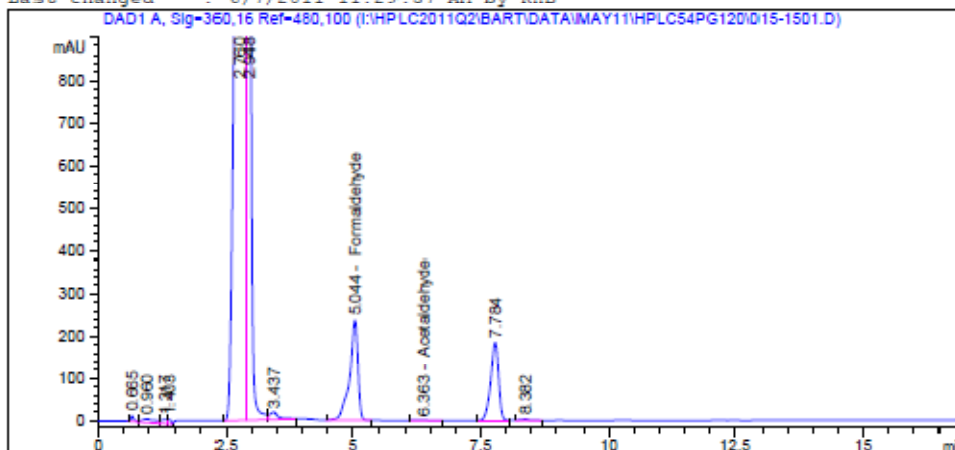
EA# 0511-68 Page 349 of 560

Instrument 2 6/7/2011 11:31:34 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\015-1501.D  
Sample Name: 052011-0011S-1-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   15
Acq. Instrument : Bart                    Location  : Vial 15
Injection Date  : 5/28/2011 2:17:18 AM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.044	BB	2708.08228	2.42472e-3	6.56634		Formaldehyde
6.363	BB	11.54180	3.41603e-3	3.94272e-2		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 6.60577

2 Warnings or Errors :

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

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

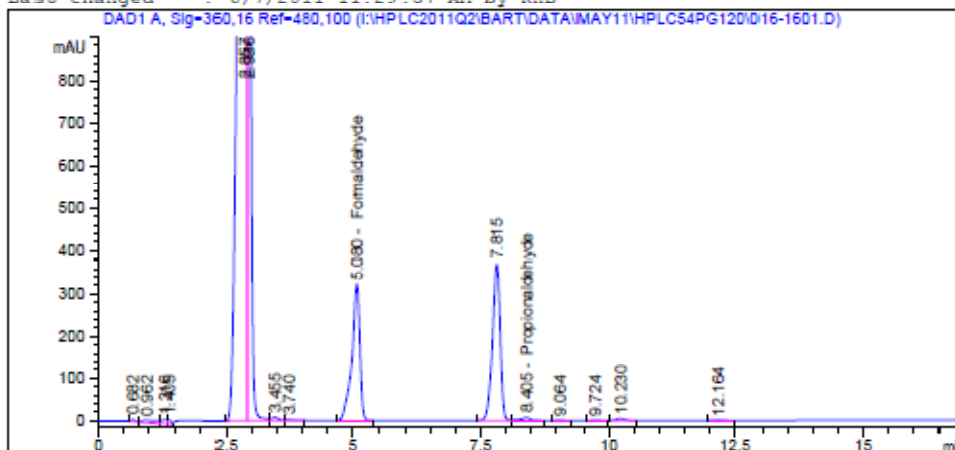
EA# 0511-68 Page 350 of 560

Instrument 2 6/7/2011 11:31:44 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\016-1601.D  
Sample Name: 052011-0011-FieldSpike 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   16
Acq. Instrument : Bart                    Location  : Vial 16
Injection Date  : 5/28/2011 2:38:56 AM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.080	BB	3544.73389	2.42472e-3	8.59499		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.405	VB	89.12579	4.41958e-3	2.93899e-1		Propionaldehyde

False Positive (MSS)

Totals : 8.98888

2 Warnings or Errors :

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

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

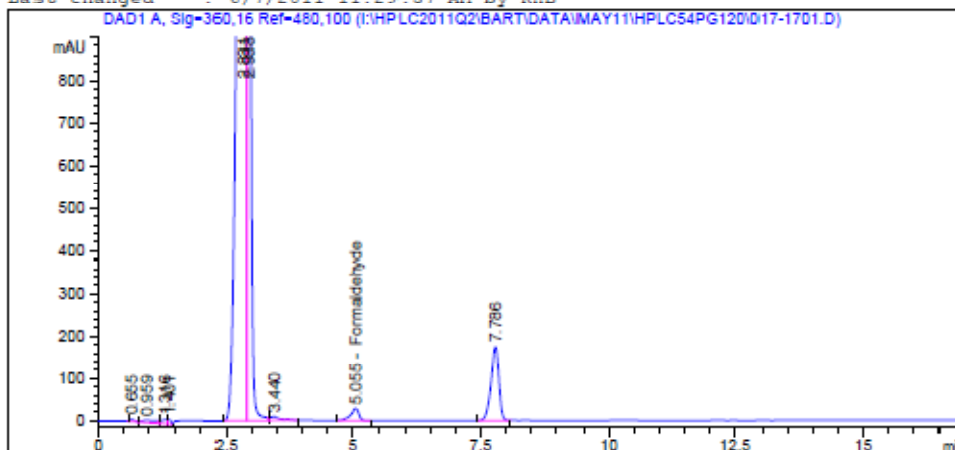
EA# 0511-68 Page 351 of 560

Instrument 2 6/7/2011 11:31:52 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\017-1701.D  
Sample Name: 052011-0011-Sample BL 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   17
Acq. Instrument : Bart                    Location  : Vial 17
Injection Date  : 5/28/2011 3:00:34 AM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      :      1.0000
Dilution:        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.055	BB	313.14447	2.42472e-3	7.59287e-1		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 7.59287e-1

2 Warnings or Errors :

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

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

EA# 0511-68 Page 352 of 560

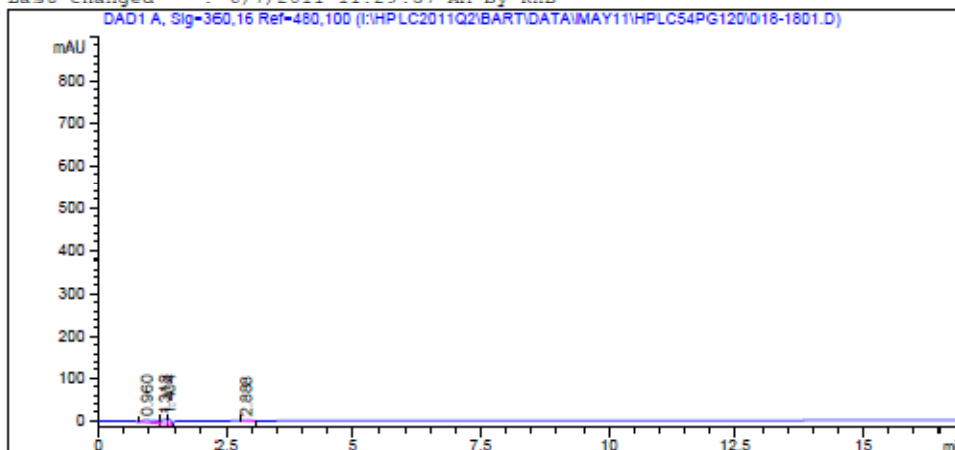
Instrument 2 6/7/2011 11:32:36 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\018-1801.D  
Sample Name: 052011-0011-DM/H2O BL 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   18
Acq. Instrument : Bart                    Location  : Vial 18
Injection Date  : 5/28/2011 3:22:12 AM      Inj       :    1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By           : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:         : 1.0000
Dilution:           : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057	-	-	-	-	-	Formaldehyde
6.380	-	-	-	-	-	Acetaldehyde
8.604	-	-	-	-	-	Propionaldehyde

Totals : 0.00000

2 Warnings or Errors :

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

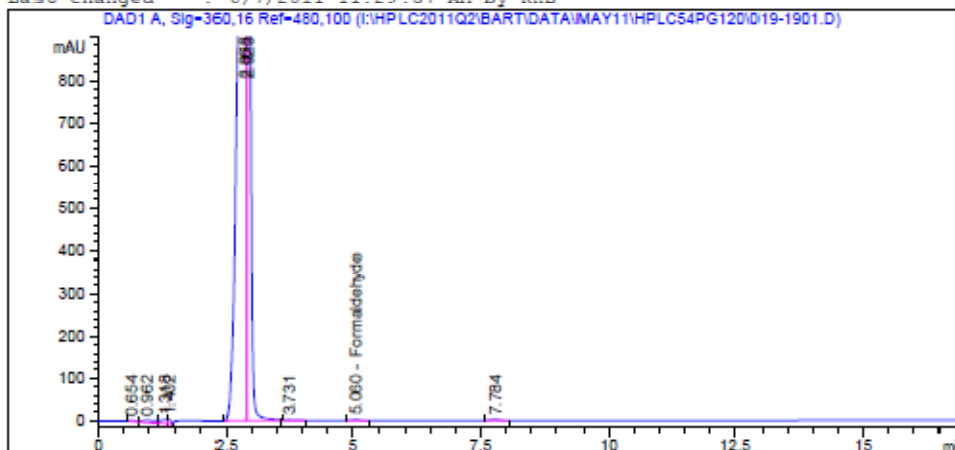
EA# 0511-68 Page 353 of 560

Instrument 2 6/7/2011 11:32:51 AM KHB

Page 1 of 2

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\019-1901.D  
Sample Name: MB-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   19
Acq. Instrument : Bart                    Location  : Vial 19
Injection Date  : 5/28/2011 3:43:49 AM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.060	BB	21.69342	2.42472e-3	5.26005e-2		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 5.26005e-2

2 Warnings or Errors :

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

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

EA# 0511-68 Page 354 of 560

Instrument 2 6/7/2011 11:33:13 AM KHB

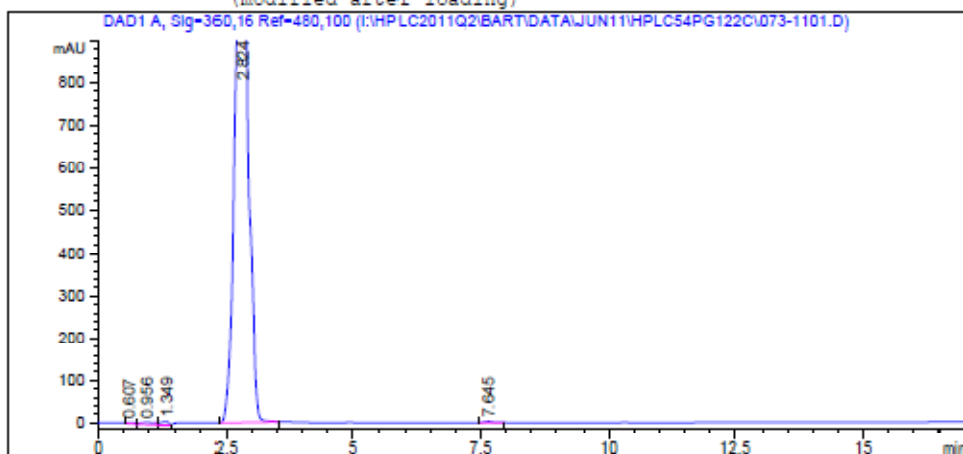
Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG122C\073-1101.D  
Sample Name: MB-2 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 11
Acq. Instrument : Bart                    Location  : Vial 73
Injection Date  : 6/8/2011 3:15:44 PM      Inj       : 1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/9/2011 4:12:23 PM by KHB
                  (modified after loading)
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 6/9/2011 4:12:24 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
4.962	-	-	-	-	-	Formaldehyde
6.380	-	-	-	-	-	Acetaldehyde
8.604	-	-	-	-	-	Propionaldehyde

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

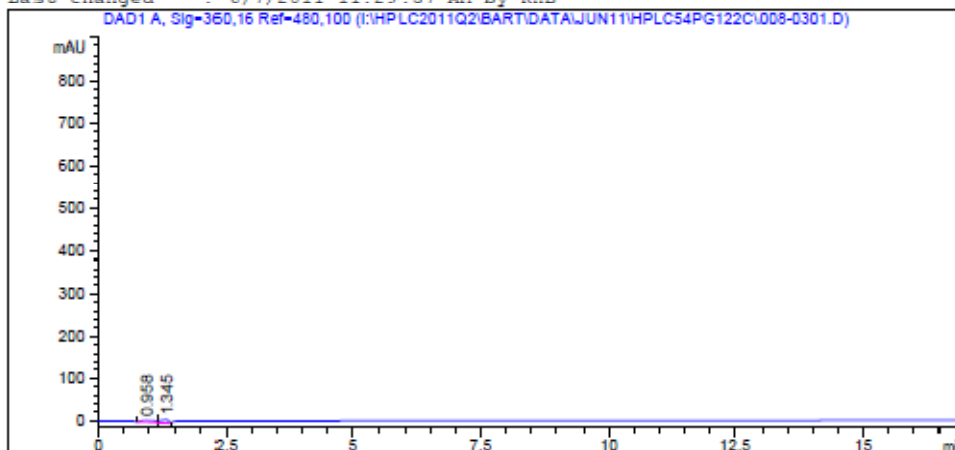
EA# 0511-68 Page 355 of 560

Instrument 2 6/9/2011 4:12:50 PM KHB

Page 1 of 2

Data File I:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG122C\008-0301.D  
Sample Name: RB/100% ACN

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Bart                    Location  : Vial 8
Injection Date  : 6/8/2011 12:22:24 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

Sorted By : Signal  
Calib. Data Modified : 6/7/2011 11:27:58 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057	-	-	-	-	-	Formaldehyde
6.380	-	-	-	-	-	Acetaldehyde
8.604	-	-	-	-	-	Propionaldehyde

Totals : 0.00000

2 Warnings or Errors :

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

```
=====
```

EA# 0511-68 Page 356 of 560

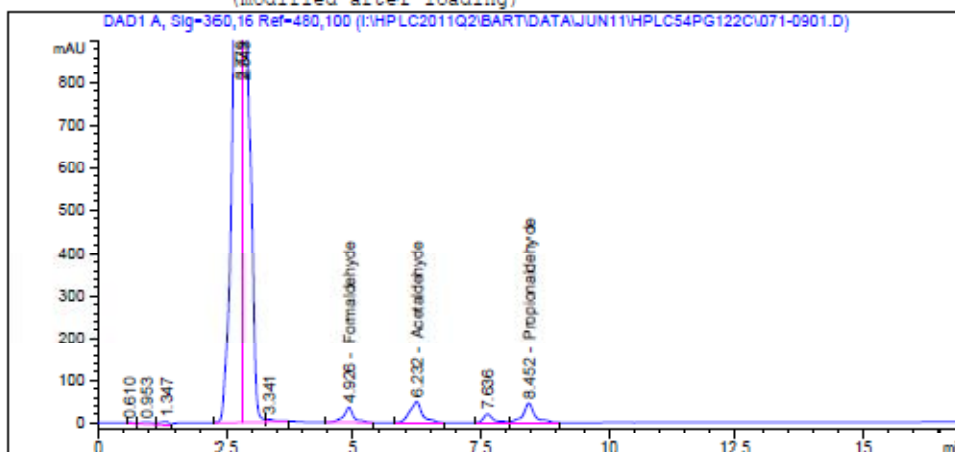
Instrument 2 6/9/2011 4:12:05 PM KHB

Page 1 of 2

Data File I:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG122C\071-0901.D  
Sample Name: MS/U-1-2 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :    9
Acq. Instrument : Bart                    Location  : Vial 71
Injection Date  : 6/8/2011 2:32:22 PM      Inj       :    1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/9/2011 4:12:23 PM by KHB
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 6/9/2011 4:12:24 PM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
4.926	BB	500.88022	2.42472e-3	1.21449		Formaldehyde
6.232	BB	839.26563	3.41603e-3	2.86696		Acetaldehyde
8.452	VB	722.57977	4.41958e-3	3.19350		Propionaldehyde

Totals : 7.27495

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

EA# 0511-68 Page 357 of 560

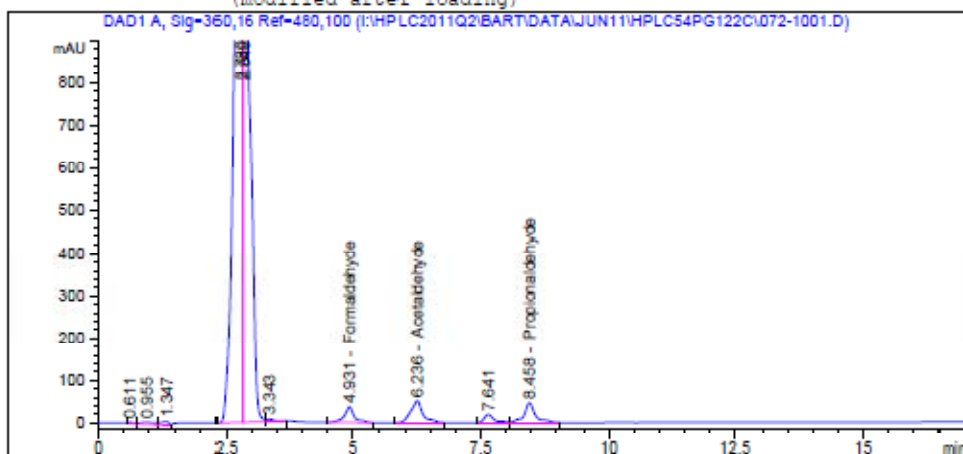
Instrument 2 6/9/2011 4:12:29 PM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG122C\072-1001.D  
Sample Name: MSD/U-1-2 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   10
Acq. Instrument : Bart                    Location  : Vial 72
Injection Date  : 6/8/2011 2:54:01 PM      Inj       :    1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/9/2011 4:12:23 PM by KHB
                (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 6/9/2011 4:12:24 PM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
4.931	BB	506.92966	2.42472e-3	1.22916		Formaldehyde
6.236	BB	837.91833	3.41603e-3	2.86236		Acetaldehyde
8.458	VB	711.27295	4.41958e-3	3.14353		Propionaldehyde

Totals : 7.23505

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

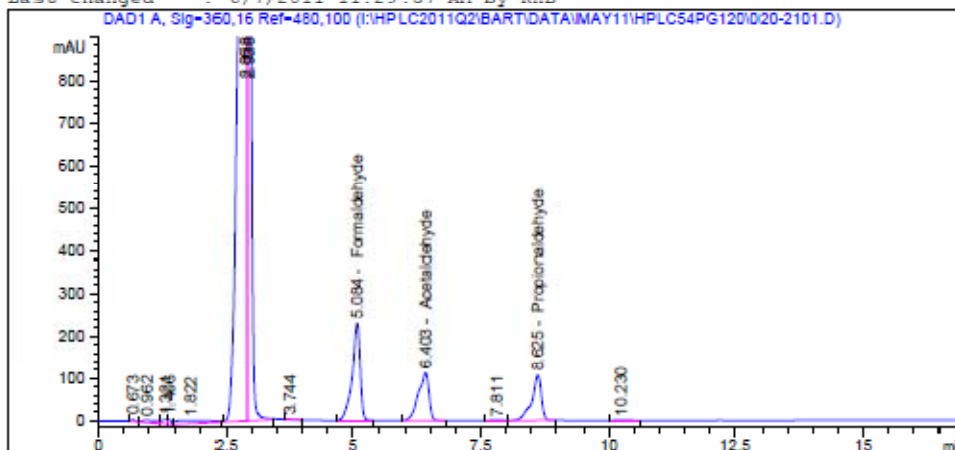
EA# 0511-68 Page 358 of 560

Instrument 2 6/9/2011 4:12:42 PM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\020-2101.D  
Sample Name: LCS-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 21
Acq. Instrument : Bart                    Location  : Vial 20
Injection Date  : 5/28/2011 5:10:27 AM      Inj       : 1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.084	BB	2538.20703	2.42472e-3	6.15444		Formaldehyde
6.403	BB	1637.83850	3.41603e-3	5.59491		Acetaldehyde
8.625	VB	1399.39661	4.41958e-3	6.18475		Propionaldehyde

Totals : 17.93410

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 359 of 560

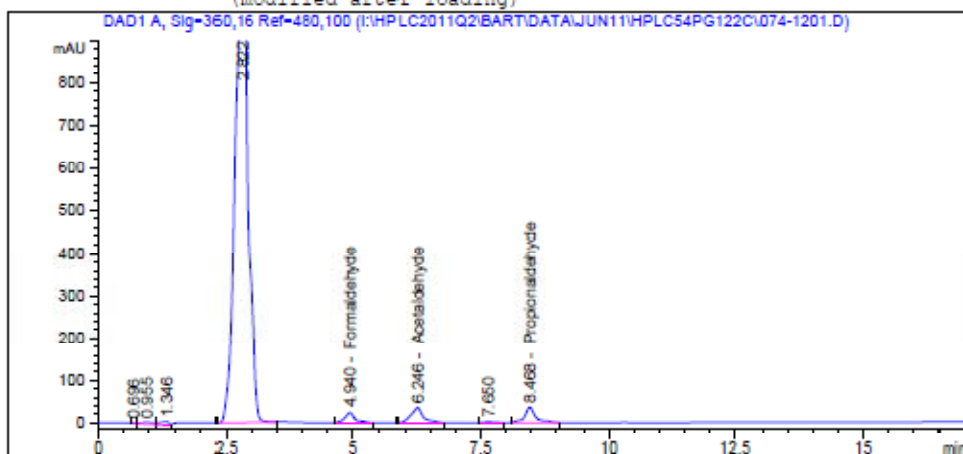
Instrument 2 6/7/2011 11:38:15 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG122C\074-1201.D  
Sample Name: LCS-2 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 12
Acq. Instrument : Bart                     Location  : Vial 74
Injection Date  : 6/8/2011 3:37:21 PM      Inj       : 1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/9/2011 4:12:23 PM by KHB
                  (modified after loading)
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/9/2011 4:12:24 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
4.940	BB	321.77954	2.42472e-3	7.80225e-1		Formaldehyde
6.246	BB	579.11346	3.41603e-3	1.97827		Acetaldehyde
8.468	BB	536.77545	4.41958e-3	2.37232		Propionaldehyde

Totals : 5.13082

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

EA# 0511-68 Page 360 of 560

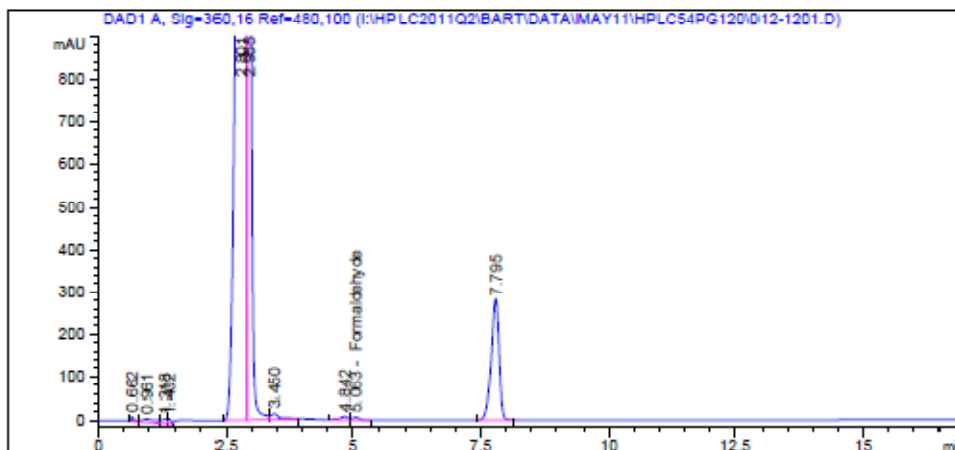
Instrument 2 6/9/2011 4:13:04 PM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\012-1201.D  
Sample Name: 052011-0011U-1-1 LD 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   12
Acq. Instrument : Bart                     Location  : Vial 12
Injection Date  : 5/28/2011 1:12:27 AM      Inj       :    1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
Sample Info     : Duplicate Sample
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.063	VB	56.45018	2.42472e-3	1.36876e-1		Formaldehyde
6.380		-	-	-		Acetaldehyde
8.604		-	-	-		Propionaldehyde

Totals : 1.36876e-1

2 Warnings or Errors :

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

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

EA# 0511-68 Page 361 of 560

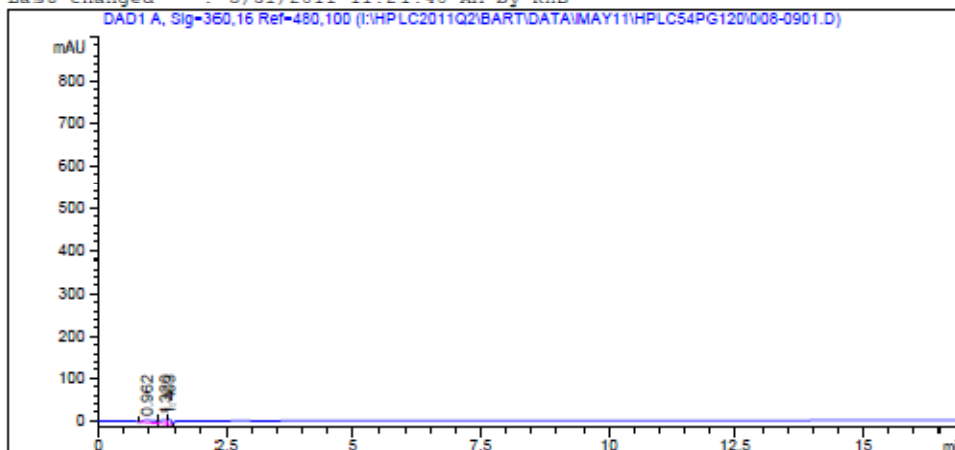
Instrument 2 6/7/2011 11:31:10 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\008-0901.D  
Sample Name: RB/100% ACN

```
=====
Acq. Operator   : KHB                      Seq. Line :    9
Acq. Instrument : Bart                    Location  : Vial 8
Injection Date  : 5/27/2011 11:24:14 PM    Inj       :    1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057	-	-	-	-	-	Formaldehyde
6.380	-	-	-	-	-	Acetaldehyde
7.788	-	-	-	-	-	Acetone
8.093	-	-	-	-	-	Acrolein
8.604	-	-	-	-	-	Propionaldehyde

Totals : 0.00000

2 Warnings or Errors :

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

```
=====
```

EA# 0511-68 Page 362 of 560

Instrument 2 5/31/2011 11:31:02 AM KHB

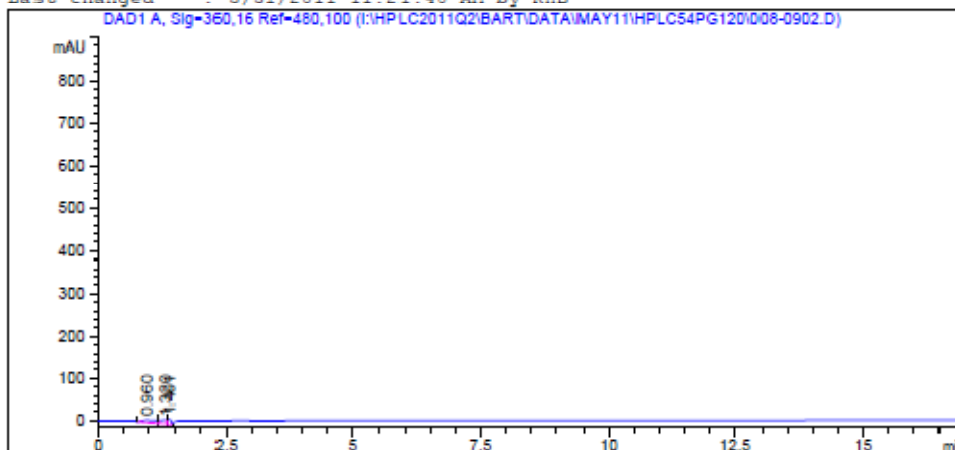
Page 1 of 2



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\008-0902.D  
Sample Name: RB/100% ACN

```
=====
Acq. Operator   : KHB                      Seq. Line :    9
Acq. Instrument : Bart                    Location  : Vial 8
Injection Date  : 5/27/2011 11:45:53 PM    Inj       :    2
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057	-	-	-	-	-	Formaldehyde
6.380	-	-	-	-	-	Acetaldehyde
7.788	-	-	-	-	-	Acetone
8.093	-	-	-	-	-	Acrolein
8.604	-	-	-	-	-	Propionaldehyde

Totals : 0.00000

2 Warnings or Errors :

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

```
=====
```

EA# 0511-68 Page 363 of 560

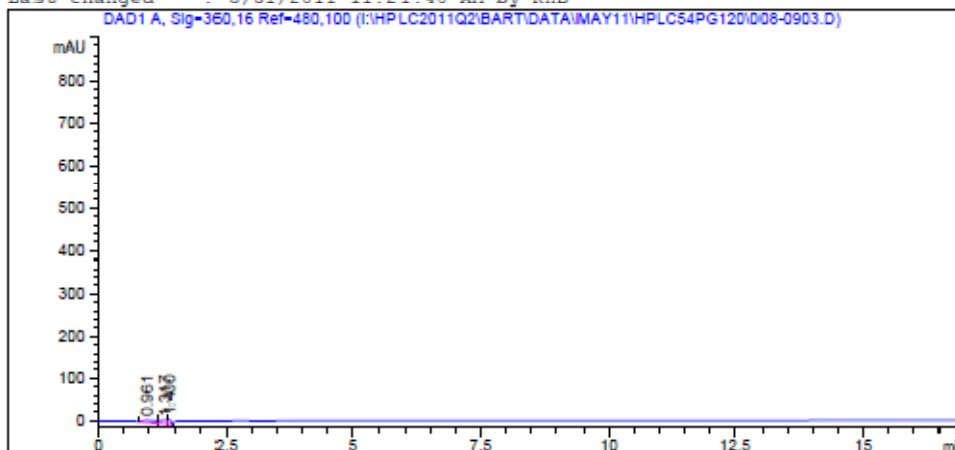
Instrument 2 5/31/2011 11:31:38 AM KHB

Page 1 of 2

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\008-0903.D  
Sample Name: RB/100% ACN

```
=====
Acq. Operator   : KHB                      Seq. Line :    9
Acq. Instrument : Bart                    Location  : Vial 8
Injection Date  : 5/28/2011 12:07:30 AM    Inj       :    3
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8316ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



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

```
Sorted By           : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:         : 1.0000
Dilution:           : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057	-	-	-	-	-	Formaldehyde
6.380	-	-	-	-	-	Acetaldehyde
7.788	-	-	-	-	-	Acetone
8.093	-	-	-	-	-	Acrolein
8.604	-	-	-	-	-	Propionaldehyde

Totals : 0.00000

2 Warnings or Errors :

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

EA# 0511-68 Page 364 of 560

Instrument 2 5/31/2011 11:31:53 AM KHB

Page 1 of 2

# Calibration Curve Chromatograms



EA# 0511-68 Page 365 of 560

=====

Calibration Table

=====

Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM

Rel. Reference Window : 5.000 %  
 Abs. Reference Window : 0.000 min  
 Rel. Non-ref. Window : 5.000 %  
 Abs. Non-ref. Window : 0.000 min  
 Uncalibrated Peaks : not reported  
 Partial Calibration : Yes, identified peaks are recalibrated  
 Correct All Ret. Times: No, only for identified peaks

Curve Type : Average Response/Amount  
 Origin : Ignored  
 Weight : Equal

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: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Lvl Sig	Amount [ug/mL]	Area	Amt/Area	Ref Grp Name
5.057	1	7.47000e-2	30.61963	2.43961e-3	Formaldehyde
	2	7.15000e-1	310.99482	2.29907e-3	
	3	2.50000	1000.60588	2.49849e-3	
	4	5.00000	2049.16028	2.44002e-3	
	5	9.01000	3688.39754	2.44280e-3	
	6	15.00000	6153.18799	2.43776e-3	
6.380	1	7.47000e-2	21.60617	3.45735e-3	Acetaldehyde
	2	7.15000e-1	220.44158	3.24349e-3	
	3	2.50000	712.11804	3.51065e-3	
	4	5.01000	1458.37695	3.43533e-3	
	5	9.01000	2621.98153	3.43633e-3	
	6	15.00000	4378.88102	3.42553e-3	
7.788	1	7.47000e-2	16.62340	4.49366e-3	Acetone
	2	7.15000e-1	165.24312	4.32696e-3	
	3	2.50000	533.17934	4.68885e-3	
	4	5.00000	1092.29525	4.57752e-3	
	5	9.01000	1967.45394	4.57952e-3	
	6	15.00000	3276.86100	4.57755e-3	
8.093	1	7.47000e-2	20.19522	3.69889e-3	Acrolein
	2	7.15000e-1	195.41486	3.65888e-3	
	3	2.50000	629.92090	3.96875e-3	
	4	5.01000	1287.60856	3.89093e-3	
	5	9.01000	2315.26774	3.89156e-3	
	6	15.00000	3867.90869	3.87806e-3	
8.604	1	7.46000e-2	16.01441	4.65831e-3	Propionaldehyde
	2	7.14000e-1	171.99996	4.15116e-3	
	3	2.50000	553.96212	4.51294e-3	
	4	5.00000	1133.32099	4.51116e-3	

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Method I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M

RetTime [min]	Lvl Sig	Amount [ug/mL]	Area	Amt/Area	Ref Grp Name
5		9.00000	2038.95015	4.41404e-3	
6		15.00000	3408.43978	4.40084e-3	

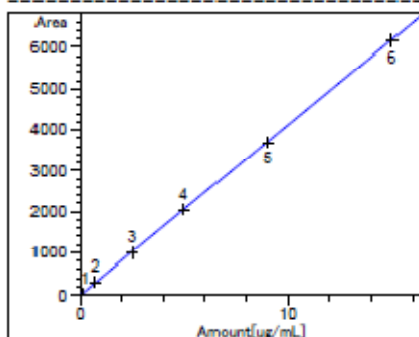
1 Warnings or Errors :

Warning : Overlapping peak time windows at 7.788 min, signal 1

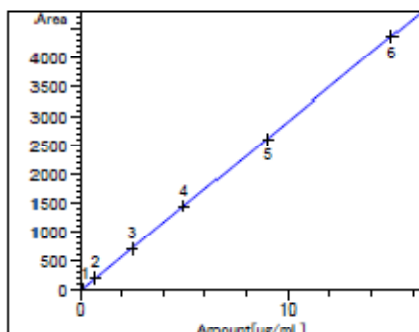
# Peak Sum Table

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

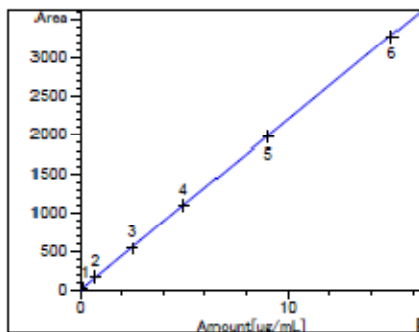
## Calibration Curves



Formaldehyde at exp. RT: 5.057  
DAD1 A, Sig=360,16 Ref=480,100  
Correlation: 0.99998  
Residual Std. Dev.: 28.30642  
Formula:  $y = mx$   
m: 412.41885  
x: Amount  
y: Area



Acetaldehyde at exp. RT: 6.380  
DAD1 A, Sig=360,16 Ref=480,100  
Correlation: 0.99998  
Residual Std. Dev.: 15.58800  
Formula:  $y = mx$   
m: 292.73714  
x: Amount  
y: Area



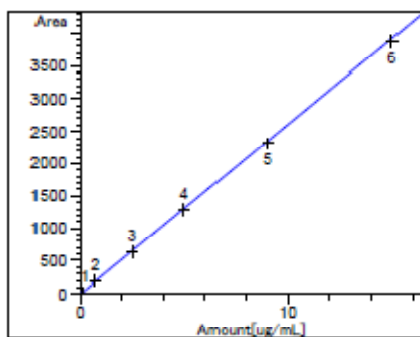
Acetone at exp. RT: 7.788  
DAD1 A, Sig=360,16 Ref=480,100  
Correlation: 0.99998  
Residual Std. Dev.: 20.06094  
Formula:  $y = mx$   
m: 220.36606  
x: Amount  
y: Area

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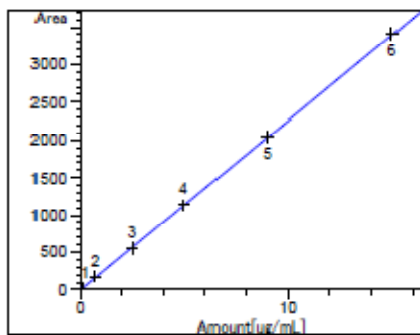
Instrument 2 5/31/2011 11:24:02 AM KHB

Page 2 of 3

Method I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M



Acrolein at exp. RT: 8.093  
DAD1 A, Sig=360,16 Ref=480,100  
Correlation: 0.99998  
Residual Std. Dev.: 35.78804  
Formula:  $y = mx$   
m: 261.24361  
x: Amount  
y: Area

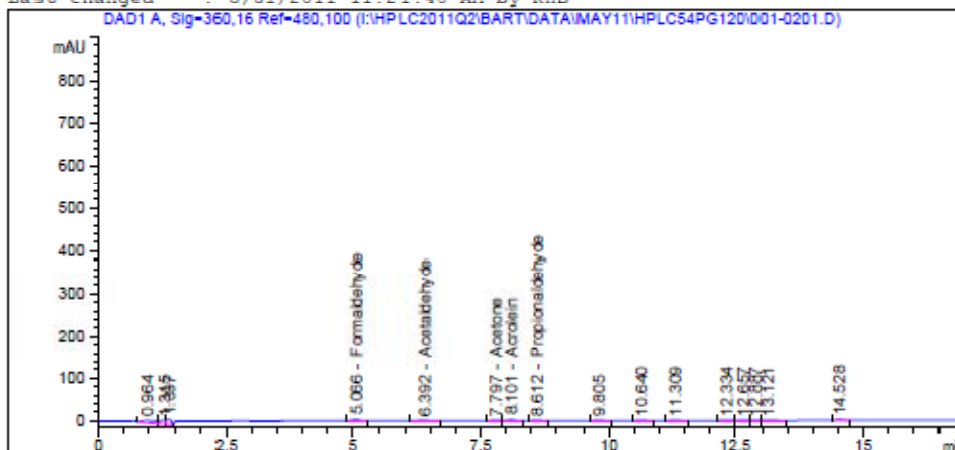


Propionaldehyde at exp. RT: 8.604  
DAD1 A, Sig=360,16 Ref=480,100  
Correlation: 0.99998  
Residual Std. Dev.: 10.79580  
Formula:  $y = mx$   
m: 226.26583  
x: Amount  
y: Area

=====

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\001-0201.D  
Sample Name: hplc54pg120 #1

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Bart                    Location  : Vial 1
Injection Date  : 5/27/2011 3:49:47 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.066	BB	29.63630	2.42472e-3	7.18597e-2		Formaldehyde
6.392	BB	22.03458	3.41603e-3	7.52709e-2		Acetaldehyde
7.797	BV	16.60152	4.53790e-3	7.53361e-2		Acetone
8.101	VB	20.15335	3.82784e-3	7.71439e-2		Acrolein
8.612	BB	16.10484	4.41958e-3	7.11766e-2		Propionaldehyde

Totals : 3.70787e-1

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 369 of 560

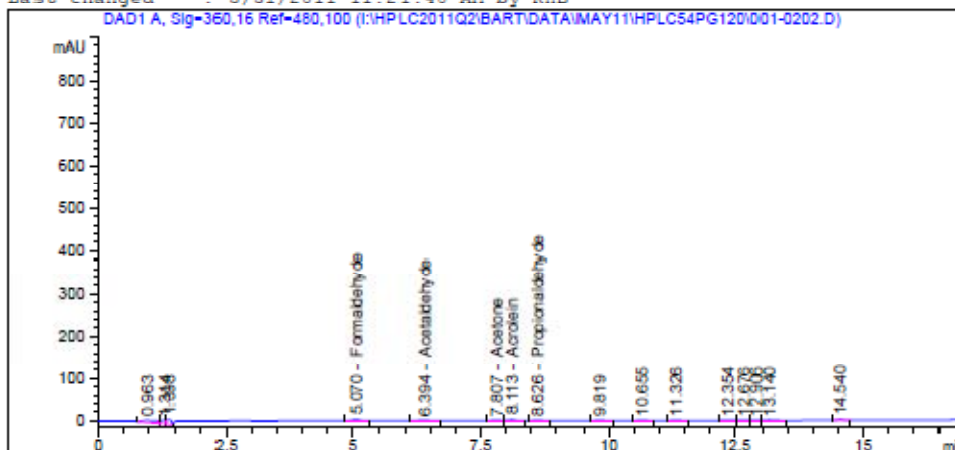
Instrument 2 5/31/2011 11:24:47 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\001-0202.D  
Sample Name: hplc54pg120 #1

=====

Acq. Operator	: KHB	Seq. Line	: 2
Acq. Instrument	: Bart	Location	: Vial 1
Injection Date	: 5/27/2011 4:11:25 PM	Inj	: 2
		Inj Volume	: 15.000 µl
Acq. Method	: H:\HPLC2011Q2\BART\METHODS\8315ICR.M		
Last changed	: 5/27/2011 3:16:54 PM by KHB		
Analysis Method	: I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M		
Last changed	: 5/31/2011 11:21:40 AM by KHB		



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.070	BB	31.00495	2.42472e-3	7.51783e-2		Formaldehyde
6.394	BB	21.29319	3.41603e-3	7.27383e-2		Acetaldehyde
7.807	BV	16.89919	4.53790e-3	7.66869e-2		Acetone
8.113	VB	20.30722	3.82784e-3	7.77329e-2		Acrolein
8.626	BB	16.01859	4.41958e-3	7.07955e-2		Propionaldehyde

Totals : 3.73132e-1

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

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

EA# 0511-68 Page 370 of 560

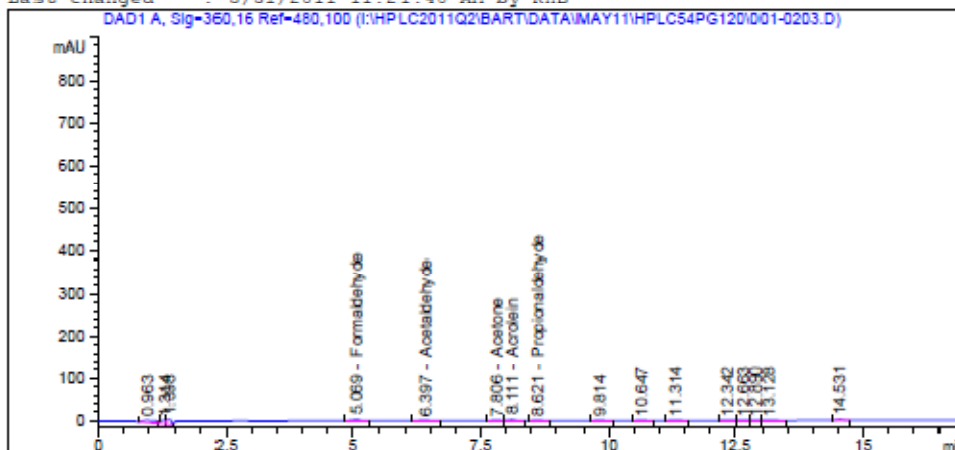
Instrument 2 5/31/2011 11:24:54 AM KHB

Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\001-0203.D  
Sample Name: hplc54pg120 #1

