

**WASHINGTON STATE TOXICOLOGY LABORATORY**  
**FORENSIC LABORATORY SERVICES BUREAU**  
 WASHINGTON STATE PATROL  
 2203 AIRPORT WAY S, SUITE 360  
 SEATTLE, WASHINGTON 98134-2027  
 (206) 464-5435 FAX (206) 389-2738

Preparation and certification of **0.10 g/210L Quality Assurance solution**

Batch number **03013**

Date: 5/8/2003

Preparation: 28.9 mL of absolute ethyl alcohol diluted to 18 Liters with water

Concentration of ethanol (g/100mL) measured by gas chromatography:

	Anal 1	Anal 2	Anal 3	Anal 4	Anal 5	Anal 6	Anal 7	Anal 8	Anal 9	Anal10	Anal 11	Anal 12
1	0.129	0.129	0.128									
2	0.129	0.128	0.129									
3	0.129	0.127	0.128									
4	0.129	0.127	0.128									
5	0.129	0.127	0.129									
Ctrl	0.100	0.098	0.101									

**External Control:**

Lot #: A022167 Exp date: 01/05

Target concentration: 0.10 g/100mL

**Statistics:**

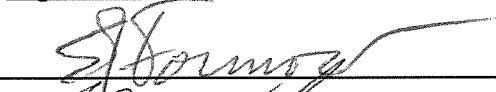
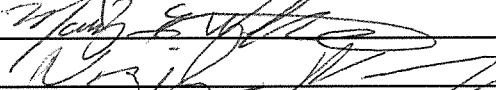
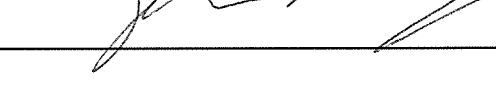
Avg. solution concent.: 0.1283 g/100 mL

SD: 0.00082

Range (3xSD): 0.1259 to 0.1308

Precision CV (%): 0.6362 %

**Equivalent vapor concent.:** 0.1043 g/210L

Analyst	Name	Signature	Date
1	Edward Formoso		05/08/03
2	Mary E Wilson		05/09/03
3	Naziha Nuwayhid, PhD		05/09/03
4			
5			
6			
7			
8			
9			
10			
11			
12			

Prepared by: Edward Formoso according to the approved protocol



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2203 Airport Way South, Suite 360 • Seattle, Washington 98134-2027 • (206) 262-6100 • FAX (206) 262-6145

BAC VERIFIER DATAMASTER QUALITY ASSURANCE SOLUTION  
CERTIFICATION

I, Edward J. Formoso, do certify under penalty of perjury as follows:

I am employed by the Washington State Toxicology Laboratory, and a part of my responsibilities includes preparing and testing the alcohol solutions for the BAC Verifier Data Master breath test instrument.

I possess the following qualifications: B.S. degree in Chemistry and twenty-seven years experience in the Washington State Toxicology Laboratory.

The quality assurance solution, Lot Number 03013, was prepared in the Washington State Toxicology Laboratory. I examined and tested this solution. The mean concentration of the alcohol was 0.1283 grams per 100ml.

Dated: 5/12/03  
Seattle, WA

Edward J. Formoso  
Forensic Toxicologist

EJF/bf  
EFQA





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BAC VERIFIER DATAMASTER QUALITY ASSURANCE SOLUTION  
CERTIFICATION

I, Mary E. Wilson, do certify under penalty of perjury as follows:

I am employed by the Washington State Toxicology Laboratory, and a part of my responsibilities includes preparing and testing the alcohol solutions for the BAC Verifier Data Master breath test instrument.

I possess the following qualifications: BS degree in Biology and a minor in Chemistry with two years of experience in Toxicology.

The quality assurance solution, Lot Number 03013, was prepared in the Washington State Toxicology Laboratory. I examined and tested this solution. The mean concentration of the alcohol was 0.1283 grams per 100ml.

Dated: 5/12/03  
Seattle, WA

Mary E. Wilson  
Forensic Toxicologist

MEW/bf  
MEWQA





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BAC VERIFIER DATAMASTER QUALITY ASSURANCE SOLUTION  
CERTIFICATION

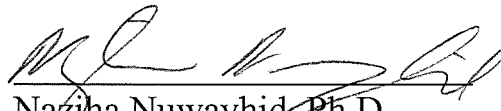
I, Naziha Nuwayhid, do certify under penalty of perjury as follows:

I am employed by the Washington State Toxicology Laboratory, and a part of my responsibilities includes preparing and testing the alcohol solutions for the BAC Verifier Data Master breath test instrument.

I possess the following qualifications: Bachelor and Masters degrees in Biology, Ph.D. degree in Basic Medical Science, ten years experience in clinical laboratory sciences, one year in clinical toxicology and two years in forensic toxicology. I am also board certified by the American Board of Clinical Chemistry.

The quality assurance solution, Lot Number 03013, was prepared in the Washington State Toxicology Laboratory. I examined and tested this solution. The mean concentration of the alcohol was 0.1283 grams per 100ml.

Dated: 5/12/03  
Seattle, WA

  
Naziha Nuwayhid, Ph.D.  
Forensic Toxicologist

NN/bf  
NNQA



:\HPCHEM\1\METHODS\BLDALCO3.M

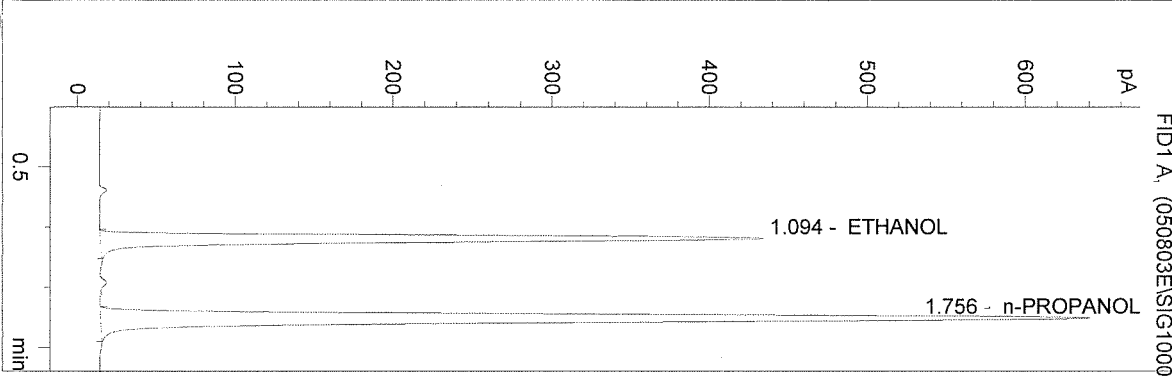
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Instrument 3

ALC1

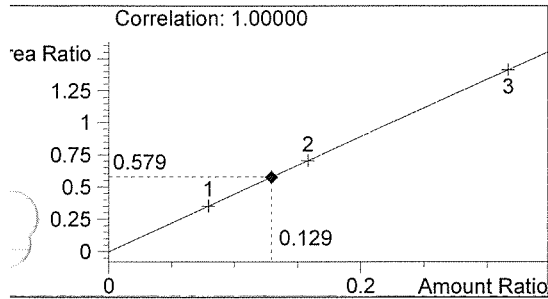
03013  
ED FORMOSO

vial # 9

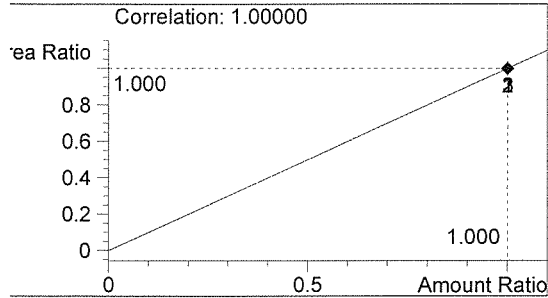


#	Compound	Area	RT
1	ETHANOL	1646	1.094
2	n-PROPANOL	2845	1.756

Totals:



ETHANOL 0.129 g/100mL

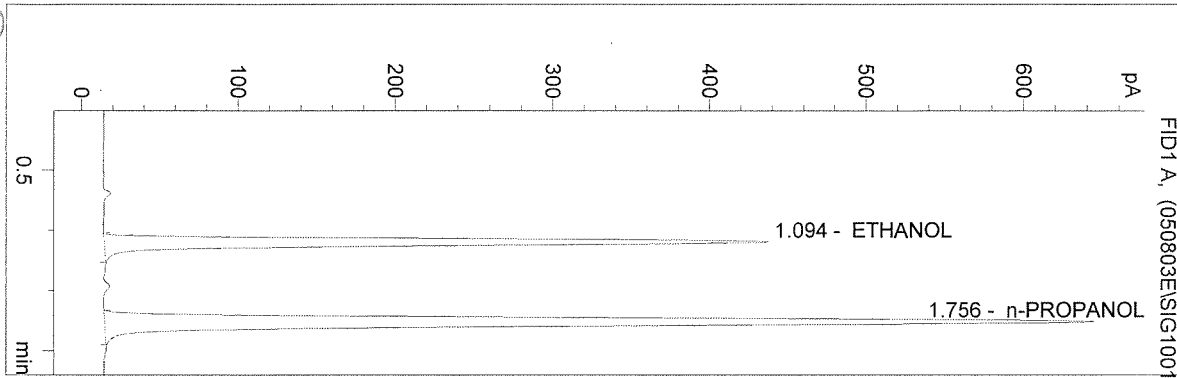


n-PROPANOL 1.000 g/100mL

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 8/03 2:03:31 PM  
 Instrument 3  
 ALC1

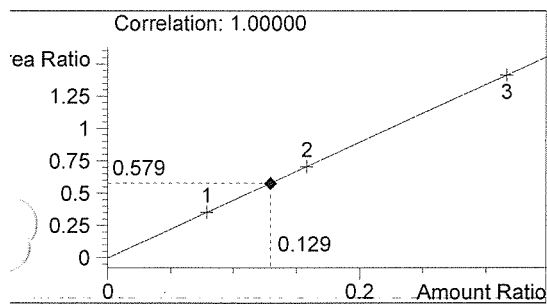
03013  
 ED FORMOSO

vial # 10

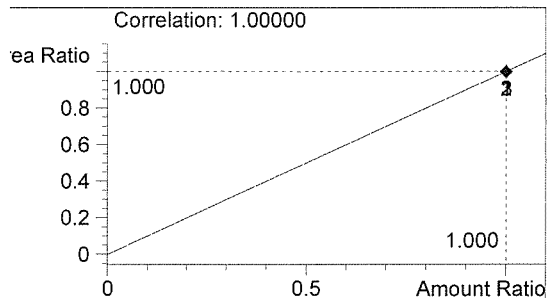


#	Compound	Area	RT
1	ETHANOL	1658	1.094
2	n-PROPANOL	2861	1.756

Totals:



ETHANOL 0.129 g/100mL

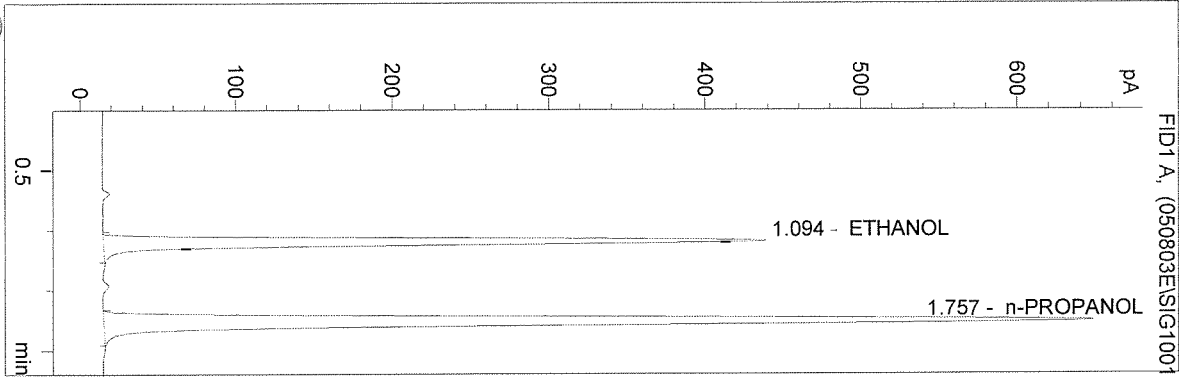


n-PROPANOL 1.000 g/100mL

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 8/03 2:06:54 PM  
 Instrument 3  
 ALC1

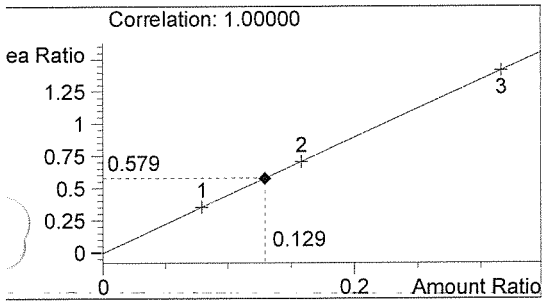
03013  
 ED FORMOSO

vial # 11

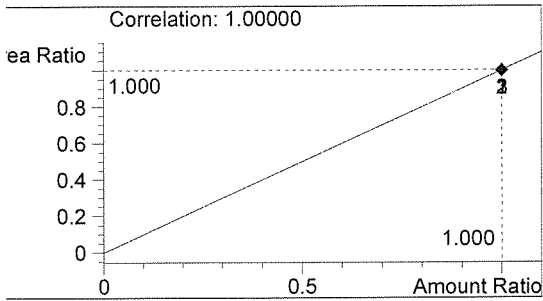


#	Compound	Area	RT
1	ETHANOL	1659	1.094
2	n-PROPANOL	2867	1.757

Totals:



ETHANOL 0.129 g/100mL



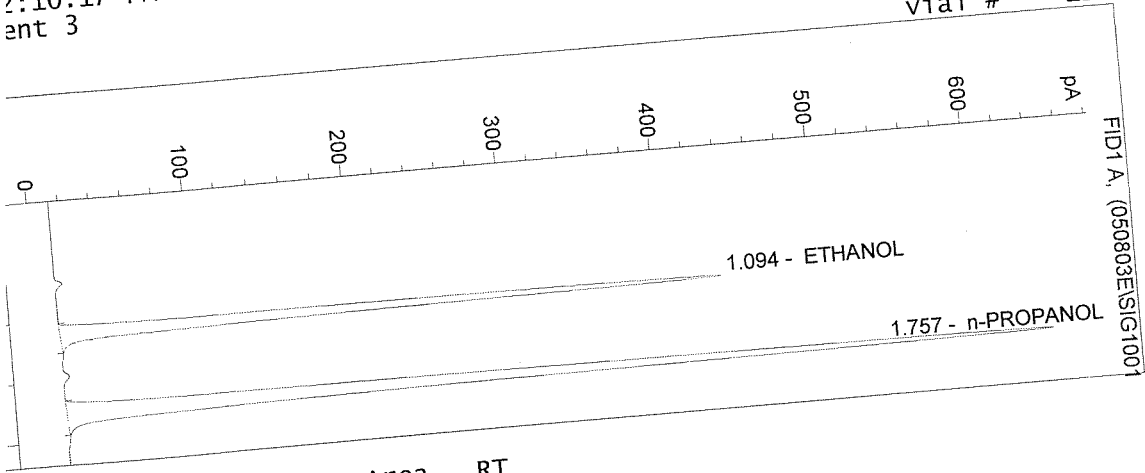
n-PROPANOL 1.000 g/100mL

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M:\1\METHODS\BLDALCO3.M  
 2:10:17 PM  
 ent 3

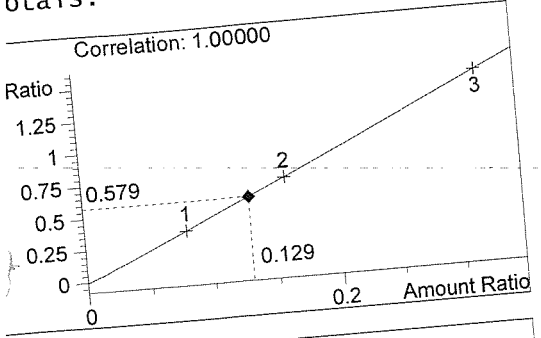
03013  
 ED FORMOSO

vial # 12

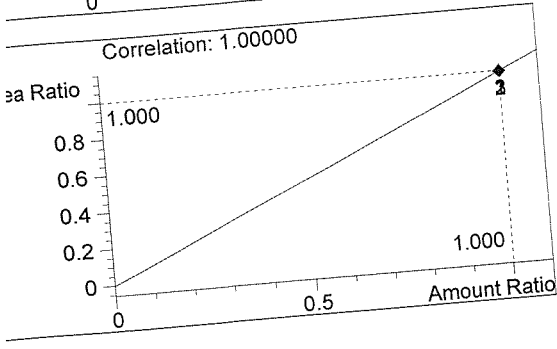


#	Compound	Area	RT
1	ETHANOL	1667	1.094
2	n-PROPANOL	2881	1.757

totals:



ETHANOL 0.129 g/100mL



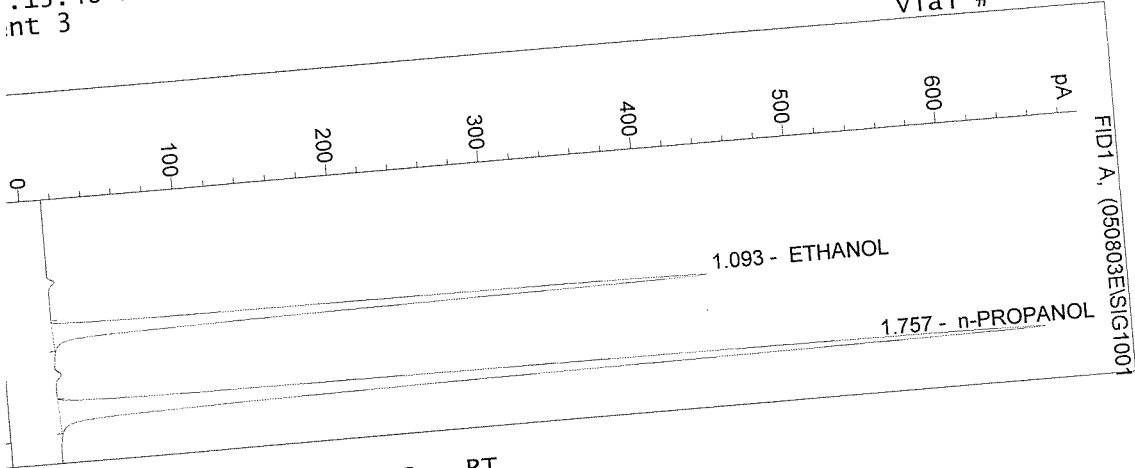
n-PROPANOL 1.000 g/100mL



03013  
ED FORMOSO

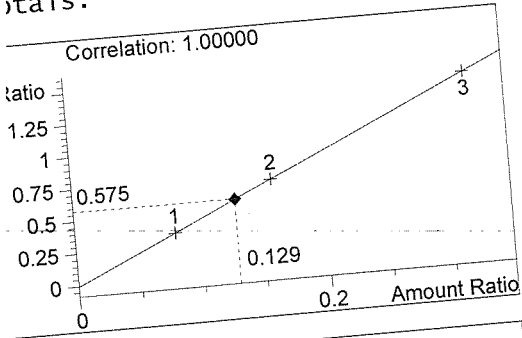
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nt 3

vial # 13

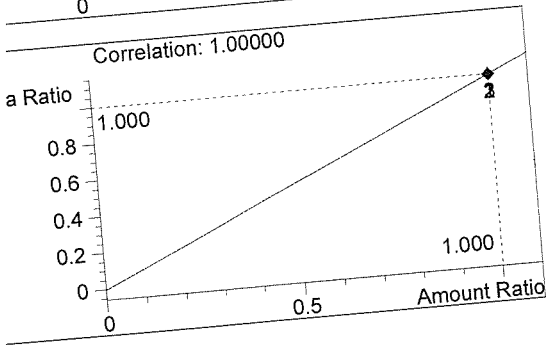


#	Compound	Area	RT
1	ETHANOL	1699	1.093
2	n-PROPANOL	2953	1.757

Results:



ETHANOL 0.129 g/100mL

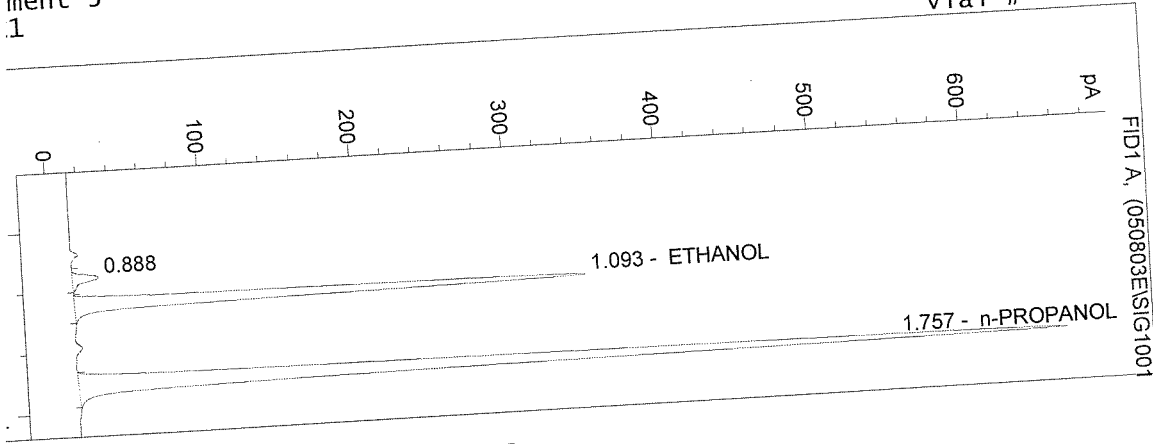


n-PROPANOL 1.000 g/100mL

HEM\1\METHODS\BLDALCO3.M  
 2:17:03 PM  
 ment 3  
 1

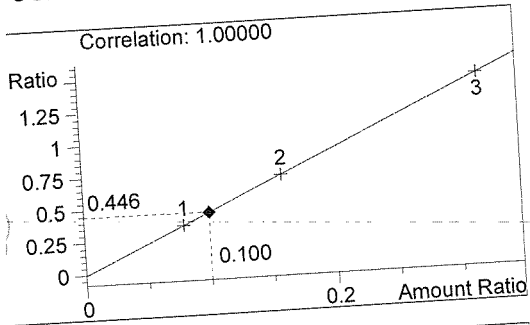
0.10 CONTROL  
 ED FORMOSO

vial # 14

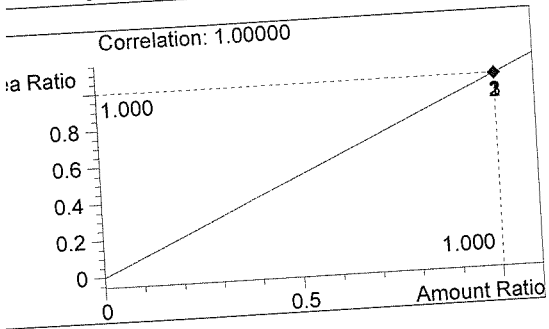


#	Compound	Area	RT
1		73	0.888
2	ETHANOL	1313	1.093
3	n-PROPANOL	2942	1.757

totals:



ETHANOL 0.100 g/100mL



n-PROPANOL 1.000 g/100mL

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	BLANK	BLDALCO3	1	Sample		
2	2	0.079 CAL	BLDALCO3	1	Calib		
3	3	0.158 CAL	BLDALCO3	1	Calib		
4	4	0.316 CAL	BLDALCO3	1	Calib		
5	5	BLANK	BLDALCO3	1	Sample		
6	6	0.04 CAP	BLDALCO3	1	Ctrl Samp		
7	7	0.20 CONTROL	BLDALCO3	1	Ctrl Samp		
8	8	BLANK	BLDALCO3	1	Sample		
9	9	03013	BLDALCO3	1	Sample		
10	10	03013	BLDALCO3	1	Sample		
11	11	03013	BLDALCO3	1	Sample		
12	12	03013	BLDALCO3	1	Sample		
13	13	03013	BLDALCO3	1	Sample		
14	14	0.10 CONTROL	BLDALCO3	1	Ctrl Samp		

Sequence Table (Back Injector):

No entries - empty table!

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

ETOH CALIBRATION

Calib. Data Modified : Thursday, May 08, 2003 1:45:25 PM  
 Calculate : Internal Standard  
 Based on : Peak Area  
 Rel. Reference Window : 0.200 %  
 Abs. Reference Window : 0.050 min  
 Rel. Non-ref. Window : 0.200 %  
 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 : Included  
 Weight : Equal  
 Recalibration Settings:  
 Average Response : Floating Average New 99%  
 Average Retention Time: Floating Average New 99%

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)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount [g/100ml]	Name
1	1.00000	n-PROPANOL

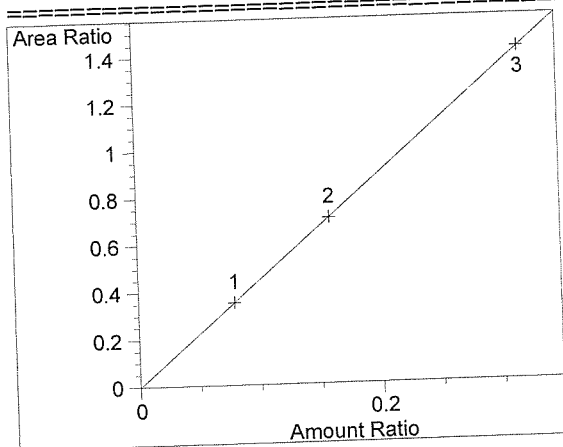
Signal 1: FID1 A,

RetTime [min]	Lvl Sig	Amount [g/100ml]	Area	Amt/Area	Ref Grp	Name
1.094	1	7.90000e-2	1042.69238	7.57654e-5	1	ETHANOL
		1.58000e-1	2096.50513	7.53635e-5		
		3.16000e-1	4226.31152	7.47697e-5		
1.756	1	1.00000	2953.88086	3.38538e-4	I1	n-PROPANOL
		1.00000	2971.26807	3.36557e-4		
		1.00000	2984.58130	3.35055e-4		

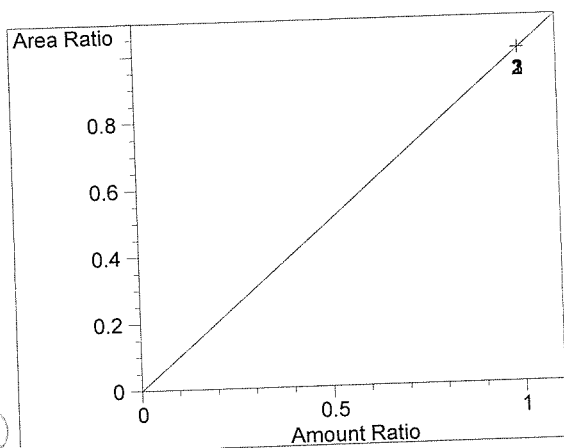
=====  
 Peak Sum Table  
 =====

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

Calibration Curves



ETHANOL at exp. RT: 1.094  
FID1 A,  
Correlation: 1.00000  
Residual Std. Dev.: 0.00141  
Formula:  $y = mx + b$   
m: 4.48139  
b: -8.94864e-4  
x: Amount Ratio  
y: Area Ratio

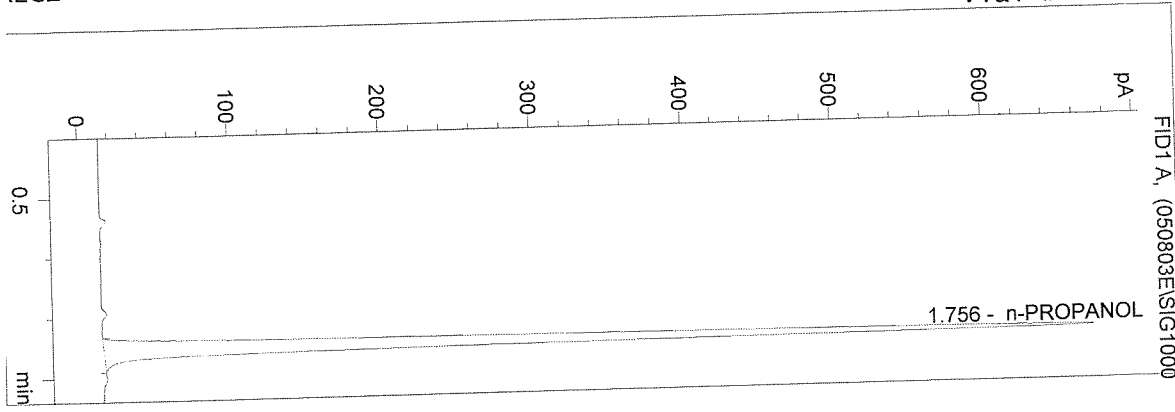


n-PROPANOL at exp. RT: 1.756  
FID1 A,  
Correlation: 1.00000  
Residual Std. Dev.: 0.00000  
Formula:  $y = mx + b$   
m: 1.00000  
b: 0.00000  
x: Amount Ratio  
y: Area Ratio

IPCHEM\1\METHODS\BLDALCO3.M  
 '03 1:33:03 PM  
 Instrument 3  
 LCL1

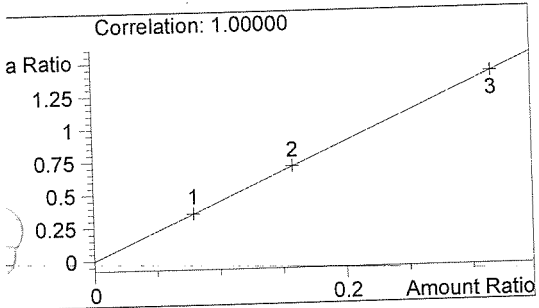
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 ED FORMOSO

vial # 1

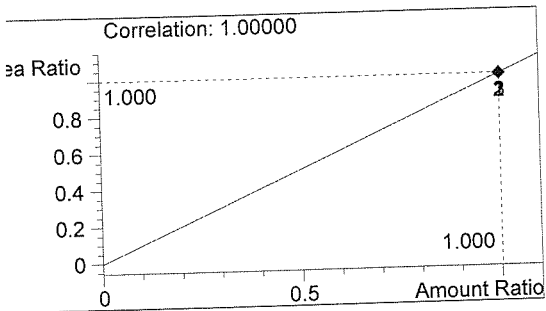


#	Compound	Area	RT
1	ETHANOL	0	0.000
2	n-PROPANOL	2946	1.756

Totals:



ETHANOL 0.000 g/100mL

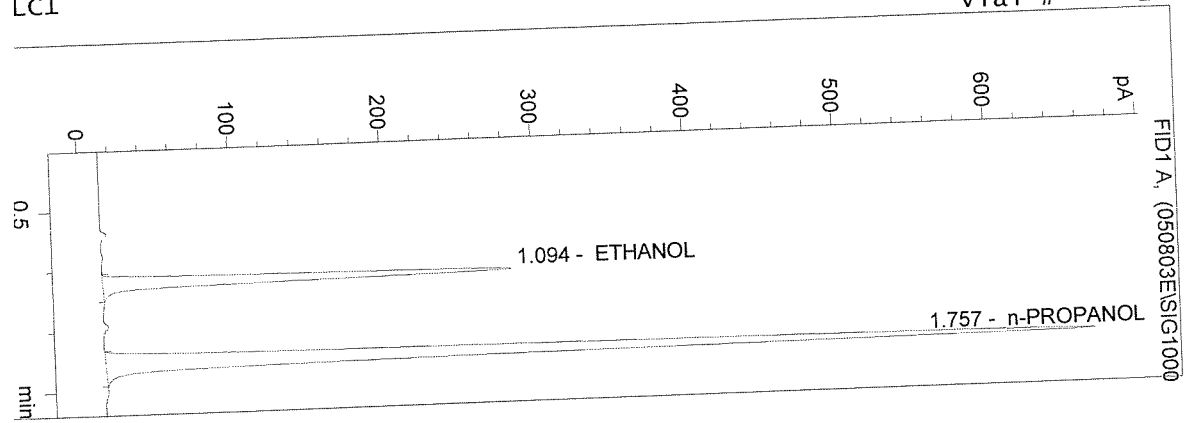


n-PROPANOL 1.000 g/100mL

\\CHEM\1\METHODS\BLDALCO3.M  
 03 1:36:26 PM  
 Experiment 3  
 LC1

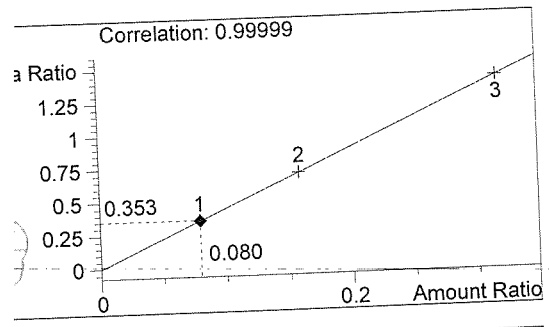
0.079 CAL  
 ED FORMOSO

vial # 2

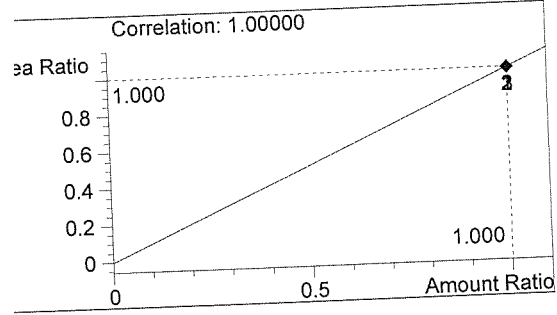


#	Compound	Area	RT
1	ETHANOL	1043	1.094
2	n-PROPANOL	2954	1.757

Totals:



ETHANOL 0.080 g/100mL

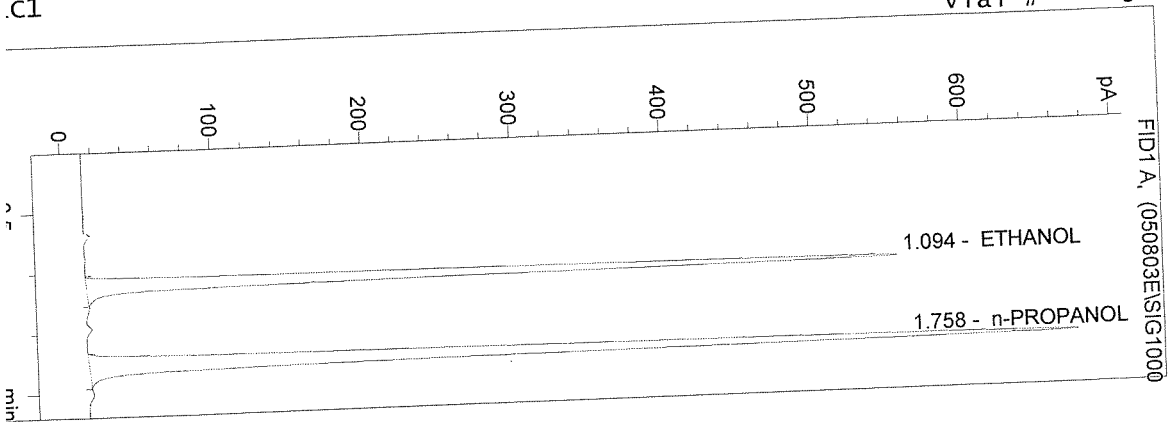


n-PROPANOL 1.000 g/100mL

CHEM\1\METHODS\BLDALCO3.M  
 3 1:39:49 PM  
 ument 3  
 .C1

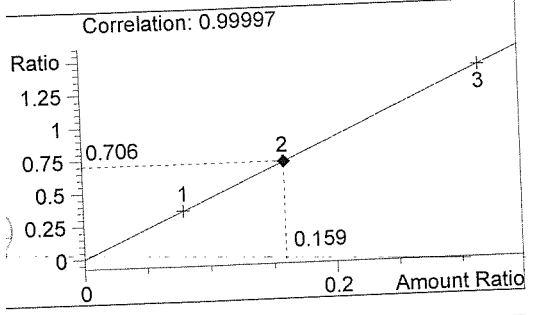
0.158 CAL  
 ED FORMOSO

vial # 3

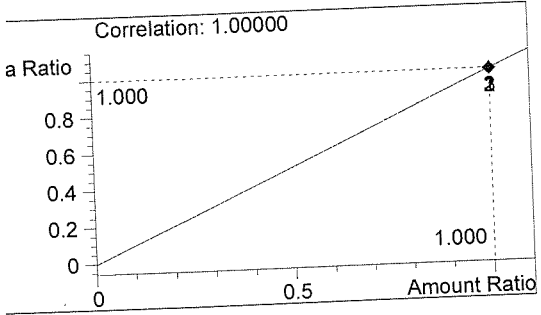


#	Compound	Area	RT
1	ETHANOL	2097	1.094
2	n-PROPANOL	2971	1.758

Totals:



ETHANOL 0.159 g/100mL



n-PROPANOL 1.000 g/100mL

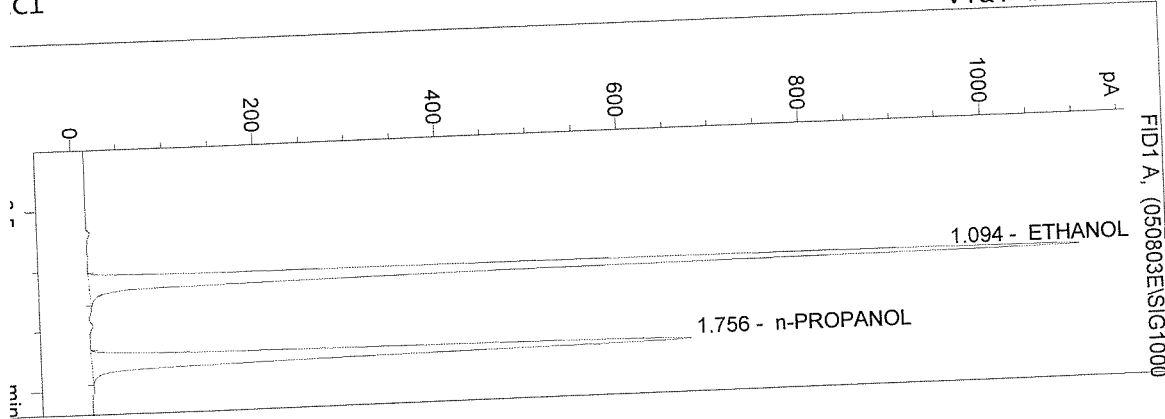


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CHEM\1\METHODS\BLDALCO3.M  
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 ument 3  
 c1

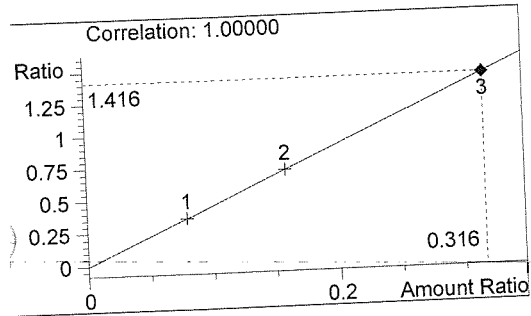
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 ED FORMOSO

vial # 4

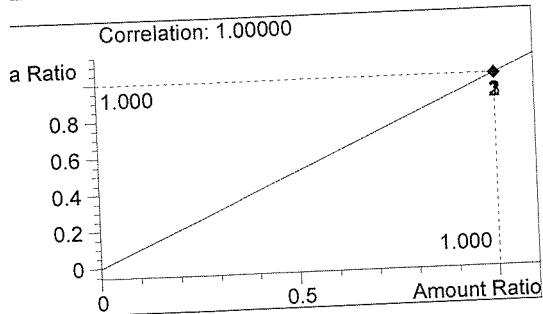


#	Compound	Area	RT
1	ETHANOL	4226	1.094
2	n-PROPANOL	2985	1.756

Totals:



ETHANOL 0.316 g/100mL

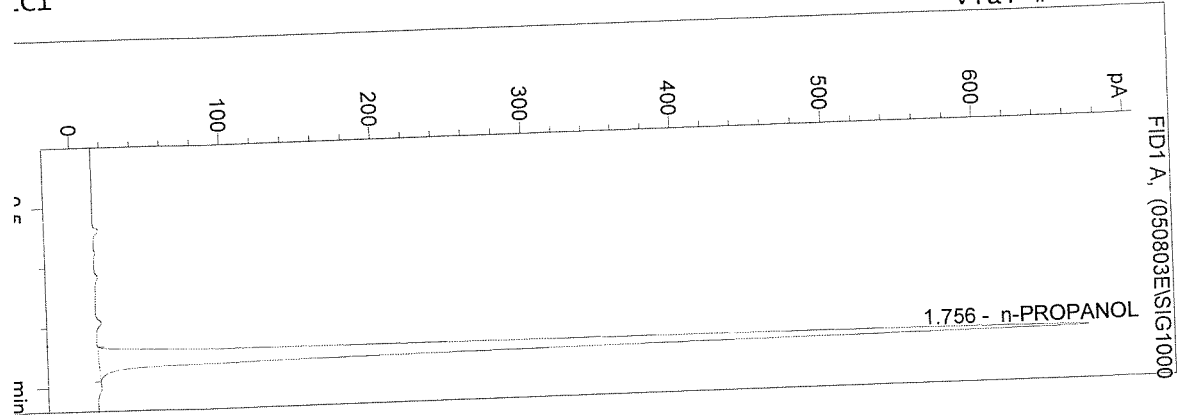


n-PROPANOL 1.000 g/100mL

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 13 1:46:35 PM  
 Document 3  
 .C1