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Bart                    Location  : Vial 1
Injection Date  : 5/27/2011 4:33:05 PM      Inj       :    3
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.069	BB	31.21763	2.42472e-3	7.56940e-2		Formaldehyde
6.397	BB	21.49072	3.41603e-3	7.34130e-2		Acetaldehyde
7.806	BV	16.36949	4.53790e-3	7.42832e-2		Acetone
8.111	VB	20.12511	3.82784e-3	7.70358e-2		Acrolein
8.621	BB	15.91979	4.41958e-3	7.03588e-2		Propionaldehyde

Totals : 3.70785e-1

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

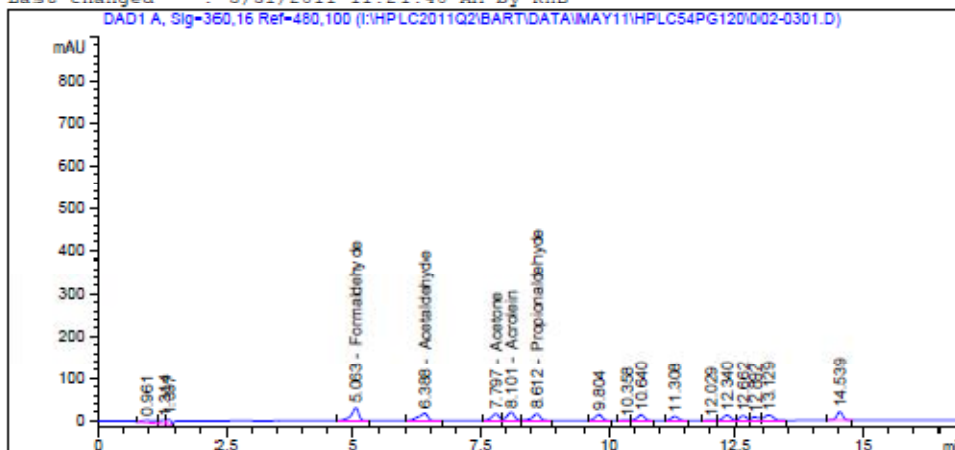
EA# 0511-68 Page 371 of 560

Instrument 2 5/31/2011 11:25:03 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\002-0301.D  
Sample Name: hplc54pg120 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Bart                    Location  : Vial 2
Injection Date  : 5/27/2011 4:54:43 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.063	BB	311.51663	2.42472e-3	7.55340e-1		Formaldehyde
6.388	BB	221.01292	3.41603e-3	7.54988e-1		Acetaldehyde
7.797	BV	166.06204	4.53790e-3	7.53574e-1		Acetone
8.101	VV	195.89969	3.82784e-3	7.49874e-1		Acrolein
8.612	VB	172.74652	4.41958e-3	7.63467e-1		Propionaldehyde

Totals : 3.77724

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

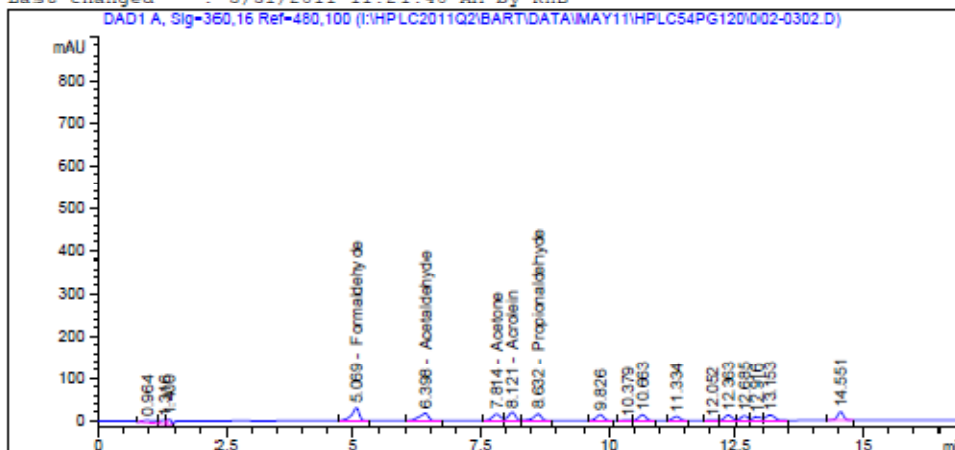
EA# 0511-68 Page 372 of 560

Instrument 2 5/31/2011 11:25:10 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\002-0302.D  
Sample Name: hplc54pg120 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Bart                    Location  : Vial 2
Injection Date  : 5/27/2011 5:16:23 PM      Inj       :    2
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



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

```
Sorted By           : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:         : 1.0000
Dilution:           : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.069	BB	310.92529	2.42472e-3	7.53907e-1		Formaldehyde
6.398	BB	220.41605	3.41603e-3	7.52949e-1		Acetaldehyde
7.814	BV	164.85385	4.53790e-3	7.48091e-1		Acetone
8.121	VV	195.58609	3.82784e-3	7.48673e-1		Acrolein
8.632	VB	171.94592	4.41958e-3	7.59929e-1		Propionaldehyde

Totals : 3.76355

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 373 of 560

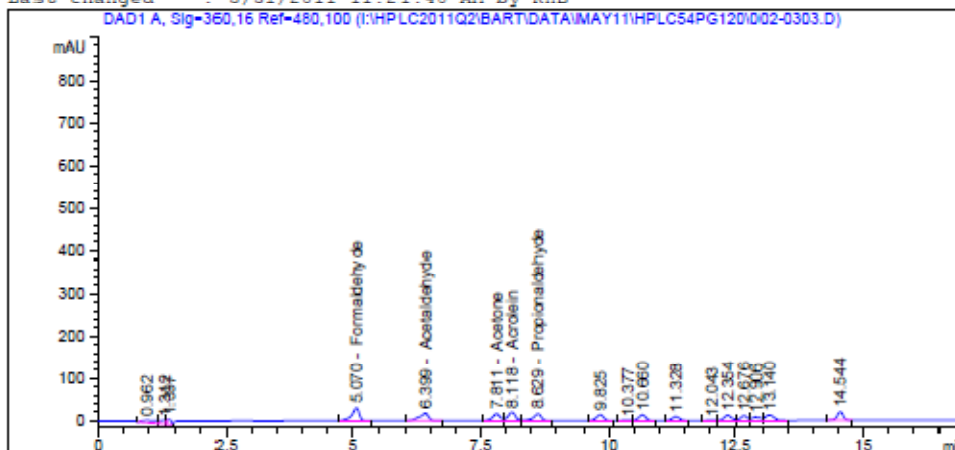
Instrument 2 5/31/2011 11:25:18 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\002-0303.D  
Sample Name: hplc54pg120 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Bart                    Location  : Vial 2
Injection Date  : 5/27/2011 5:38:01 PM      Inj       :    3
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.070	BB	310.54254	2.42472e-3	7.52979e-1		Formaldehyde
6.399	BB	219.89577	3.41603e-3	7.51171e-1		Acetaldehyde
7.811	BV	164.81348	4.53790e-3	7.47908e-1		Acetone
8.118	VV	194.75879	3.82784e-3	7.45506e-1		Acrolein
8.629	VB	171.30743	4.41958e-3	7.57107e-1		Propionaldehyde

Totals : 3.75467

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

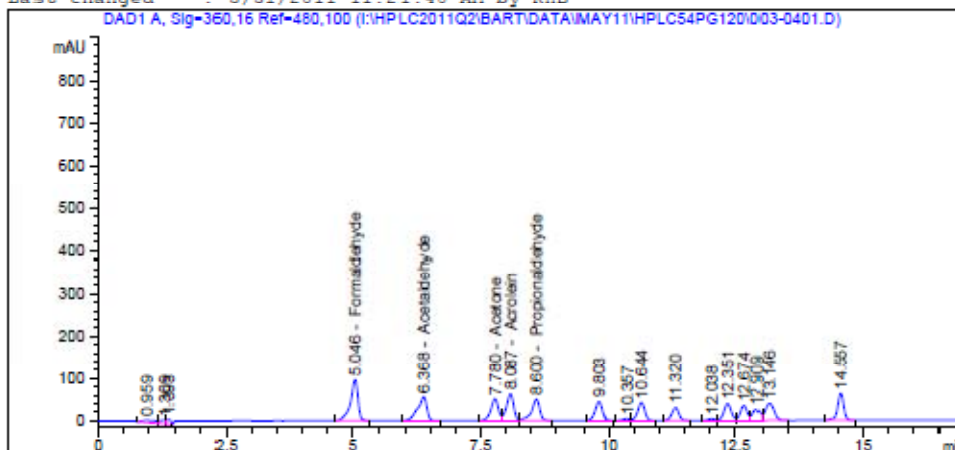
EA# 0511-68 Page 374 of 560

Instrument 2 5/31/2011 11:25:24 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-0401.D  
Sample Name: hplc54pg120 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :    4
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 5/27/2011 5:59:39 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.046	BB	998.41003	2.42472e-3	2.42086		Formaldehyde
6.368	BB	709.74158	3.41603e-3	2.42450		Acetaldehyde
7.780	BV	531.52472	4.53790e-3	2.41201		Acetone
8.087	VV	627.80054	3.82784e-3	2.40312		Acrolein
8.600	VB	551.54254	4.41958e-3	2.43759		Propionaldehyde

Totals : 12.09808

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 375 of 560

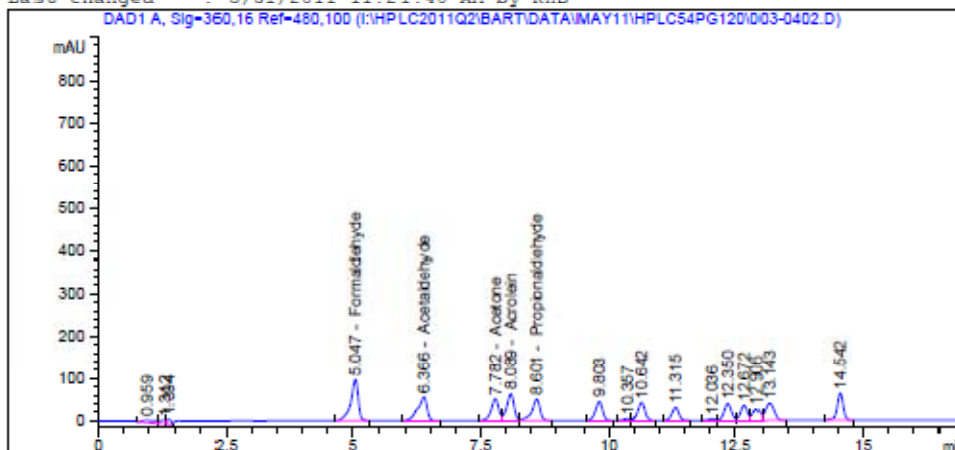
Instrument 2 5/31/2011 11:25:32 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-0402.D  
Sample Name: hplc54pg120 #3

=====

Acq. Operator	: KHB	Seq. Line	: 4
Acq. Instrument	: Bart	Location	: Vial 3
Injection Date	: 5/27/2011 6:21:18 PM	Inj	: 2
		Inj Volume	: 15.000 µl
Acq. Method	: H:\HPLC2011Q2\BART\METHODS\8315ICR.M		
Last changed	: 5/27/2011 3:16:54 PM by KHB		
Analysis Method	: I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M		
Last changed	: 5/31/2011 11:21:40 AM by KHB		



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.047	BB	1000.59607	2.42472e-3	2.42616		Formaldehyde
6.366	BB	712.76935	3.41603e-3	2.43484		Acetaldehyde
7.782	BV	534.88556	4.53790e-3	2.42726		Acetone
8.089	VV	630.79639	3.82784e-3	2.41459		Acrolein
8.601	VB	555.57050	4.41958e-3	2.45539		Propionaldehyde

Totals : 12.15825

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

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

EA# 0511-68 Page 376 of 560

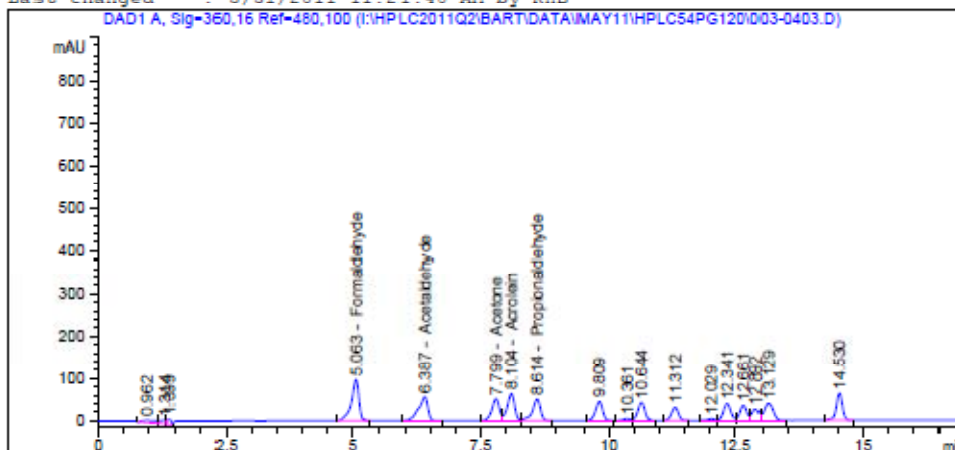
Instrument 2 5/31/2011 11:25:38 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-0403.D  
Sample Name: hplc54pg120 #3

=====

Acq. Operator	: KHB	Seq. Line	: 4
Acq. Instrument	: Bart	Location	: Vial 3
Injection Date	: 5/27/2011 6:42:57 PM	Inj	: 3
		Inj Volume	: 15.000 µl
Acq. Method	: H:\HPLC2011Q2\BART\METHODS\8315ICR.M		
Last changed	: 5/27/2011 3:16:54 PM by KHB		
Analysis Method	: I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M		
Last changed	: 5/31/2011 11:21:40 AM by KHB		



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime	Type	Area	Amt/Area	Amount	Grp	Name
[min]		[mAU*s]		[ug/mL]		
5.063	BB	1002.81152	2.42472e-3	2.43154		Formaldehyde
6.387	BB	713.84320	3.41603e-3	2.43851		Acetaldehyde
7.799	BV	533.12775	4.53790e-3	2.41928		Acetone
8.104	VV	631.16577	3.82784e-3	2.41600		Acrolein
8.614	VB	554.77332	4.41958e-3	2.45187		Propionaldehyde

Totals : 12.15720

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

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

EA# 0511-68 Page 377 of 560

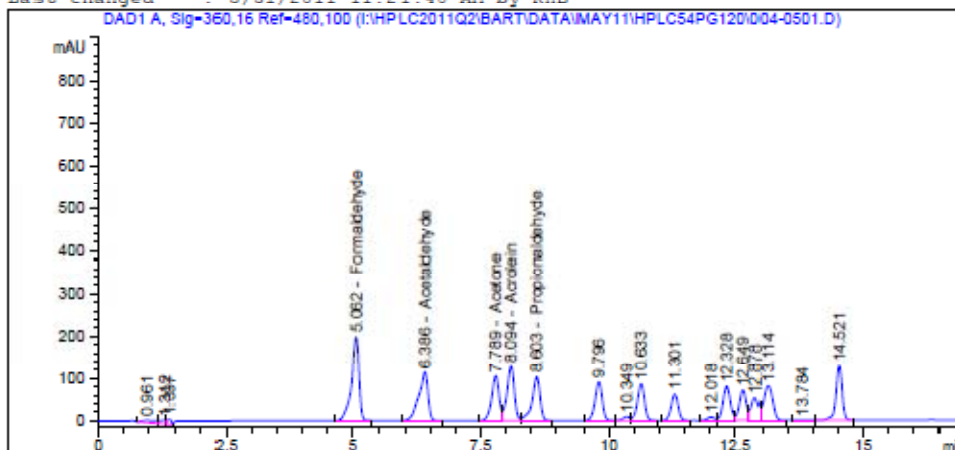
Instrument 2 5/31/2011 11:25:46 AM KHB

Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\004-0501.D  
Sample Name: hplc54pg120 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :    5
Acq. Instrument : Bart                    Location  : Vial 4
Injection Date  : 5/27/2011 7:04:36 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.062	BB	2044.54797	2.42472e-3	4.95746		Formaldehyde
6.386	BB	1454.89929	3.41603e-3	4.96999		Acetaldehyde
7.789	BV	1085.05432	4.53790e-3	4.92387		Acetone
8.094	VV	1287.47888	3.82784e-3	4.92827		Acrolein
8.603	VB	1130.24646	4.41958e-3	4.99522		Propionaldehyde

Totals : 24.77480

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 378 of 560

Instrument 2 5/31/2011 11:25:53 AM KHB

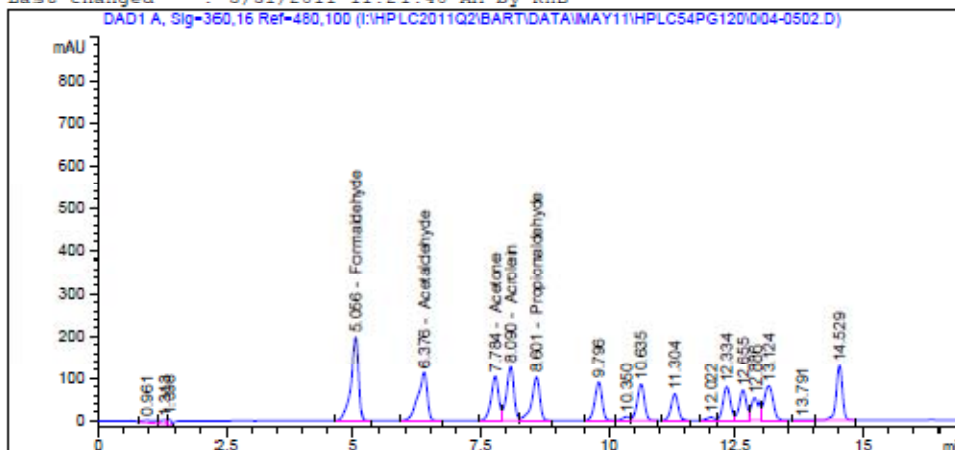
Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\004-0502.D  
Sample Name: hplc54pg120 #4

=====

Acq. Operator	: KHB	Seq. Line	: 5
Acq. Instrument	: Bart	Location	: Vial 4
Injection Date	: 5/27/2011 7:26:13 PM	Inj	: 2
		Inj Volume	: 15.000 µl
Acq. Method	: H:\HPLC2011Q2\BART\METHODS\8315ICR.M		
Last changed	: 5/27/2011 3:16:54 PM by KHB		
Analysis Method	: I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M		
Last changed	: 5/31/2011 11:21:40 AM by KHB		



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.056	BB	2051.84546	2.42472e-3	4.97515		Formaldehyde
6.376	BB	1460.14539	3.41603e-3	4.98791		Acetaldehyde
7.784	BV	1094.21240	4.53790e-3	4.96543		Acetone
8.090	VV	1288.81555	3.82784e-3	4.93339		Acrolein
8.601	VB	1135.35559	4.41958e-3	5.01780		Propionaldehyde

Totals : 24.87967

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

=====

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

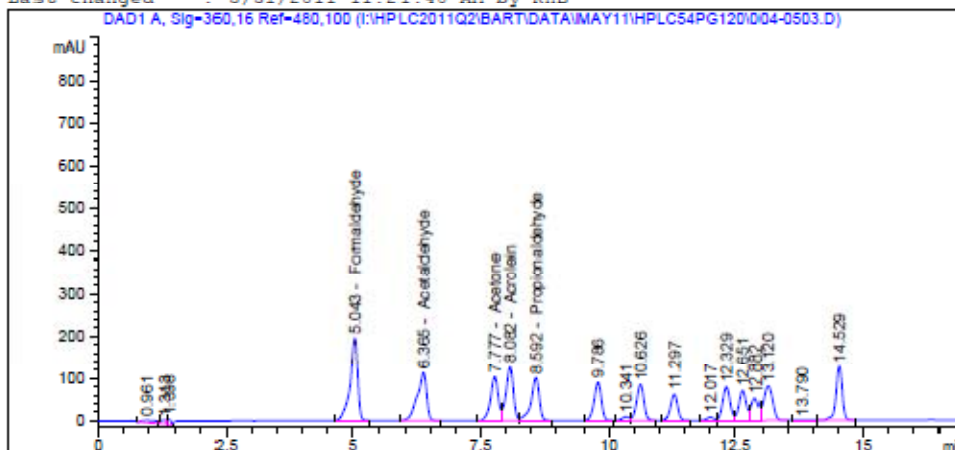
EA# 0511-68 Page 379 of 560

Instrument 2 5/31/2011 11:26:03 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\004-0503.D  
Sample Name: hplc54pg120 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :    5
Acq. Instrument : Bart                    Location  : Vial 4
Injection Date  : 5/27/2011 7:47:52 PM      Inj       :    3
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.043	BB	2051.08740	2.42472e-3	4.97331		Formaldehyde
6.365	BB	1460.08618	3.41603e-3	4.98770		Acetaldehyde
7.777	BV	1097.61902	4.53790e-3	4.98089		Acetone
8.082	VV	1286.53125	3.82784e-3	4.92464		Acrolein
8.592	VB	1134.36035	4.41958e-3	5.01340		Propionaldehyde

Totals : 24.87994

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

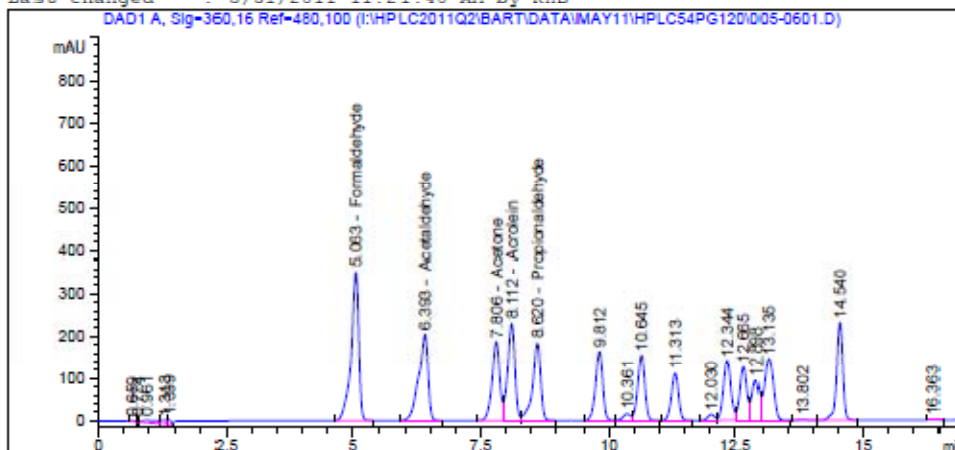
EA# 0511-68 Page 380 of 560

Instrument 2 5/31/2011 11:26:11 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\005-0601.D  
Sample Name: hplc54pg120 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Bart                    Location  : Vial 5
Injection Date  : 5/27/2011 8:09:31 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.063	BB	3694.70972	2.42472e-3	8.95863		Formaldehyde
6.393	BB	2628.70581	3.41603e-3	8.97975		Acetaldehyde
7.806	BV	1967.23157	4.53790e-3	8.92711		Acetone
8.112	VV	2322.37964	3.82784e-3	8.88971		Acrolein
8.620	VB	2043.09290	4.41958e-3	9.02961		Propionaldehyde

Totals : 44.78481

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

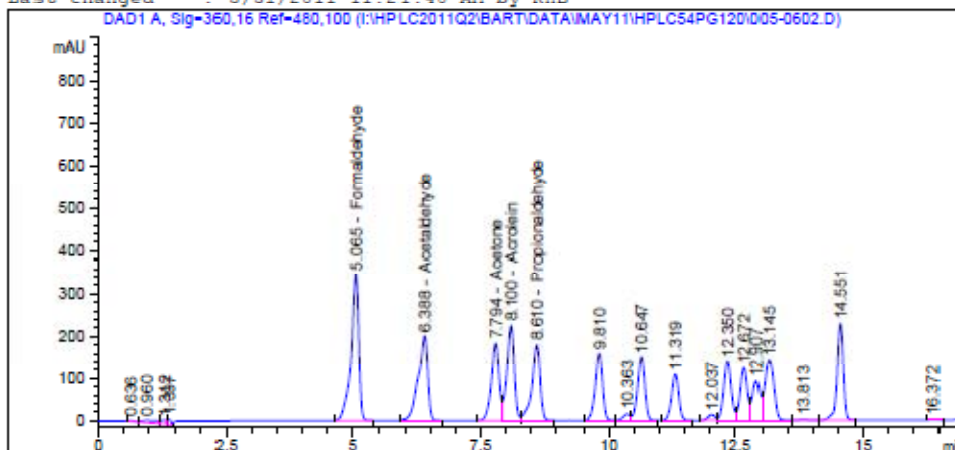
EA# 0511-68 Page 381 of 560

Instrument 2 5/31/2011 11:26:18 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\005-0602.D  
Sample Name: hplc54pg120 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Bart                    Location  : Vial 5
Injection Date  : 5/27/2011 8:31:10 PM      Inj       :    2
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.065	BB	3663.10767	2.42472e-3	8.88201		Formaldehyde
6.388	BB	2602.87476	3.41603e-3	8.89161		Acetaldehyde
7.794	BV	1958.41614	4.53790e-3	8.88710		Acetone
8.100	VV	2293.68091	3.82784e-3	8.77985		Acrolein
8.610	VB	2025.27539	4.41958e-3	8.95087		Propionaldehyde

Totals : 44.39134

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

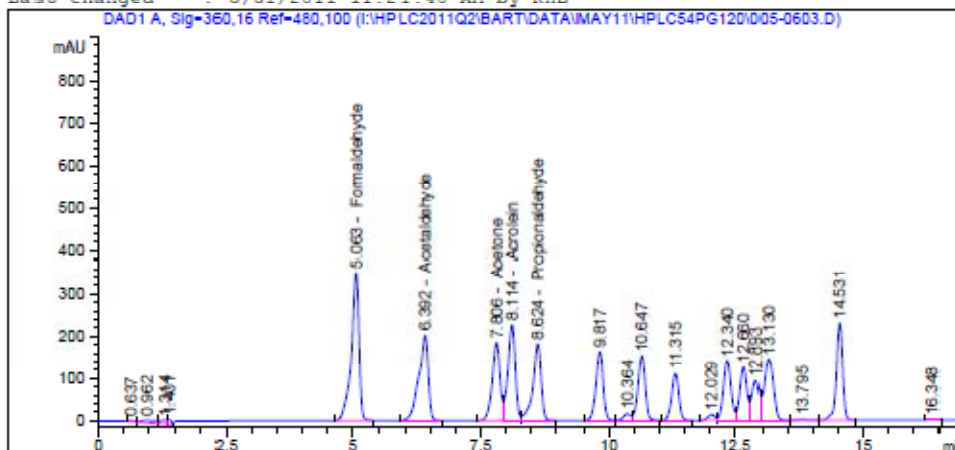
EA# 0511-68 Page 382 of 560

Instrument 2 5/31/2011 11:26:26 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\005-0603.D  
Sample Name: hplc54pg120 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Bart                    Location  : Vial 5
Injection Date  : 5/27/2011 8:52:48 PM      Inj       :    3
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.063	BB	3707.37524	2.42472e-3	8.98934		Formaldehyde
6.392	BB	2634.36401	3.41603e-3	8.99908		Acetaldehyde
7.806	BV	1976.71411	4.53790e-3	8.97014		Acetone
8.114	VV	2329.74268	3.82784e-3	8.91789		Acrolein
8.624	VB	2048.48218	4.41958e-3	9.05343		Propionaldehyde

Totals : 44.92989

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

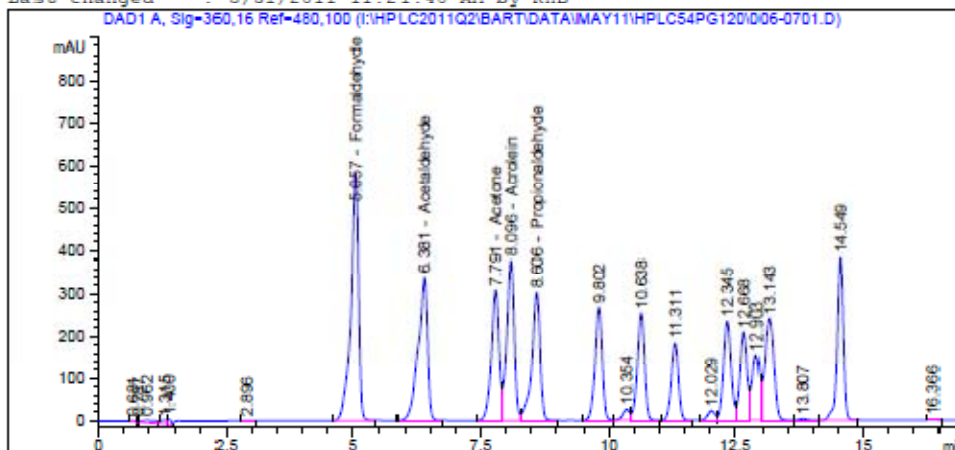
EA# 0511-68 Page 383 of 560

Instrument 2 5/31/2011 11:29:50 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\006-0701.D  
Sample Name: hplc54pg120 #6

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Bart                    Location  : Vial 6
Injection Date  : 5/27/2011 9:14:25 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.057	BB	6163.41943	2.42472e-3	14.94456		Formaldehyde
6.381	BB	4384.52734	3.41603e-3	14.97769		Acetaldehyde
7.791	BV	3290.95898	4.53790e-3	14.93406		Acetone
8.096	VV	3868.78564	3.82784e-3	14.80911		Acrolein
8.606	VB	3406.74805	4.41958e-3	15.05640		Propionaldehyde

Totals : 74.72182

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 384 of 560

Instrument 2 5/31/2011 11:29:59 AM KHB

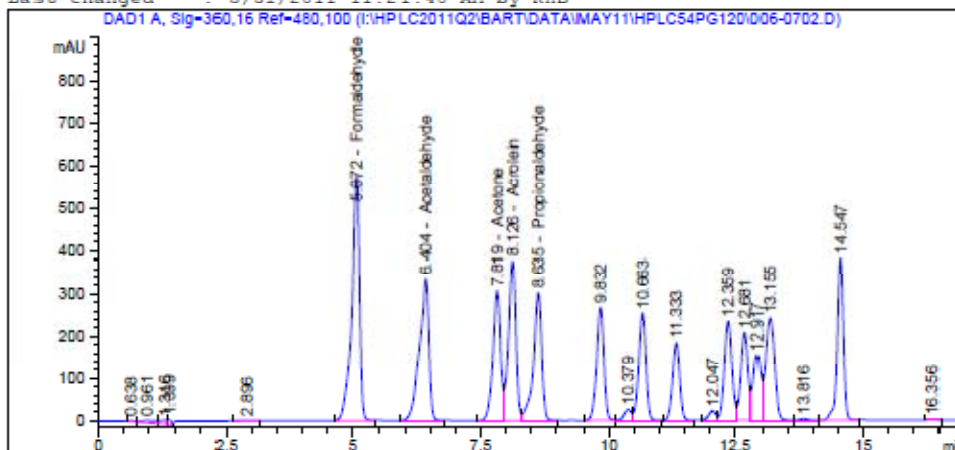
Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\006-0702.D  
Sample Name: hplc54pg120 #6

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Bart                    Location  : Vial 6
Injection Date  : 5/27/2011 9:36:05 PM      Inj       :    2
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.072	BB	6128.59717	2.42472e-3	14.86013		Formaldehyde
6.404	BB	4362.37842	3.41603e-3	14.90203		Acetaldehyde
7.819	BV	3252.63745	4.53790e-3	14.76016		Acetone
8.126	VV	3856.25903	3.82784e-3	14.76116		Acrolein
8.635	VB	3395.85425	4.41958e-3	15.00825		Propionaldehyde

Totals : 74.29173

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 385 of 560

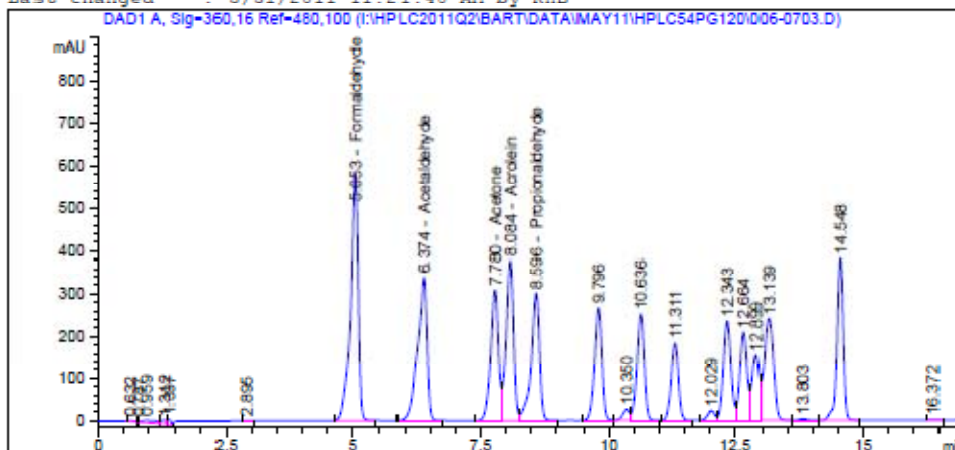
Instrument 2 5/31/2011 11:30:07 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\006-0703.D  
Sample Name: hplc54pg120 #6

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Bart                    Location  : Vial 6
Injection Date  : 5/27/2011 9:57:44 PM      Inj       :    3
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.053	BB	6167.54736	2.42472e-3	14.95457		Formaldehyde
6.374	BB	4389.73730	3.41603e-3	14.99549		Acetaldehyde
7.780	BV	3286.98657	4.53790e-3	14.91603		Acetone
8.084	VV	3878.68140	3.82784e-3	14.84699		Acrolein
8.596	VB	3422.71704	4.41958e-3	15.12697		Propionaldehyde

Totals : 74.84006

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

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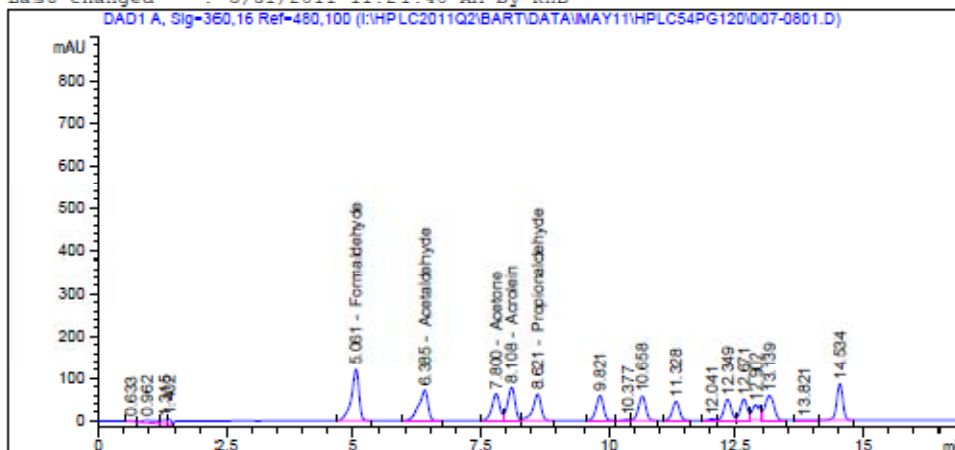
Instrument 2 5/31/2011 11:30:24 AM KHB

Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\007-0801.D  
Sample Name: hplc54pg120 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Bart                    Location  : Vial 7
Injection Date  : 5/27/2011 10:19:22 PM    Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.061	BB	1265.50842	2.42472e-3	3.06850		Formaldehyde
6.385	BB	910.46594	3.41603e-3	3.11018		Acetaldehyde
7.800	BV	673.00220	4.53790e-3	3.05402		Acetone
8.108	VV	804.38818	3.82784e-3	3.07907		Acrolein
8.621	VB	697.69531	4.41958e-3	3.08352		Propionaldehyde

Totals : 15.39530

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 387 of 560

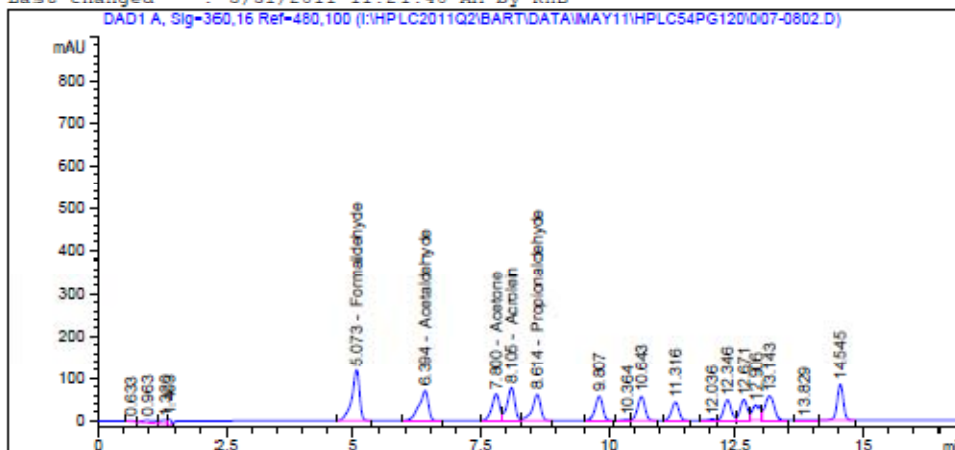
Instrument 2 5/31/2011 11:30:34 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\007-0802.D  
Sample Name: hplc54pg120 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Bart                    Location  : Vial 7
Injection Date  : 5/27/2011 10:40:59 PM    Inj       :    2
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By       : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.073	BB	1264.89819	2.42472e-3	3.06702		Formaldehyde
6.394	BB	909.70721	3.41603e-3	3.10759		Acetaldehyde
7.800	BV	676.37134	4.53790e-3	3.06931		Acetone
8.105	VV	800.74591	3.82784e-3	3.06513		Acrolein
8.614	VB	697.62158	4.41958e-3	3.08319		Propionaldehyde

Totals : 15.39225

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 388 of 560

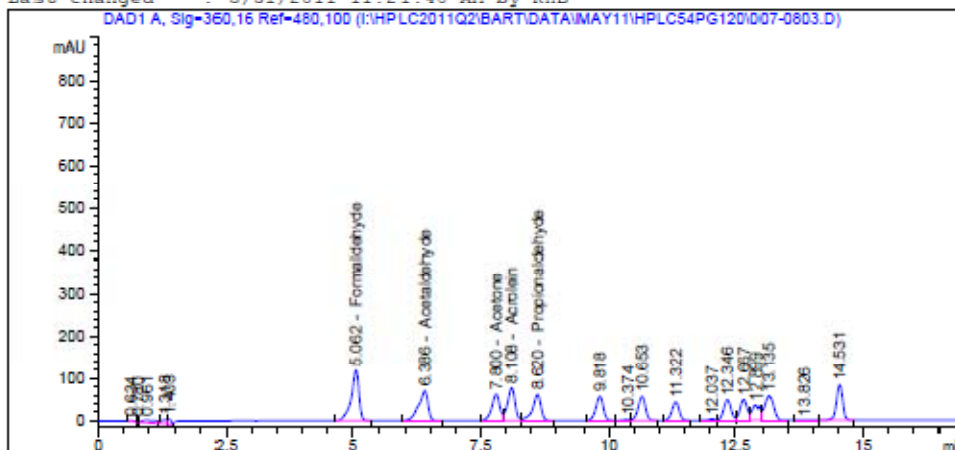
Instrument 2 5/31/2011 11:30:46 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\007-0803.D  
Sample Name: hplc54pg120 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Bart                    Location  : Vial 7
Injection Date  : 5/27/2011 11:02:36 PM    Inj       :    3
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120.M
Last changed    : 5/31/2011 11:21:40 AM by KHB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Tuesday, May 31, 2011 11:20:41 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.062	BB	1263.88220	2.42472e-3	3.06456		Formaldehyde
6.386	BB	908.57458	3.41603e-3	3.10372		Acetaldehyde
7.800	BV	674.59912	4.53790e-3	3.06127		Acetone
8.108	VV	800.84680	3.82784e-3	3.06552		Acrolein
8.620	VB	695.49054	4.41958e-3	3.07378		Propionaldehyde

Totals : 15.36884

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

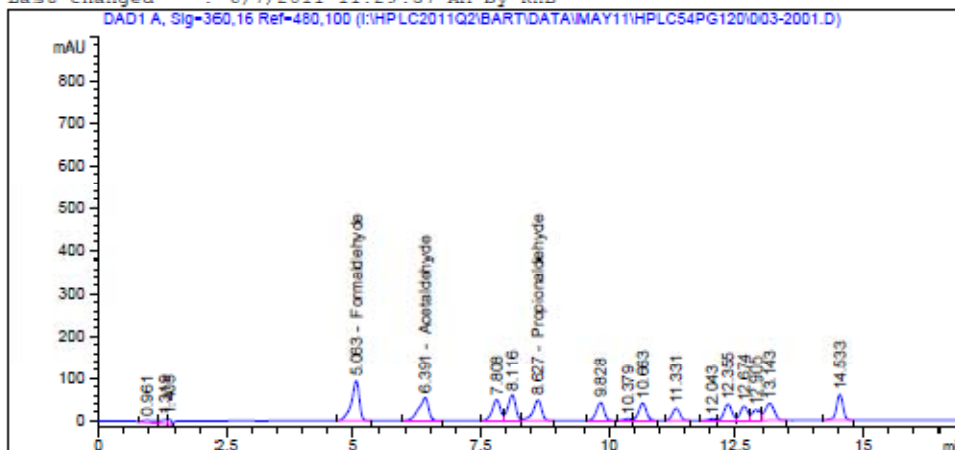
EA# 0511-68 Page 389 of 560

Instrument 2 5/31/2011 11:30:56 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-2001.D  
Sample Name: hplc54pg120 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :   20
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 5/28/2011 4:05:29 AM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.063	BB	1027.25525	2.42472e-3	2.49081		Formaldehyde
6.391	BB	730.47949	3.41603e-3	2.49534		Acetaldehyde
8.627	VB	564.63080	4.41958e-3	2.49543		Propionaldehyde

Totals : 7.48158

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

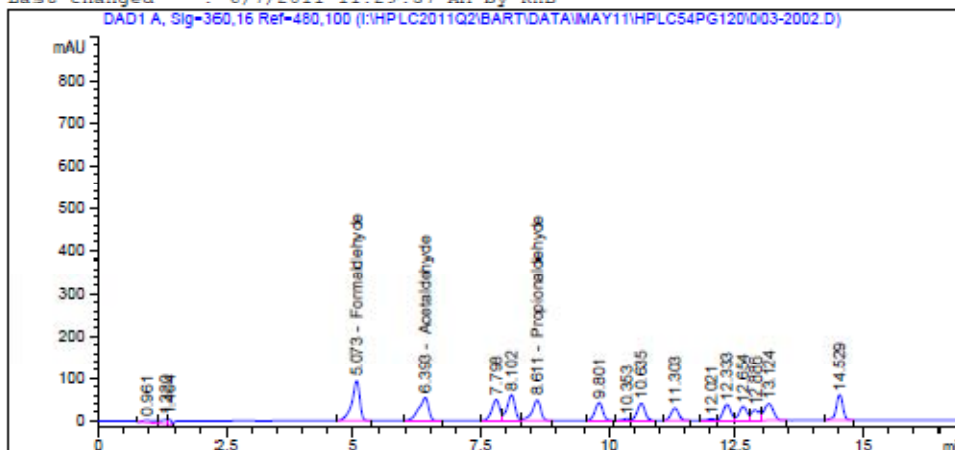
EA# 0511-68 Page 390 of 560

Instrument 2 6/7/2011 11:41:54 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-2002.D  
Sample Name: hplc54pg120 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :   20
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 5/28/2011 4:27:08 AM      Inj       :    2
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.073	BB	1022.89587	2.42472e-3	2.48024		Formaldehyde
6.393	BB	727.48633	3.41603e-3	2.48512		Acetaldehyde
8.611	VB	565.14624	4.41958e-3	2.49771		Propionaldehyde

Totals : 7.46306

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

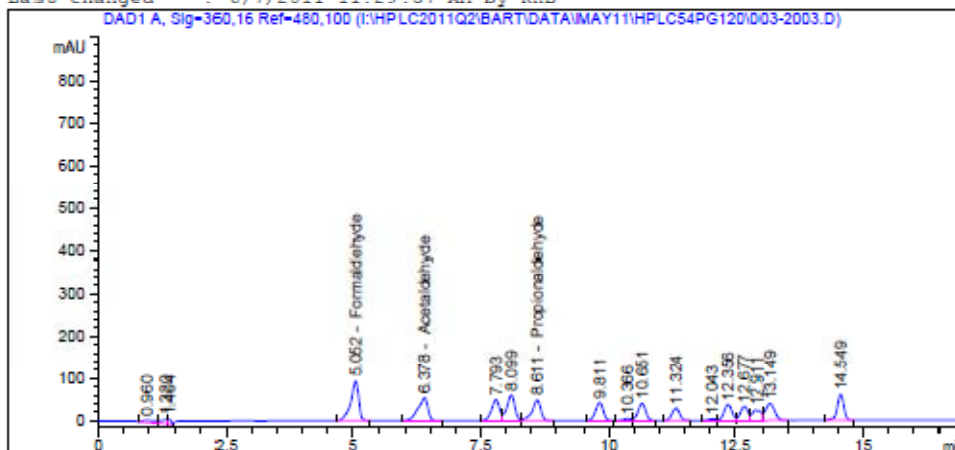
EA# 0511-68 Page 391 of 560

Instrument 2 6/7/2011 11:42:03 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-2003.D  
Sample Name: hplc54pg120 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :   20
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 5/28/2011 4:48:48 AM      Inj       :    3
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.052	BB	1022.08099	2.42472e-3	2.47826		Formaldehyde
6.378	BB	727.93884	3.41603e-3	2.48666		Acetaldehyde
8.611	VB	564.35199	4.41958e-3	2.49420		Propionaldehyde

Totals : 7.45912

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

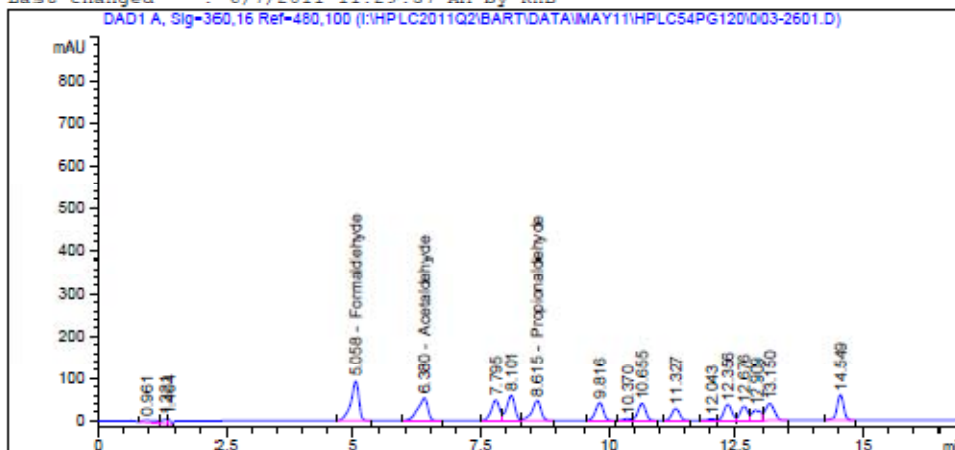
EA# 0511-68 Page 392 of 560

Instrument 2 6/7/2011 11:42:12 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-2601.D  
Sample Name: hplc54pg120 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :   26
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 5/28/2011 6:58:37 AM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.058	BB	1028.24304	2.42472e-3	2.49320		Formaldehyde
6.380	BB	732.13751	3.41603e-3	2.50101		Acetaldehyde
8.615	VB	568.42761	4.41958e-3	2.51221		Propionaldehyde

Totals : 7.50642

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

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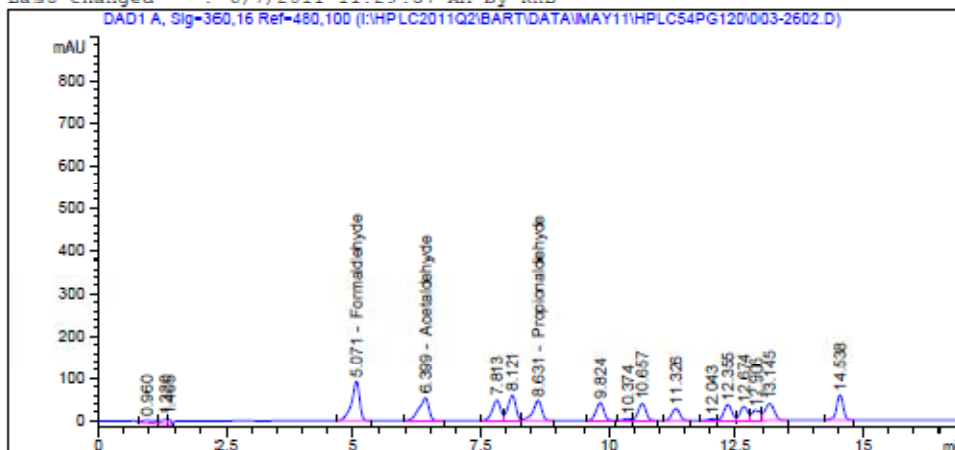
Instrument 2 6/7/2011 11:42:21 AM KHB

Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-2602.D  
Sample Name: hplc54pg120 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :   26
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 5/28/2011 7:20:15 AM      Inj       :    2
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.071	BB	1027.28772	2.42472e-3	2.49088		Formaldehyde
6.399	BB	728.73700	3.41603e-3	2.48939		Acetaldehyde
8.631	VB	566.05011	4.41958e-3	2.50170		Propionaldehyde

Totals : 7.48198

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 394 of 560

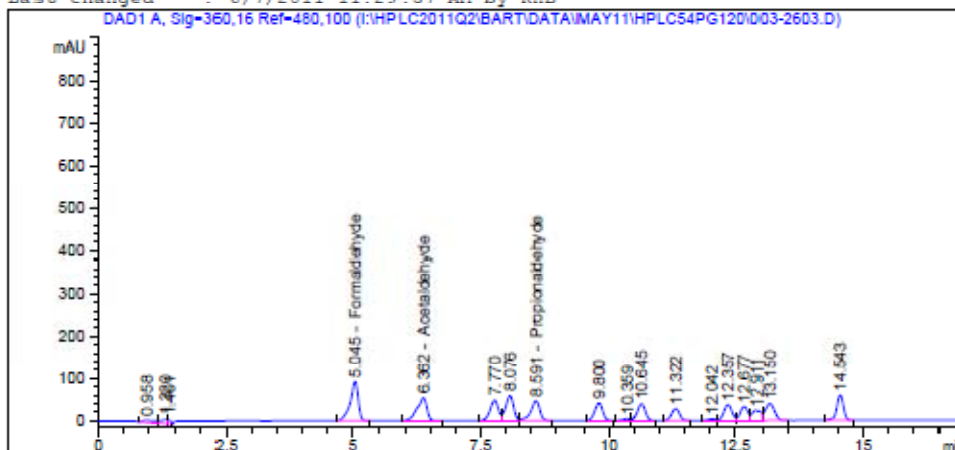
Instrument 2 6/7/2011 11:42:30 AM KHB

Page 1 of 1



Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-2603.D  
Sample Name: hplc54pg120 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :   26
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 5/28/2011 7:41:59 AM      Inj       :    3
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      : 1.0000
Dilution:        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.045	BB	1016.83813	2.42472e-3	2.46555		Formaldehyde
6.362	BB	723.33704	3.41603e-3	2.47094		Acetaldehyde
8.591	VB	565.28748	4.41958e-3	2.49833		Propionaldehyde

Totals : 7.43482

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

EA# 0511-68 Page 395 of 560

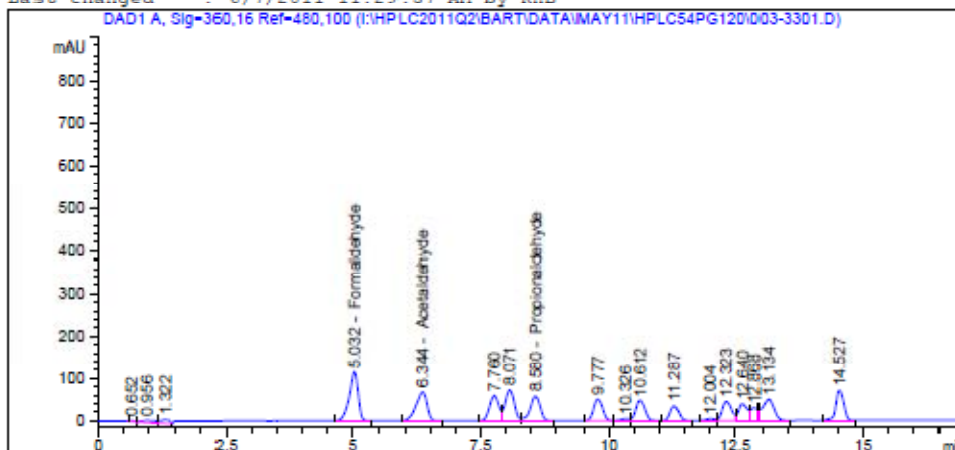
Instrument 2 6/7/2011 11:42:39 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\MAY11\HPLC54PG120\003-3301.D  
Sample Name: hplc54pg120 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :   33
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 6/3/2011 3:33:08 PM      Inj       :    1
                                           Inj Volume: 15.000 µl

Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
5.032	BB	1404.92371	2.42472e-3	3.40655		Formaldehyde
6.344	BB	1011.87915	3.41603e-3	3.45661		Acetaldehyde
8.580	VB	779.94507	4.41958e-3	3.44703		Propionaldehyde

Totals : 10.31019

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

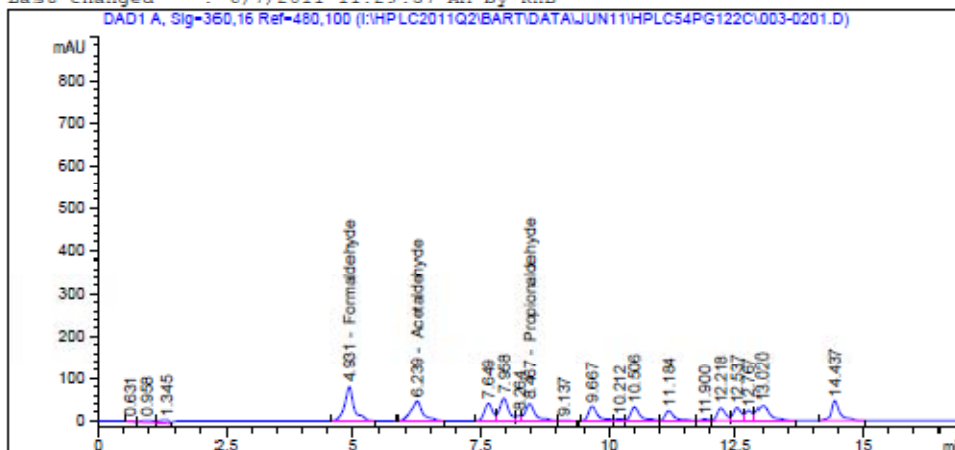
EA# 0511-68 Page 396 of 560

Instrument 2 6/7/2011 11:43:47 AM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG122C\003-0201.D  
Sample Name: hplc54pg122 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 6/8/2011 12:00:45 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



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

```
Sorted By       :      Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:      :      1.0000
Dilution:        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
4.931	BB	1048.22070	2.42472e-3	2.54164		Formaldehyde
6.239	BB	746.45868	3.41603e-3	2.54993		Acetaldehyde
8.467	VV	568.86383	4.41958e-3	2.51414		Propionaldehyde

Totals : 7.60571

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

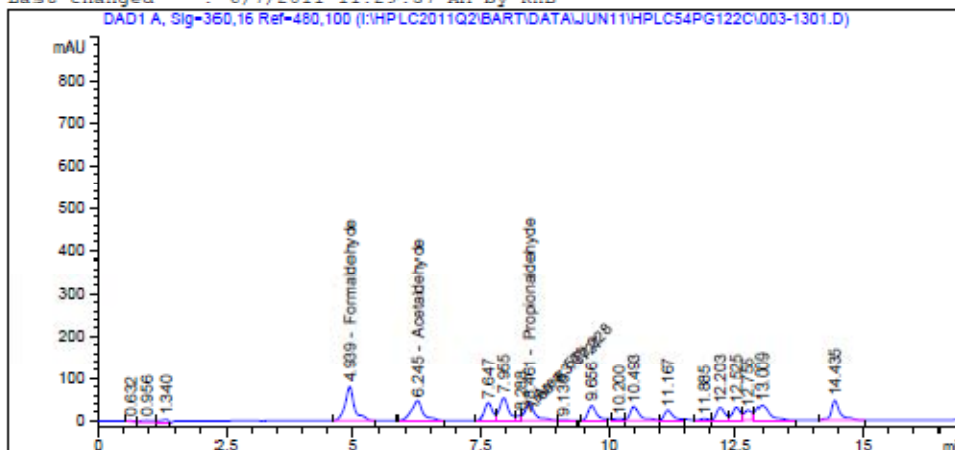
EA# 0511-68 Page 397 of 560

Instrument 2 6/9/2011 4:10:22 PM KHB

Page 1 of 1

Data File I:\HPLC2011Q2\BART\DATA\JUN11\HPLC54PG122C\003-1301.D  
Sample Name: hplc54pg122 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :   13
Acq. Instrument : Bart                    Location  : Vial 3
Injection Date  : 6/8/2011 3:59:01 PM      Inj       :    1
                                           Inj Volume: 15.000 µl
Acq. Method     : H:\HPLC2011Q2\BART\METHODS\8315ICR.M
Last changed    : 5/27/2011 3:16:54 PM by KHB
Analysis Method : I:\HPLC2011Q2\BART\METHODS\HPLC54PG120ICR.M
Last changed    : 6/7/2011 11:29:37 AM by KHB
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/7/2011 11:27:58 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: DAD1 A, Sig=360,16 Ref=480,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
4.939	BB	1046.22668	2.42472e-3	2.53681		Formaldehyde
6.245	BB	745.13818	3.41603e-3	2.54542		Acetaldehyde
8.461	FM	570.22784	4.41958e-3	2.52017		Propionaldehyde

Manual Int. "II" (KHB)

Totals : 7.60239

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M  
Modified on: 5/27/2011 at 3:16:54 PM

Method Information

Method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M  
Modified: 5/27/2011 at 3:16:54 PM

Column: Restek Ultra C18, 4\*150mm  
Mobile Phase: 59:30:10:1 DIUF H2O:ACN:THF:IPA to 100% ACN on a  
gradient  
Flow rate: 1.2 mL/min  
UV Detection at 360 nm

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Bart 6/7/2011 11:17:48 AM KHB

Page 1 of 4

method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M  
Modified on: 5/27/2011 at 3:16:54 PM

=====

Agilent 1100/1200 Quaternary Pump 1

=====

Control

Column Flow : 1.200 ml/min  
Stoptime : 17.00 min  
Posttime : 3.00 min

Solvents

Solvent A : 100.0 % (59:30:10:1 DI:ACN:THF:IPA)  
Solvent B : 0.0 % (100% ACN)  
Solvent C : Off  
Solvent D : Off

PressureLimits

Minimum Pressure : 0 bar  
Maximum Pressure : 400 bar

Auxiliary

Maximal Flow Ramp : 100.00 ml/min^2  
Primary Channel : Auto  
Compressibility :  $83 \times 10^{-6}$ /bar  
Minimal Stroke : Auto

Store Parameters

Store Ratio A : Yes  
Store Ratio B : Yes  
Store Ratio C : Yes  
Store Ratio D : Yes  
Store Flow : Yes  
Store Pressure : Yes

Agilent Contacts Option

=====

Contact 1 : Open  
Contact 2 : Open  
Contact 3 : Open  
Contact 4 : Open

Timetable

Time	Solv.B	Solv.C	Solv.D	Flow	Pressure
0.00	0.0	0.0	0.0		
0.10	0.0	0.0	0.0		
12.00	50.0	0.0	0.0		
17.00	100.0	0.0	0.0		

Agilent Contacts Option Timetable

=====

Timetable is empty

=====

Agilent 1100/1200 Diode Array Detector 1

=====

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Bart 6/7/2011 11:17:48 AM KHB

Page 2 of 4

method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M  
Modified on: 5/27/2011 at 3:16:54 PM  
Signals

Signal	Store	Signal,Bw	Reference,Bw	[nm]
A:	Yes	360 16	480 100	
B:	No	254 16	360 100	
C:	No	218 8	360 100	
D:	No	230 16	360 100	
E:	No	280 16	360 100	

Spectrum  
Store Spectra : None

Time  
Stoptime : As pump  
Posttime : Off

Required Lamps  
UV lamp required : Yes  
Vis lamp required : Yes

Autobalance  
Prerun balancing : Yes  
Postrun balancing : No  
Margin for negative Absorbance: 100 mAU

Peakwidth : > 0.1 min  
Slit : 4 nm

Analog Outputs  
Zero offset ana. out. 1: 5 %  
Zero offset ana. out. 2: 5 %  
Attenuation ana. out. 1: 1000 mAU  
Attenuation ana. out. 2: 1000 mAU

Agilent Contacts Option

=====  
Contact 1 : Open  
Contact 2 : Open  
Contact 3 : Open  
Contact 4 : Open

=====  
Agilent 1100 Autosampler 1  
=====

Injection  
Injection Mode : Needle Wash  
Injector volume : 15.00 µl  
Wash Vial : 100  
Optimization : Prefetch Sample Vial  
8.00 min. after Injection

Auxiliary  
Drawspeed : 100 µl/min  
Ejectspeed : 1000 µl/min  
Draw position : 2.0 mm

Time  
Stoptime : As Pump  
Posttime : Off

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Bart 6/7/2011 11:17:48 AM KHB

Page 3 of 4

method: H:\HPLC2011Q2\BART\METHODS\8315ICR.M  
Modified on: 5/27/2011 at 3:16:54 PM

=====

Agilent 1100/1200 Column Thermostat 1

=====

Temperature settings

Left temperature : 30.0°C  
Right temperature : Same as left  
Enable analysis : When Temp. is within setpoint +/- 0.8°C  
Store left temperature : No  
Store right temperature: No

Time

Stoptime : As pump  
Posttime : Off

Column Switching Valve : Column 1

Timetable is empty



Sequence: I:\HPLC2011\Q1\BART\SEQUENCE\HPLC54PG120.S

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
====	=====	=====	=====	=====	=====	=====
1	Vial 8	RB/100% ACN	831SICR	1	Sample	
2	Vial 1	hplc54pg120 #1	831SICR	3	Sample	
3	Vial 2	hplc54pg120 #2	831SICR	3	Sample	
4	Vial 3	hplc54pg120 #3	831SICR	3	Sample	
5	Vial 4	hplc54pg120 #4	831SICR	3	Sample	
6	Vial 5	hplc54pg120 #5	831SICR	3	Sample	
7	Vial 6	hplc54pg120 #6	831SICR	3	Sample	
8	Vial 7	hplc54pg120 #SS	831SICR	3	Sample	
9	Vial 8	RB/100% ACN	831SICR	3	Sample	
10	Vial 11	052011-0011U-1-1 05 11-68	831SICR	1	Sample	
11	Vial 11	052011-0011U-1-1 05 11-68	831SICR	1	Sample	
12	Vial 12	052011-0011U-1-1 LD 0511-68	831SICR	1	Sample	
13	Vial 13	052011-0011U-1-2 05 11-68	831SICR	1	Sample	
14	Vial 14	052011-0011U-1-3 05 11-68	831SICR	1	Sample	
15	Vial 15	052011-0011S-1-1 05 11-68	831SICR	1	Sample	
16	Vial 16	052011-0011-FieldSpi ke 0511-68	831SICR	1	Sample	
17	Vial 17	052011-0011-Sample B L 0511-68	831SICR	1	Sample	
18	Vial 18	052011-0011-DM/H2O B L 0511-68	831SICR	1	Sample	
19	Vial 19	MB-1 0511-68	831SICR	1	Sample	
20	Vial 3	hplc54pg120 #3	831SICR	3	Sample	
21	Vial 20	LCS-1 0511-68	831SICR	1	Sample	
<del>22</del>	<del>Vial 21</del>	<del>ZRT LCS-1</del>	<del>831SICR</del>	<del>1</del>	<del>Sample</del>	
<del>23</del>	<del>Vial 22</del>	<del>ZRT LCS-2</del>	<del>831SICR</del>	<del>1</del>	<del>Sample</del>	

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Instrument 2 6/7/2011 11:13:11 AM KHB

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Sequence: I:\HPLC2011\Q1\BART\SEQUENCE\HPLC54PG120.S

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
====	=====	=====	=====	=====	=====	=====
<del>24</del>	<del>Vial 24</del>	<del>ZRT LCS-3</del>	<del>831SICR</del>	<del>1</del>	<del>Sample</del>	
<del>25</del>	<del>Vial 24</del>	<del>ZRT LCS-4</del>	<del>831SICR</del>	<del>1</del>	<del>Sample</del>	
26	Vial 3	hplc54pg120 #3	831SICR	3	Sample	
<del>27</del>	<del>Vial 9</del>	<del>hplc54pg120 #MDL 1</del>	<del>831SICR</del>	<del>8</del>	<del>Sample</del>	
28	Vial 3	hplc54pg120 #3	831SICR	3	Sample	
29	Vial 9	hplc54pg120 #MDL 1	831SICR	8	Sample	
30	Vial 10	hplc54pg120 #MDL 2	831SICR	8	Sample	
<del>31</del>	<del>Vial 3</del>	<del>hplc54pg120 #3</del>	<del>831SICR</del>	<del>3</del>	<del>Sample</del>	

Sequence: I:\HPLC2011Q1\BART\SEQUENCE\HPLC54PGL22B.S

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 8	RB/100% ACN	831SICR	1	Sample	
2	Vial 3	hplc54pgl22 #3	831SICR	1	Sample	
3	Vial 8	RB/100% ACN	831SICR	1	Sample	
4	Vial 11	F1R1 0511-84	831SICR	1	Sample	
5	Vial 11	F1R1 0511-84	831SICR	1	Sample	
6	Vial 12	LD/F1R1 0511-84	831SICR	1	Sample	
7	Vial 13	F1R1 Dup 0511-84	831SICR	1	Sample	
8	Vial 14	F1R2 0511-84	831SICR	1	Sample	
9	Vial 71	MS/U-1-2 0511-68	831SICR	1	Sample	
10	Vial 72	MSD/U-1-2 0511-68	831SICR	1	Sample	
11	Vial 73	MB-2 0511-68	831SICR	1	Sample	
12	Vial 74	LCS-2 0511-68	831SICR	1	Sample	
13	Vial 3	hplc54pgl22 #3	831SICR	1	Sample	
14	Vial 15	F1R2 Train Spike Hig h 0511-84	831SICR	1	Sample	
15	Vial 16	F1R3 0511-84	831SICR	1	Sample	
16	Vial 17	F1R4 0511-84	831SICR	1	Sample	
17	Vial 18	F1R5 0511-84	831SICR	1	Sample	
18	Vial 3	hplc54pgl22 #3	831SICR	1	Sample	
19	Vial 19	F1R6 0511-84	831SICR	1	Sample	
20	Vial 20	F1R7 0511-84	831SICR	1	Sample	
21	Vial 21	F1R8 0511-84	831SICR	1	Sample	
22	Vial 22	LD/F1R8 0511-84	831SICR	1	Sample	
23	Vial 23	F2R1 0511-84	831SICR	1	Sample	
24	Vial 23	F2R1 0511-84	831SICR	1	Sample	
25	Vial 24	F2R1 Dup 0511-84	831SICR	1	Sample	
26	Vial 25	F2R2 0511-84	831SICR	1	Sample	
27	Vial 26	F2R2 Train Spike Hig h 0511-84	831SICR	1	Sample	

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Instrument 2 6/9/2011 5:19:53 PM KHE

Page 1 of 3

Sequence: I:\HPLC2011\Q1\BART\SEQUENCE\HPLC54PG122B.S

28	Vial 27	F2R3	0511-84	831SICR	1	Sample
29	Vial 3	hplc54pg122 #3		831SICR	1	Sample
30	Vial 28	F2R4	0511-84	831SICR	1	Sample
31	Vial 29	F2R5	0511-84	831SICR	1	Sample
32	Vial 30	F2R6	0511-84	831SICR	1	Sample
33	Vial 47	MB-1	0511-84	831SICR	1	Sample
34	Vial 48	LCS-1	0511-84	831SICR	1	Sample
35	Vial 31	F2R7	0511-84	831SICR	1	Sample
36	Vial 32	F2R8	0511-84	831SICR	1	Sample
37	Vial 33	F3R1	0511-84	831SICR	1	Sample
38	Vial 33	F3R1	0511-84	831SICR	1	Sample
39	Vial 34	F3R1 Dup	0511-84	831SICR	1	Sample
40	Vial 3	hplc54pg122 #3		831SICR	1	Sample
41	Vial 35	F3R2	0511-84	831SICR	1	Sample
42	Vial 36	F3R2 Spike	0511-84	831SICR	1	Sample
43	Vial 37	LD/F3R2 Spike	0511-84	831SICR	1	Sample
44	Vial 38	F3R3	0511-84	831SICR	1	Sample
45	Vial 39	F3R3 Train Spike Hg h	0511-84	831SICR	1	Sample
46	Vial 40	F3R4	0511-84	831SICR	1	Sample
47	Vial 41	F3R5	0511-84	831SICR	1	Sample
48	Vial 42	F3R6	0511-84	831SICR	1	Sample
49	Vial 43	F3R7	0511-84	831SICR	1	Sample
50	Vial 44	F3R8	0511-84	831SICR	1	Sample
51	Vial 3	hplc54pg122 #3		831SICR	1	Sample
52	Vial 33	F4R1	0511-84	831SICR	1	Sample
53	Vial 33	F4R1	0511-84	831SICR	1	Sample
54	Vial 34	F4R1 Dup	0511-84	831SICR	1	Sample
55	Vial 35	F4R2	0511-84	831SICR	1	Sample
56	Vial 36	F4R2 Spike	0511-84	831SICR	1	Sample
57	Vial 38	F4R3	0511-84	831SICR	1	Sample
58	Vial 40	F4R4	0511-84	831SICR	1	Sample

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Instrument 2 6/9/2011 5:19:53 PM KHE

Page 2 of 3

Sequence: I:\HPLC2011Q1\BART\SEQUENCE\HPLC54PG122B.S

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
====	=====	=====	=====	=====	=====	=====
59	Vial 49	MB-2 0511-84	831SICR	1	Sample	
60	Vial 50	LCS-2 0511-84	831SICR	1	Sample	
61	Vial 41	F4R5 0511-84	831SICR	1	Sample	
62	Vial 3	hplc54pg122 #3	831SICR	1	Sample	
63	Vial 42	F4R6 0511-84	831SICR	1	Sample	
64	Vial 43	F4R7 0511-84	831SICR	1	Sample	
65	Vial 44	F4R8 0511-84	831SICR	1	Sample	
66	Vial 45	DNPH Blank 5.24.11 0511-84	831SICR	1	Sample	
67	Vial 46	DNPH Blank 5.25.11 0511-84	831SICR	1	Sample	
68	Vial 51	MB-3 0511-84	831SICR	1	Sample	
69	Vial 52	LCS-3 0511-84	831SICR	1	Sample	
70	Vial 3	hplc54pg122 #3	831SICR	1	Sample	

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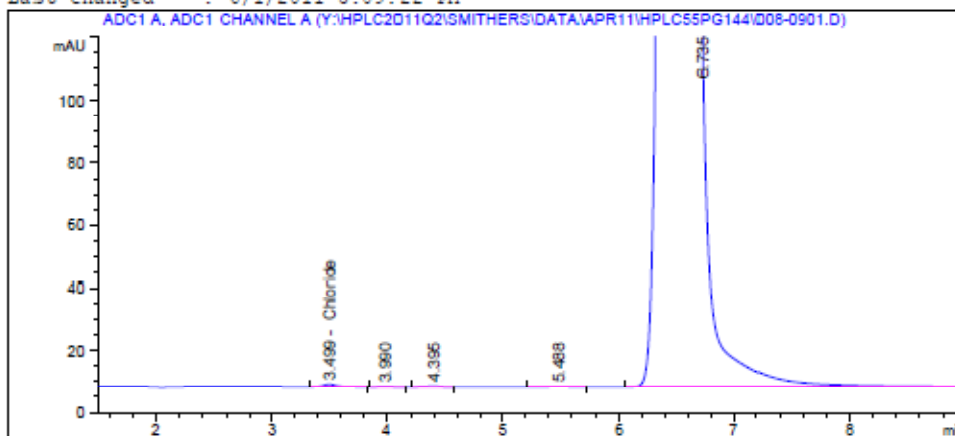
# Sample Chromatograms



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Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\008-0901.D  
Sample Name: R1 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line :    9
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 5/31/2011 8:30:31 PM      Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:     :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.658		-	-	-		Fluoride
3.499	BB	6.87108	2.60146e-2	1.78748e-1		Chloride

Totals : 1.78748e-1

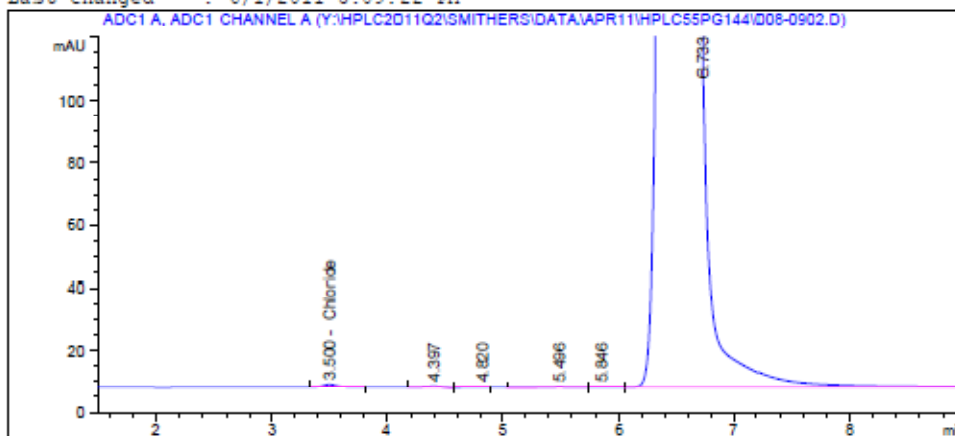
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\008-0902.D  
Sample Name: R1 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                               Seq. Line :    9
Acq. Instrument : Smithers                         Location  :    -
Injection Date  : 5/31/2011 8:41:46 PM             Inj       :    2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:      :      1.0000
Dilution:        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.658		-	-	-		Fluoride
3.500	BB	6.87243	2.60146e-2	1.78783e-1		Chloride

Totals : 1.78783e-1

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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

EA# 0511-68 Page 410 of 560

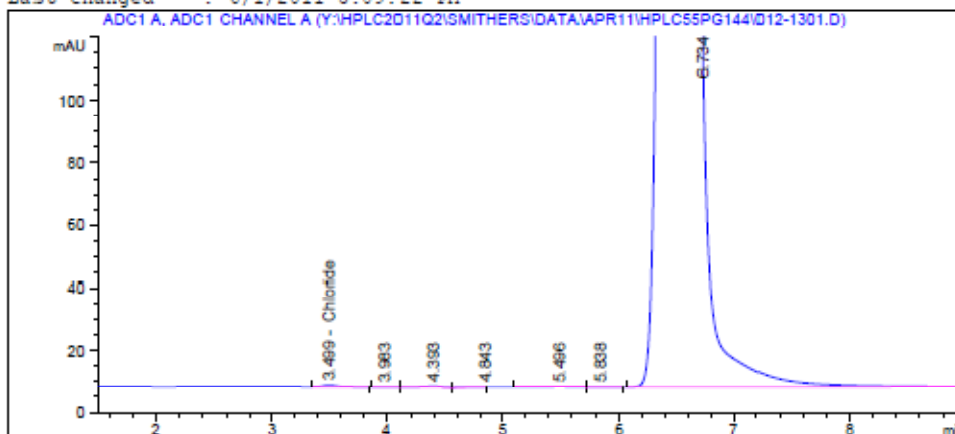
Instrument 2 6/1/2011 3:20:11 PM

Page 1 of 1



Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\012-1301.D  
Sample Name: R2 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 13
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 10:11:44 PM   Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.658		-	-	-		Fluoride
3.499	BB	5.84958	2.60146e-2	1.52174e-1		Chloride

Totals : 1.52174e-1

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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

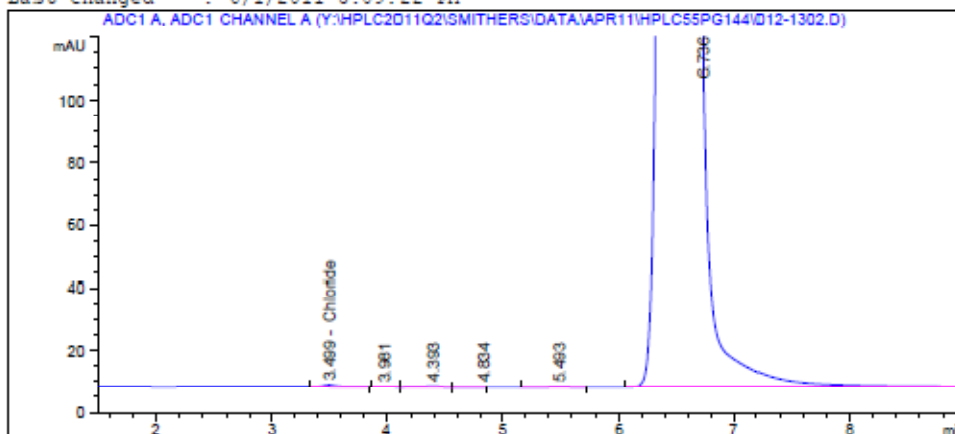
EA# 0511-68 Page 411 of 560

Instrument 2 6/1/2011 3:29:15 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\012-1302.D  
Sample Name: R2 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 13
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 10:23:00 PM   Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.658	-	-	-	-	-	Fluoride
3.499	BB	5.86124	2.60146e-2	1.52478e-1	-	Chloride

Totals : 1.52478e-1

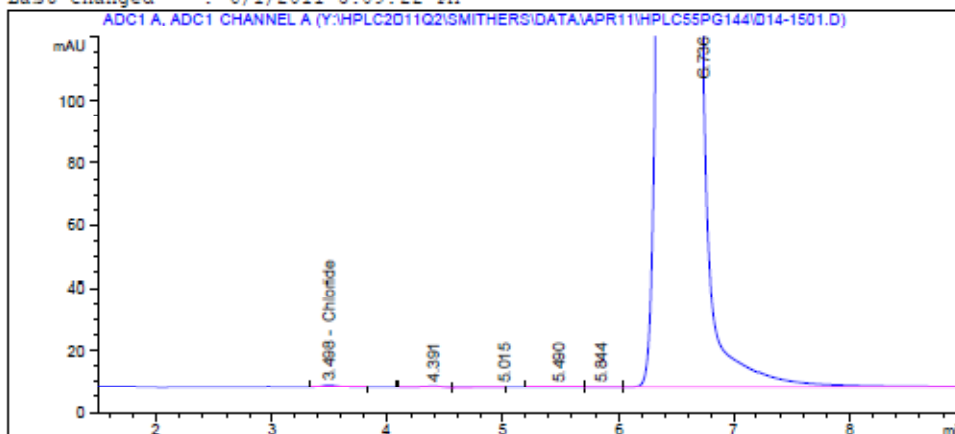
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\014-1501.D  
Sample Name: R3 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line :   15
Acq. Instrument : Smithers                Location  :    -
Injection Date  : 5/31/2011 11:07:51 PM   Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.658	-	-	-	-	-	Fluoride
3.498	BB	5.02755	2.60146e-2	1.30790e-1	-	Chloride

Totals : 1.30790e-1

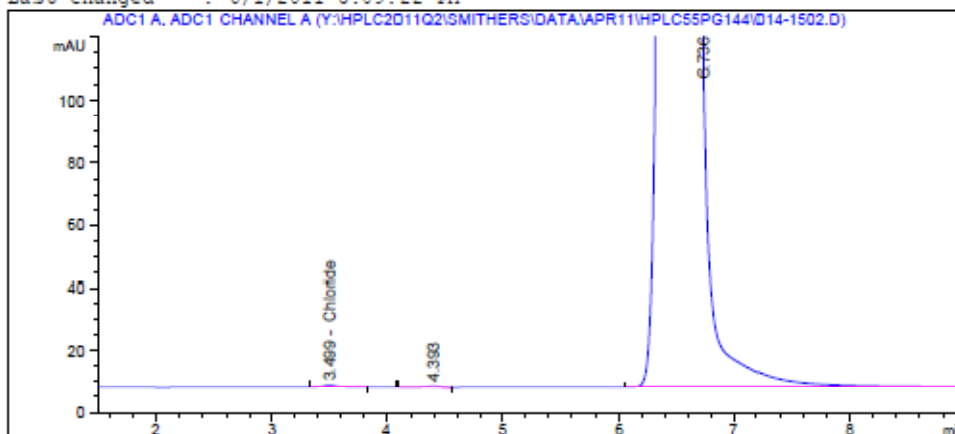
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\014-1502.D  
Sample Name: R3 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 15
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 11:19:08 PM   Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.658		-	-	-		Fluoride
3.499	BB	4.96049	2.60146e-2	1.29045e-1		Chloride

Totals : 1.29045e-1

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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

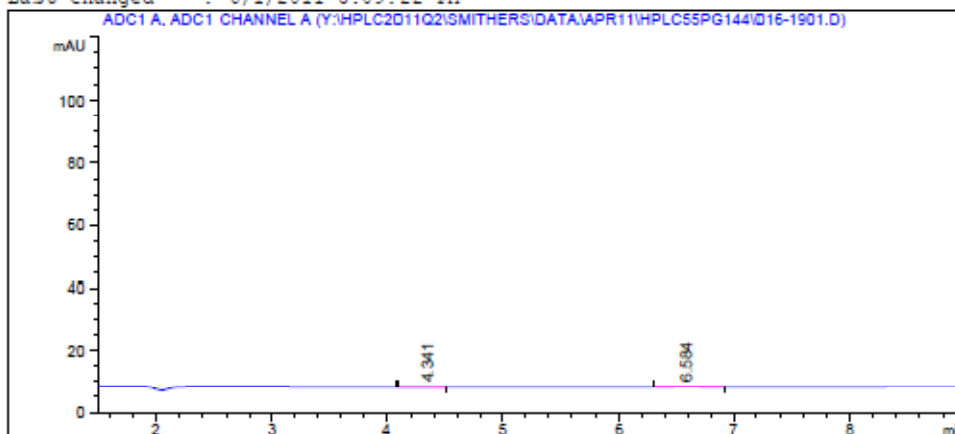
EA# 0511-68 Page 414 of 560

Instrument 2 6/1/2011 3:38:57 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\016-1901.D  
Sample Name: DI H2O Blank 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line :   19
Acq. Instrument : Smithers                Location  :    -
Injection Date  : 6/1/2011 12:49:05 AM      Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed     : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

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

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Area Percent Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

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Instrument 2 6/1/2011 3:39:36 PM

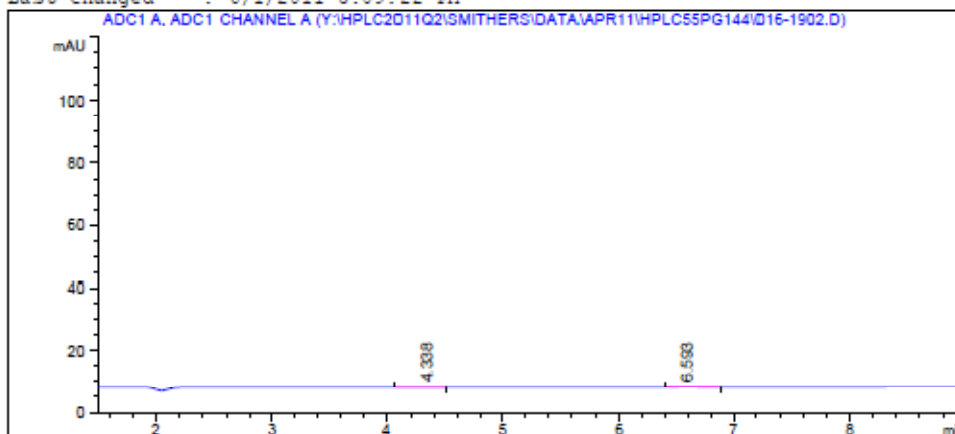
Page 1 of 2

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\016-1902.D  
Sample Name: DI H2O Blank 0511-68

=====

Acq. Operator	: EO	Seq. Line	: 19
Acq. Instrument	: Smithers	Location	: -
Injection Date	: 6/1/2011 1:05:52 AM	Inj	: 2
Acq. Method	: C:\HPCHEM\1\METHODS\METROHM.M		
Last changed	: 5/6/2011 12:14:53 PM by EO		
Analysis Method	: Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M		
Last changed	: 6/1/2011 3:09:22 PM		

=====



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

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

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====

Area Percent Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

EA# 0511-68 Page 416 of 560

Instrument 2 6/1/2011 3:39:42 PM

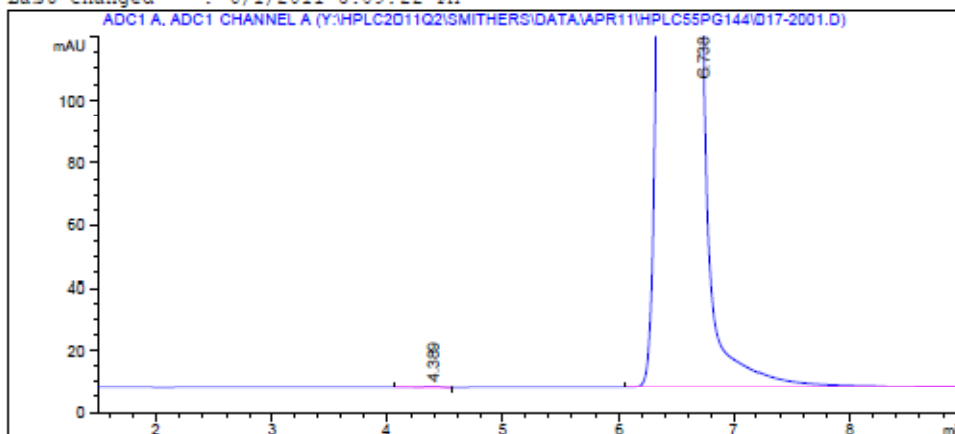
Page 1 of 2

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\017-2001.D  
Sample Name: H2SO4 Blank \*10 0511-68

=====

Acq. Operator	: EO	Seq. Line	: 20
Acq. Instrument	: Smithers	Location	: -
Injection Date	: 6/1/2011 1:22:40 AM	Inj	: 1
Acq. Method	: C:\HPCHEM\1\METHODS\METROHM.M		
Last changed	: 5/6/2011 12:14:53 PM by EO		
Analysis Method	: Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M		
Last changed	: 6/1/2011 3:09:22 PM		

=====



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

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

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====

Area Percent Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

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Instrument 2 6/1/2011 3:40:33 PM

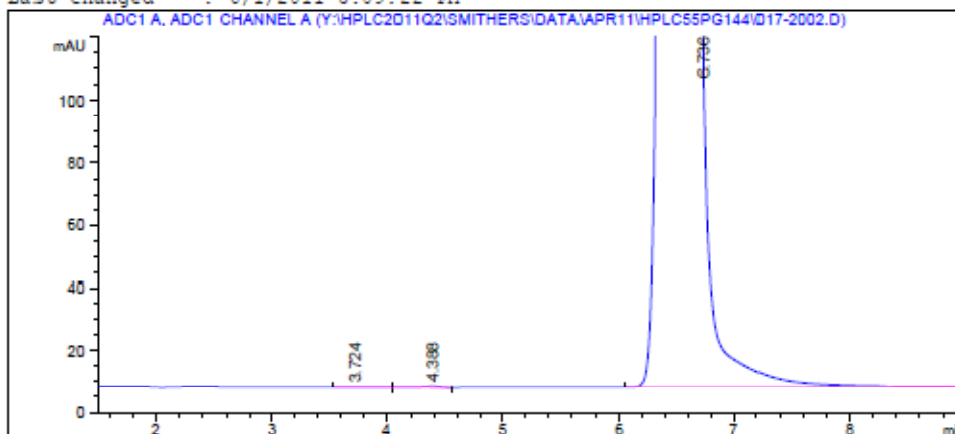
Page 1 of 2

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\017-2002.D  
Sample Name: H2SO4 Blank \*10 0511-68

=====

Acq. Operator	: EO	Seq. Line	: 20
Acq. Instrument	: Smithers	Location	: -
Injection Date	: 6/1/2011 1:39:28 AM	Inj	: 2
Acq. Method	: C:\HPCHEM\1\METHODS\METROHM.M		
Last changed	: 5/6/2011 12:14:53 PM by EO		
Analysis Method	: Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M		
Last changed	: 6/1/2011 3:09:22 PM		

=====



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

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

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====

Area Percent Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

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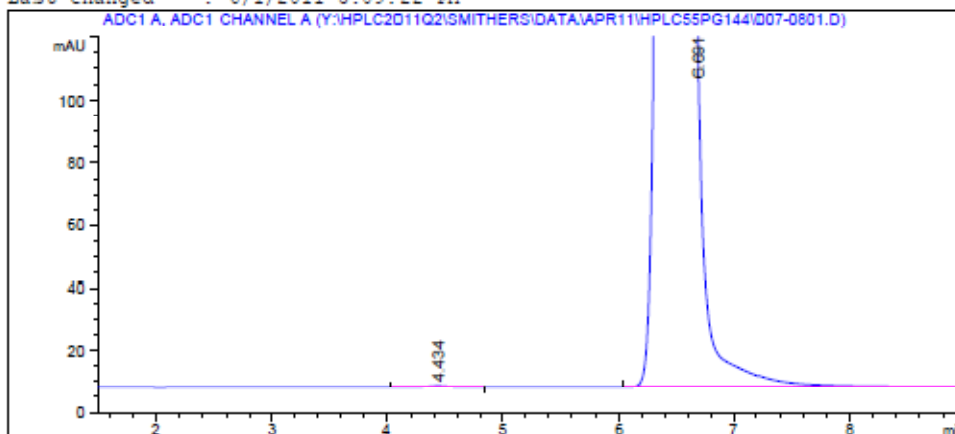
Instrument 2 6/1/2011 3:40:39 PM

Page 1 of 2



Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\007-0801.D  
Sample Name: 0.01N H2SO4/NaOH RB

```
=====
Acq. Operator   : EO                      Seq. Line :    8
Acq. Instrument : Smithers                Location  :    -
Injection Date  : 5/31/2011 8:07:59 PM    Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

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

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Area Percent Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

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Instrument 2 6/1/2011 3:17:24 PM

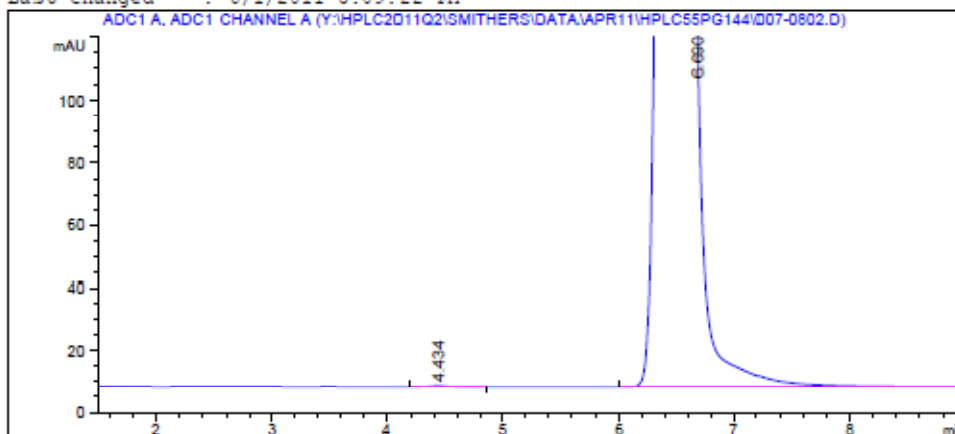
Page 1 of 2

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\007-0802.D  
Sample Name: 0.01N H2SO4/NaOH RB

=====

Acq. Operator	: EO	Seq. Line	: 8
Acq. Instrument	: Smithers	Location	: -
Injection Date	: 5/31/2011 8:19:15 PM	Inj	: 2
Acq. Method	: C:\HPCHEM\1\METHODS\METROHM.M		
Last changed	: 5/6/2011 12:14:53 PM by EO		
Analysis Method	: Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M		
Last changed	: 6/1/2011 3:09:22 PM		

=====



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 A, ADC1 CHANNEL A

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

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====

Area Percent Report

=====

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

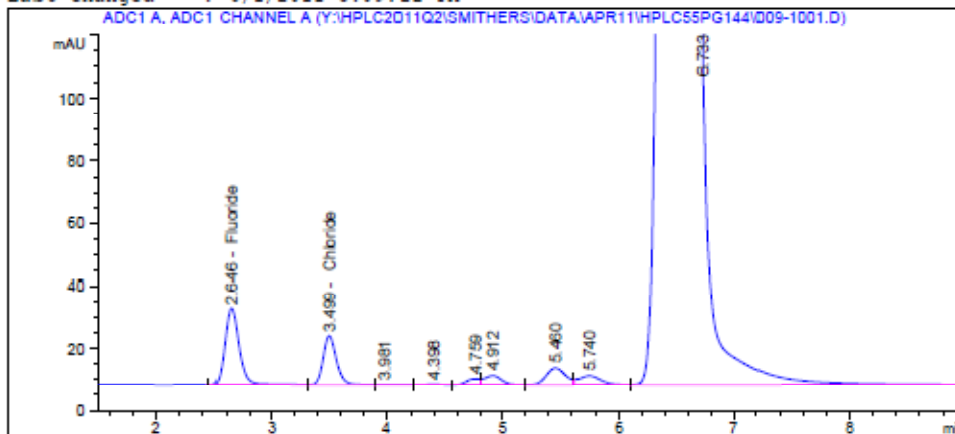
EA# 0511-68 Page 420 of 560

Instrument 2 6/1/2011 3:17:41 PM

Page 1 of 2

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\009-1001.D  
Sample Name: MS R1 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 10
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 8:53:02 PM    Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

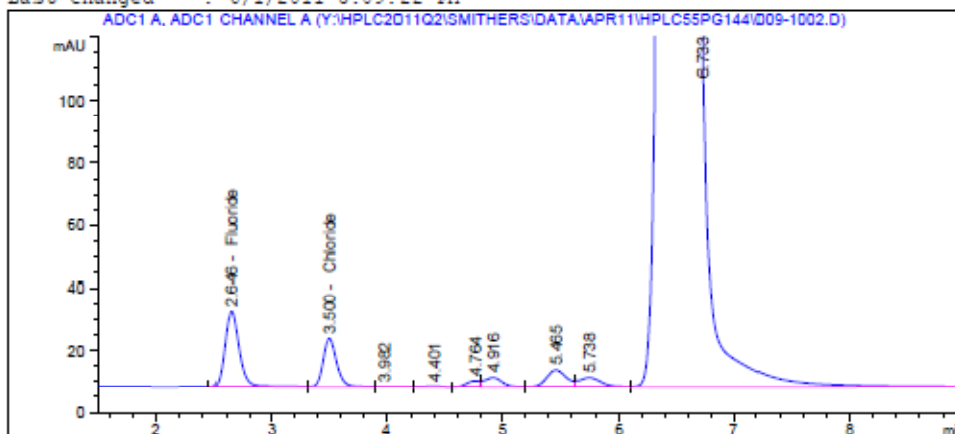
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.646	BV	210.66473	1.62355e-2	3.42025		Fluoride
3.499	VV	129.30911	2.45040e-2	3.16859		Chloride

Totals : 6.58684

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\009-1002.D  
Sample Name: MS R1 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 10
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 9:04:18 PM    Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

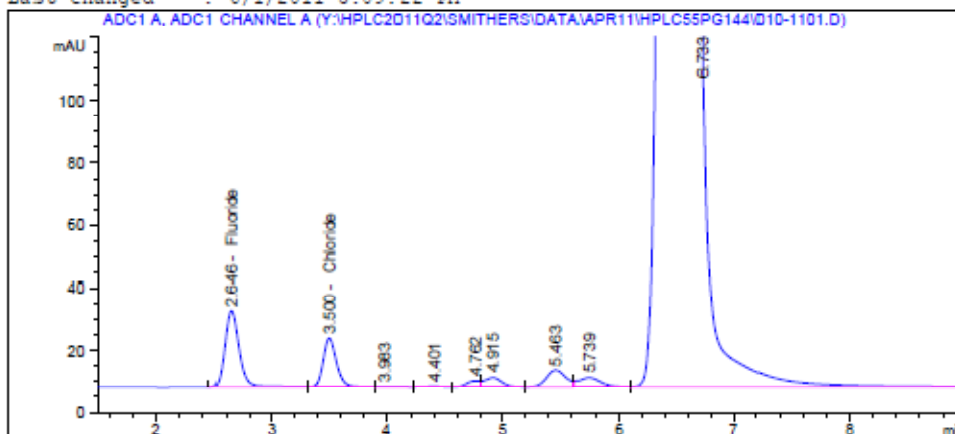
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.646	BV	211.01410	1.62361e-2	3.42605		Fluoride
3.500	VB	129.72444	2.45037e-2	3.17873		Chloride

Totals : 6.60478

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\010-1101.D  
Sample Name: MSD R1 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 11
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 9:15:35 PM    Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

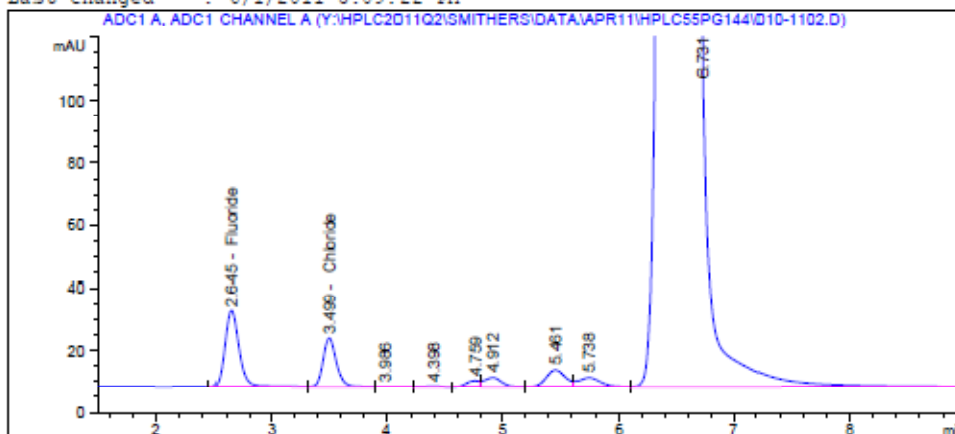
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.646	BV	210.97813	1.62360e-2	3.42545		Fluoride
3.500	VB	129.59142	2.45038e-2	3.17548		Chloride

Totals : 6.60093

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\010-1102.D  
Sample Name: MSD R1 C3 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 11
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 9:26:51 PM    Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.645	BV	210.31778	1.62349e-2	3.41449		Fluoride
3.499	VV	128.95801	2.45043e-2	3.16002		Chloride

Totals : 6.57451

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

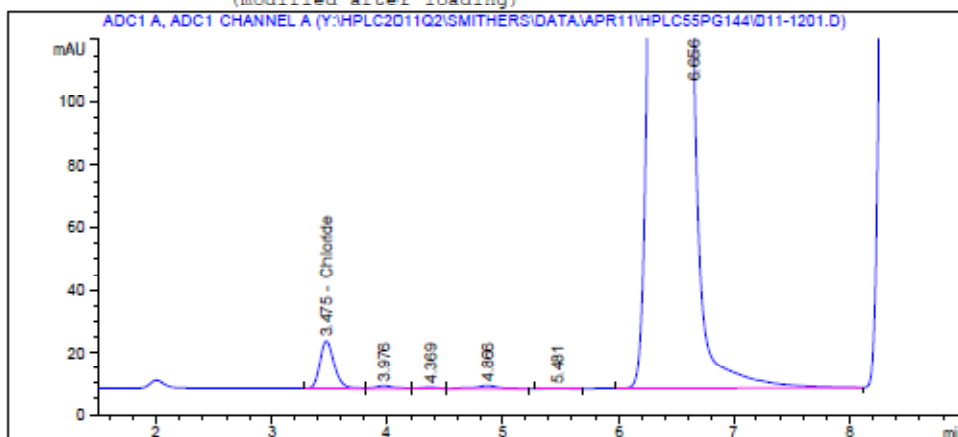
# Sample Chromatograms



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Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\011-1201.D  
Sample Name: R1 C4 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 12
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 9:38:08 PM    Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:28:46 PM
                  (modified after loading)
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 6/1/2011 3:28:46 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
3.475	BV	133.96623	2.45007e-2	3.28226		Chloride

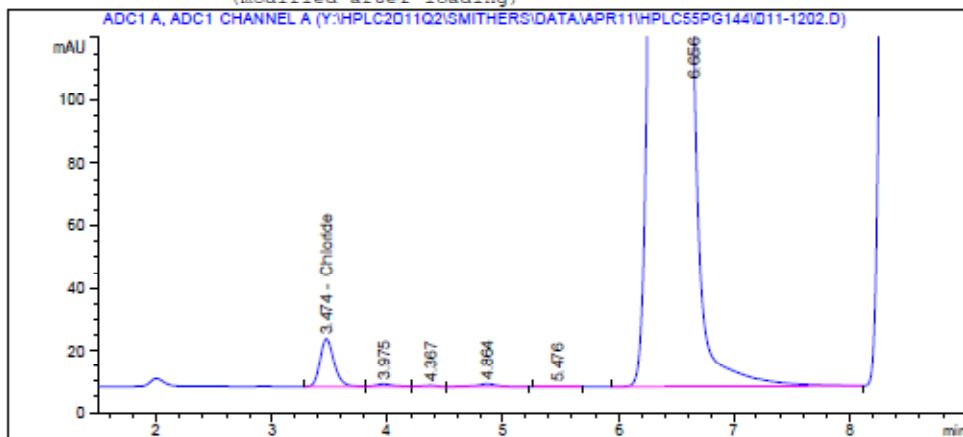
Totals : 3.28226

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



Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\011-1202.D  
Sample Name: R1 C4 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 12
Acq. Instrument : Smithers                 Location  : -
Injection Date  : 5/31/2011 9:54:56 PM      Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:28:46 PM
                  (modified after loading)
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 6/1/2011 3:28:46 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

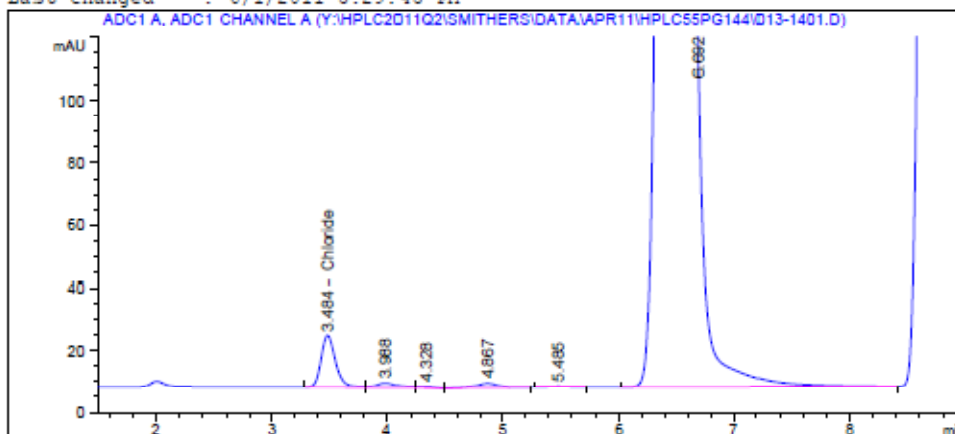
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
3.474	BV	134.08482	2.45006e-2	3.28516		Chloride

Totals : 3.28516

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\013-1401.D  
Sample Name: R2 C4 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 14
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 10:34:17 PM   Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144CL.M
Last changed    : 6/1/2011 3:29:43 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 6/1/2011 3:29:35 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

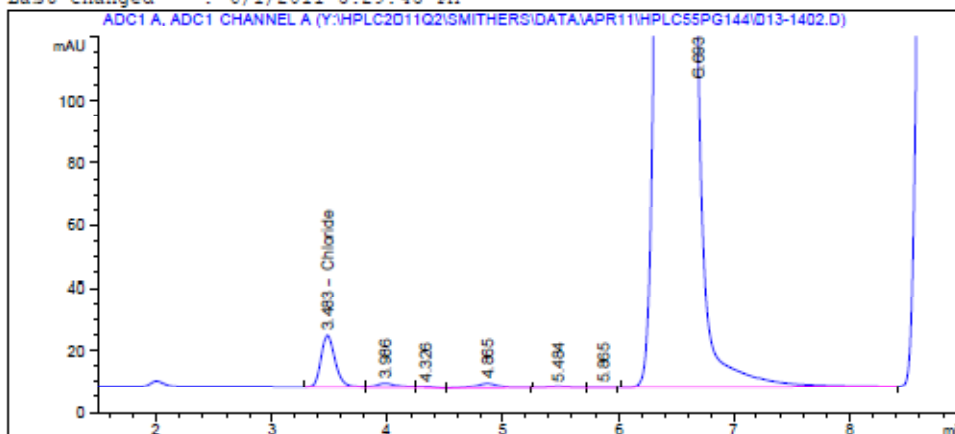
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
3.484	BV	145.28232	2.44935e-2	3.55847		Chloride

Totals : 3.55847

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\013-1402.D  
Sample Name: R2 C4 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 14
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 10:51:03 PM   Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144CL.M
Last changed    : 6/1/2011 3:29:43 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/1/2011 3:29:35 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

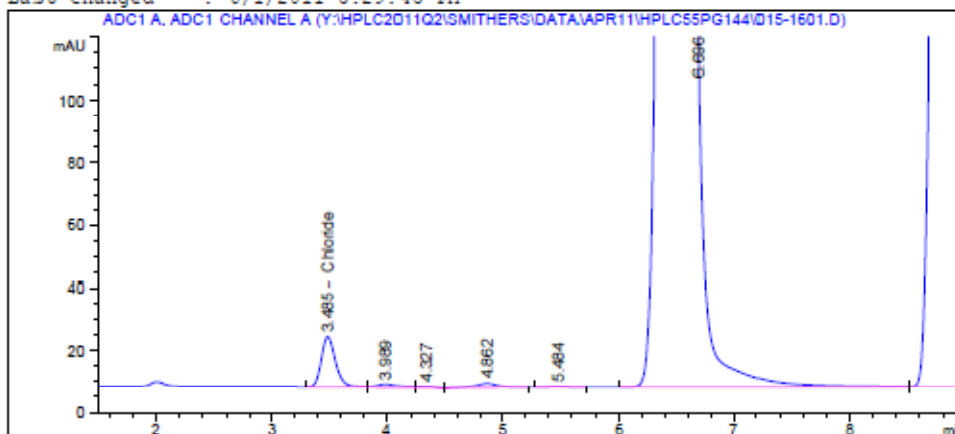
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
3.483	BV	145.59662	2.44933e-2	3.56614		Chloride

Totals : 3.56614

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\015-1601.D  
Sample Name: R3 C4 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 16
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 11:30:23 PM   Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144CL.M
Last changed    : 6/1/2011 3:29:43 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/1/2011 3:29:35 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

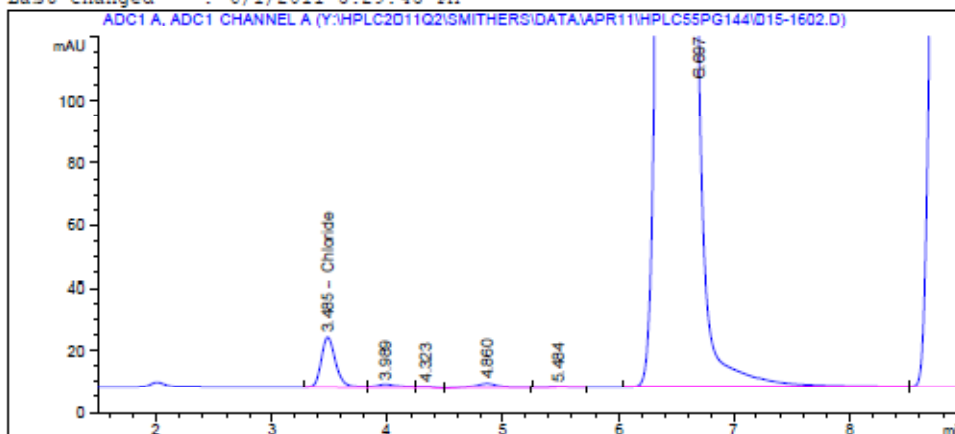
Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
3.485	BV	140.62119	2.44963e-2	3.44470		Chloride
Totals :				3.44470		

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\015-1602.D  
Sample Name: R3 C4 \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 16
Acq. Instrument : Smithers                Location  : -
Injection Date  : 5/31/2011 11:47:12 PM   Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144CL.M
Last changed    : 6/1/2011 3:29:43 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 6/1/2011 3:29:35 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

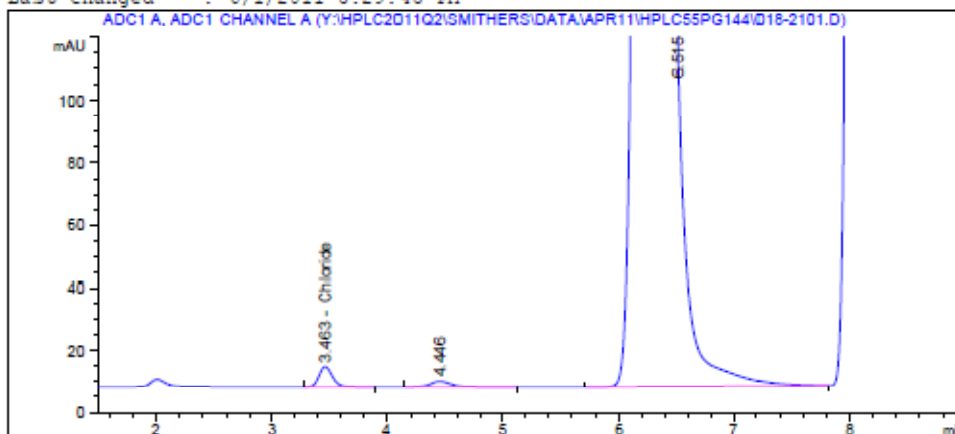
Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
3.485	VV	142.69682	2.44950e-2	3.49536		Chloride
Totals :				3.49536		

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\018-2101.D  
Sample Name: NaOH Blank \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 21
Acq. Instrument : Smithers                 Location  : -
Injection Date  : 6/1/2011 1:56:15 AM      Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144CL.M
Last changed    : 6/1/2011 3:29:43 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 6/1/2011 3:29:35 PM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

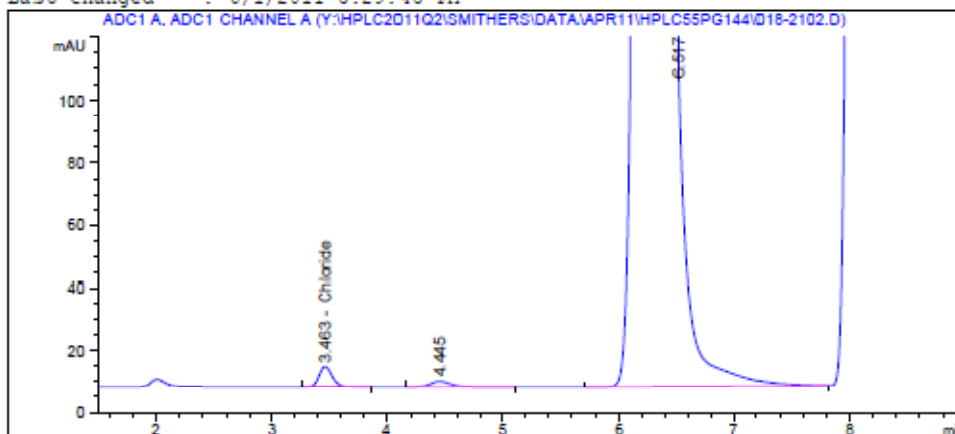
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
3.463	BB	53.62364	2.46388e-2	1.32122		Chloride

Totals : 1.32122

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\018-2102.D  
Sample Name: NaOH Blank \*10 0511-68

```
=====
Acq. Operator   : EO                      Seq. Line : 21
Acq. Instrument : Smithers                Location  : -
Injection Date  : 6/1/2011 2:13:02 AM      Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144CL.M
Last changed    : 6/1/2011 3:29:43 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : 6/1/2011 3:29:35 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
3.463	BB	53.53802	2.46391e-2	1.31913		Chloride

Totals : 1.31913

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

# Calibration Curve Chromatograms



EA# 0511-68 Page 434 of 560



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

Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM

Rel. Reference Window : 10.000 %  
Abs. Reference Window : 0.000 min  
Rel. Non-ref. Window : 10.000 %  
Abs. Non-ref. Window : 0.000 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 : Linear (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)

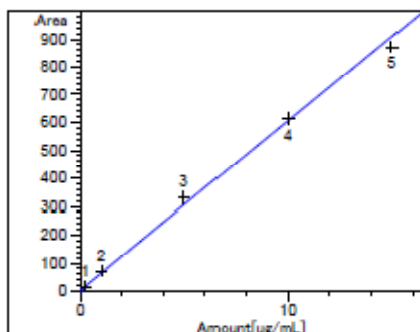
Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Lvl Sig	Amount [ug/mL]	Area	Amt/Area	Ref Grp Name
2.658	1	2.00000e-1	14.51774	1.37762e-2	Fluoride
	2	1.00000	72.44920	1.38028e-2	
	3	5.00000	330.77357	1.51161e-2	
	4	10.00000	613.41130	1.63023e-2	
	5	15.00000	871.51140	1.72115e-2	
3.493	1	2.00000e-1	7.71600	2.59202e-2	Chloride
	2	1.00000	40.48394	2.47012e-2	
	3	5.00000	203.36210	2.45867e-2	
	4	10.00000	408.38235	2.44869e-2	
	5	15.00000	615.76906	2.43598e-2	

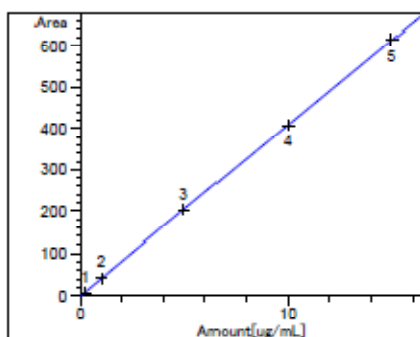
=====  
Peak Sum Table  
=====

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

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



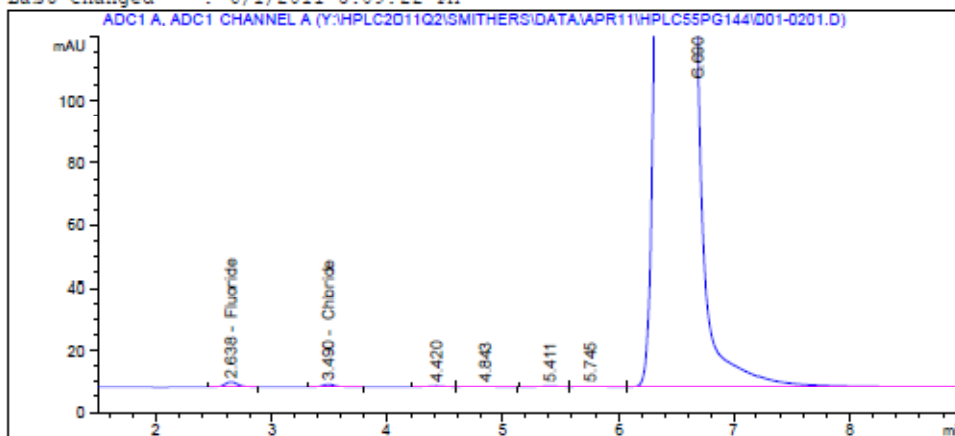
Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.2  
 Level 3 : 0.04  
 Level 4 : 0.02  
 Level 5 : 0.013333



Calibration Level Weights:  
 Level 1 : 1  
 Level 2 : 0.2  
 Level 3 : 0.04  
 Level 4 : 0.02  
 Level 5 : 0.013333

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\001-0201.D  
Sample Name: HPLC55pg144 #1

```
=====
Acq. Operator   : EO                      Seq. Line :    2
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 5/31/2011 5:52:43 PM      Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:      :      1.0000
Dilution:        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.638	BV	14.51411	1.19976e-2	1.74135e-1		Fluoride
3.490	BB	7.70193	2.60117e-2	2.00340e-1		Chloride

Totals : 3.74475e-1

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

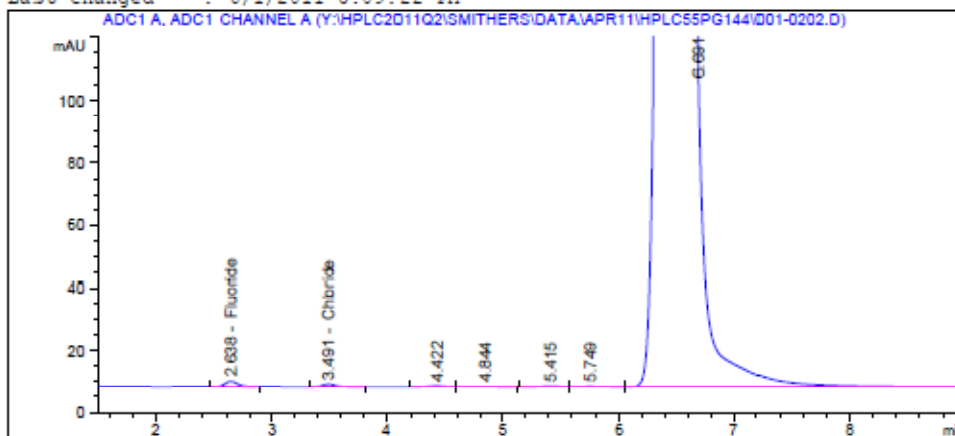
EA# 0511-68 Page 437 of 560

Instrument 2 6/1/2011 3:09:43 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\001-0202.D  
Sample Name: HPLC55pg144 #1

```
=====
Acq. Operator   : EO                      Seq. Line :    2
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 5/31/2011 6:03:59 PM      Inj       :    2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

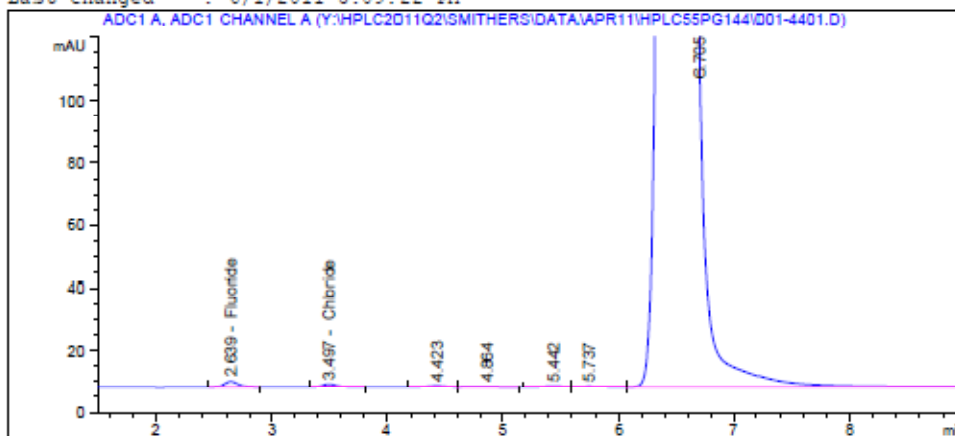
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.638	BV	14.53388	1.19976e-2	1.74372e-1		Fluoride
3.491	BB	7.70387	2.60113e-2	2.00388e-1		Chloride

Totals : 3.74760e-1

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\001-4401.D  
Sample Name: HPLC55pg144 #1

```
=====
Acq. Operator   : EO                      Seq. Line : 44
Acq. Instrument : Smithers                Location  : -
Injection Date  : 6/1/2011 10:45:45 AM    Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.639	BB	14.47437	1.19976e-2	1.73658e-1		Fluoride
3.497	BB	7.73256	2.60053e-2	2.01088e-1		Chloride

Totals : 3.74746e-1

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

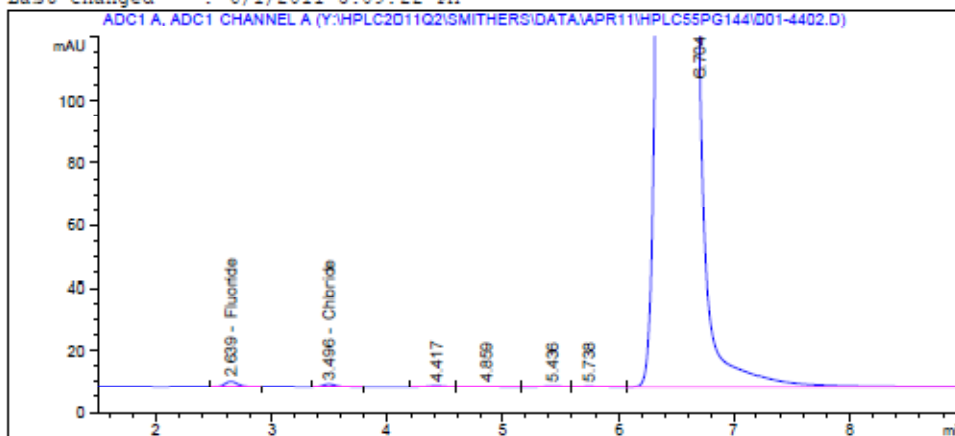
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Instrument 2 6/1/2011 3:09:55 PM

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Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\001-4402.D  
Sample Name: HPLC55pg144 #1

```
=====
Acq. Operator   : EO                      Seq. Line : 44
Acq. Instrument : Smithers                 Location  : -
Injection Date  : 6/1/2011 10:57:02 AM      Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

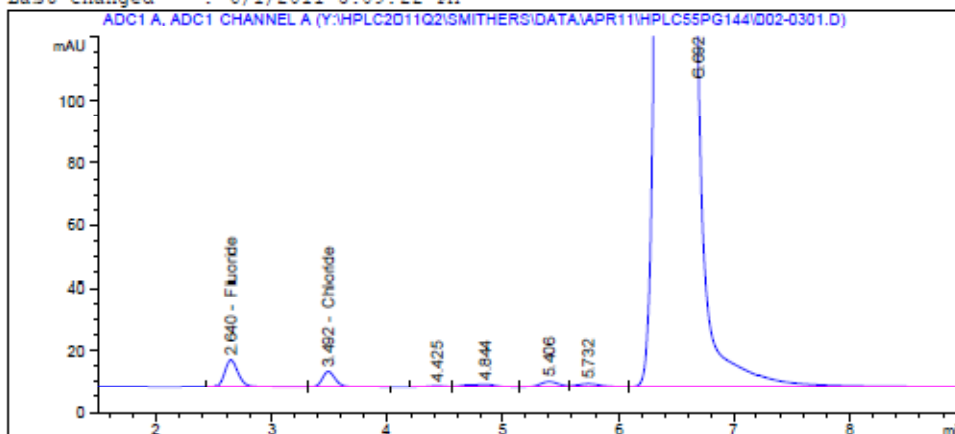
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.639	BB	14.54862	1.19976e-2	1.74549e-1		Fluoride
3.496	BB	7.72564	2.60068e-2	2.00919e-1		Chloride

Totals : 3.75468e-1

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\002-0301.D  
Sample Name: HPLC55pg144 #2

```
=====
Acq. Operator   : EO                      Seq. Line :    3
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 5/31/2011 6:15:15 PM      Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:     :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.640	BV	72.63779	1.55435e-2	1.12905		Fluoride
3.492	VB	40.44846	2.47138e-2	9.99634e-1		Chloride

Totals : 2.12868

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

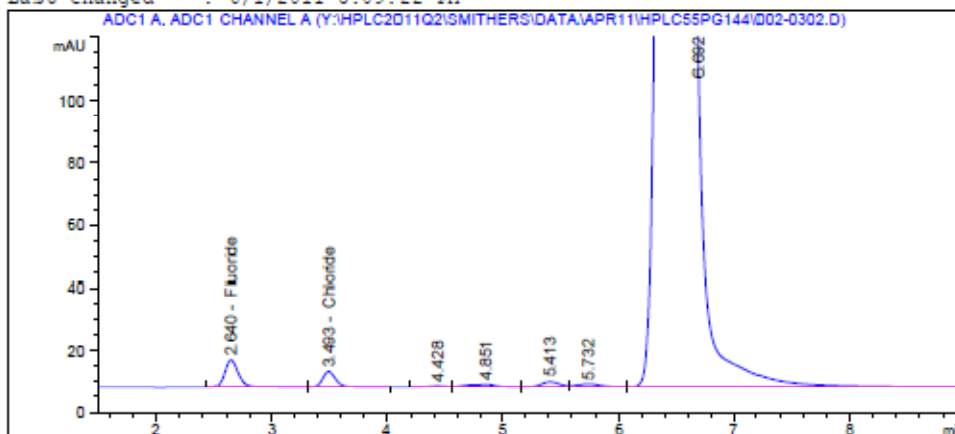
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Instrument 2 6/1/2011 3:10:04 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\002-0302.D  
Sample Name: HPLC55pg144 #2

```
=====
Acq. Operator   : EO                      Seq. Line :    3
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 5/31/2011 6:26:31 PM      Inj       :    2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:      :      1.0000
Dilution:      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.640	BV	72.53925	1.55421e-2	1.12741		Fluoride
3.493	VB	40.45617	2.47137e-2	9.99822e-1		Chloride

Totals : 2.12723

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

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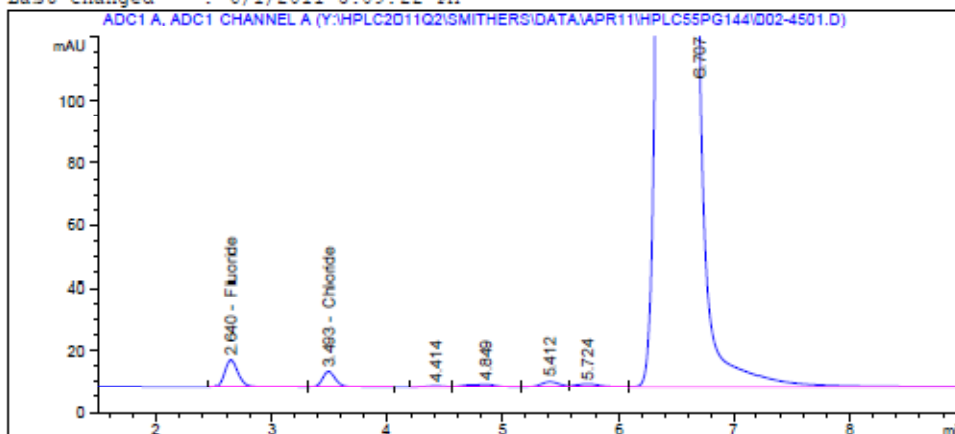
Instrument 2 6/1/2011 3:10:09 PM

Page 1 of 1



Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\002-4501.D  
Sample Name: HPLC55pg144 #2

```
=====
Acq. Operator   : EO                      Seq. Line : 45
Acq. Instrument : Smithers                 Location  : -
Injection Date  : 6/1/2011 11:08:18 AM      Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

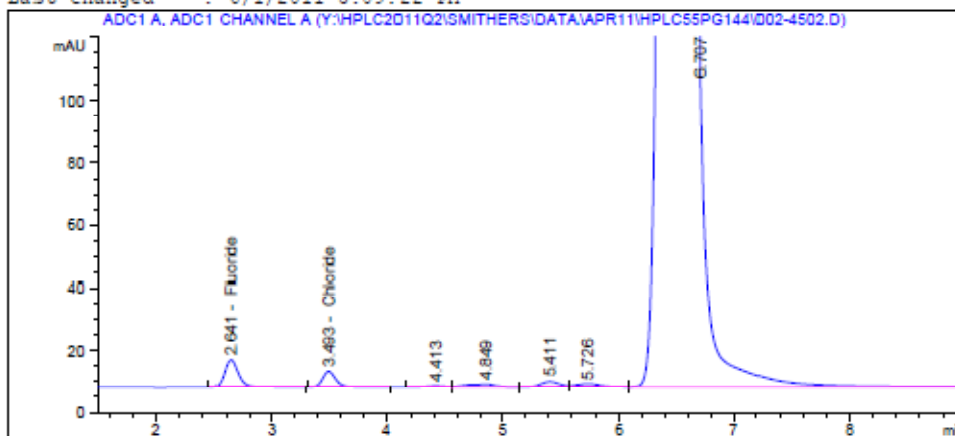
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.640	BV	72.36291	1.55395e-2	1.12448		Fluoride
3.493	VB	40.50773	2.47133e-2	1.00108		Chloride

Totals : 2.12557

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\002-4502.D  
Sample Name: HPLC55pg144 #2

```
=====
Acq. Operator   : EO                      Seq. Line : 45
Acq. Instrument : Smithers                Location  : -
Injection Date  : 6/1/2011 11:19:34 AM    Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.641	BB	72.25686	1.55380e-2	1.12272		Fluoride
3.493	BB	40.52341	2.47132e-2	1.00146		Chloride

Totals : 2.12419

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

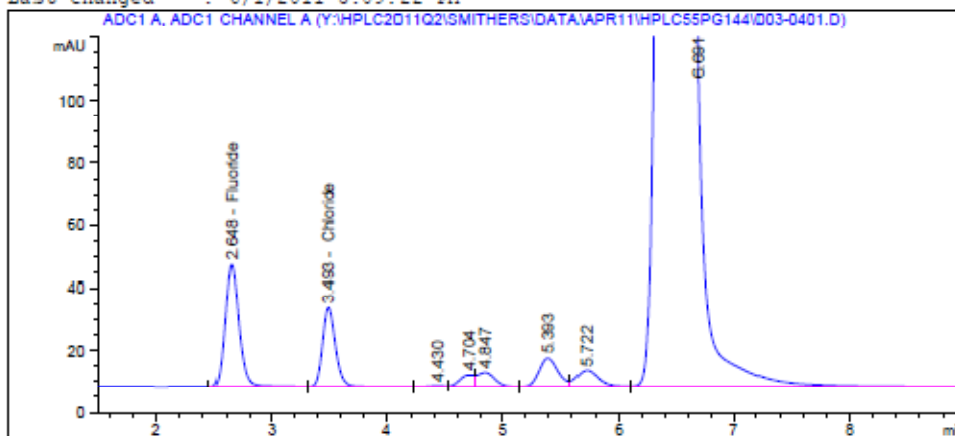
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Instrument 2 6/1/2011 3:10:20 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\003-0401.D  
Sample Name: HPLC55pg144 #3

```
=====
Acq. Operator   : EO                               Seq. Line :    4
Acq. Instrument : Smithers                         Location  :    -
Injection Date  : 5/31/2011 6:37:47 PM             Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:      :      1.0000
Dilution:      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.648	BV	330.17261	1.63673e-2	5.40404		Fluoride
3.493	VV	202.42392	2.44695e-2	4.95321		Chloride

Totals : 10.35725

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

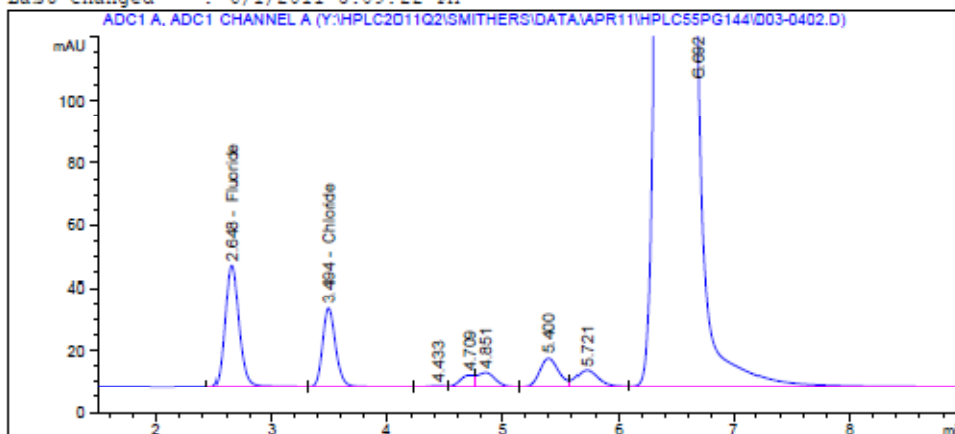
EA# 0511-68 Page 445 of 560

Instrument 2 6/1/2011 3:10:40 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\003-0402.D  
Sample Name: HPLC55pg144 #3

```
=====
Acq. Operator   : EO                      Seq. Line :    4
Acq. Instrument : Smithers                Location  :    -
Injection Date  : 5/31/2011 6:49:03 PM    Inj       :    2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    :      1.0000
Dilution:      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

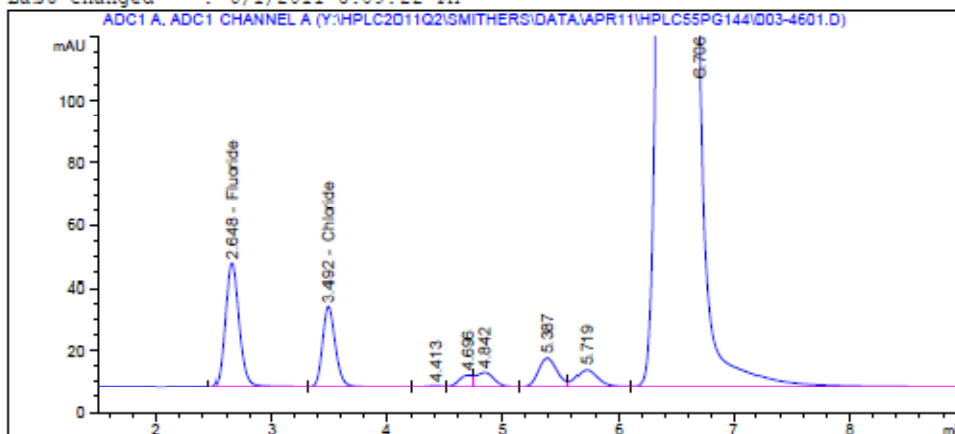
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.648	BV	330.66342	1.63677e-2	5.41219		Fluoride
3.494	VV	203.67671	2.44691e-2	4.98379		Chloride

Totals : 10.39598

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\003-4601.D  
Sample Name: HPLC55pg144 #3

```
=====
Acq. Operator   : EO                      Seq. Line : 46
Acq. Instrument : Smithers                 Location  : -
Injection Date  : 6/1/2011 11:30:51 AM      Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.648	BV	331.23834	1.63681e-2	5.42173		Fluoride
3.492	VB	203.11421	2.44693e-2	4.97006		Chloride

Totals : 10.39179

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

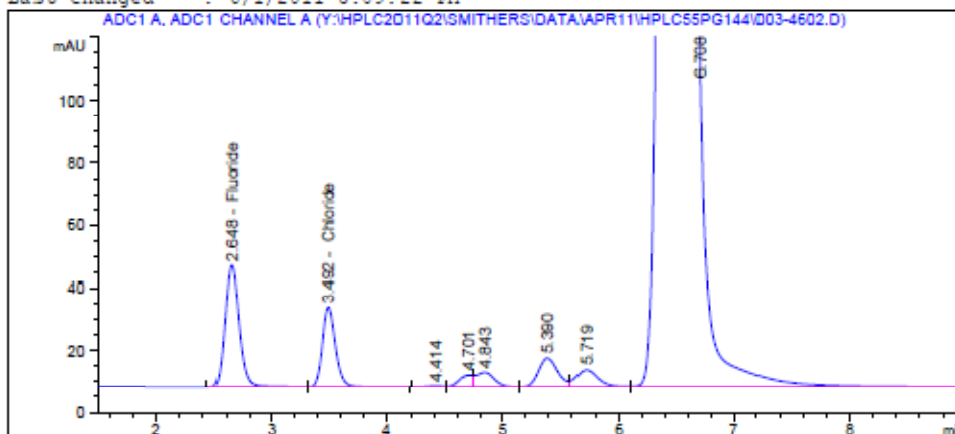
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Instrument 2 6/1/2011 3:10:54 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\003-4602.D  
Sample Name: HPLC55pg144 #3

```
=====
Acq. Operator   : EO                      Seq. Line : 46
Acq. Instrument : Smithers                 Location  : -
Injection Date  : 6/1/2011 11:42:07 AM      Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.648	VV	331.01990	1.63679e-2	5.41810		Fluoride
3.492	VB	204.23357	2.44690e-2	4.99738		Chloride

Totals : 10.41549

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

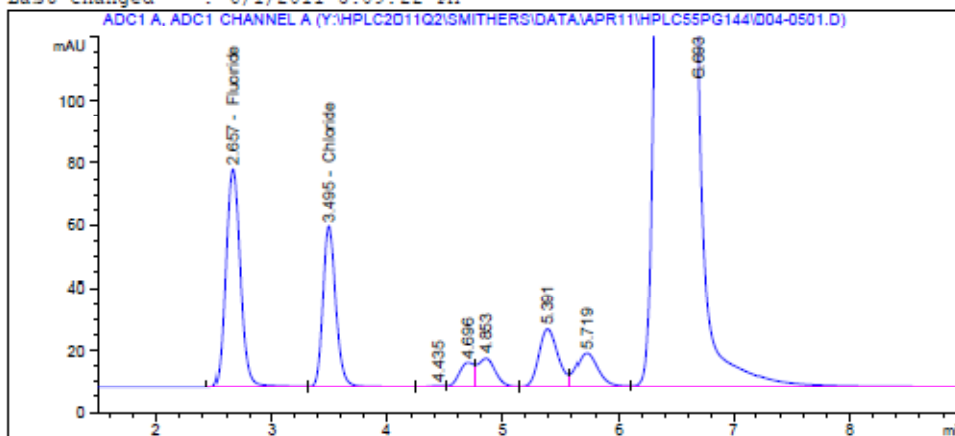
EA# 0511-68 Page 448 of 560

Instrument 2 6/1/2011 3:11:03 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\004-0501.D  
Sample Name: HPLC55pg144 #4

```
=====
Acq. Operator   : EO                      Seq. Line :    5
Acq. Instrument : Smithers                Location  :    -
Injection Date  : 5/31/2011 7:00:19 PM    Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

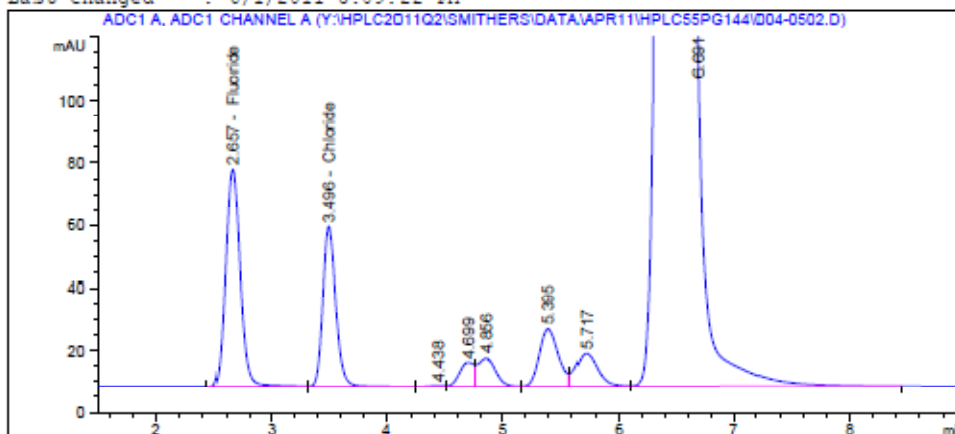
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.657	BV	613.75916	1.64747e-2	10.11148		Fluoride
3.495	VV	409.84015	2.44386e-2	10.01593		Chloride

Totals : 20.12742

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\004-0502.D  
Sample Name: HPLC55pg144 #4

```
=====
Acq. Operator   : EO                               Seq. Line :    5
Acq. Instrument : Smithers                         Location  :    -
Injection Date  : 5/31/2011 7:11:36 PM             Inj       :    2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    :      1.0000
Dilution:      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.657	BV	612.51697	1.64744e-2	10.09086		Fluoride
3.496	VV	405.36200	2.44390e-2	9.90663		Chloride

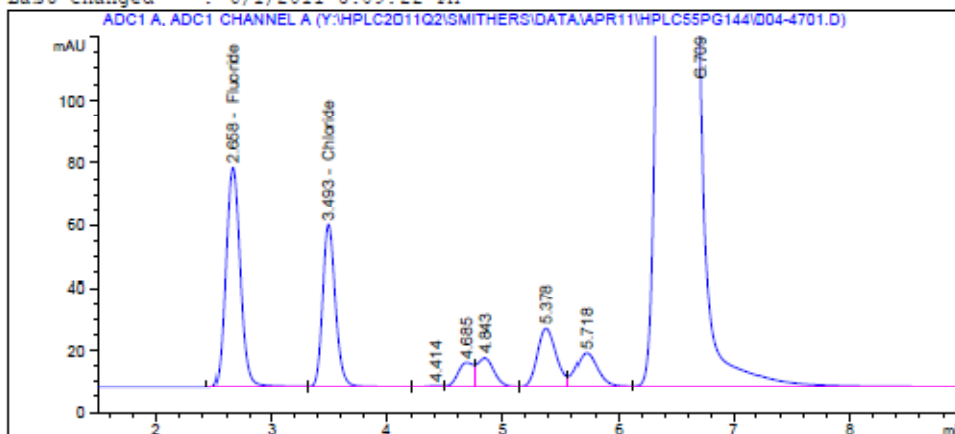
Totals : 19.99749

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



Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\004-4701.D  
Sample Name: HPLC55pg144 #4

```
=====
Acq. Operator   : EO                      Seq. Line : 47
Acq. Instrument : Smithers                 Location  : -
Injection Date  : 6/1/2011 11:53:23 AM      Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

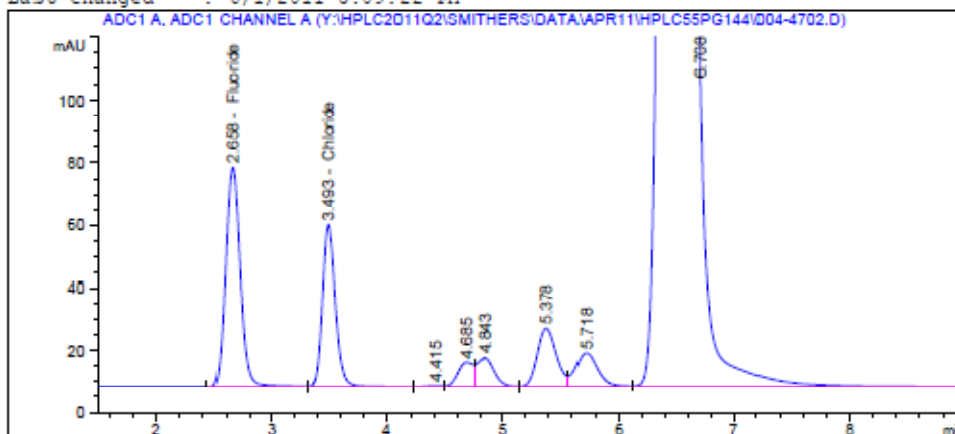
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.658	BV	614.12640	1.64748e-2	10.11758		Fluoride
3.493	VV	410.81119	2.44386e-2	10.03964		Chloride

Totals : 20.15721

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\004-4702.D  
Sample Name: HPLC55pg144 #4

```
=====
Acq. Operator   : EO                      Seq. Line : 47
Acq. Instrument : Smithers                Location  : -
Injection Date  : 6/1/2011 12:04:39 PM    Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.658	BV	613.24268	1.64746e-2	10.10291		Fluoride
3.493	VV	407.51608	2.44388e-2	9.95921		Chloride

Totals : 20.06212

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

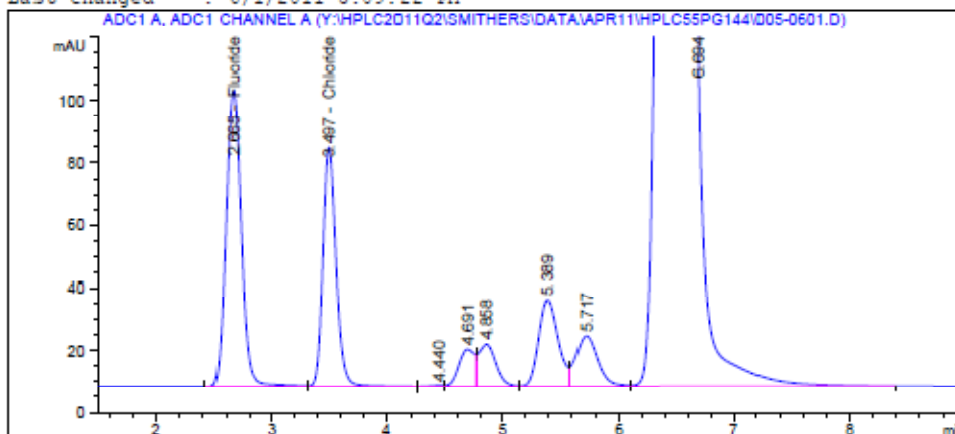
EA# 0511-68 Page 452 of 560

Instrument 2 6/1/2011 3:13:26 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\005-0601.D  
Sample Name: HPLC55pg144 #5

```
=====
Acq. Operator   : EO                      Seq. Line :    6
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 5/31/2011 7:22:52 PM      Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:     :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

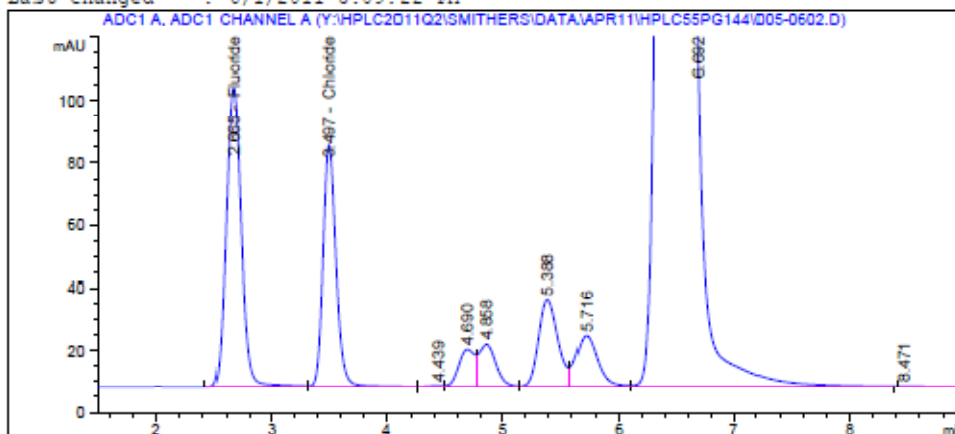
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.665	BV	872.21252	1.65117e-2	14.40172		Fluoride
3.497	VV	613.45654	2.44286e-2	14.98591		Chloride

Totals : 29.38763

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\005-0602.D  
Sample Name: HPLC55pg144 #5

```
=====
Acq. Operator   : EO                      Seq. Line :    6
Acq. Instrument : Smithers                Location  :    -
Injection Date  : 5/31/2011 7:34:09 PM    Inj       :    2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

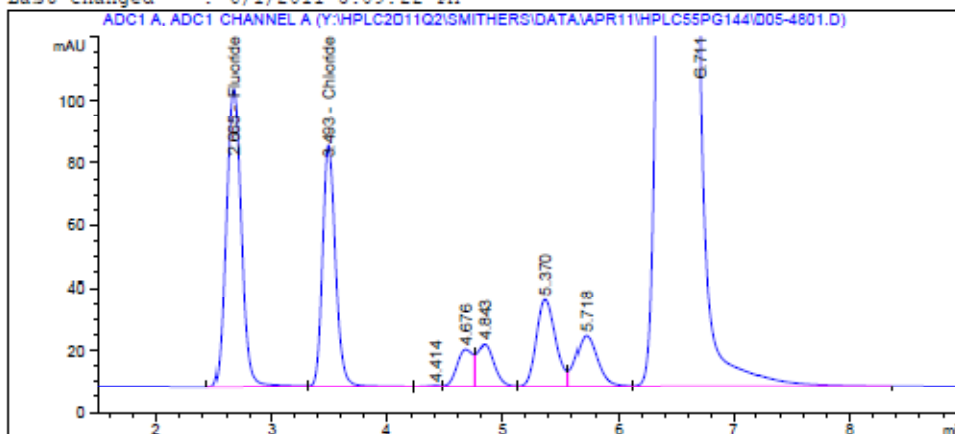
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.665	BV	870.38214	1.65115e-2	14.37134		Fluoride
3.497	VV	616.82703	2.44285e-2	15.06817		Chloride

Totals : 29.43951

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\005-4801.D  
Sample Name: HPLC55pg144 #5

```
=====
Acq. Operator   : EO                               Seq. Line : 48
Acq. Instrument : Smithers                         Location  : -
Injection Date  : 6/1/2011 12:15:55 PM             Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.665	BV	872.40411	1.65117e-2	14.40490		Fluoride
3.493	VV	614.59796	2.44286e-2	15.01377		Chloride

Totals : 29.41667

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

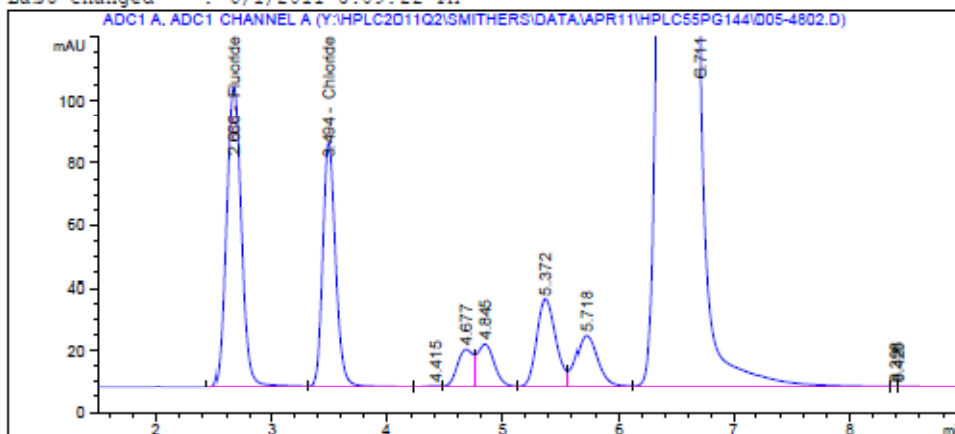
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Instrument 2 6/1/2011 3:14:37 PM

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Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\005-4802.D  
Sample Name: HPLC55pg144 #5

```
=====
Acq. Operator   : EO                      Seq. Line : 48
Acq. Instrument : Smithers                Location  : -
Injection Date  : 6/1/2011 12:27:11 PM    Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

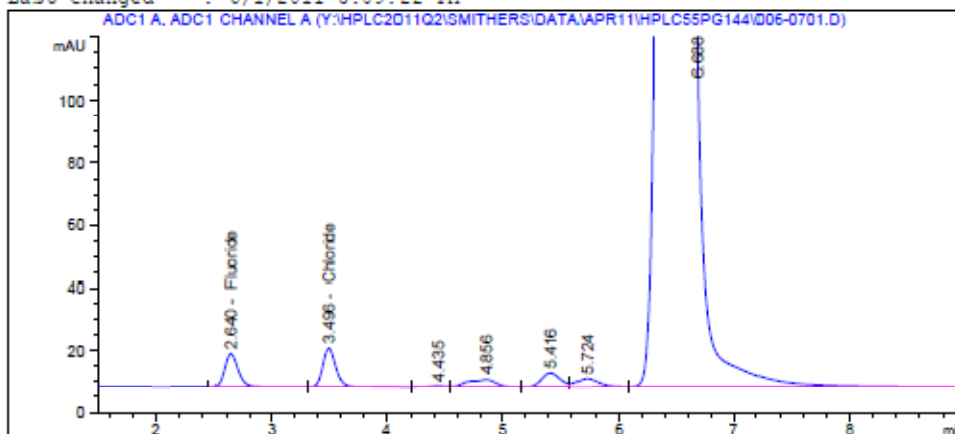
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.666	BV	871.04681	1.65116e-2	14.38237		Fluoride
3.494	VV	618.19470	2.44285e-2	15.10156		Chloride

Totals : 29.48393

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\006-0701.D  
Sample Name: HPLC55pg144 #SS

```
=====
Acq. Operator   : EO                      Seq. Line :    7
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 5/31/2011 7:45:25 PM      Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:      :      1.0000
Dilution:        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.640	BV	87.87699	1.57267e-2	1.38201		Fluoride
3.496	VB	99.06847	2.45331e-2	2.43046		Chloride

Totals : 3.81247

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

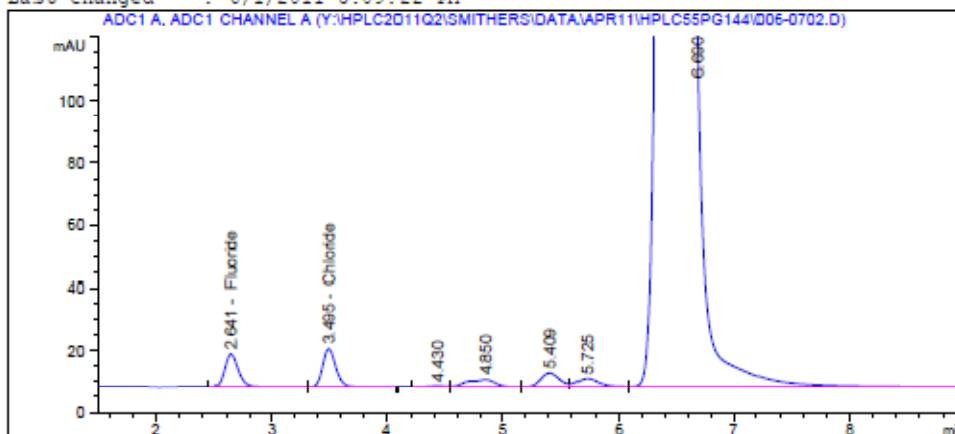
EA# 0511-68 Page 457 of 560

Instrument 2 6/1/2011 3:15:09 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\006-0702.D  
Sample Name: HPLC55pg144 #SS

```
=====
Acq. Operator   : EO                      Seq. Line :    7
Acq. Instrument : Smithers                Location  :    -
Injection Date  : 5/31/2011 7:56:42 PM    Inj       :    2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.641	BV	88.05122	1.57284e-2	1.38491		Fluoride
3.495	VB	99.14588	2.45330e-2	2.43235		Chloride

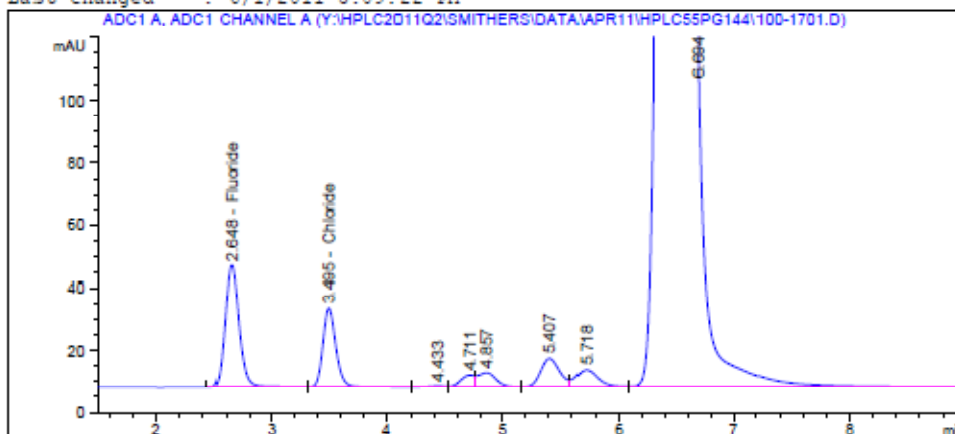
Totals : 3.81726

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



Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\100-1701.D  
Sample Name: HPLC55pg144 #3

```
=====
Acq. Operator   : EO                      Seq. Line : 17
Acq. Instrument : Smithers                Location  : -
Injection Date  : 6/1/2011 12:04:00 AM    Inj       : 1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

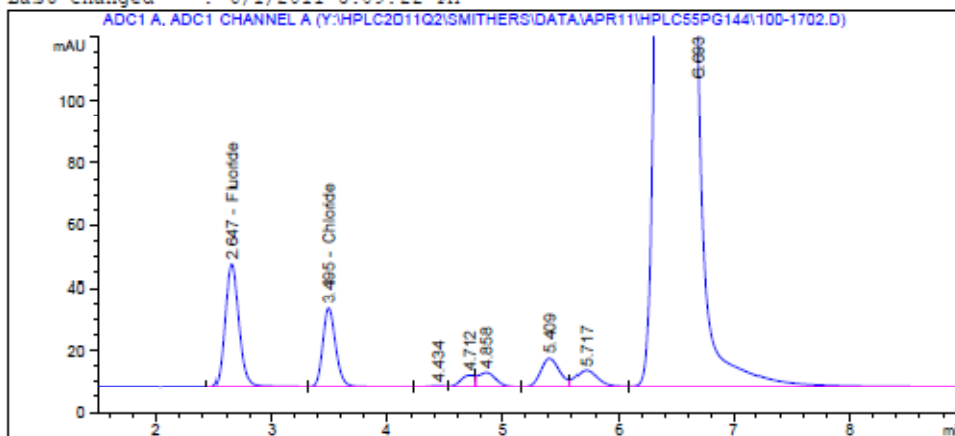
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.648	BV	329.42624	1.63668e-2	5.39165		Fluoride
3.495	VB	202.81516	2.44694e-2	4.96276		Chloride

Totals : 10.35441

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

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\100-1702.D  
Sample Name: HPLC55pg144 #3

```
=====
Acq. Operator   : EO                      Seq. Line : 17
Acq. Instrument : Smithers                 Location  : -
Injection Date  : 6/1/2011 12:15:16 AM      Inj       : 2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.647	BV	328.85049	1.63664e-2	5.38209		Fluoride
3.495	VB	200.26910	2.44702e-2	4.90062		Chloride

Totals : 10.28271

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

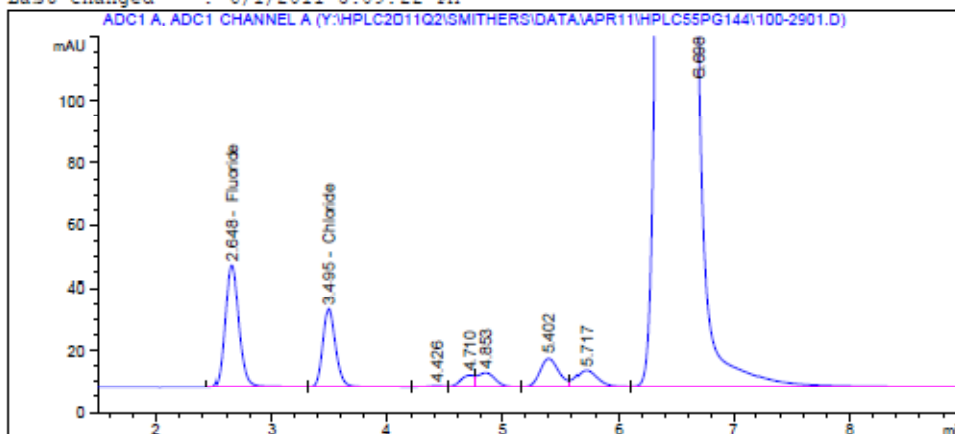
EA# 0511-68 Page 460 of 560

Instrument 2 6/1/2011 3:52:46 PM

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Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\100-2901.D  
Sample Name: HPLC55pg144 #3

```
=====
Acq. Operator   : EO                      Seq. Line :   29
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 6/1/2011 5:07:39 AM      Inj       :    1
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Wednesday, June 01, 2011 3:09:02 PM
Multiplier:     :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.648	BV	326.05527	1.63644e-2	5.33569		Fluoride
3.495	VB	200.71307	2.44700e-2	4.91145		Chloride

Totals : 10.24715

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

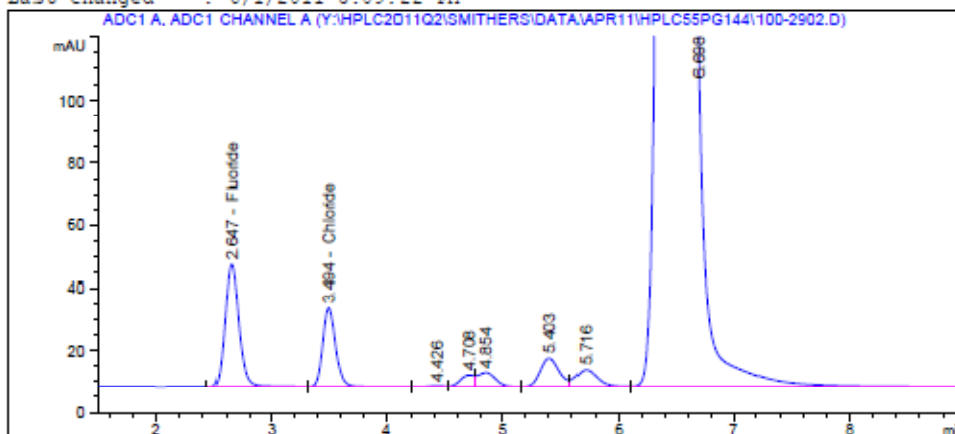
EA# 0511-68 Page 461 of 560

Instrument 2 6/1/2011 3:52:52 PM

Page 1 of 1

Data File Y:\HPLC2011Q2\SMITHERS\DATA\APR11\HPLC55PG144\100-2902.D  
Sample Name: HPLC55pg144 #3

```
=====
Acq. Operator   : EO                      Seq. Line :   29
Acq. Instrument : Smithers                 Location  :    -
Injection Date  : 6/1/2011 5:18:54 AM      Inj       :    2
Acq. Method     : C:\HPCHEM\1\METHODS\METROHM.M
Last changed    : 5/6/2011 12:14:53 PM by EO
Analysis Method : Y:\HPLC2011Q2\SMITHERS\METHODS\HPLC55PG144.M
Last changed    : 6/1/2011 3:09:22 PM
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 01, 2011 3:09:02 PM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/mL]	Grp	Name
2.647	BV	328.14795	1.63659e-2	5.37043		Fluoride
3.494	VV	200.01167	2.44702e-2	4.89433		Chloride

Totals : 10.26477

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

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

Method Information

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

=====

ANALOG DIGITAL CONVERTER

=====

Signal 1

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

Start Signal Source: External Device Will Start 35900

Timed Event Table:  
<no events>

Sequence: Y:\HPLC2011Q2\SMITHERS\SEQUENCE\HPLC55pg144.S

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
=====	=====	=====	=====	=====	=====	=====
<del>1</del>	<del>Vial 127</del>	<del>DI Rinse</del>	<del>METROHM</del>	<del>4</del>	<del>Sample</del>	
2	Vial 1	HPLC55pg144 #1	METROHM	2	Sample	
3	Vial 2	HPLC55pg144 #2	METROHM	2	Sample	
4	Vial 3	HPLC55pg144 #3	METROHM	2	Sample	
5	Vial 4	HPLC55pg144 #4	METROHM	2	Sample	
6	Vial 5	HPLC55pg144 #5	METROHM	2	Sample	
7	Vial 6	HPLC55pg144 #SS	METROHM	2	Sample	
8	Vial 7	0.01N H2SO4/NaOH RB	METROHM	2	Sample	
9	Vial 8	R1 C3 *10 0511-68	METROHM	2	Sample	
10	Vial 9	MS R1 C3 *10 0511-68	METROHM	2	Sample	
11	Vial 10	MSD R1 C3 *10 0511-68	METROHM	2	Sample	
12	Vial 11	R1 C4 *10 0511-68	METROHM	2	Sample	
13	Vial 12	R2 C3 *10 0511-68	METROHM	2	Sample	
14	Vial 13	R2 C4 *10 0511-68	METROHM	2	Sample	
15	Vial 14	R3 C3 *10 0511-68	METROHM	2	Sample	
16	Vial 15	R3 C4 *10 0511-68	METROHM	2	Sample	
17	Vial 100	HPLC55pg144 #3	METROHM	2	Sample	
<del>18</del>	<del>Vial 101</del>	<del>HPLC55pg144 #4</del>	<del>METROHM</del>	<del>2</del>	<del>Sample</del>	
19	Vial 16	DI H2O Blank 0511-68	METROHM	2	Sample	
20	Vial 17	H2SO4 Blank *10 0511-68	METROHM	2	Sample	
21	Vial 18	NaOH Blank *10 0511-68	METROHM	2	Sample	
<del>22</del>	<del>Vial 19</del>	<del>U1 R1 *10 0511-133</del>	<del>METROHM</del>	<del>2</del>	<del>Sample</del>	
23	Vial 20	MS U1 R1 *10 0511-133	METROHM	2	Sample	
<del>24</del>	<del>Vial 21</del>	<del>MSD U1 R1 *10 0511-133</del>	<del>METROHM</del>	<del>2</del>	<del>Sample</del>	

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Instrument 2 6/1/2011 3:58:31 PM

Page 1 of 2

Sequence: Y:\HPLC2011Q2\SMITHERS\SEQUENCE\HPLC55pg144.S

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
====	=====	=====	=====	=====	=====	=====
<del>25</del>	<del>Vial 22</del>	<del>U1 R2 *10 0511-133</del>	<del>METROHM</del>	<del>2</del>	<del>Sample</del>	
26	Vial 23	U1 R3 *10 0511-133	METROHM	2	Sample	
27	Vial 24	U2 R1 *10 0511-133	METROHM	2	Sample	
<del>28</del>	<del>Vial 25</del>	<del>U2 R2 *10 0511-133</del>	<del>METROHM</del>	<del>2</del>	<del>Sample</del>	
29	Vial 100	HPLC55pg144 #3	METROHM	2	Sample	
<del>30</del>	<del>Vial 101</del>	<del>HPLC55pg144 #4</del>	<del>METROHM</del>	<del>2</del>	<del>Sample</del>	
31	Vial 6	HPLC55pg144 #SS	METROHM	2	Sample	
32	Vial 7	0.01N H2SO4/NaOH RB	METROHM	2	Sample	
33	Vial 26	U2 R3 *10 0511-133	METROHM	2	Sample	
34	Vial 27	DI H2O Blank 0511-1 33	METROHM	2	Sample	
35	Vial 28	H2SO4 Blank *10 051 1-133	METROHM	2	Sample	
36	Vial 29	R1 *10 0511-151	METROHM	2	Sample	
37	Vial 30	MS R1 *10 0511-151	METROHM	2	Sample	
38	Vial 31	MSD R1 *10 0511-151	METROHM	2	Sample	
39	Vial 32	R2 *10 0511-151	METROHM	2	Sample	
40	Vial 33	R3 *10 0511-151	METROHM	2	Sample	
41	Vial 102	HPLC55pg144 #3	METROHM	2	Sample	
42	Vial 103	HPLC55pg144 #4	METROHM	2	Sample	
<del>43</del>	<del>Vial 34</del>	<del>NaOH Blank *10 0511</del>	<del>METROHM</del>	<del>2</del>	<del>Sample</del>	
		<del>-68</del>				
44	Vial 1	HPLC55pg144 #1	METROHM	2	Sample	
45	Vial 2	HPLC55pg144 #2	METROHM	2	Sample	
46	Vial 3	HPLC55pg144 #3	METROHM	2	Sample	
47	Vial 4	HPLC55pg144 #4	METROHM	2	Sample	
48	Vial 5	HPLC55pg144 #5	METROHM	2	Sample	

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Instrument 2 6/1/2011 3:58:31 PM

Page 2 of 2

# Sample Chromatograms

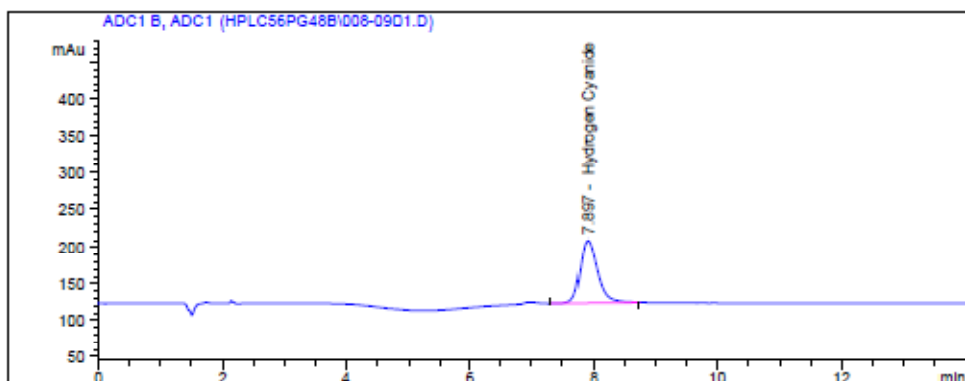


EA# 0511-68 Page 466 of 560



Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\008-0901.D  
Sample Name: 051811-OTM29 3-1\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :    9
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 7:09:14 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.897	BB	1638.93677	5.77764e-4	9.46918e-1		Hydrogen Cyanide

Totals : 9.46918e-1

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

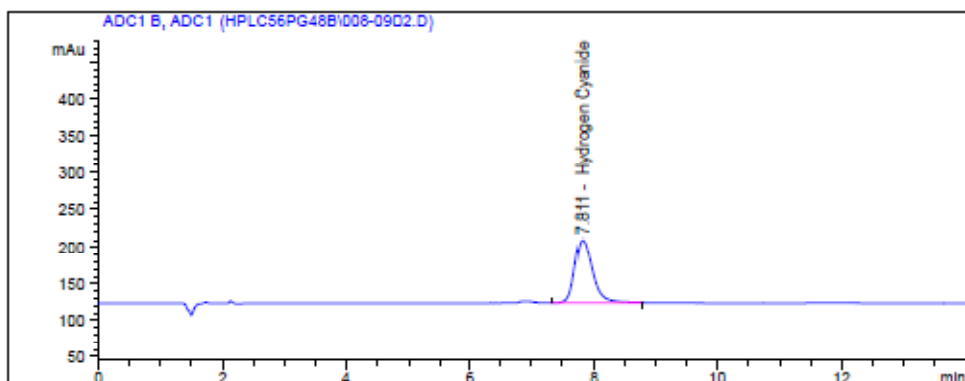
EA# 0511-68 Page 467 of 560

Instrument 2 6/13/2011 11:23:59 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\008-0902.D  
Sample Name: 051811-OTM29 3-1\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :    9
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 7:24:31 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Monday, June 13, 2011 11:17:17 AM
Multiplier:     :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.811	BB	1640.01428	5.77773e-4	9.47556e-1		Hydrogen Cyanide

Totals : 9.47556e-1

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

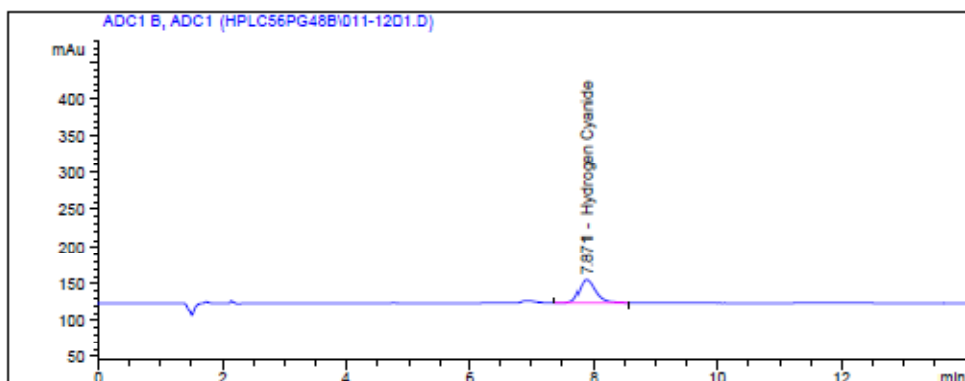
EA# 0511-68 Page 468 of 560

Instrument 2 6/13/2011 11:24:04 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\011-1201.D  
Sample Name: 051811-OTM29 4-1\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 12
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/10/2011 8:40:57 PM      Inj       : 1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.871	BB	562.48627	5.50541e-4	3.09672e-1		Hydrogen Cyanide

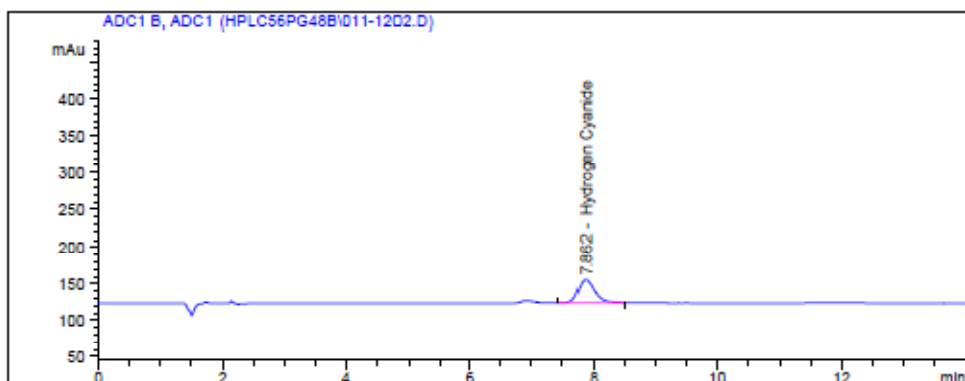
Totals : 3.09672e-1

=====

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\011-1202.D  
Sample Name: 051811-OTM29 4-1\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 12
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/10/2011 8:56:14 PM      Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

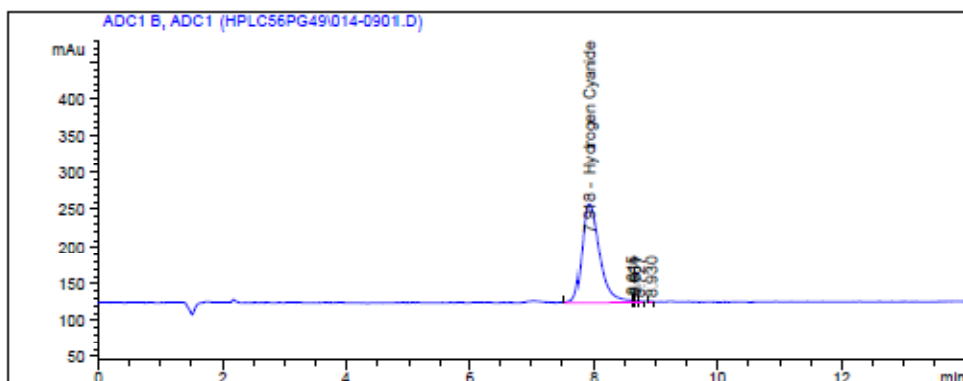
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.862	BB	564.99078	5.50725e-4	3.11154e-1		Hydrogen Cyanide

Totals : 3.11154e-1

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\014-0901.D  
Sample Name: 051811-OTM29 3-2\*100 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :    9
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/13/2011 6:01:16 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

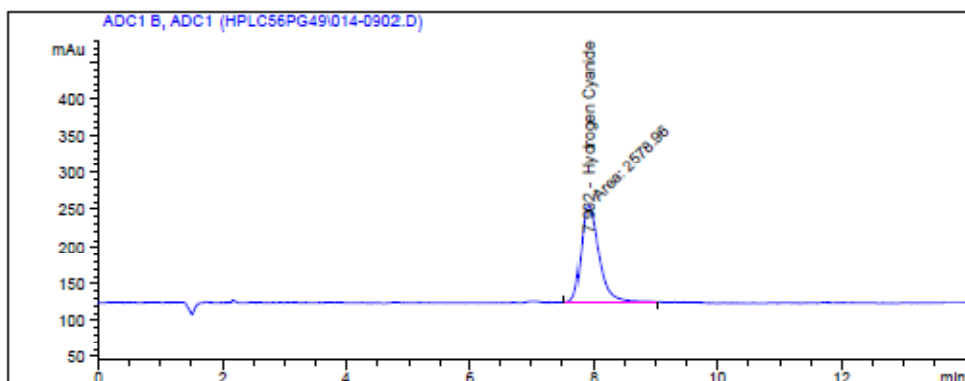
Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.918	VV	2590.37500	5.42970e-4	1.40650		Hydrogen Cyanide
Totals :				1.40650		

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\014-0902.D  
Sample Name: 051811-OTM29 3-2\*100 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :    9
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/13/2011 6:16:33 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

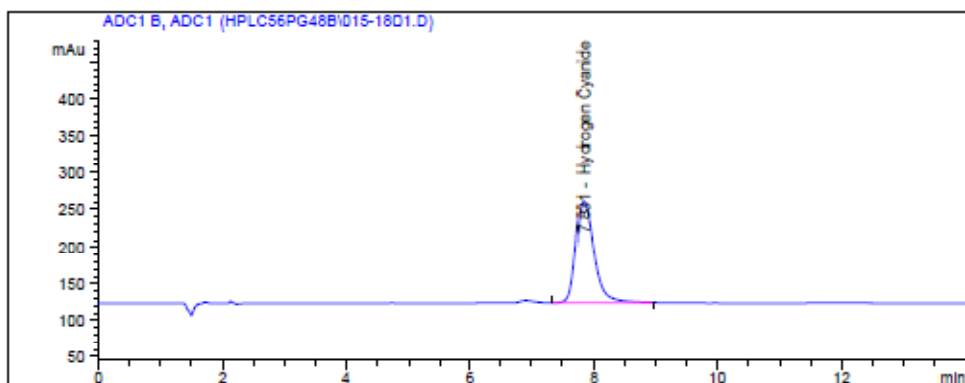
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.902	MM	2578.96118	5.42908e-4	1.40014		Hydrogen Cyanide
Totals :				1.40014		

Manual Int. "IT" (AMP)

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\015-1801.D  
Sample Name: 051811-OTM29 4-2\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   18
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 11:44:24 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Monday, June 13, 2011 11:17:17 AM
Multiplier:     :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.831	BB	2666.85425	5.83247e-4	1.55543		Hydrogen Cyanide

Totals : 1.55543

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

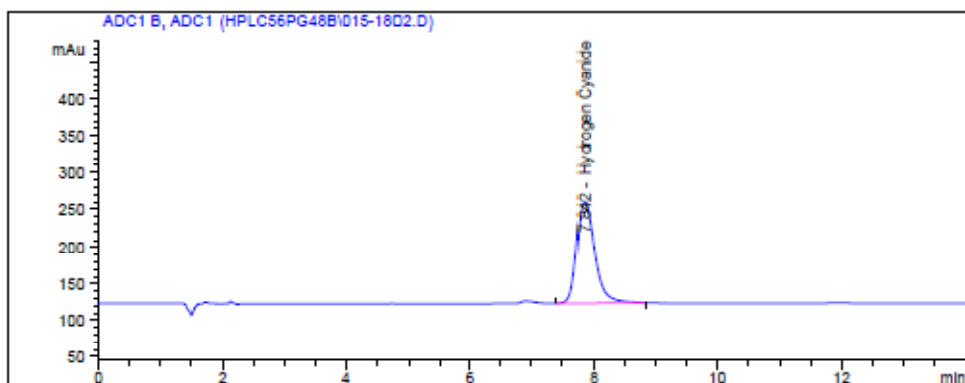
EA# 0511-68 Page 473 of 560

Instrument 2 6/13/2011 11:25:21 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\015-1802.D  
Sample Name: 051811-OTM29 4-2\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 18
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/10/2011 11:59:40 PM      Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.842	BB	2657.31592	5.83215e-4	1.54979		Hydrogen Cyanide

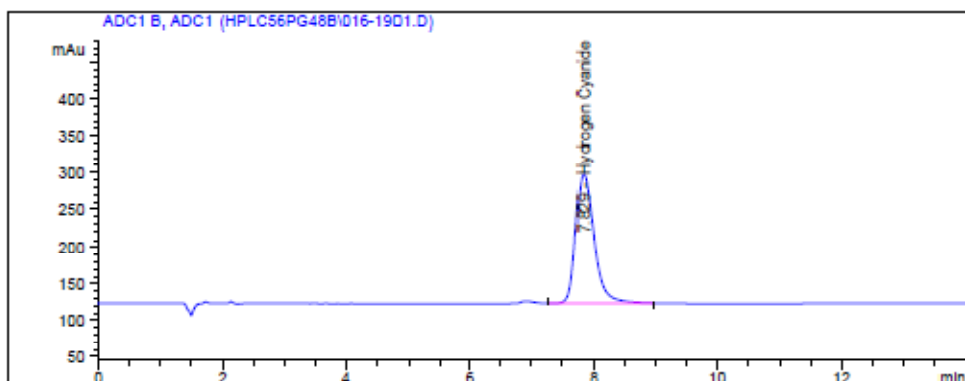
Totals : 1.54979

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



Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\016-1901.D  
Sample Name: 051811-OTM29 3-3\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   19
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/11/2011 12:14:59 AM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.829	VB	3426.82275	5.85185e-4	2.00533		Hydrogen Cyanide

Totals : 2.00533

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

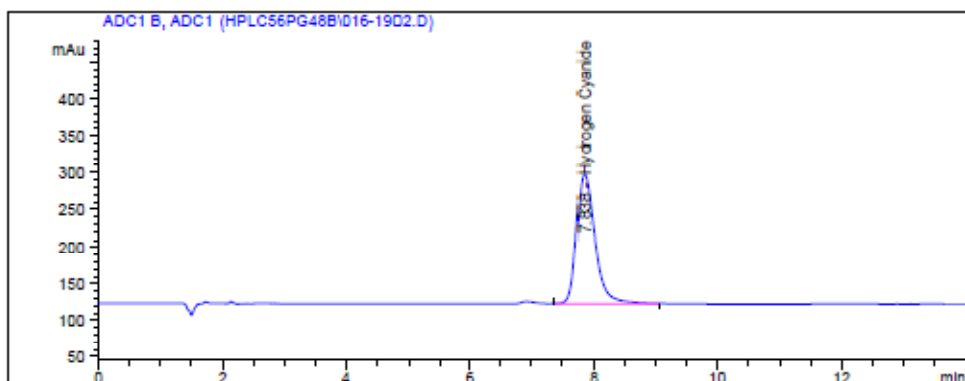
EA# 0511-68 Page 475 of 560

Instrument 2 6/13/2011 11:25:30 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\016-1902.D  
Sample Name: 051811-OTM29 3-3\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   19
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/11/2011 12:30:15 AM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.838	VB	3456.97632	5.85245e-4	2.02318		Hydrogen Cyanide

Totals : 2.02318

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

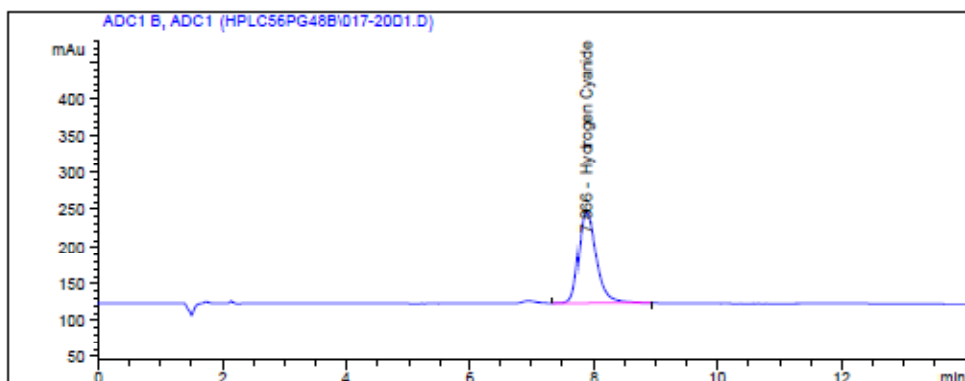
EA# 0511-68 Page 476 of 560

Instrument 2 6/13/2011 11:25:35 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\017-2001.D  
Sample Name: 051811-OTM29 4-3\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   20
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/11/2011 12:45:33 AM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.866	VB	2362.08008	5.82119e-4	1.37501		Hydrogen Cyanide

Totals : 1.37501

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

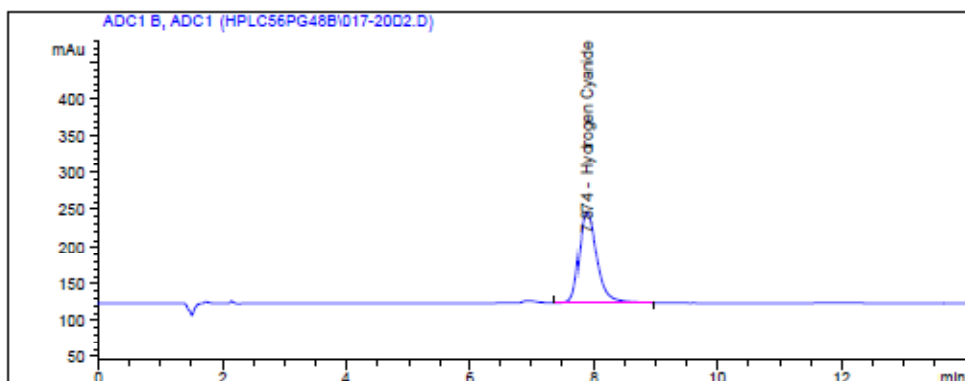
EA# 0511-68 Page 477 of 560

Instrument 2 6/13/2011 11:25:40 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\017-2002.D  
Sample Name: 051811-OTM29 4-3\*50 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   20
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/11/2011 1:00:49 AM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

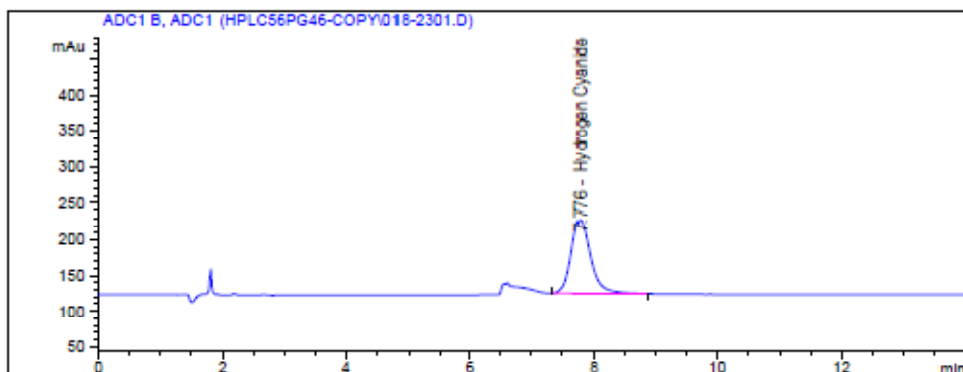
Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.874	BB	2355.88232	5.82093e-4	1.37134		Hydrogen Cyanide
Totals :				1.37134		

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

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\018-2301.D  
Sample Name: 051811-OTM29 Spike\*5 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   23
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/9/2011 12:38:00 AM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

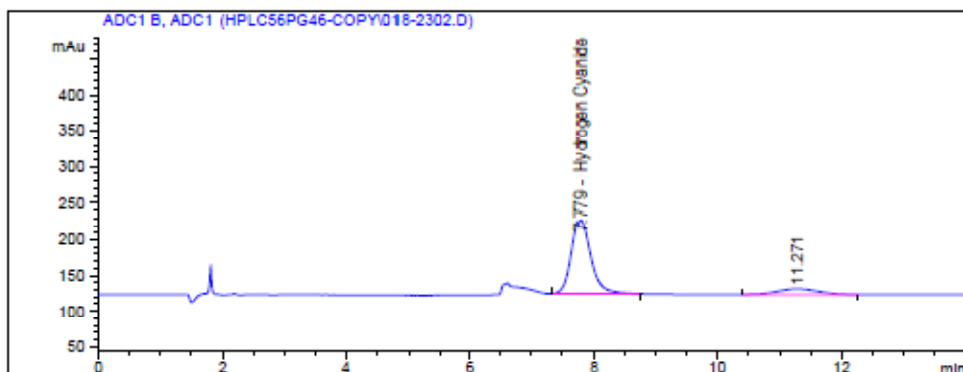
Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.776	BB	2143.61621	6.44839e-4	1.38229		Hydrogen Cyanide
Totals :				1.38229		

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

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\018-2302.D  
Sample Name: 051811-OTM29 Spike\*5 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   23
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/9/2011 12:53:16 AM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.779	BB	2126.71021	6.44794e-4	1.37129		Hydrogen Cyanide
Totals :				1.37129		

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

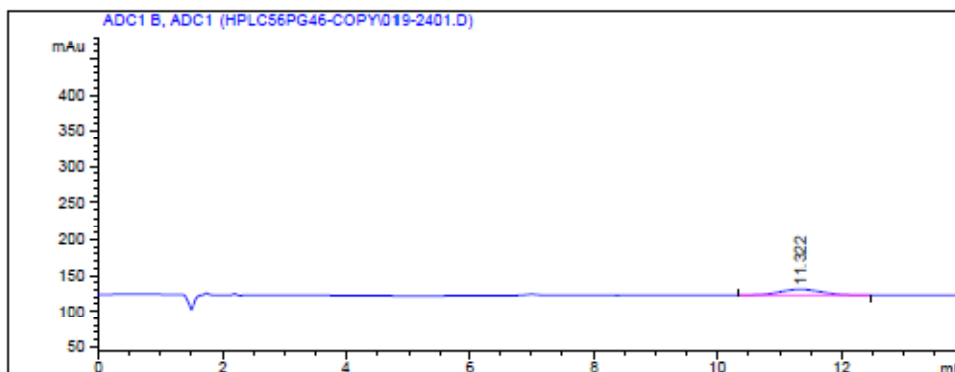
EA# 0511-68 Page 480 of 560

Instrument 2 6/9/2011 11:39:48 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\019-2401.D  
Sample Name: 051811-OTM29 Wash-BL\*5 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 24
Acq. Instrument : Grandmama                Location  : -
Injection Date  : 6/9/2011 1:08:34 AM      Inj       : 1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.819	-	-	-	-	-	Hydrogen Cyanide

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Area Percent Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

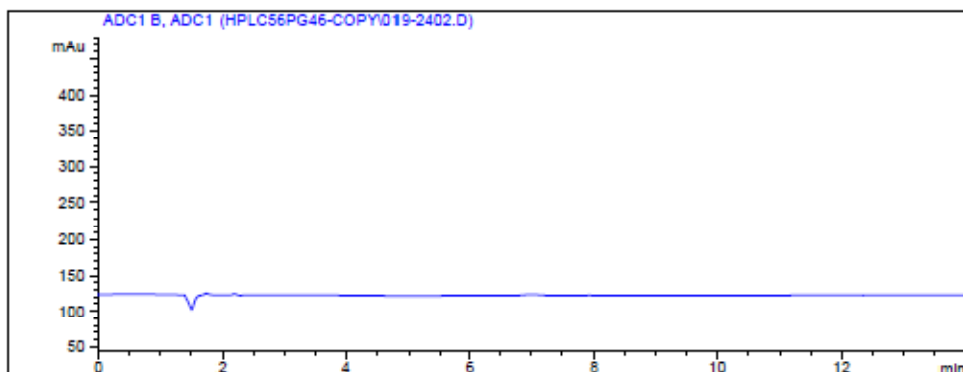
EA# 0511-68 Page 481 of 560

Instrument 2 6/9/2011 11:39:55 AM AMP

Page 1 of 2

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\019-2402.D  
Sample Name: 051811-OTM29 Wash-BL\*5 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 24
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/9/2011 1:23:57 AM       Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.819	-	-	-	-	-	Hydrogen Cyanide

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====

Area Percent Report

=====

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

EA# 0511-68 Page 482 of 560

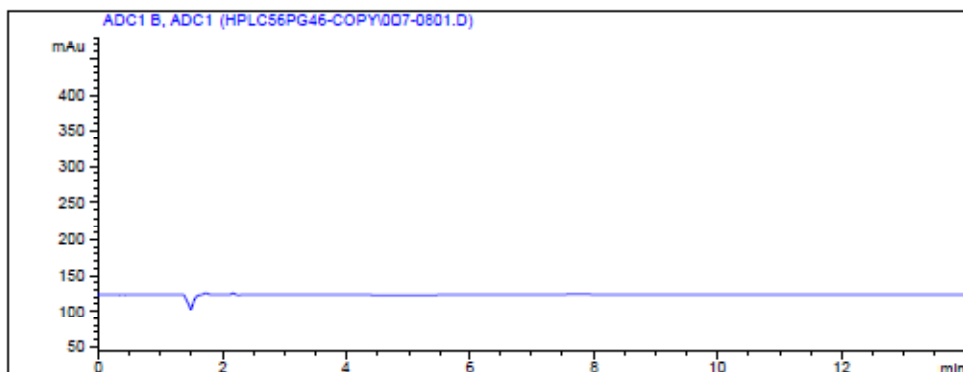
Instrument 2 6/9/2011 11:40:02 AM AMP

Page 1 of 2



Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\007-0801.D  
Sample Name: MB/0.1N NaOH

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 4:59:16 PM       Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.819	-	-	-	-	-	Hydrogen Cyanide

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====  
Area Percent Report  
=====

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

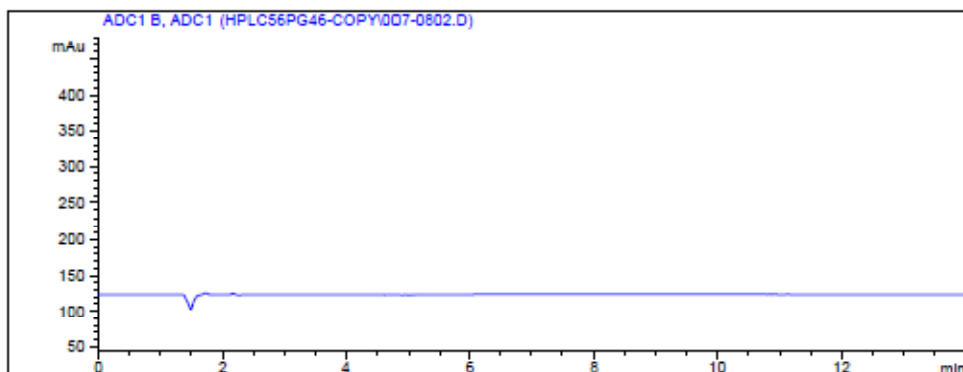
EA# 0511-68 Page 483 of 560

Instrument 2 6/9/2011 11:36:21 AM AMP

Page 1 of 2

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\007-0802.D  
Sample Name: MB/0.1N NaOH

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 5:14:32 PM       Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.819	-	-	-	-	-	Hydrogen Cyanide

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Area Percent Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

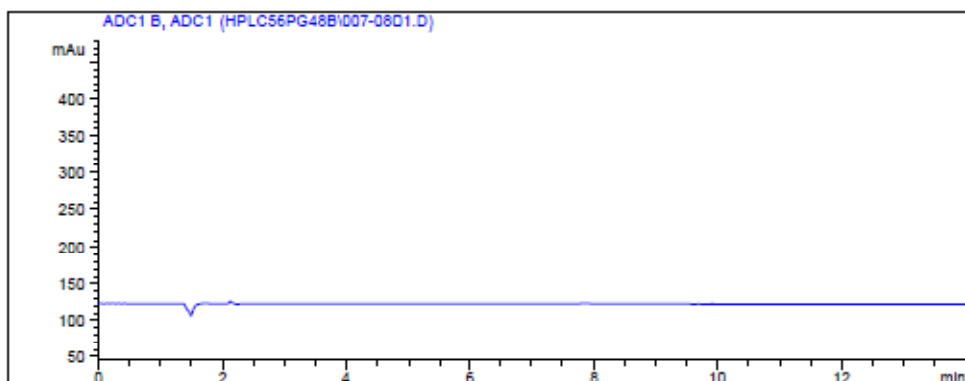
EA# 0511-68 Page 484 of 560

Instrument 2 6/9/2011 11:36:29 AM AMP

Page 1 of 2

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\007-0801.D  
Sample Name: MB/0.1N NaOH

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 6:38:40 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.816	-	-	-	-	-	Hydrogen Cyanide

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====  
Area Percent Report  
=====

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

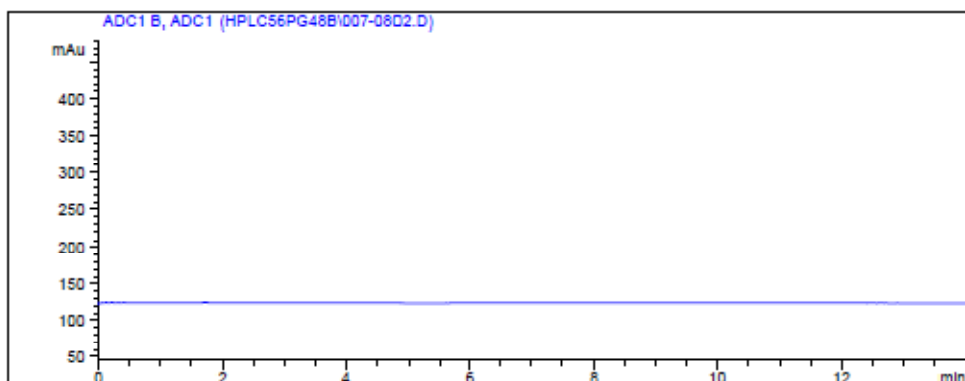
EA# 0511-68 Page 485 of 560

Instrument 2 6/13/2011 11:23:48 AM AMP

Page 1 of 2

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\007-0802.D  
Sample Name: MB/0.1N NaOH

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 6:53:57 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.816	-	-	-	-	-	Hydrogen Cyanide

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====  
Area Percent Report  
=====

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

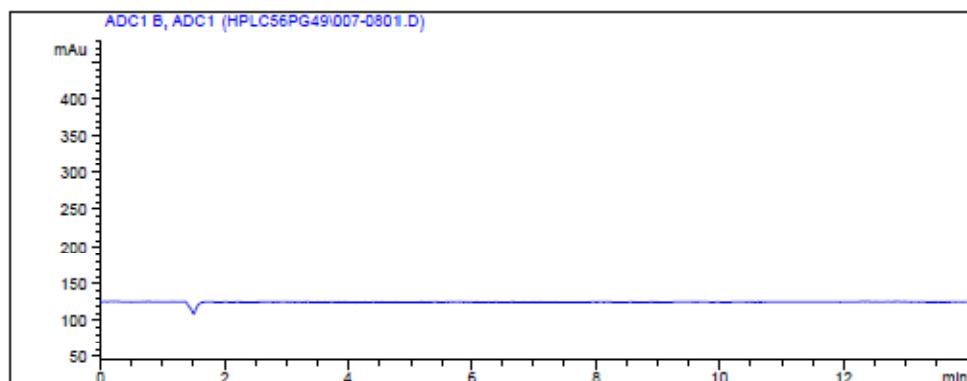
EA# 0511-68 Page 486 of 560

Instrument 2 6/13/2011 11:23:54 AM AMP

Page 1 of 2

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\007-0801.D  
Sample Name: MB/0.1N NaOH

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/13/2011 5:30:43 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.881	-	-	-	-	-	Hydrogen Cyanide

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====  
Area Percent Report  
=====

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

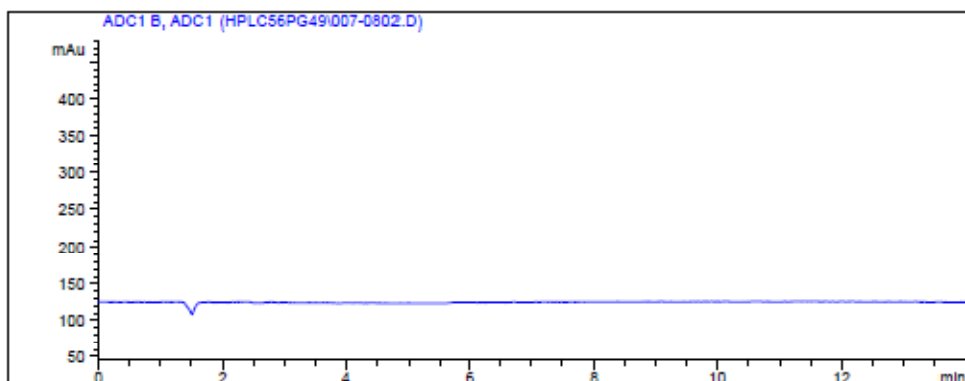
EA# 0511-68 Page 487 of 560

Instrument 2 6/14/2011 9:50:32 AM AMP

Page 1 of 2

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\007-0802.D  
Sample Name: MB/0.1N NaOH

```
=====
Acq. Operator   : KHB                      Seq. Line :    8
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 5:45:59 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.881	-	-	-	-	-	Hydrogen Cyanide

Totals : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

=====  
Area Percent Report  
=====

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

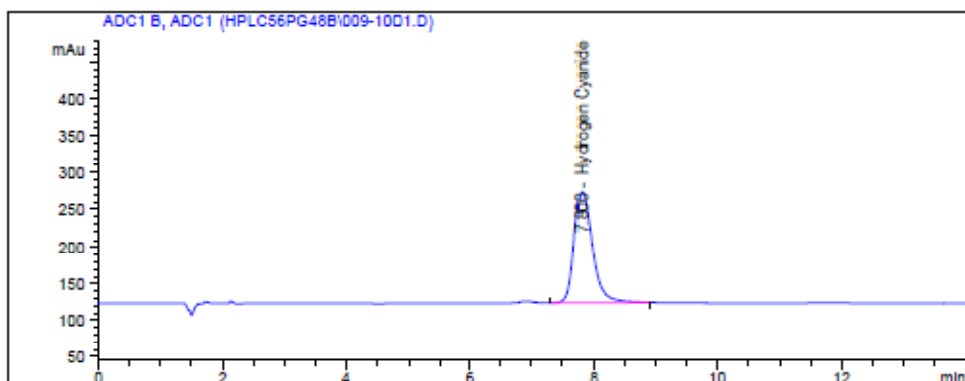
EA# 0511-68 Page 488 of 560

Instrument 2 6/14/2011 9:50:38 AM AMP

Page 1 of 2

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\009-1001.D  
Sample Name: MS/051811-OTM29 3-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   10
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 7:39:47 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

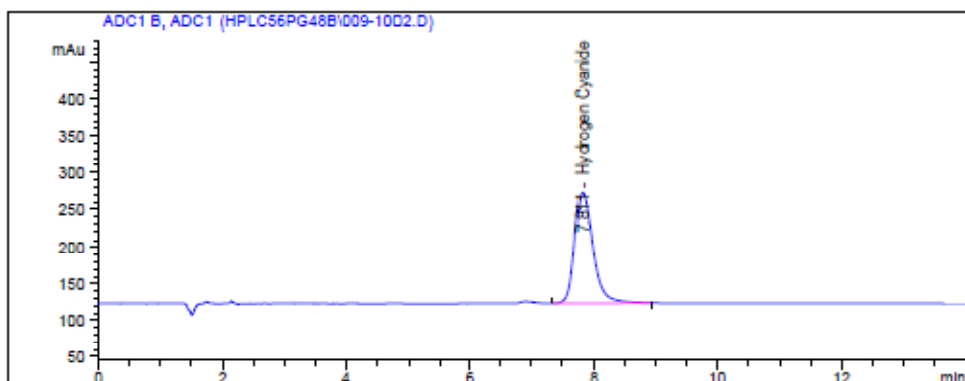
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.806	BB	2930.03369	5.84032e-4	1.71123		Hydrogen Cyanide

Totals : 1.71123

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\009-1002.D  
Sample Name: MS/051811-OTM29 3-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 10
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/10/2011 7:55:04 PM      Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

```
Sorted By      : Signal
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM
Multiplier:     : 1.0000
Dilution:       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.811	BB	2926.02417	5.84021e-4	1.70886		Hydrogen Cyanide

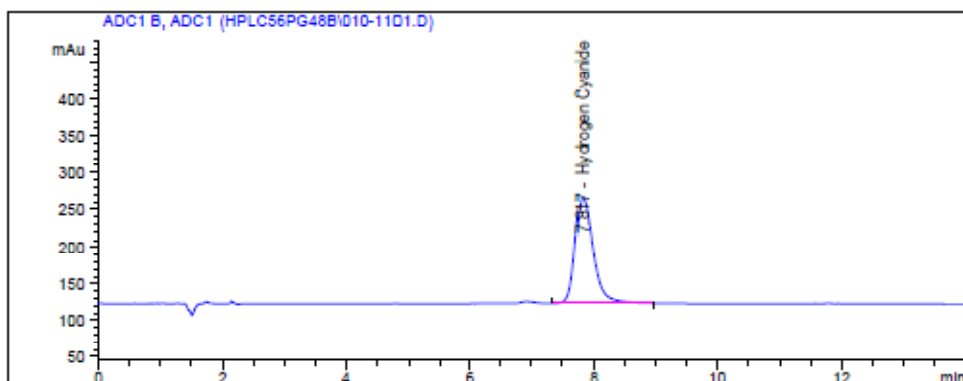
Totals : 1.70886

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



Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\010-1101.D  
Sample Name: MSD/051811-OTM29 3-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 11
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/10/2011 8:10:22 PM      Inj       : 1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

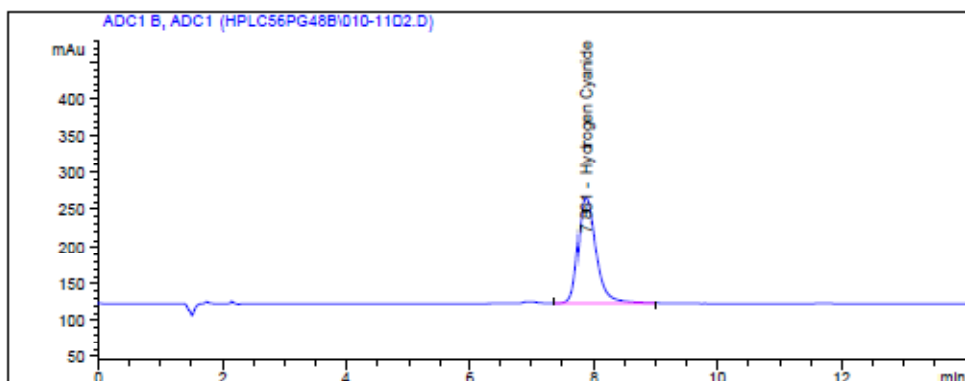
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.817	VB	2761.46729	5.83546e-4	1.61144		Hydrogen Cyanide

Totals : 1.61144

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\010-1102.D  
Sample Name: MSD/051811-OTM29 3-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 11
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/10/2011 8:25:40 PM      Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

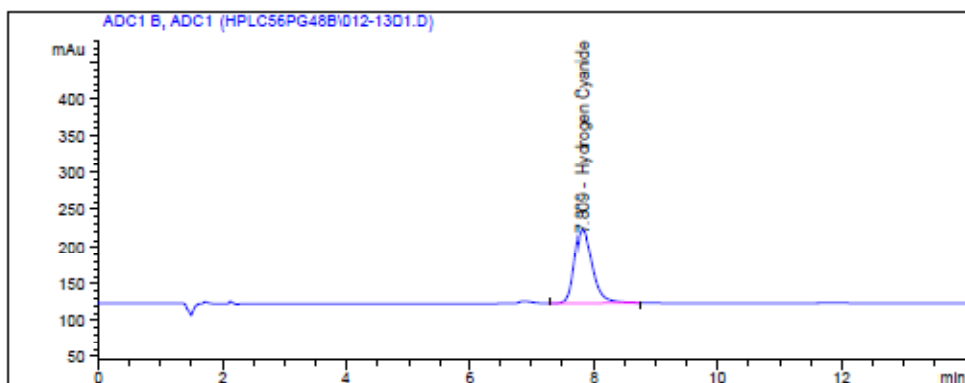
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.861	BB	2757.10596	5.83533e-4	1.60886		Hydrogen Cyanide

Totals : 1.60886

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\012-1301.D  
Sample Name: MS/051811-OTM29 4-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   13
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 9:11:31 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

```
Sorted By      :      Signal
Calib. Data Modified :      Monday, June 13, 2011 11:17:17 AM
Multiplier:     :      1.0000
Dilution:       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

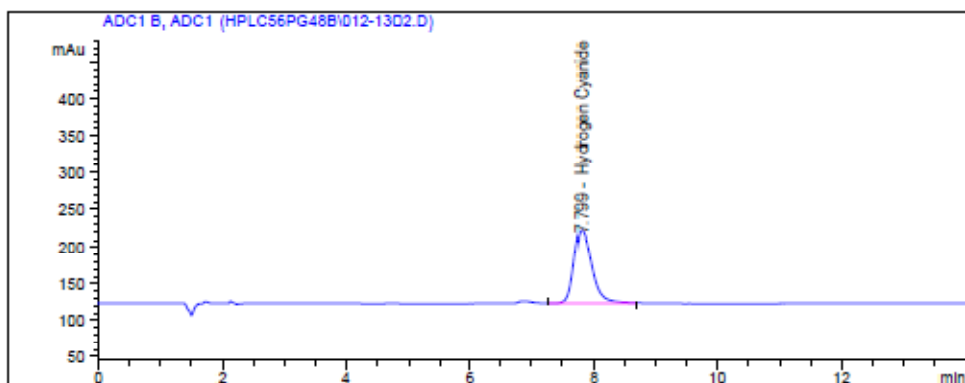
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.809	VB	1875.39063	5.79557e-4	1.08690		Hydrogen Cyanide

Totals : 1.08690

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\012-1302.D  
Sample Name: MS/051811-OTM29 4-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   13
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/10/2011 9:26:47 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

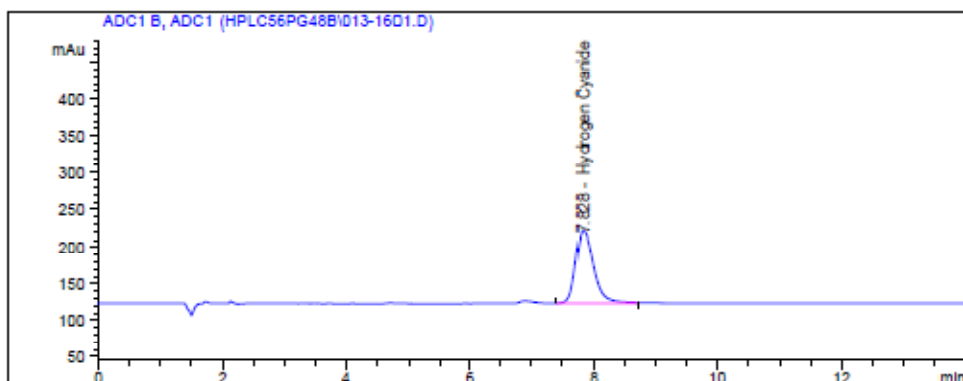
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.799	BB	1874.15857	5.79549e-4	1.08617		Hydrogen Cyanide

Totals : 1.08617

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\013-1601.D  
Sample Name: MSD/051811-OTM29 4-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 16
Acq. Instrument : Grandmama                Location  : -
Injection Date  : 6/10/2011 10:43:13 PM    Inj       : 1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

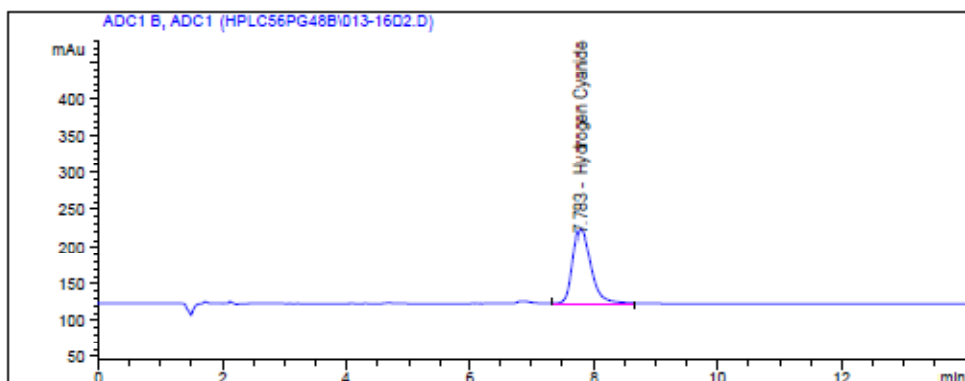
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.828	VB	1884.63318	5.79618e-4	1.09237		Hydrogen Cyanide

Totals : 1.09237

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\013-1602.D  
Sample Name: MSD/051811-OTM29 4-1 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line : 16
Acq. Instrument : Grandmama                Location  : -
Injection Date  : 6/10/2011 10:58:32 PM    Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.783	BB	1919.87781	5.79845e-4	1.11323		Hydrogen Cyanide

Totals : 1.11323

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

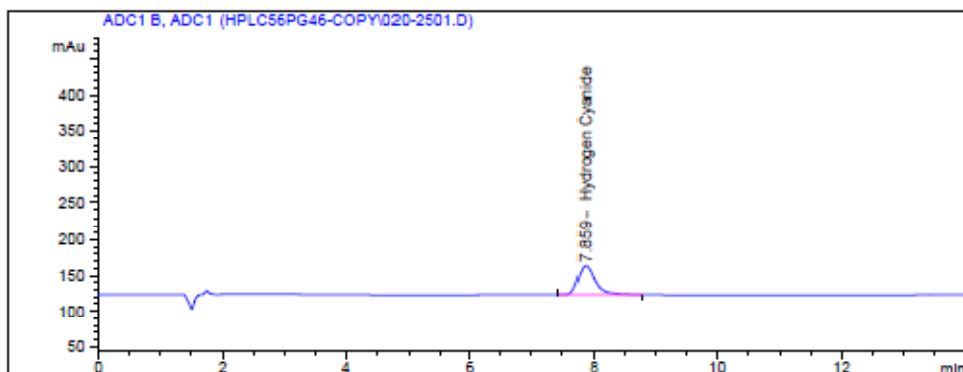
EA# 0511-68 Page 496 of 560

Instrument 2 6/13/2011 11:25:08 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\020-2501.D  
Sample Name: LCS 1\*100 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   25
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/9/2011 1:39:14 AM        Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.859	VB	749.61737	6.34439e-4	4.75586e-1		Hydrogen Cyanide

Totals : 4.75586e-1

=====

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

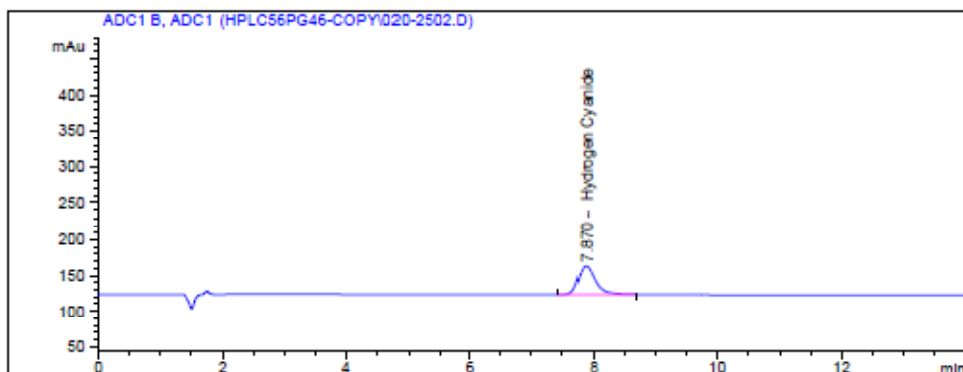
EA# 0511-68 Page 497 of 560

Instrument 2 6/9/2011 11:40:10 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\020-2502.D  
Sample Name: LCS 1\*100 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   25
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/9/2011 1:54:30 AM       Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.870	BB	733.65234	6.34091e-4	4.65202e-1		Hydrogen Cyanide

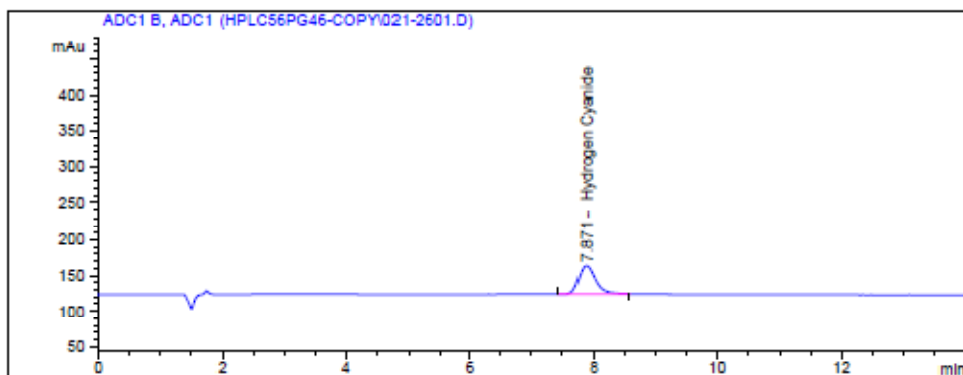
Totals : 4.65202e-1

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



Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\021-2601.D  
Sample Name: LCS 2\*100 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   26
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/9/2011 2:09:47 AM       Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

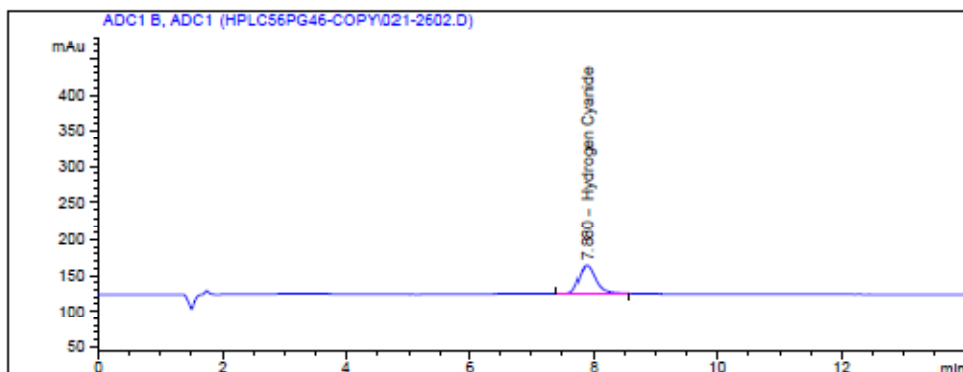
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.871	BB	723.74707	6.33867e-4	4.58760e-1		Hydrogen Cyanide

Totals : 4.58760e-1

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

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\021-2602.D  
Sample Name: LCS 2\*100 0511-68

```
=====
Acq. Operator   : KHB                      Seq. Line :   26
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/9/2011 2:25:03 AM        Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.880	VB	734.10852	6.34101e-4	4.65499e-1		Hydrogen Cyanide

Totals : 4.65499e-1

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

EA# 0511-68 Page 500 of 560

Instrument 2 6/9/2011 11:40:32 AM AMP

Page 1 of 1

# Calibration Curve Chromatograms



EA# 0511-68 Page 501 of 560

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

Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM

Rel. Reference Window : 20.000 %  
Abs. Reference Window : 0.300 min  
Rel. Non-ref. Window : 20.000 %  
Abs. Non-ref. Window : 0.300 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 : Ignored  
Weight : Linear (Amnt)

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

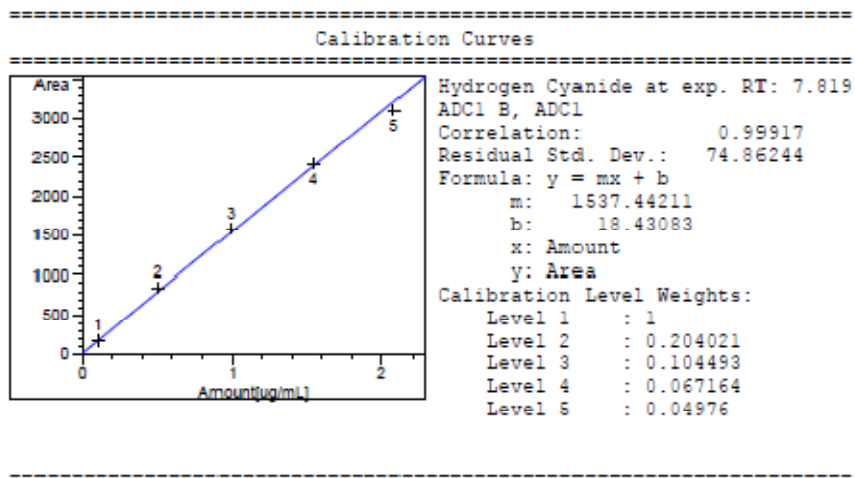
Calibration Report Options :  
Printout of recalibrations within a sequence:  
Calibration Table after Recalibration  
Normal Report after Recalibration  
If the sequence is done with bracketing:  
Results of first cycle (ending previous bracket)

Signal 1: ADC1 A, ADC1 CHANNEL A  
Signal 2: ADC1 B, ADC1

RetTime [min]	Lvl Sig	Amount [ug/mL]	Area	Amt/Area	Ref Grp Name
7.819	2	1.03500e-1	167.01047	6.19722e-4	Hydrogen Cyanide
		5.07300e-1	845.50391	5.99997e-4	
		9.90500e-1	1581.27667	6.26393e-4	
		1.54100	2419.85547	6.36815e-4	
		2.08000	3107.49158	6.69350e-4	

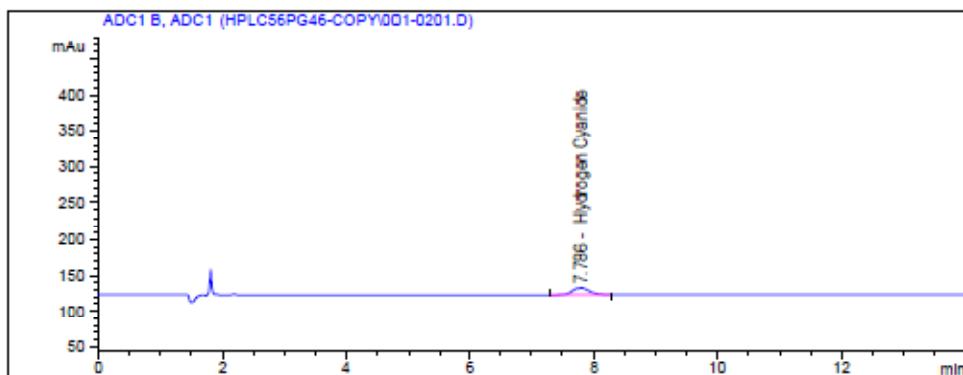
=====  
Peak Sum Table  
=====

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



Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\001-0201.D  
Sample Name: hplc56pg41 #1

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/8/2011 1:55:50 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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External Standard Report

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Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.786	BB	167.10204	5.78690e-4	9.67004e-2		Hydrogen Cyanide

Totals : 9.67004e-2

=====

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

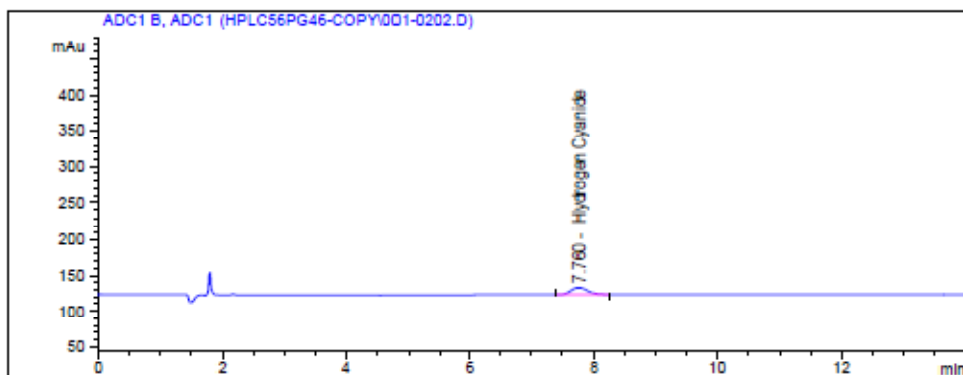
EA# 0511-68 Page 504 of 560

Instrument 2 6/9/2011 11:35:00 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\001-0202.D  
Sample Name: hplc56pg41 #1

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 2:11:06 PM       Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.760	BB	166.91890	5.78612e-4	9.65812e-2		Hydrogen Cyanide

Totals : 9.65812e-2

=====

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

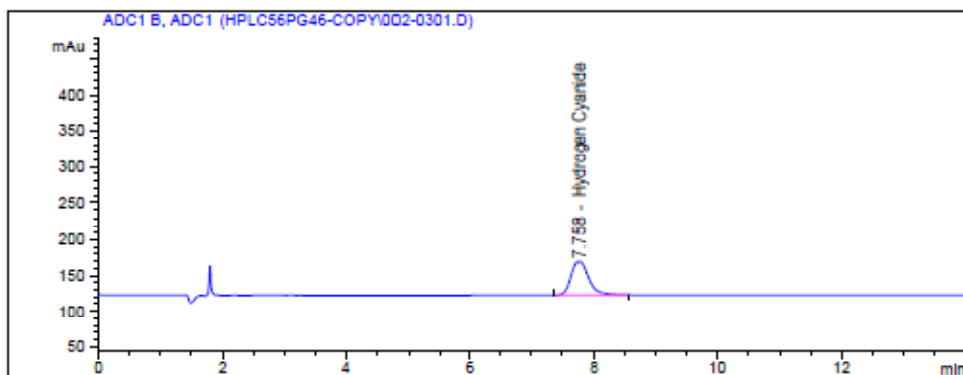
EA# 0511-68 Page 505 of 560

Instrument 2 6/9/2011 11:35:08 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\002-0301.D  
Sample Name: hplc56pg41 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 2:26:23 PM       Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.758	BB	855.21478	6.36413e-4	5.44270e-1		Hydrogen Cyanide

Totals : 5.44270e-1

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

EA# 0511-68 Page 506 of 560

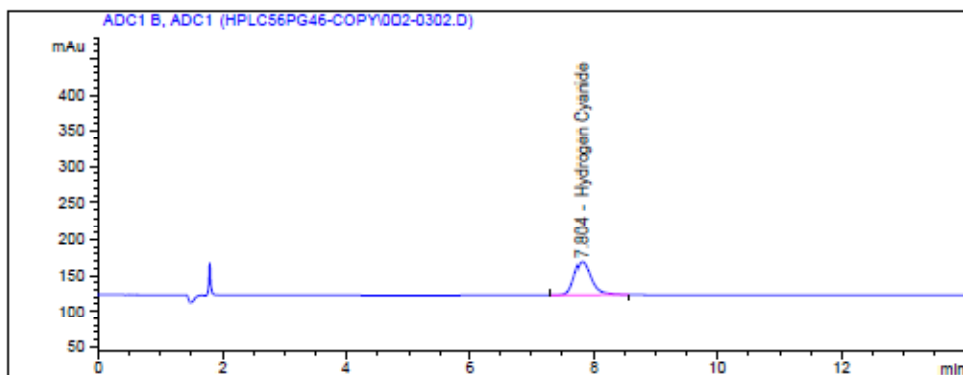
Instrument 2 6/9/2011 11:35:16 AM AMP

Page 1 of 1



Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\002-0302.D  
Sample Name: hplc56pg41 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 2:41:44 PM        Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.804	BB	835.79303	6.36088e-4	5.31638e-1		Hydrogen Cyanide

Totals : 5.31638e-1

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

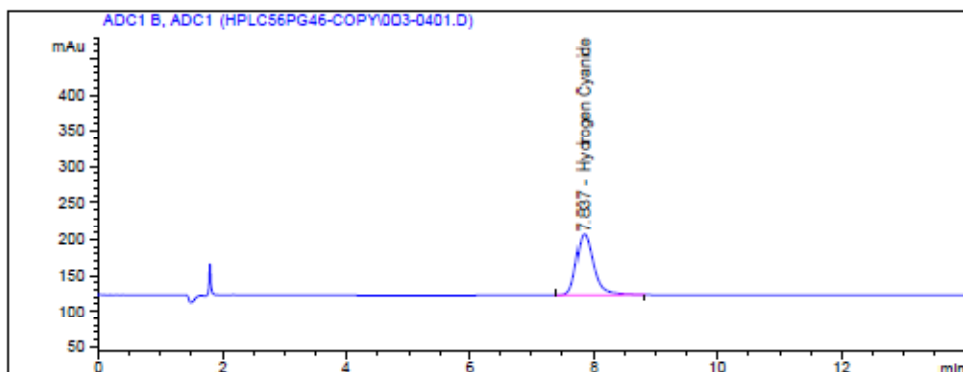
EA# 0511-68 Page 507 of 560

Instrument 2 6/9/2011 11:35:22 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\003-0401.D  
Sample Name: hplc56pg41 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :    4
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/8/2011 2:57:01 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.837	BB	1581.71497	6.42852e-4	1.01681		Hydrogen Cyanide

Totals : 1.01681

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

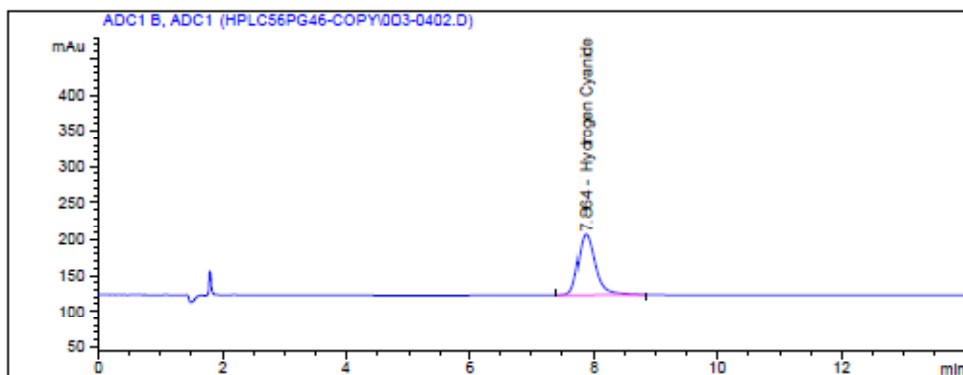
EA# 0511-68 Page 508 of 560

Instrument 2 6/9/2011 11:35:30 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\003-0402.D  
Sample Name: hplc56pg41 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :    4
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/8/2011 3:12:17 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

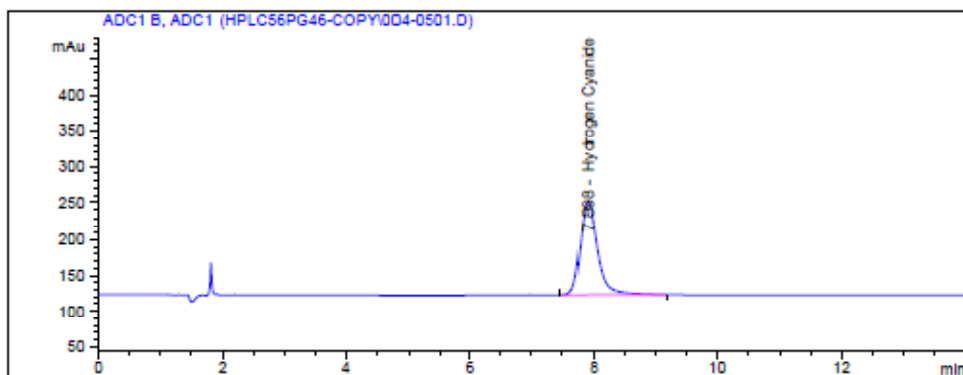
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.864	BB	1580.83838	6.42848e-4	1.01624		Hydrogen Cyanide

Totals : 1.01624

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

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\004-0501.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :    5
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/8/2011 3:27:34 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.898	BB	2434.83789	6.45507e-4	1.57171		Hydrogen Cyanide

Totals : 1.57171

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

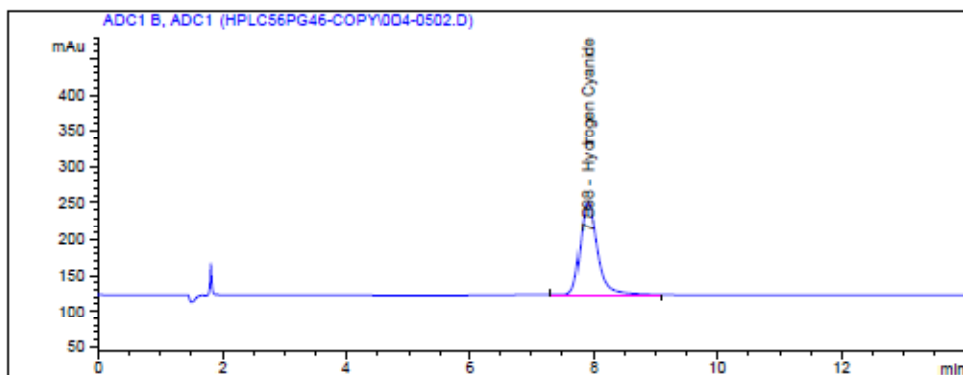
EA# 0511-68 Page 510 of 560

Instrument 2 6/9/2011 11:35:42 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\004-0502.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :    5
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 3:42:51 PM        Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.898	BB	2404.87305	6.45446e-4	1.55222		Hydrogen Cyanide

Totals : 1.55222

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

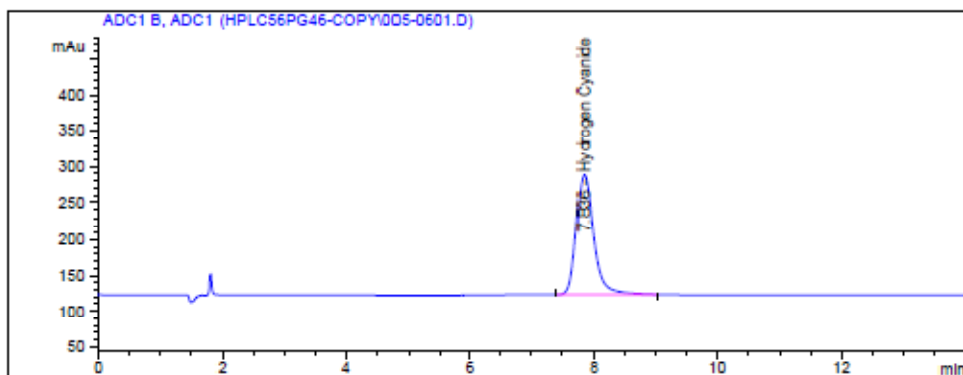
EA# 0511-68 Page 511 of 560

Instrument 2 6/9/2011 11:35:49 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\005-0601.D  
Sample Name: hplc56pg41 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 3:58:09 PM        Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.836	BB	3100.33276	6.46564e-4	2.00456		Hydrogen Cyanide

Totals : 2.00456

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

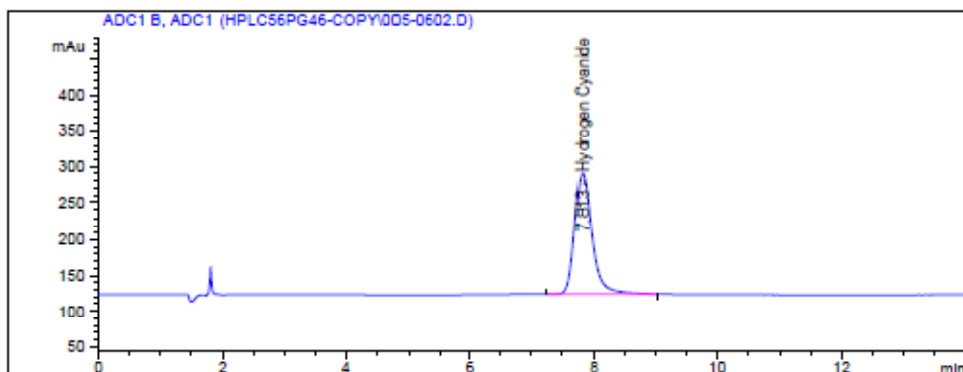
EA# 0511-68 Page 512 of 560

Instrument 2 6/9/2011 11:35:55 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\005-0602.D  
Sample Name: hplc56pg41 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 4:13:24 PM       Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.813	BB	3114.65039	6.46582e-4	2.01388		Hydrogen Cyanide
Totals :				2.01388		

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

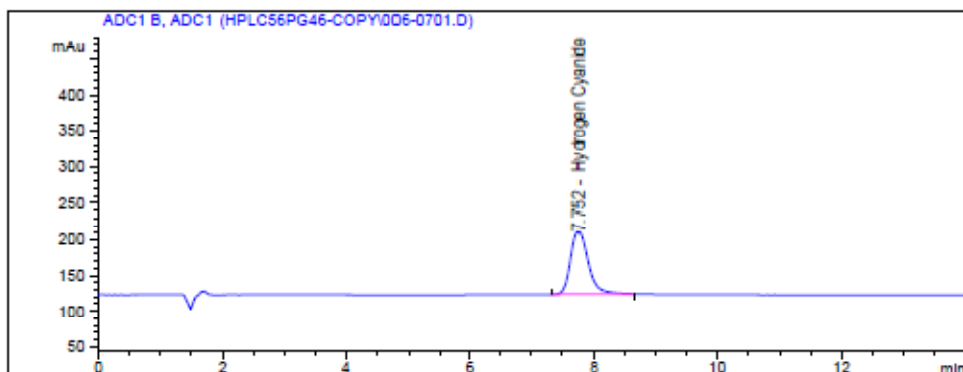
EA# 0511-68 Page 513 of 560

Instrument 2 6/9/2011 11:36:01 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\006-0701.D  
Sample Name: hplc56pg41 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 4:28:43 PM       Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.752	BB	1621.39368	6.43037e-4	1.04262		Hydrogen Cyanide

Totals : 1.04262

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

EA# 0511-68 Page 514 of 560

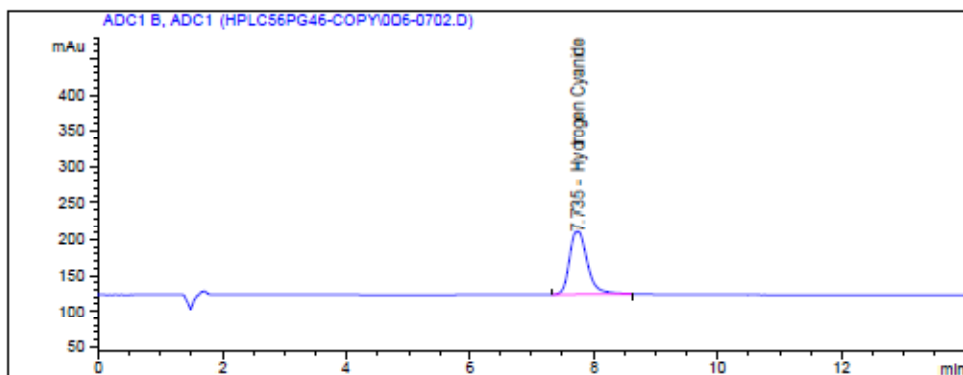
Instrument 2 6/9/2011 11:36:07 AM AMP

Page 1 of 1



Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\006-0702.D  
Sample Name: hplc56pg41 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 4:43:58 PM       Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

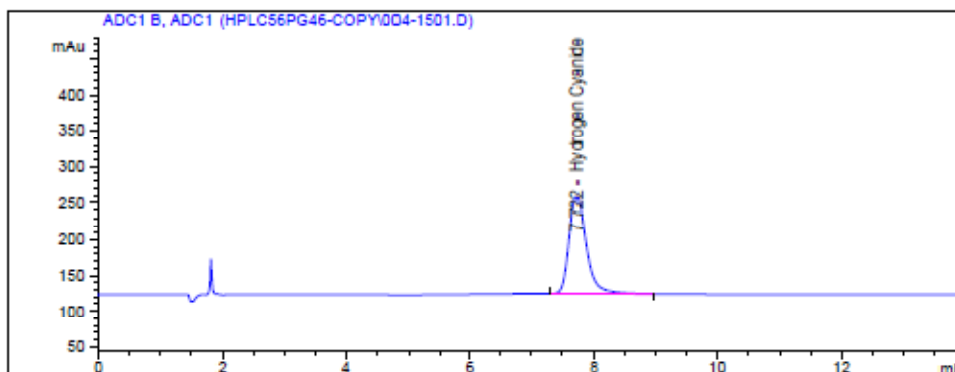
Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.735	BB	1624.52527	6.43052e-4	1.04465		Hydrogen Cyanide
Totals :				1.04465		

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

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\004-1501.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :   15
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/8/2011 8:33:25 PM       Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

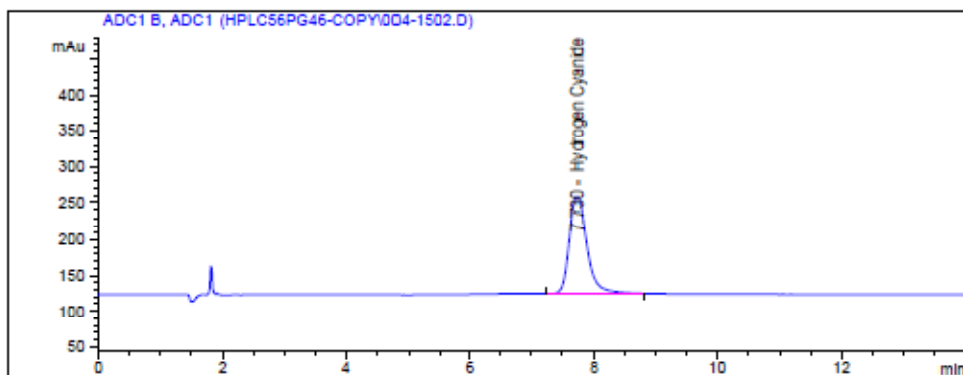
Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.722	BB	2463.35449	6.45564e-4	1.59025		Hydrogen Cyanide
Totals :				1.59025		

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

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\004-1502.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line : 15
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/8/2011 8:48:40 PM       Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.730	BB	2466.93213	6.45572e-4	1.59258		Hydrogen Cyanide

Totals : 1.59258

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

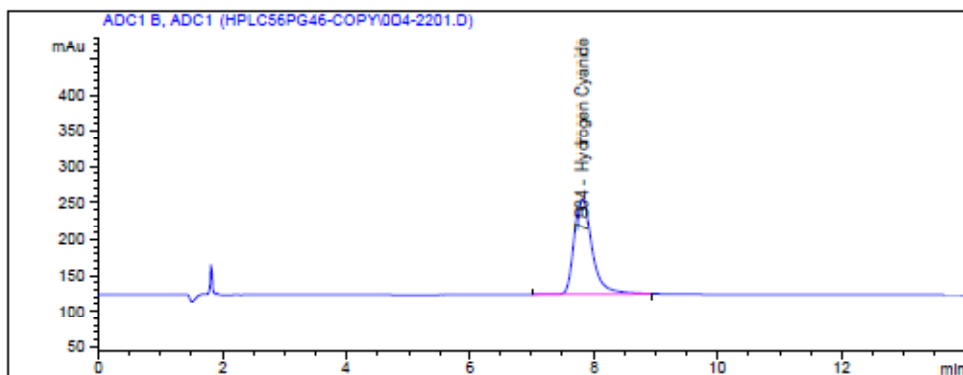
EA# 0511-68 Page 517 of 560

Instrument 2 6/9/2011 11:38:05 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\004-2201.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line : 22
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/9/2011 12:07:27 AM      Inj       : 1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

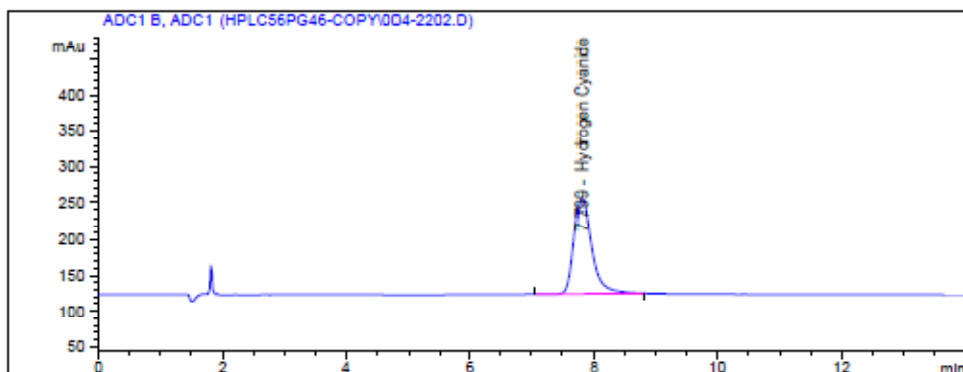
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.804	BB	2488.41479	6.45613e-4	1.60655		Hydrogen Cyanide

Totals : 1.60655

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

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\004-2202.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line : 22
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/9/2011 12:22:43 AM      Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.799	BB	2497.33105	6.45631e-4	1.61235		Hydrogen Cyanide

Totals : 1.61235

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

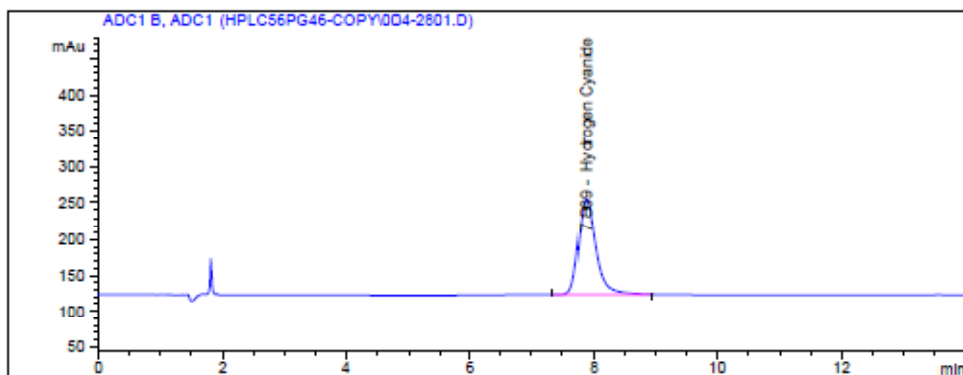
EA# 0511-68 Page 519 of 560

Instrument 2 6/9/2011 11:39:35 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\004-2801.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :   28
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/9/2011 3:10:56 AM       Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



=====

External Standard Report

=====

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.869	BB	2510.48437	6.45656e-4	1.62091		Hydrogen Cyanide

Totals : 1.62091

=====

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

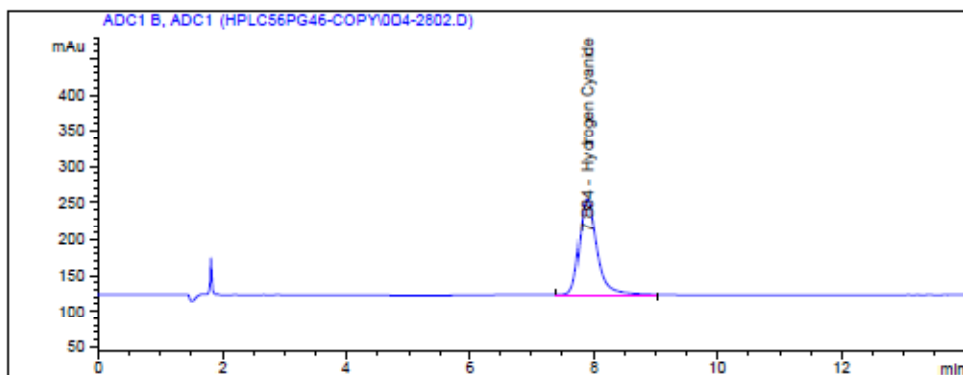
EA# 0511-68 Page 520 of 560

Instrument 2 6/9/2011 11:40:52 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q1\GRANDMAM\DATA\JAN11\HPLC56PG46-COPY\004-2802.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :   28
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/9/2011 3:26:11 AM       Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG46.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/8/2011 1:24:35 PM by KHB
                  (modified after loading)
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG46.M
Last changed    : 6/9/2011 11:32:48 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Thursday, June 09, 2011 11:32:39 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.884	VV	2527.76416	6.45688e-4	1.63215		Hydrogen Cyanide

Totals : 1.63215

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

EA# 0511-68 Page 521 of 560

Instrument 2 6/9/2011 11:40:59 AM AMP

Page 1 of 1

=====

Calibration Table

=====

Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM

Rel. Reference Window : 20.000 %  
 Abs. Reference Window : 0.300 min  
 Rel. Non-ref. Window : 20.000 %  
 Abs. Non-ref. Window : 0.300 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 : Ignored  
 Weight : Linear (Amt)

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

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

Signal 1: ADC1 A, ADC1 CHANNEL A  
 Signal 2: ADC1 B, ADC1

RetTime	Lvl	Amount	Area	Amt/Area	Ref Grp Name
[min]	Sig	[ug/mL]			
7.816	2	1.03500e-1	195.12936	5.30417e-4	Hydrogen Cyanide
		5.07300e-1	982.34827	5.16416e-4	
		9.90500e-1	1804.98206	5.48759e-4	
		1.54100	2631.47815	5.85602e-4	
		2.08000	3404.59448	6.10939e-4	

=====

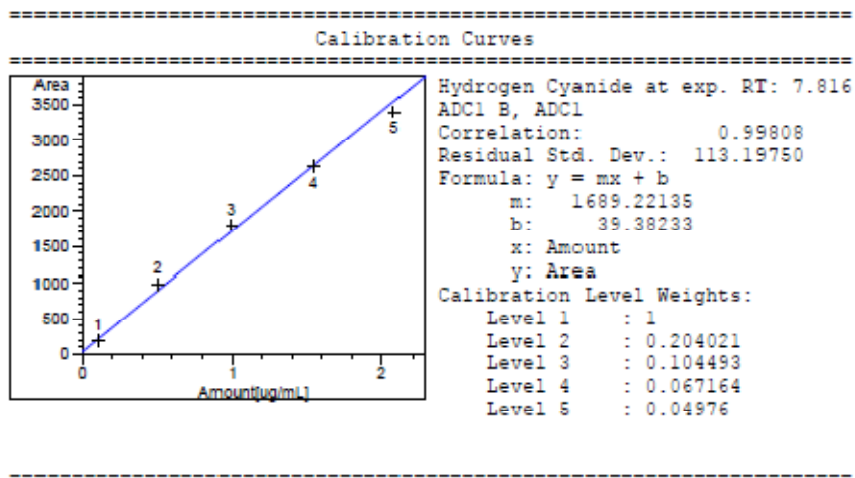
Peak Sum Table

=====

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

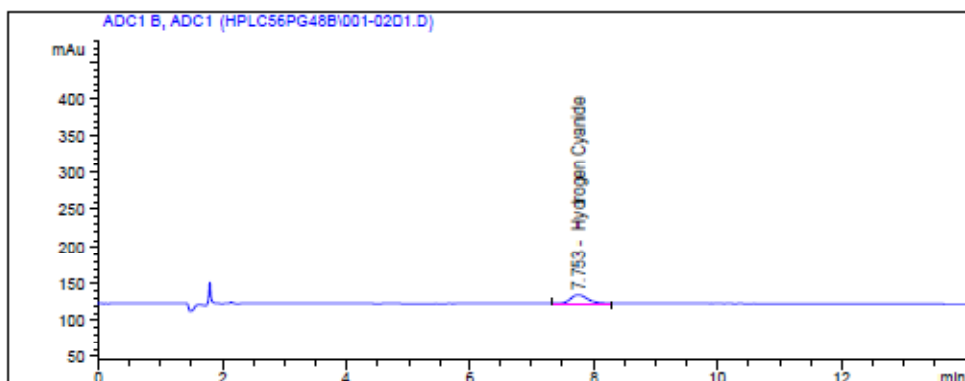
=====





Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\001-0201.D  
Sample Name: hplc56pg41 #1

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 3:35:16 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

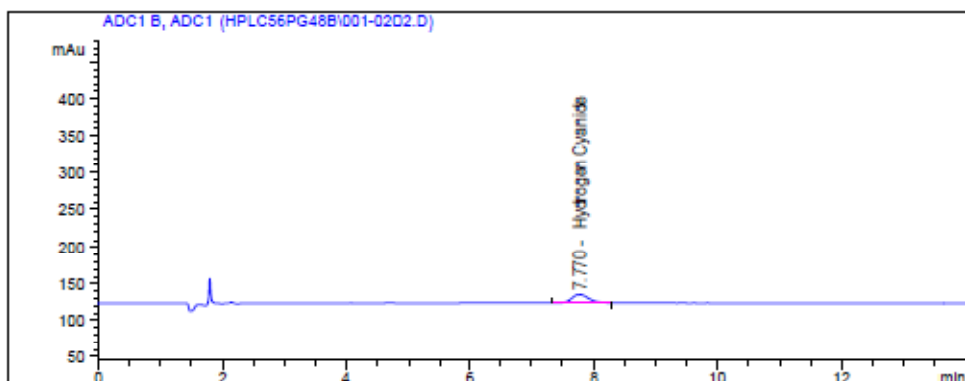
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.753	VB	195.38658	4.72667e-4	9.23528e-2		Hydrogen Cyanide

Totals : 9.23528e-2

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\001-0202.D  
Sample Name: hplc56pg41 #1

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/10/2011 3:50:31 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.770	VB	194.87213	4.72352e-4	9.20482e-2		Hydrogen Cyanide

Totals : 9.20482e-2

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

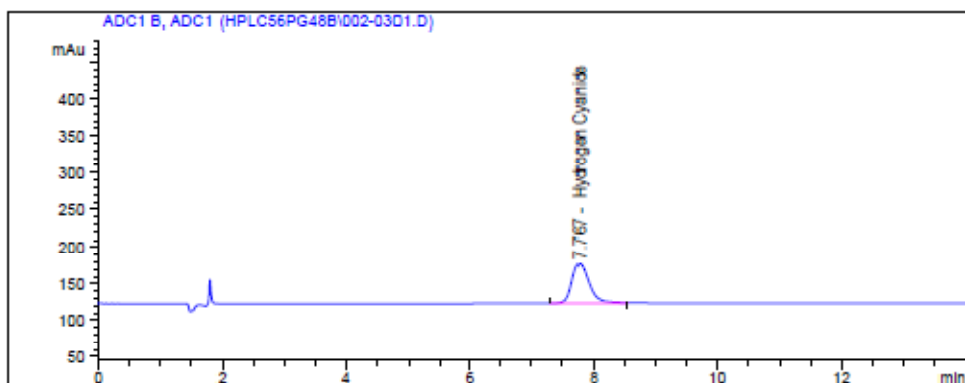
EA# 0511-68 Page 525 of 560

Instrument 2 6/13/2011 11:22:59 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\002-0301.D  
Sample Name: hplc56pg41 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 4:05:48 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.767	VB	982.34827	5.68256e-4	5.58225e-1		Hydrogen Cyanide

Totals : 5.58225e-1

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

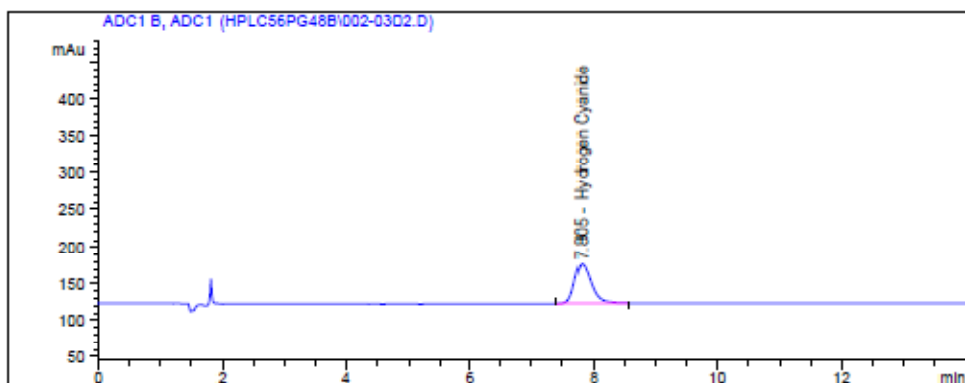
EA# 0511-68 Page 526 of 560

Instrument 2 6/13/2011 11:23:03 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\002-0302.D  
Sample Name: hplc56pg41 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/10/2011 4:21:04 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

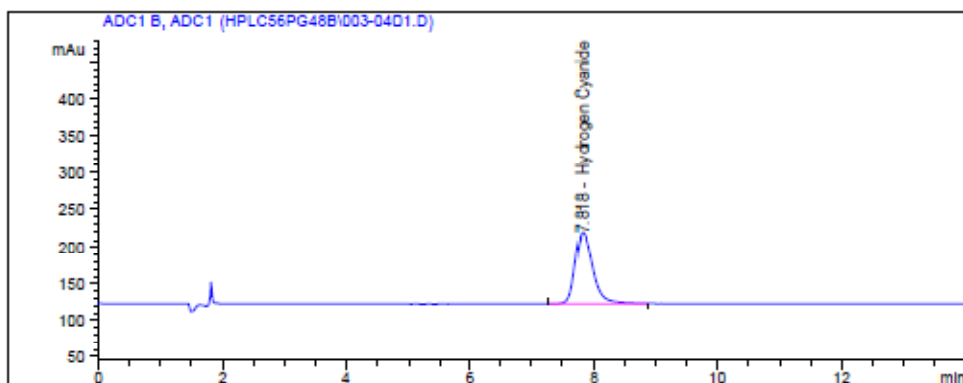
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.805	VB	971.16626	5.67983e-4	5.51606e-1		Hydrogen Cyanide

Totals : 5.51606e-1

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\003-0401.D  
Sample Name: hplc56pg41 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :    4
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/10/2011 4:36:23 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.818	BB	1818.09131	5.79165e-4	1.05298		Hydrogen Cyanide

Totals : 1.05298

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

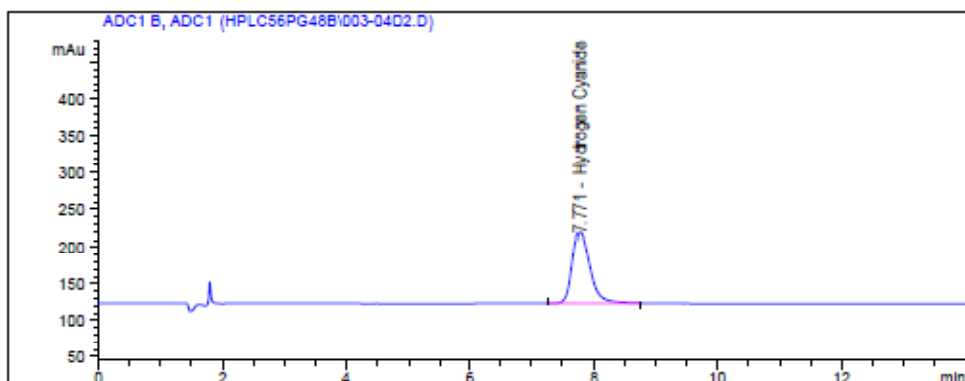
EA# 0511-68 Page 528 of 560

Instrument 2 6/13/2011 11:23:12 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\003-0402.D  
Sample Name: hplc56pg41 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :    4
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/10/2011 4:51:39 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

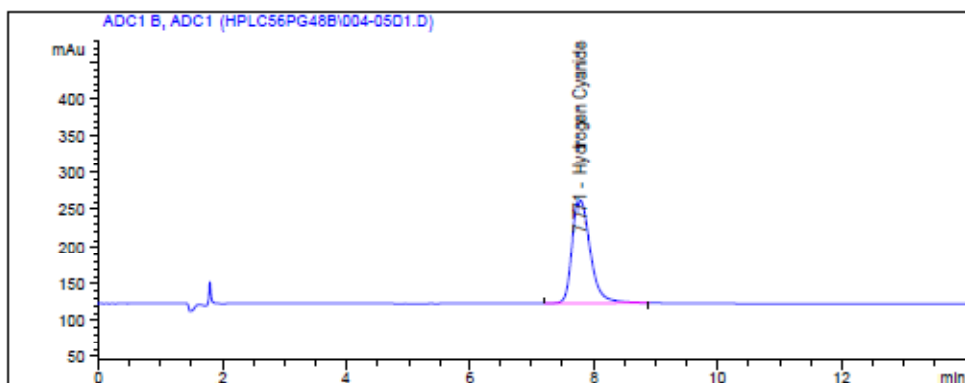
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.771	VB	1791.87280	5.78978e-4	1.03745		Hydrogen Cyanide

Totals : 1.03745

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\004-0501.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :    5
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 5:06:55 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.771	BB	2631.48193	5.83129e-4	1.53449		Hydrogen Cyanide

Totals : 1.53449

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

EA# 0511-68 Page 530 of 560

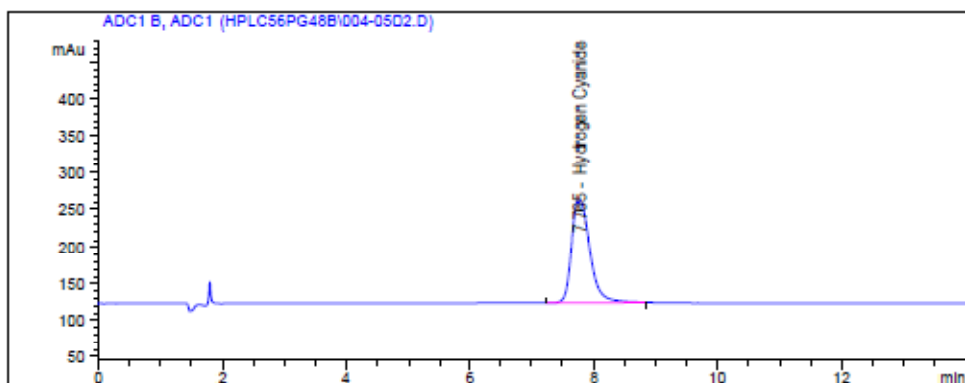
Instrument 2 6/13/2011 11:23:21 AM AMP

Page 1 of 1



Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\004-0502.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :    5
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 5:22:11 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.765	VB	2631.47437	5.83129e-4	1.53449		Hydrogen Cyanide

Totals : 1.53449

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

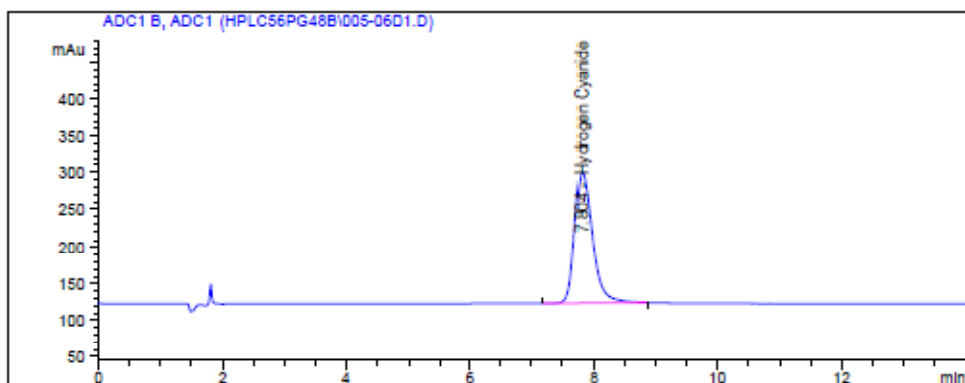
EA# 0511-68 Page 531 of 560

Instrument 2 6/13/2011 11:23:26 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\005-0601.D  
Sample Name: hplc56pg41 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/10/2011 5:37:33 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

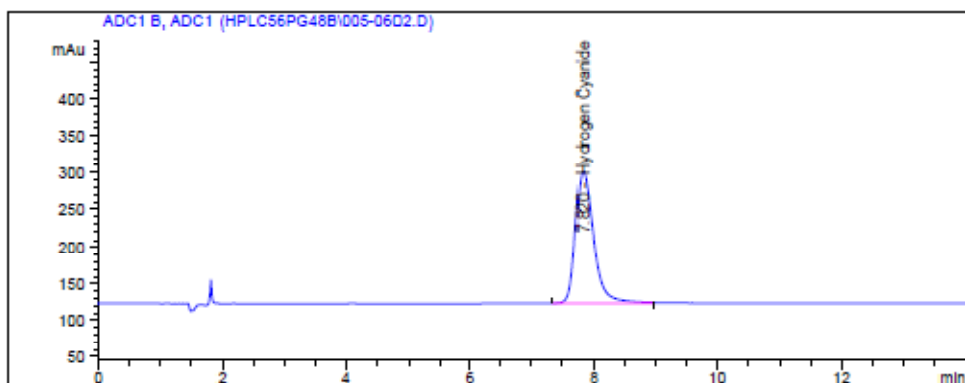
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.804	BB	3362.78711	5.85056e-4	1.96742		Hydrogen Cyanide

Totals : 1.96742

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\005-0602.D  
Sample Name: hplc56pg41 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 5:52:49 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

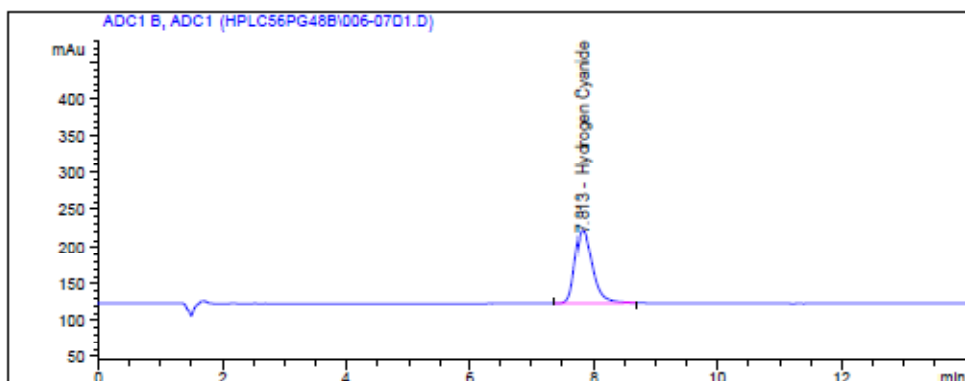
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.820	VB	3446.40186	5.85224e-4	2.01692		Hydrogen Cyanide

Totals : 2.01692

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\006-0701.D  
Sample Name: hplc56pg41 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 6:08:07 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

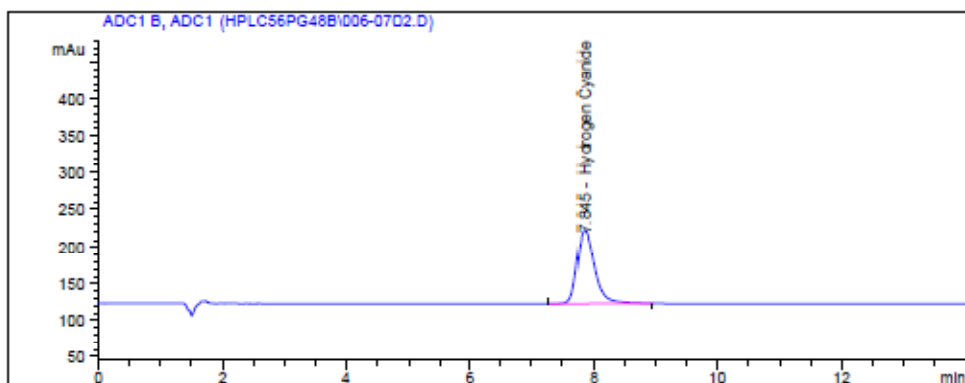
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.813	VB	1838.22278	5.79306e-4	1.06489		Hydrogen Cyanide

Totals : 1.06489

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\006-0702.D  
Sample Name: hplc56pg41 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 6:23:23 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

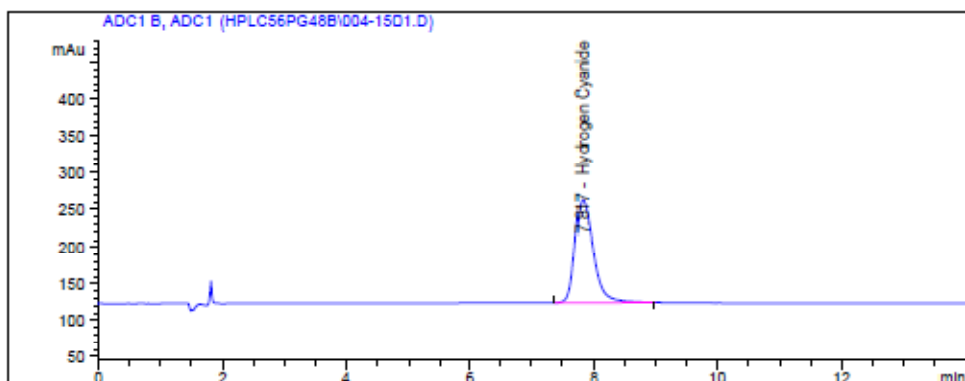
Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.845	BB	1866.80652	5.79500e-4	1.08181		Hydrogen Cyanide
Totals :				1.08181		

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\004-1501.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :   15
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/10/2011 10:12:39 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.817	BB	2717.85718	5.83411e-4	1.58563		Hydrogen Cyanide

Totals : 1.58563

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

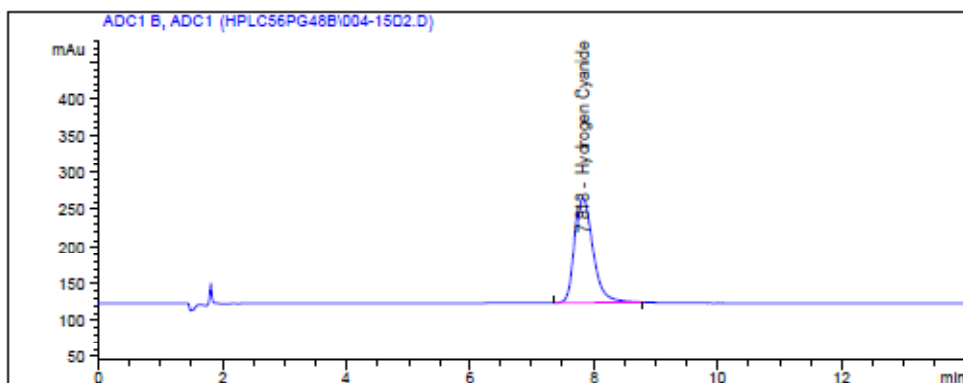
EA# 0511-68 Page 536 of 560

Instrument 2 6/13/2011 11:24:54 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\004-1502.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :   15
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/10/2011 10:27:56 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.813	BB	2746.96899	5.83502e-4	1.60286		Hydrogen Cyanide

Totals : 1.60286

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

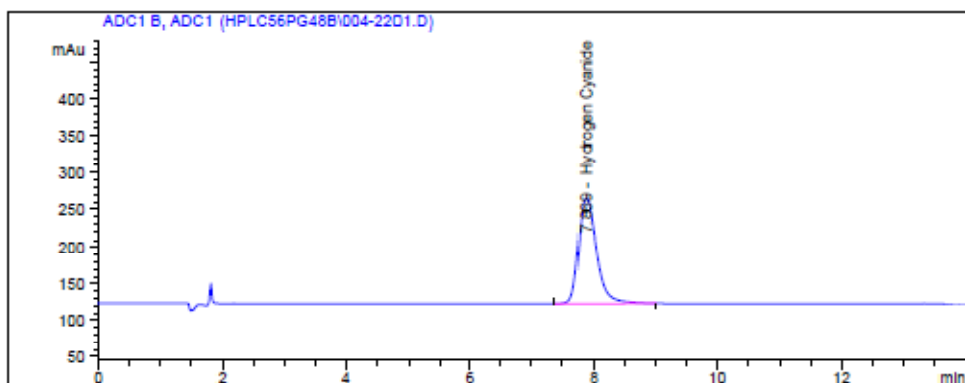
EA# 0511-68 Page 537 of 560

Instrument 2 6/13/2011 11:24:59 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\004-2201.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line : 22
Acq. Instrument : Grandmama                 Location  : -
Injection Date  : 6/11/2011 1:46:49 AM      Inj       : 1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.869	VB	2774.84253	5.83587e-4	1.61936		Hydrogen Cyanide

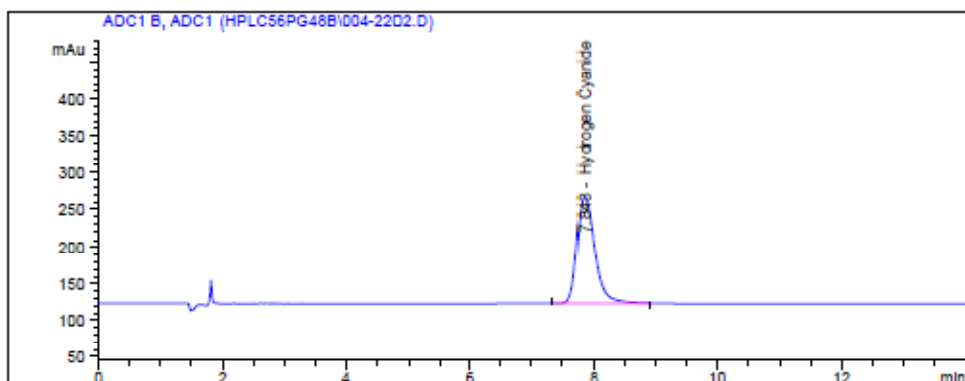
Totals : 1.61936

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



Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG48B\004-2202.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line : 22
Acq. Instrument : Grandmama                Location  : -
Injection Date  : 6/11/2011 2:02:05 AM      Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG48.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG48B.M
Last changed    : 6/13/2011 11:17:32 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Monday, June 13, 2011 11:17:17 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.843	VB	2758.00391	5.83536e-4	1.60939		Hydrogen Cyanide

Totals : 1.60939

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

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

Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM

Rel. Reference Window : 20.000 %  
Abs. Reference Window : 0.300 min  
Rel. Non-ref. Window : 20.000 %  
Abs. Non-ref. Window : 0.300 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 : Ignored  
Weight : Linear (Amt)

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

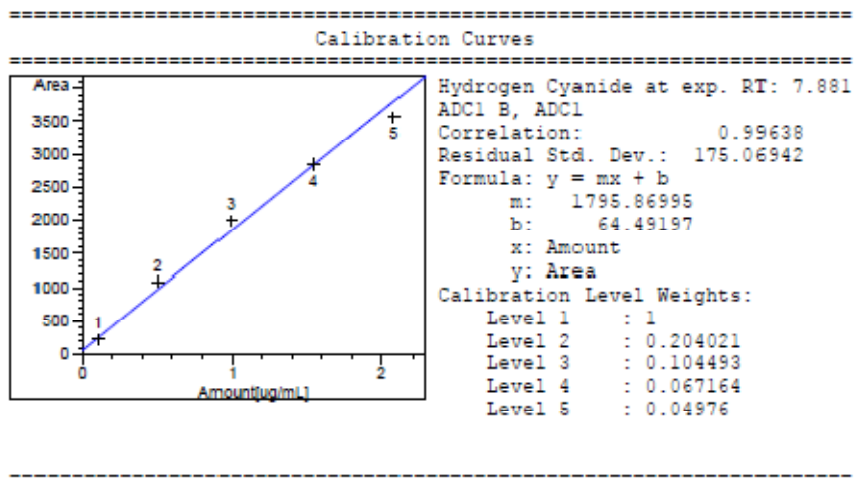
Calibration Report Options :  
Printout of recalibrations within a sequence:  
Calibration Table after Recalibration  
Normal Report after Recalibration  
If the sequence is done with bracketing:  
Results of first cycle (ending previous bracket)

Signal 1: ADC1 A, ADC1 CHANNEL A  
Signal 2: ADC1 B, ADC1

RetTime [min]	Lvl Sig	Amount [ug/mL]	Area	Amt/Area	Ref Grp Name
7.881	2	1.03500e-1	224.01187	4.62029e-4	Hydrogen Cyanide
		5.07300e-1	1083.67969	4.68127e-4	
		9.90500e-1	1994.32269	4.96660e-4	
		1.54100	2837.28040	5.43126e-4	
		2.08000	3561.73682	5.83985e-4	

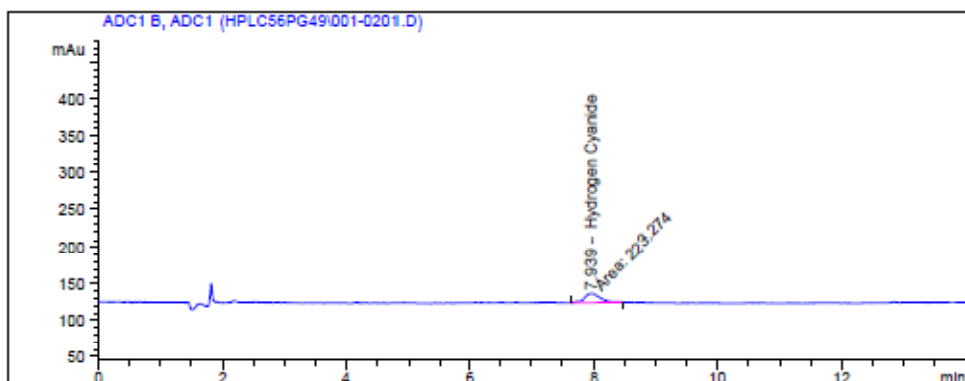
=====  
Peak Sum Table  
=====

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



Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\001-0201.D  
Sample Name: hplc56pg41 #1

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/13/2011 2:27:17 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.939	MM	223.27368	3.95994e-4	8.84149e-2		Hydrogen Cyanide

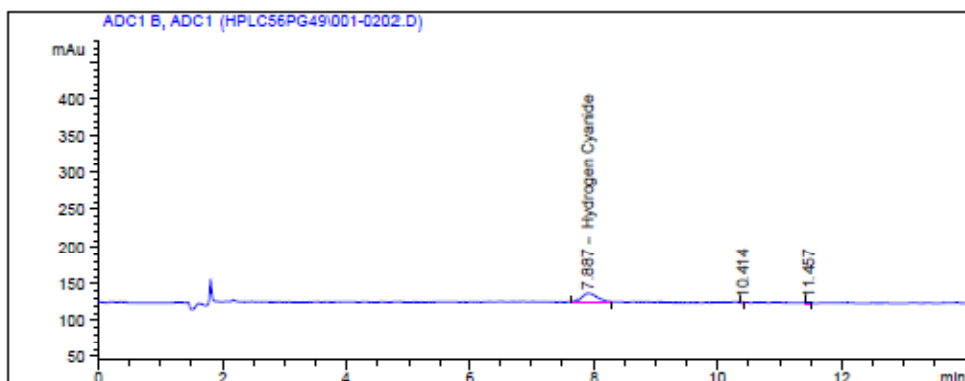
Manual Int. "II" (AMP)

Totals : 8.84149e-2

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\001-0202.D  
Sample Name: hplc56pg41 #1

```
=====
Acq. Operator   : KHB                      Seq. Line :    2
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 2:42:39 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.887	VV	224.75006	3.97050e-4	8.92370e-2		Hydrogen Cyanide

Totals : 8.92370e-2

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

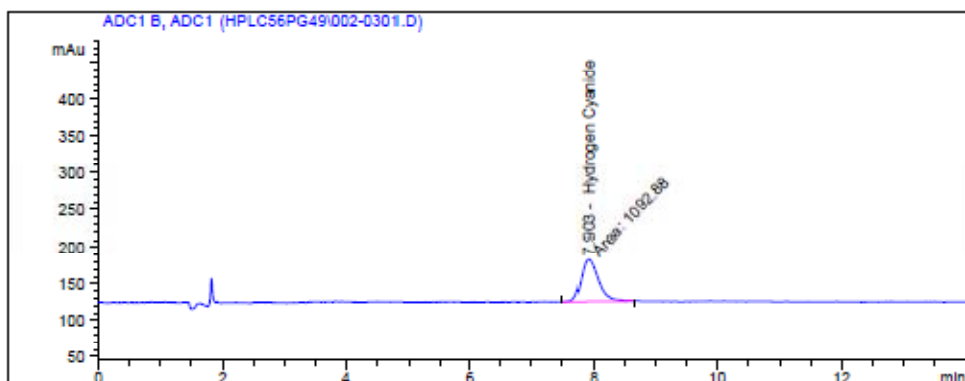
EA# 0511-68 Page 543 of 560

Instrument 2 6/14/2011 9:49:17 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\002-0301.D  
Sample Name: hplc56pg41 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 2:57:56 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

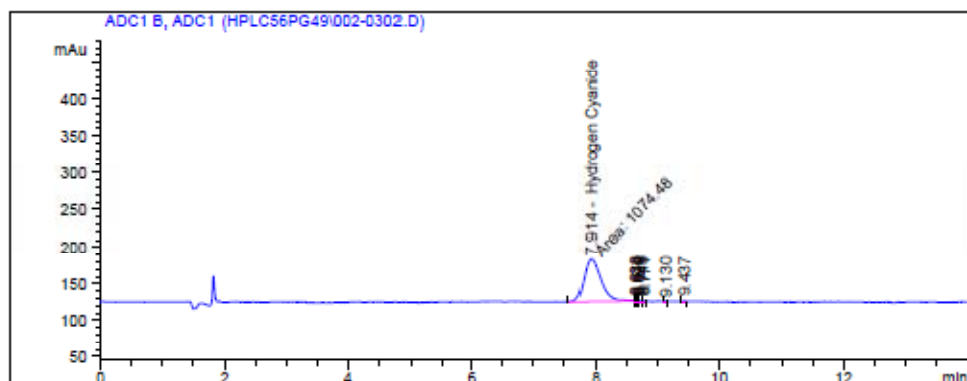
Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.903	MM	1092.88147	5.23974e-4	5.72641e-1		Hydrogen Cyanide
<b>Manual Int. "II" (AMP)</b>						
Totals :				5.72641e-1		

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\002-0302.D  
Sample Name: hplc56pg41 #2

```
=====
Acq. Operator   : KHB                      Seq. Line :    3
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 3:13:11 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.914	MM	1074.47791	5.23411e-4	5.62394e-1		Hydrogen Cyanide

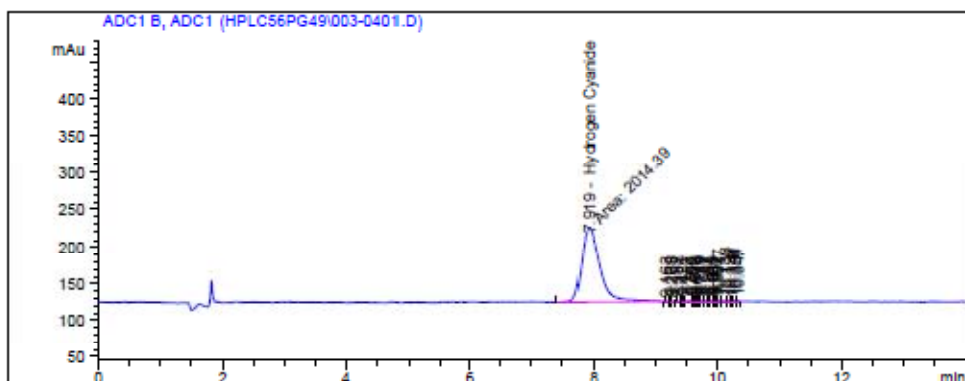
Manual Int. "II" (AMP)

Totals : 5.62394e-1

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\003-0401.D  
Sample Name: hplc56pg41 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :    4
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/13/2011 3:28:30 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.919	MM	2014.39294	5.39006e-4	1.08577		Hydrogen Cyanide
Totals :				1.08577		

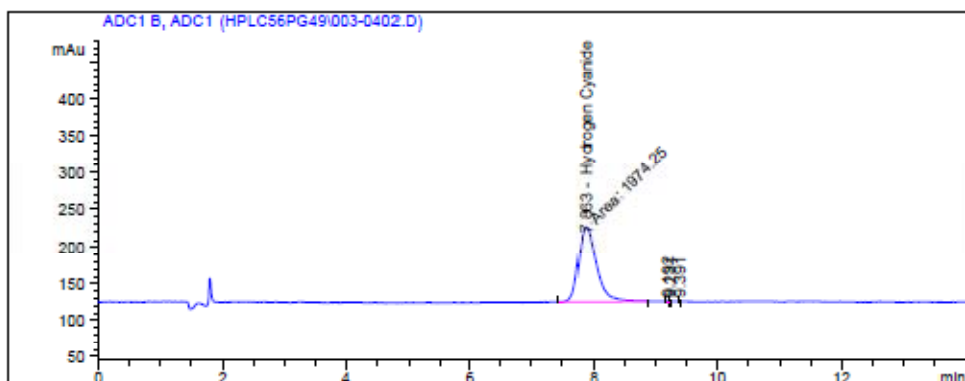
Manual Int. "II" (AMP)

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



Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\003-0402.D  
Sample Name: hplc56pg41 #3

```
=====
Acq. Operator   : KHB                      Seq. Line :    4
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/13/2011 3:43:46 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.863	MM	1974.25244	5.38643e-4	1.06342		Hydrogen Cyanide

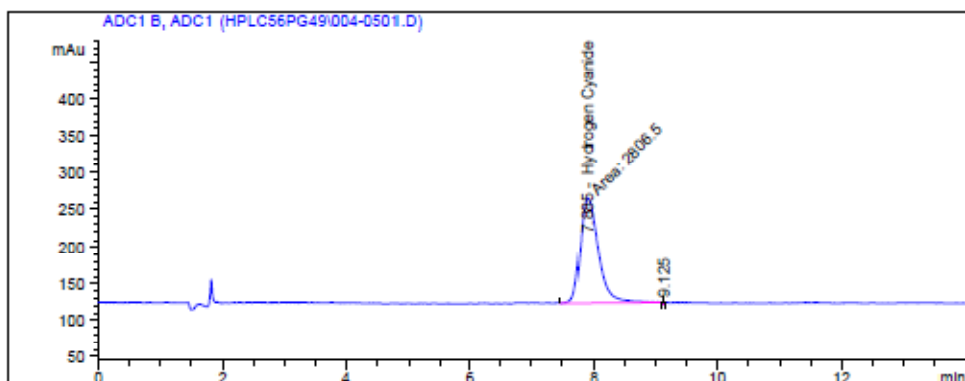
Manual Int. "II" (AMP)

Totals : 1.06342

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\004-0501.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :    5
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 3:59:02 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.885	MM	2806.50220	5.44037e-4	1.52684		Hydrogen Cyanide

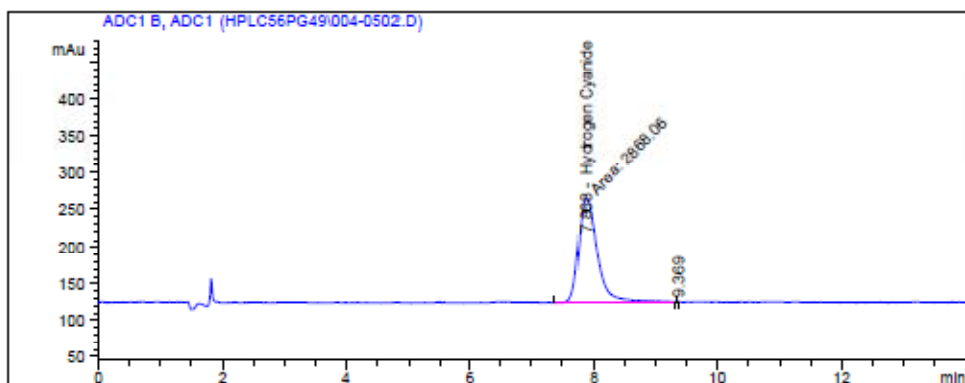
Manual Int. "IT" (AMP)

Totals : 1.52684

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\004-0502.D  
Sample Name: hplc56pg41 #4

```
=====
Acq. Operator   : KHB                      Seq. Line :    5
Acq. Instrument : Grandmama                Location  :    -
Injection Date  : 6/13/2011 4:14:19 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

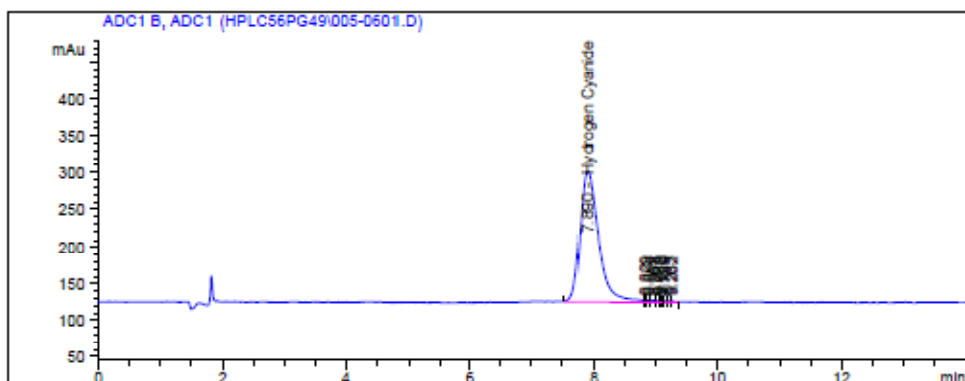
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.868	MM	2868.05859	5.44312e-4	1.56112		Hydrogen Cyanide
Totals :				1.56112		

Manual Int. "IT" (AMP)

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\005-0601.D  
Sample Name: hplc56pg41 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 4:29:35 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.890	VV	3560.11523	5.46746e-4	1.94648		Hydrogen Cyanide
Totals :				1.94648		

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

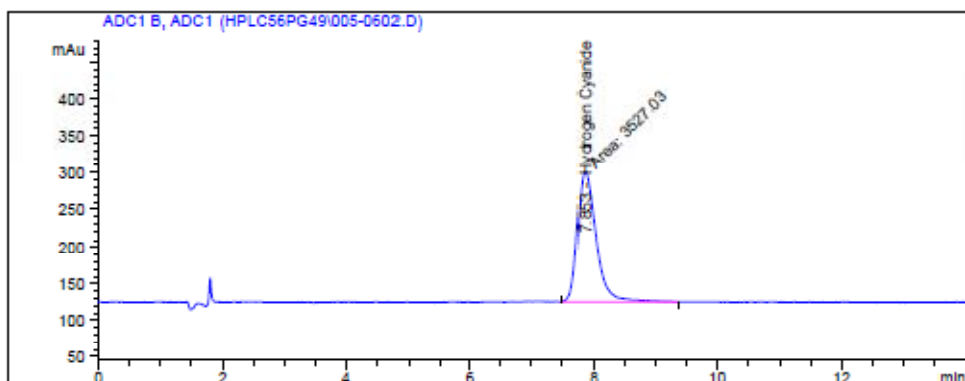
EA# 0511-68 Page 550 of 560

Instrument 2 6/14/2011 9:50:07 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\005-0602.D  
Sample Name: hplc56pg41 #5

```
=====
Acq. Operator   : KHB                      Seq. Line :    6
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 4:44:52 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

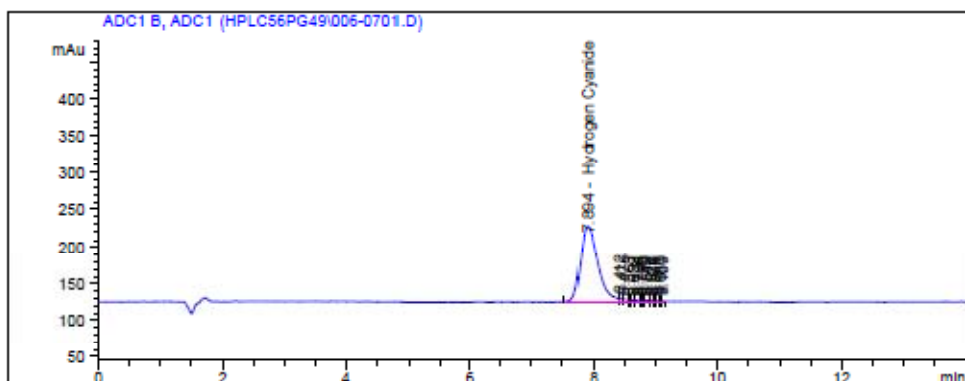
RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.853	MM	3527.03149	5.46651e-4	1.92806		Hydrogen Cyanide
Totals :				1.92806		

Manual Int. "II" (AMP)

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\006-0701.D  
Sample Name: hplc56pg41 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 5:00:09 PM      Inj       :    1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.894	VV	1969.51453	5.38600e-4	1.06078		Hydrogen Cyanide
Totals :				1.06078		

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

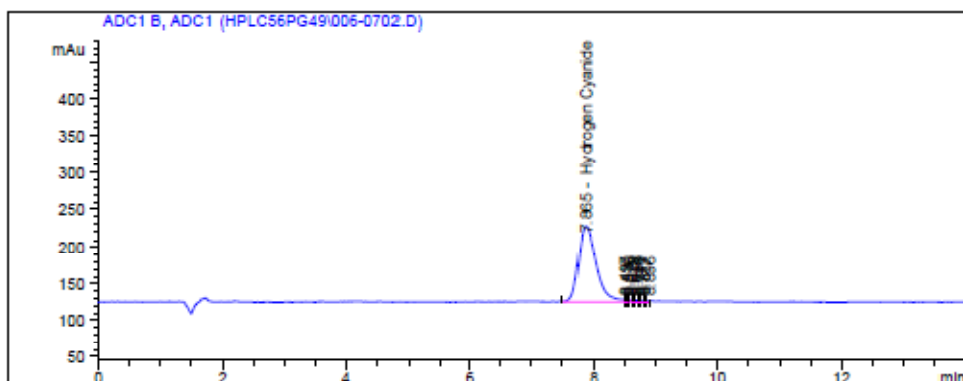
EA# 0511-68 Page 552 of 560

Instrument 2 6/14/2011 9:50:20 AM AMP

Page 1 of 1

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\006-0702.D  
Sample Name: hplc56pg41 #SS

```
=====
Acq. Operator   : KHB                      Seq. Line :    7
Acq. Instrument : Grandmama                 Location  :    -
Injection Date  : 6/13/2011 5:15:24 PM      Inj       :    2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



External Standard Report

```
=====
Sorted By      : Signal
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

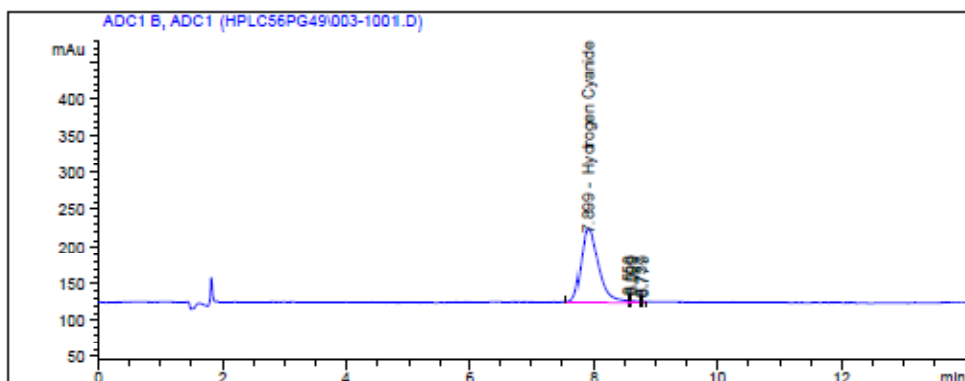
Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.865	VV	1963.61682	5.38545e-4	1.05750		Hydrogen Cyanide
Totals :				1.05750		

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

Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\003-1001.D  
Sample Name: hplc56pg41 #3

```
=====
Acq. Operator   : KHB                      Seq. Line : 10
Acq. Instrument : Grandmama                Location  : -
Injection Date  : 6/13/2011 6:31:50 PM      Inj       : 1
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.899	VV	1933.30347	5.38258e-4	1.04062		Hydrogen Cyanide

Totals : 1.04062

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

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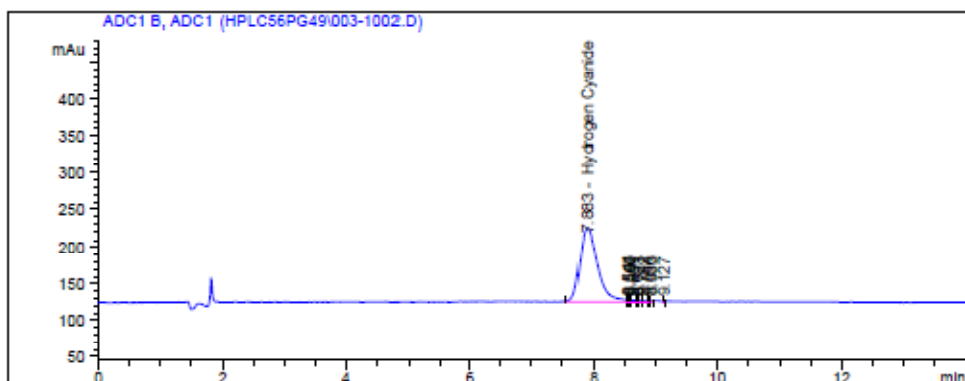
Instrument 2 6/14/2011 9:50:56 AM AMP

Page 1 of 1



Data File I:\HPLC2011Q2\GRANDMAM\DATA\APR\HPLC56PG49\003-1002.D  
Sample Name: hplc56pg41 #3

```
=====
Acq. Operator   : KHB                      Seq. Line : 10
Acq. Instrument : Grandmama                Location  : -
Injection Date  : 6/13/2011 6:47:06 PM      Inj       : 2
Sequence File   : I:\HPLC2011Q2\GRANDMAM\SEQUENCE\HPLC56PG49.S
Acq. Method     : H:\HPLC2011Q2\GRANDMAM\METHODS\1000.M
Last changed    : 6/9/2011 5:43:05 PM by KHB
Analysis Method : I:\HPLC2011Q1\GRANDMAM\METHODS\HPLC56PG49.M
Last changed    : 6/14/2011 9:48:04 AM by AMP
=====
```



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

Sorted By : Signal  
Calib. Data Modified : Tuesday, June 14, 2011 9:48:00 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: ADC1 B, ADC1

RetTime [min]	Type	Area [mAu*s]	Amt/Area	Amount [ug/mL]	Grp	Name
7.883	VV	1933.09119	5.38256e-4	1.04050		Hydrogen Cyanide

Totals : 1.04050

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

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Instrument 2 6/14/2011 9:51:00 AM AMP

Page 1 of 1

method: H:\HPLC2010Q1\GRANDMAM\METHODS\1000.M  
Modified on: 3/17/2010 at 9:48:43 AM

Method Information

Method: H:\HPLC2010Q1\GRANDMAM\METHODS\1000.M  
Modified: 3/17/2010 at 9:48:43 AM

Column: Dionex Ionpac AS7 4 X 250mm  
Eluent: 0.5M Sodium Acetate/0.1M NaOH/0.5% v/v Ethylenediamine  
Flow rate: 1.0 mL/min

=====

ANALOG DIGITAL CONVERTER

=====

Signal 1

-----

Description:	ADC1 CHANNEL A
Source:	Signal
Unit:	nC
Units/Volt:	1000.000
Peakwidth (Data Rate):	0.133 Min (2.00 Hz)
Stop Time:	14.01 Min
Data Storage:	All

Start Signal Source: External Device Will Start 35900

Timed Event Table:  
<no events>

EA# 0511-68 Page 556 of 560

Grandmama 3/17/2010 9:49:42 AM KHE

Page 1 of 1

Sequence: C:\HPCHEM\2\SEQUENCE\HPLC56PG46.TXT

Line	Vial	Sample Name	Method	Inj
1	Vial 7	MB/0.1N NaOH	1000	2
2	Vial 1	hplc56pg41 #1	1000	2
3	Vial 2	hplc56pg41 #2	1000	2
4	Vial 3	hplc56pg41 #3	1000	2
5	Vial 4	hplc56pg41 #4	1000	2
6	Vial 5	hplc56pg41 #5	1000	2
7	Vial 6	hplc56pg41 #SS	1000	2
8	Vial 7	MB/0.1N NaOH	1000	2
9	Vial 8	<del>MS/051811-OTM29 3-1*5 0511-68</del>	<del>1000</del>	<del>2</del>
10	Vial 9	MS/051811-OTM29 3-1 0511-68	1000	2
11	Vial 10	MSD/051811-OTM29 3-1 <del>0511-68</del>	1000	2
12	Vial 11	051811-OTM29 4-1*5 0511-68	1000	2
13	Vial 12	MS/051811-OTM29 4-1 0511-68	1000	2
14	Vial 3	hplc56pg41 #3	1000	2
15	Vial 4	hplc56pg41 #4	1000	2
16	Vial 13	<del>MSD/051811-OTM29 4-1 0511-68</del>	<del>1000</del>	<del>2</del>
17	Vial 14	051811-OTM29 3-2*5 0511-68	1000	2
18	Vial 15	051811-OTM29 4-2*5 <del>0511-68</del>	1000	2
19	Vial 16	051811-OTM29 3-3*5 0511-68	1000	2
20	Vial 17	051811-OTM29 4-3*5 0511-68	1000	2
21	Vial 3	hplc56pg41 #3	1000	2
22	Vial 4	hplc56pg41 #4	1000	2
23	Vial 18	051811-OTM29 Spike*5 0511-68	1000	2
24	Vial 19	051811-OTM29 Wash-BL*5 0511-68	1000	2
25	Vial 20	LCS 1*100 0511-68	1000	2
26	Vial 21	LCS 2*100 0511-68	1000	2
27	Vial 3	hplc56pg41 #3	1000	2
28	Vial 4	hplc56pg41 #4	1000	2

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Sequence: C:\HPCHEM\2\SEQUENCE\HPLC56PG48.TXT

Line	Vial	Sample Name	Method	Inj
1	Vial 7	MB/0.1N NaOH	1000	2
2	Vial 1	hplc56pg41 #1	1000	2
3	Vial 2	hplc56pg41 #2	1000	2
4	Vial 3	hplc56pg41 #3	1000	2
5	Vial 4	hplc56pg41 #4	1000	2
6	Vial 5	hplc56pg41 #5	1000	2
7	Vial 6	hplc56pg41 #SS	1000	2
8	Vial 7	MB/0.1N NaOH	1000	2
9	Vial 8	051811-OTM29 3-1*50 0511-88	1000	2
10	Vial 9	MS/051811-OTM29 3-1 0511-88	1000	2
11	Vial 10	MSD/051811-OTM29 3-1 0511-88	1000	2
12	Vial 11	051811-OTM29 4-1*50 0511-88	1000	2
13	Vial 12	MS/051811-OTM29 4-1 0511-88	1000	2
14	Vial 3	hplc56pg41 #3	1000	2
15	Vial 4	hplc56pg41 #4	1000	2
16	Vial 13	MSD/051811-OTM29 4-1 0511-88	1000	2
17	Vial 14	051811-OTM29 3-2*50 0511-88	1000	2
18	Vial 15	051811-OTM29 4-2*50 0511-88	1000	2
19	Vial 16	051811-OTM29 3-3*50 0511-88	1000	2
20	Vial 17	051811-OTM29 4-3*50 0511-88	1000	2
21	Vial 3	hplc56pg41 #3	1000	2
22	Vial 4	hplc56pg41 #4	1000	2

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Sequence: C:\HPCHEM\2\SEQUENCE\HPLC56PG49.TXT

Line	Vial	Sample Name	Method	Inj
<del>1</del>	<del>Vial 7</del>	<del>MB/0.1N NaOH</del>	<del>1000</del>	<del>2</del>
2	Vial 1	hplc56pg41 #1	1000	2
3	Vial 2	hplc56pg41 #2	1000	2
4	Vial 3	hplc56pg41 #3	1000	2
5	Vial 4	hplc56pg41 #4	1000	2
6	Vial 5	hplc56pg41 #5	1000	2
7	Vial 6	hplc56pg41 #SS	1000	2
8	Vial 7	MB/0.1N NaOH	1000	2
9	Vial 14	051811-OTM29 3-2*100 0511-68	1000	2
<del>10</del>	<del>Vial 3</del>	<del>hplc56pg41 #3</del>	<del>1000</del>	<del>2</del>
11	Vial 4	hplc56pg41 #4	1000	2

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



EA# 0511-68 Page 560 of 560