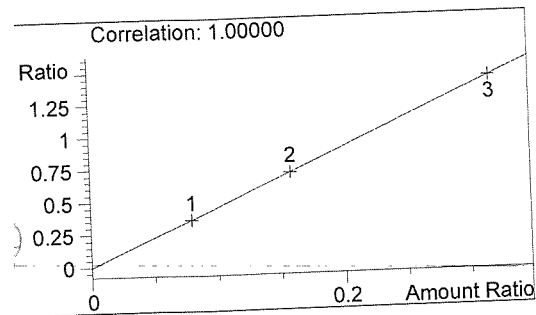
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 ED FORMOSO

vial # 5

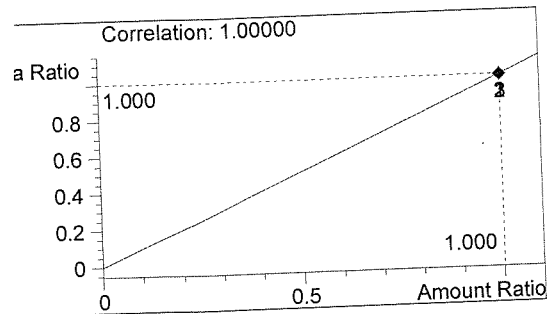


#	Compound	Area	RT
1	ETHANOL	0	0.000
2	n-PROPANOL	2952	1.756

Totals:



ETHANOL 0.000 g/100mL



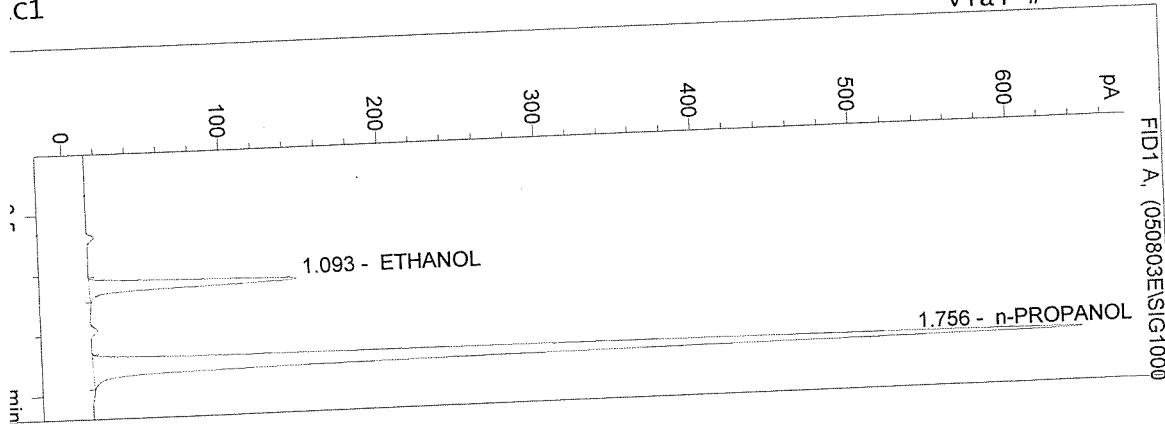
n-PROPANOL 1.000 g/100mL

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CHEM\1\METHODS\BLDALCO3.M  
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 ument 3  
 C1

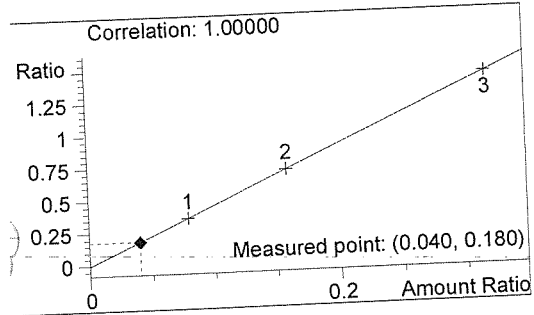
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 ED FORMOSO

vial # 6

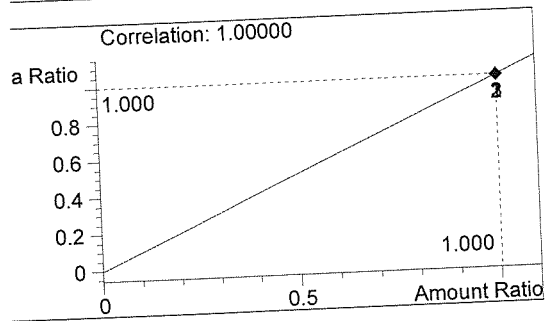


#	Compound	Area	RT
1	ETHANOL	512	1.093
2	n-PROPANOL	2846	1.756

Totals:



ETHANOL 0.040 g/100mL



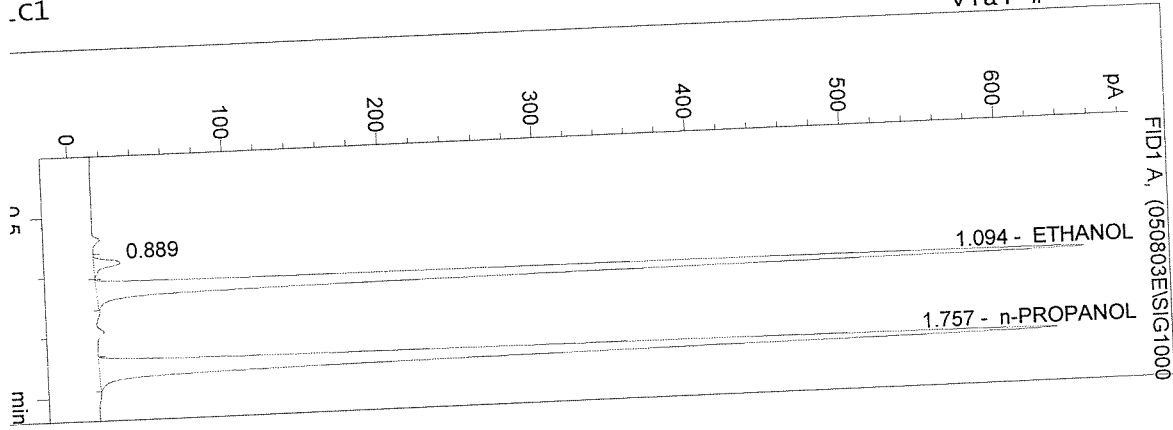
n-PROPANOL 1.000 g/100mL

WASHINGTON STATE TOXICOLOGY LABORATORY

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 13 1:53:21 PM  
 Document 3  
 .C1

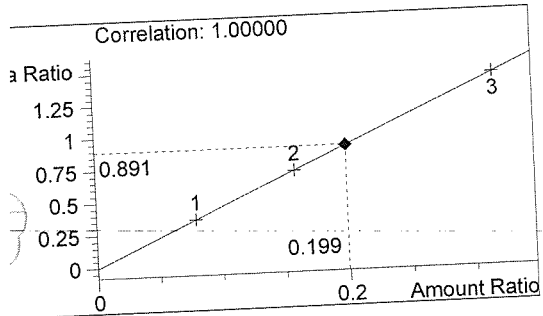
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 ED FORMOSO

vial # 7

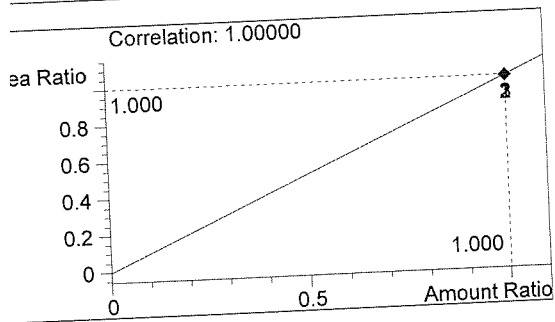


#	Compound	Area	RT
1		71	0.889
2	ETHANOL	2517	1.094
3	n-PROPANOL	2826	1.757

Totals:



ETHANOL 0.199 g/100mL



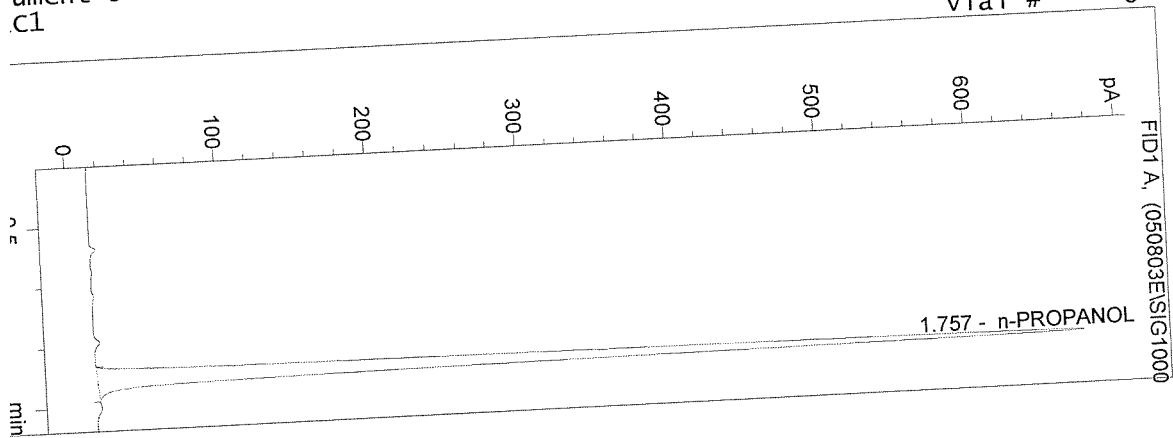
n-PROPANOL 1.000 g/100mL

WASHINGTON STATE TOXICOLOGY LABORATORY

CHEM\1\METHODS\BLDALCO3.M  
 3 1:56:45 PM  
 ument 3  
 .C1

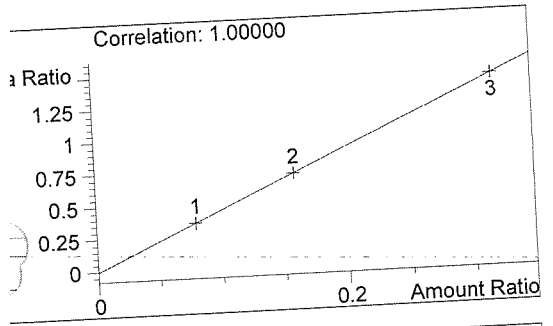
BLANK  
 ED FORMOSO

vial # 8

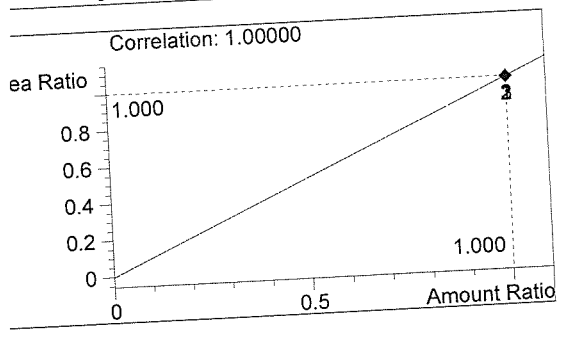


#	Compound	Area	RT
1	ETHANOL	0	0.000
2	n-PROPANOL	2995	1.757

Totals:



ETHANOL 0.000 g/100mL

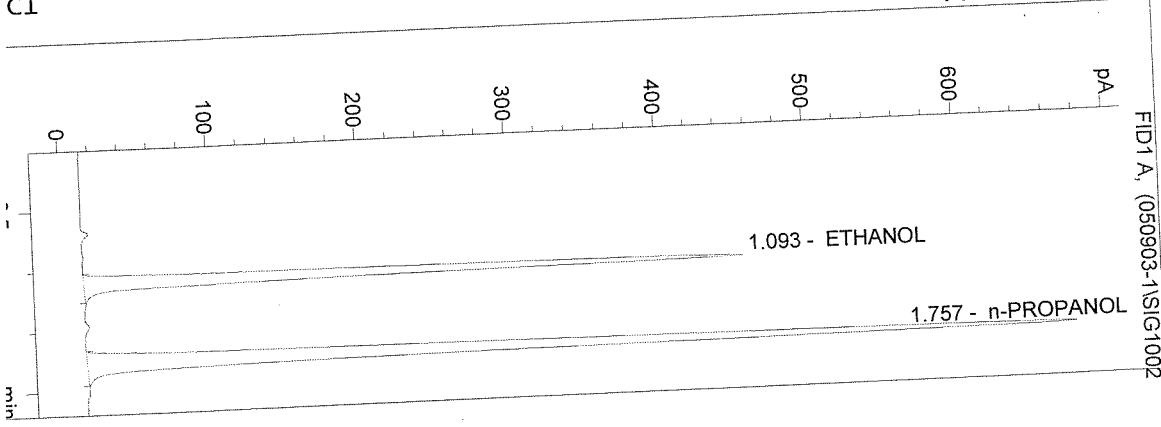


n-PROPANOL 1.000 g/100mL

CHEM\1\METHODS\BLDALCO3.M  
 3 9:46:45 AM  
 ument 3  
 C1

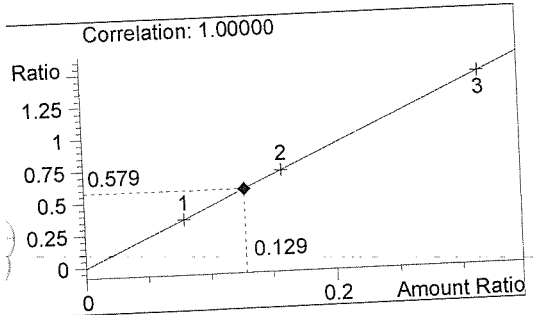
03013  
 MARY WILSON

vial # 22

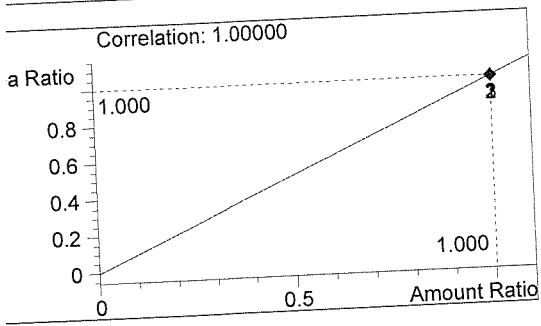


#	Compound	Area	RT
1	ETHANOL	1760	1.093
2	n-PROPANOL	3039	1.757

Totals:



ETHANOL 0.129 g/100mL

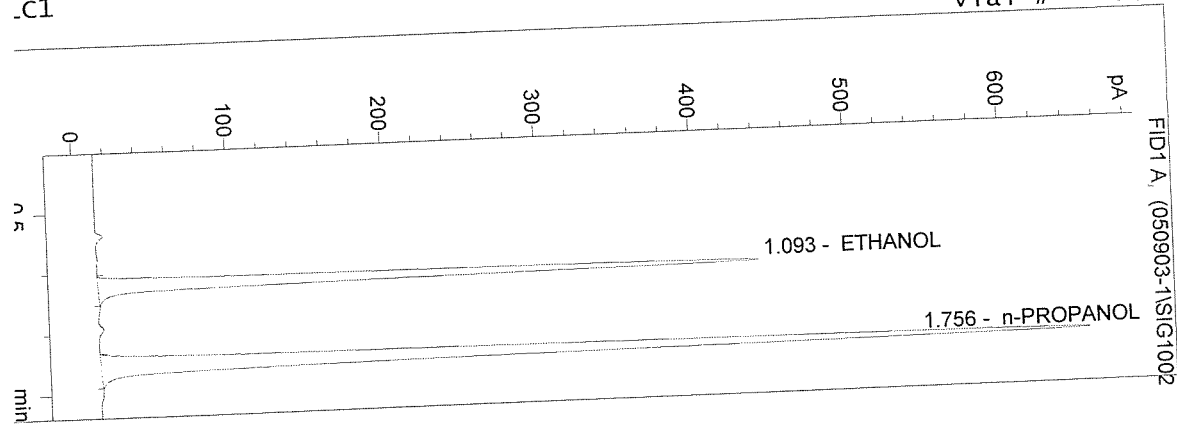


n-PROPANOL 1.000 g/100mL

'CHEM\1\METHODS\BLDALCO3.M  
 13 9:50:08 AM  
 Document 3  
 .C1

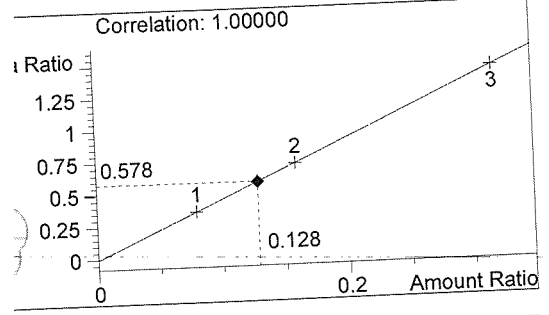
03013  
 MARY WILSON

vial # 23

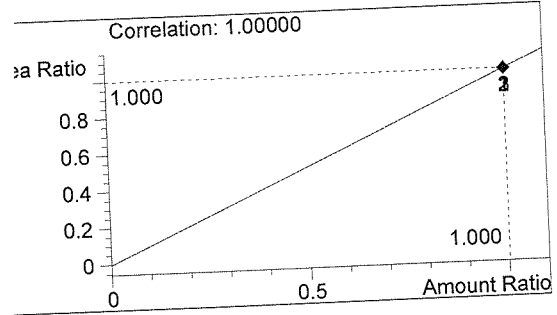


#	Compound	Area	RT
1	ETHANOL	1679	1.093
2	n-PROPANOL	2904	1.756

Totals:



ETHANOL 0.128 g/100mL

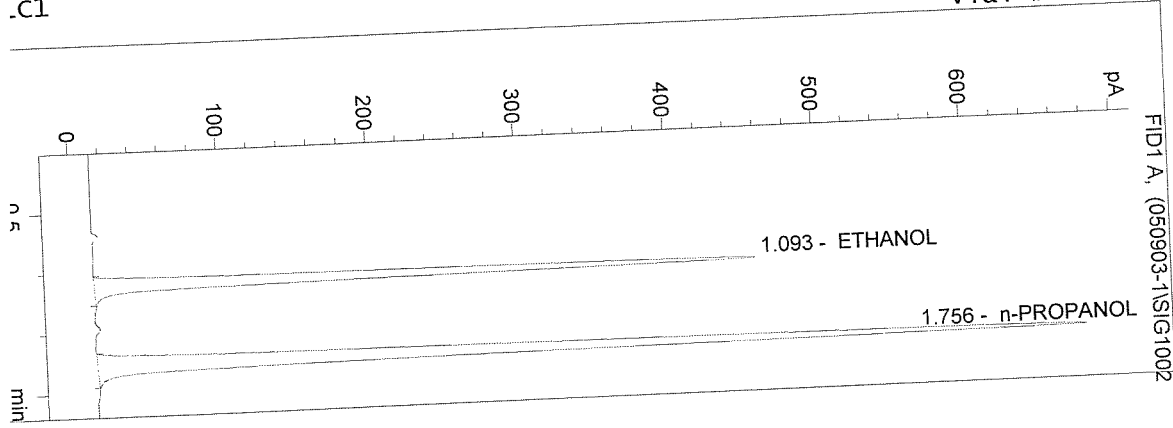


n-PROPANOL 1.000 g/100mL

CHEM\1\METHODS\BLDALCO3.M  
 13 9:53:32 AM  
 Document 3  
 .C1

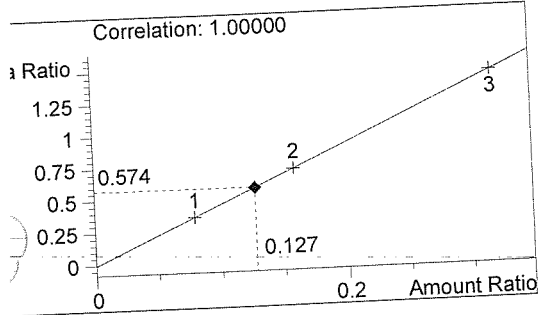
03013  
 MARY WILSON

vial # 24

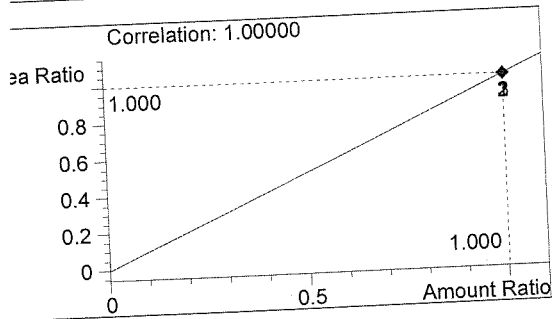


#	Compound	Area	RT
1	ETHANOL	1715	1.093
2	n-PROPANOL	2990	1.756

Totals:



ETHANOL 0.127 g/100mL



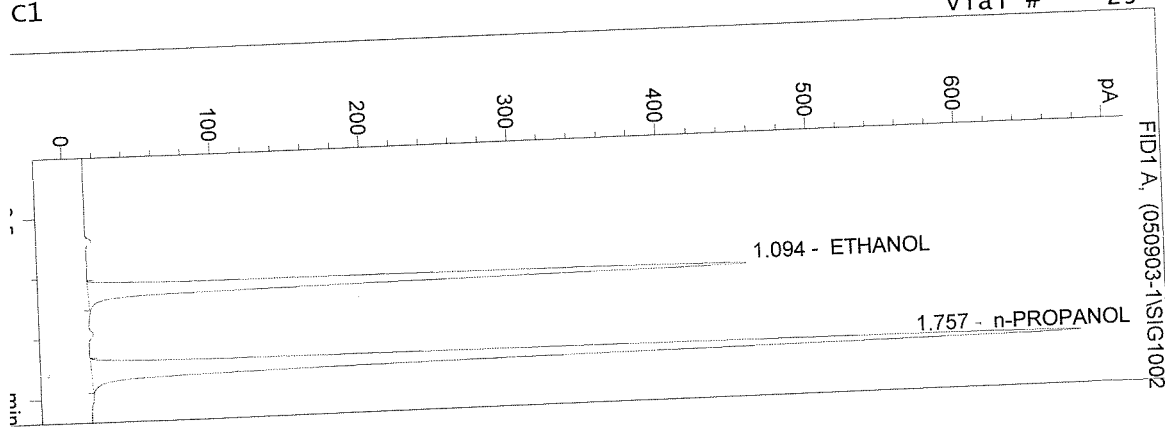
n-PROPANOL 1.000 g/100mL



CHEM\1\METHODS\BLDALCO3.M  
 3 9:56:59 AM  
 ument 3  
 C1

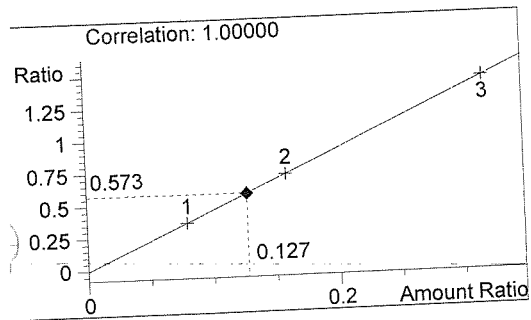
03013  
 MARY WILSON

vial # 25

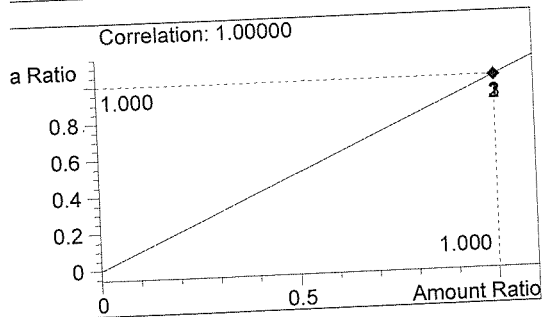


#	Compound	Area	RT
1	ETHANOL	1723	1.094
2	n-PROPANOL	3005	1.757

Totals:



ETHANOL 0.127 g/100mL



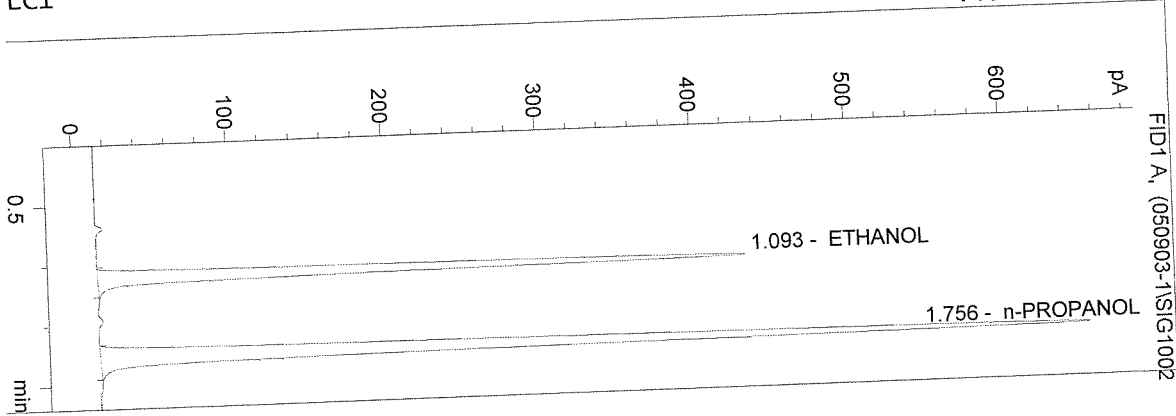
n-PROPANOL 1.000 g/100mL

3

PCHEM\1\METHODS\BLDALCO3.M  
 03 10:00:23 AM  
 rument 3  
 LC1

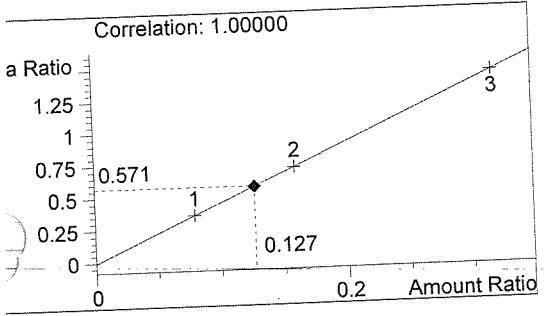
03013  
 MARY WILSON

vial # 26

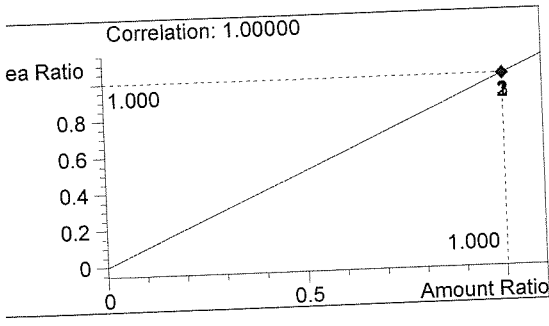


#	Compound	Area	RT
1	ETHANOL	1681	1.093
2	n-PROPANOL	2944	1.756

Totals:



ETHANOL 0.127 g/100mL

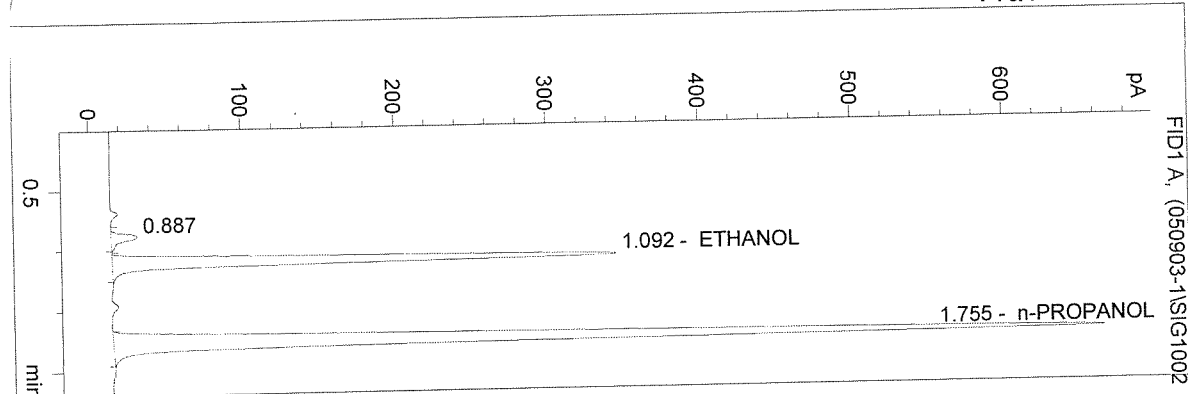


n-PROPANOL 1.000 g/100mL

HPCHEM\1\METHODS\BLDALCO3.M  
 /03 10:03:46 AM  
 trument 3  
 ALC1

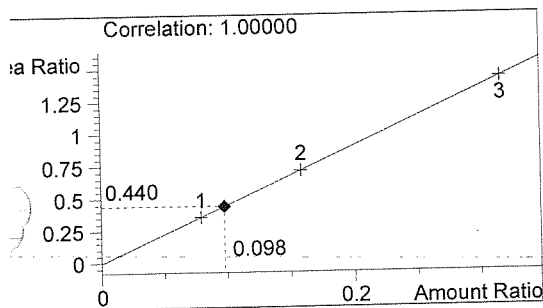
0.10 CTL  
 MARY WILSON

vial # 27

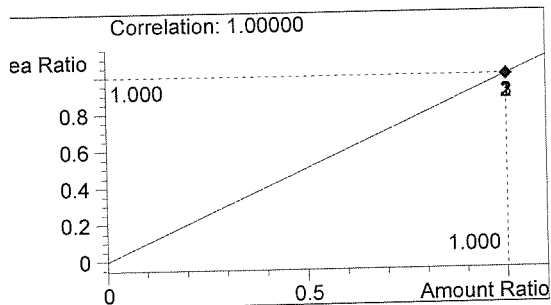


#	Compound	Area	RT
1		73	0.887
2	ETHANOL	1308	1.092
3	n-PROPANOL	2973	1.755

Totals:



ETHANOL 0.098 g/100mL

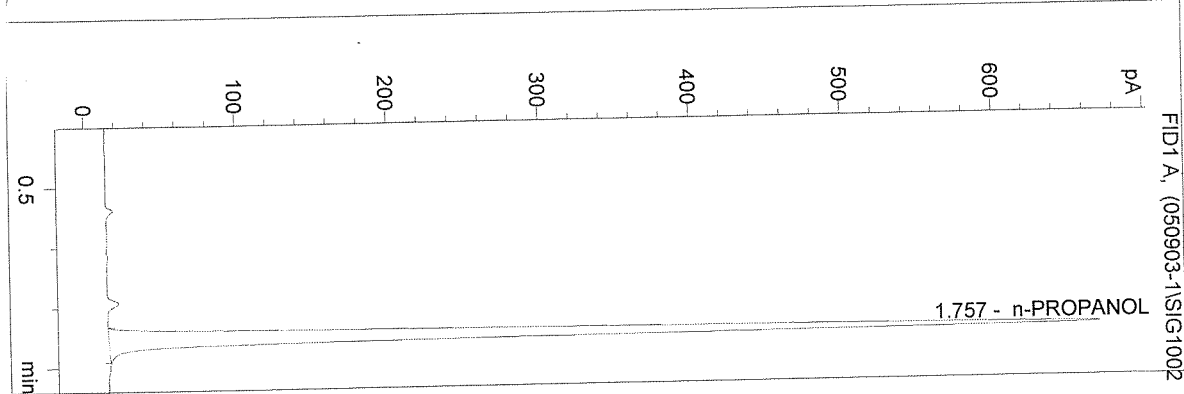


n-PROPANOL 1.000 g/100mL

HPCHEM\1\METHODS\BLDALCO3.M  
 /03 10:07:09 AM  
 trument 3  
 ALC1

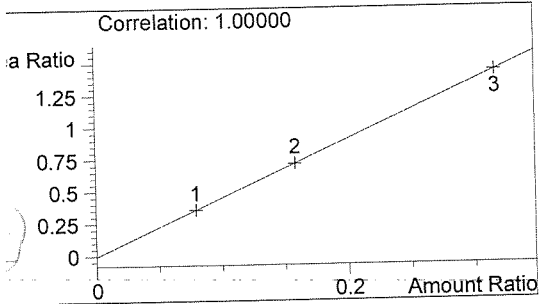
BLANK  
 MARY WILSON

vial # 28

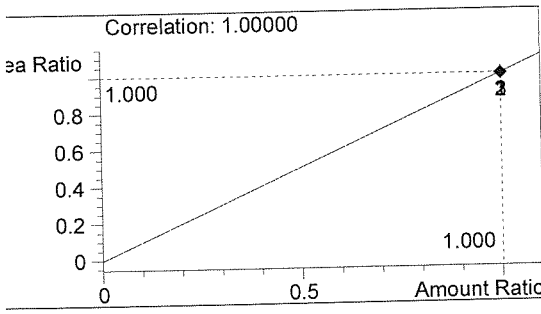


#	Compound	Area	RT
1	ETHANOL	0	0.000
2	n-PROPANOL	2960	1.757

Totals:



ETHANOL 0.000 g/100mL

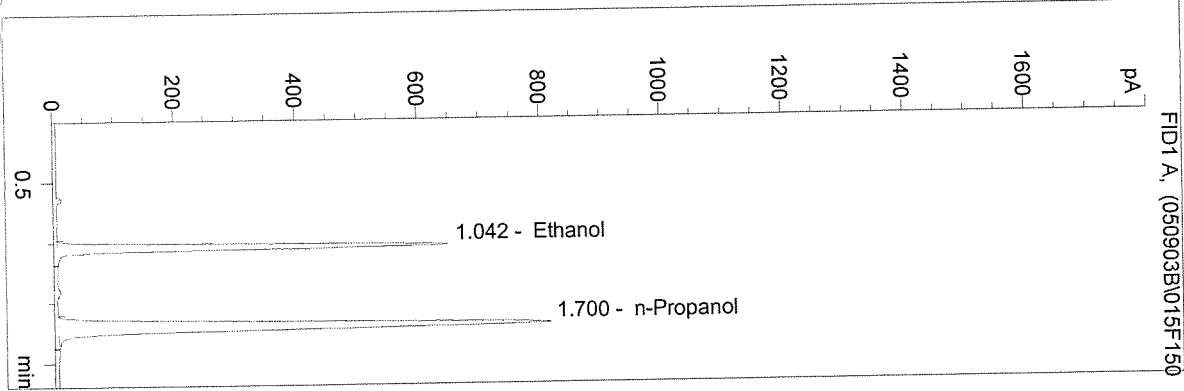


n-PROPANOL 1.000 g/100mL

HPCHEM\1\METHODS\BLDALCO.M  
 1/03 6:10:30 PM  
 Instrument 1  
 ALC1

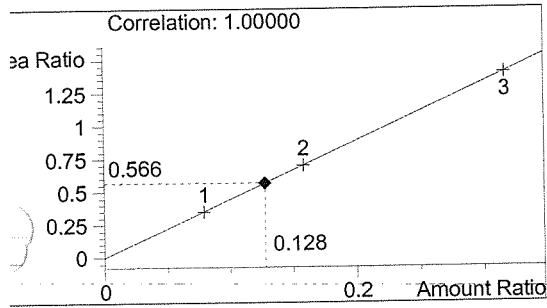
03013-1 QA  
 N Nuwayhid, PhD

vial # 15

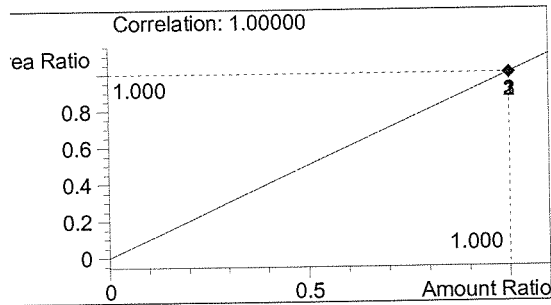


#	Compound	Area	RT
1	Ethanol	1926	1.042
2	n-Propanol	3403	1.700

Totals:



Ethanol 0.128 g/100ml

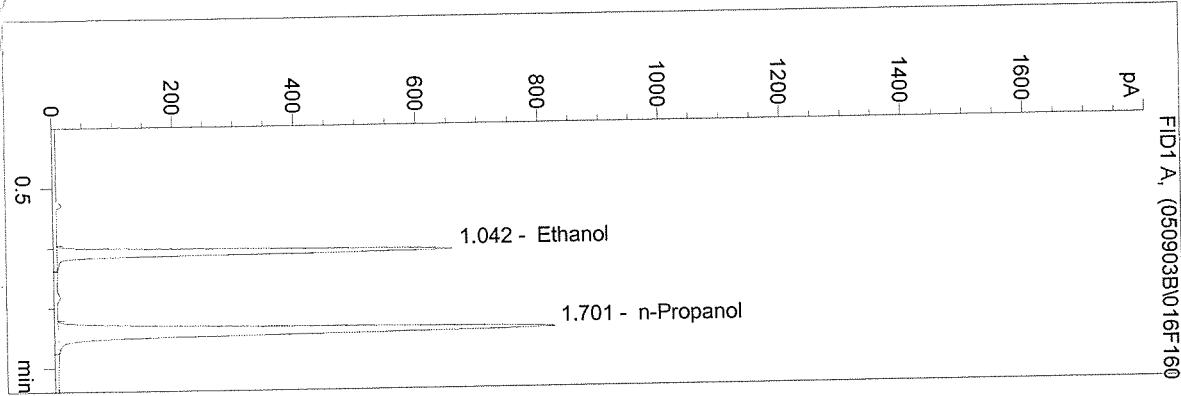


n-Propanol 1.000 g/100ml

HPCHEM\1\METHODS\BLDALCO.M  
 1/03 6:13:31 PM  
 Instrument 1  
 ALC1

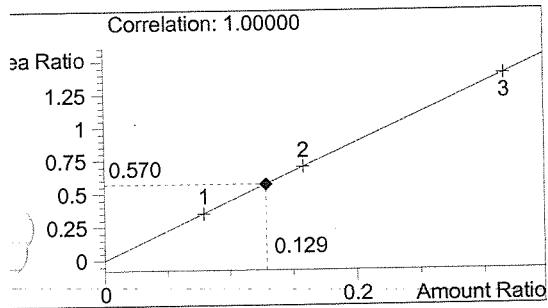
03013-2A  
 N Nuwayhid, PhD

vial # 16

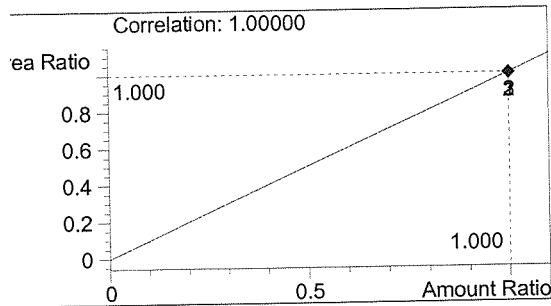


#	Compound	Area	RT
1	Ethanol	1958	1.042
2	n-Propanol	3438	1.701

Totals:



Ethanol 0.129 g/100ml

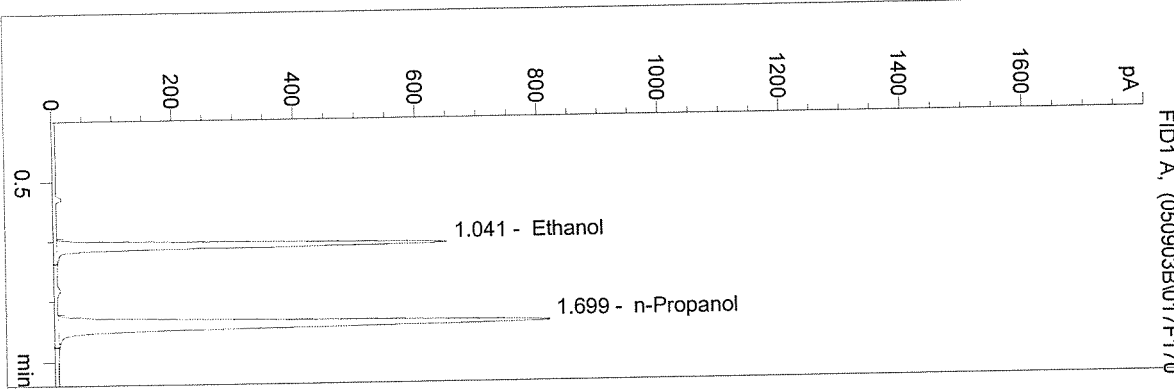


n-Propanol 1.000 g/100ml

HPCHEM\1\METHODS\BLDALCO.M  
 1/03 6:16:58 PM  
 Instrument 1  
 ALC1

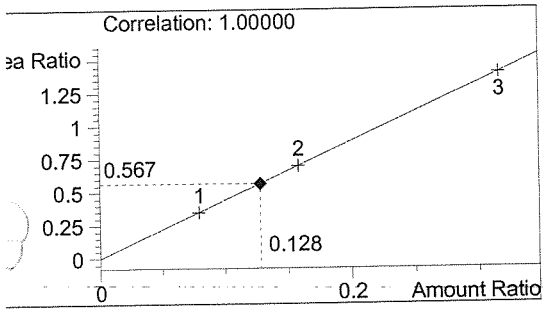
03013-3QA  
 N Nuwayhid, PhD

vial # 17

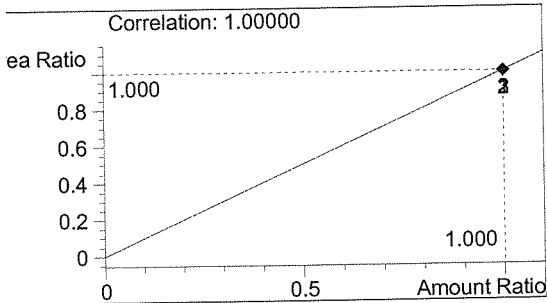


#	Compound	Area	RT
1	Ethanol	1935	1.041
2	n-Propanol	3414	1.699

Totals:



Ethanol 0.128 g/100ml

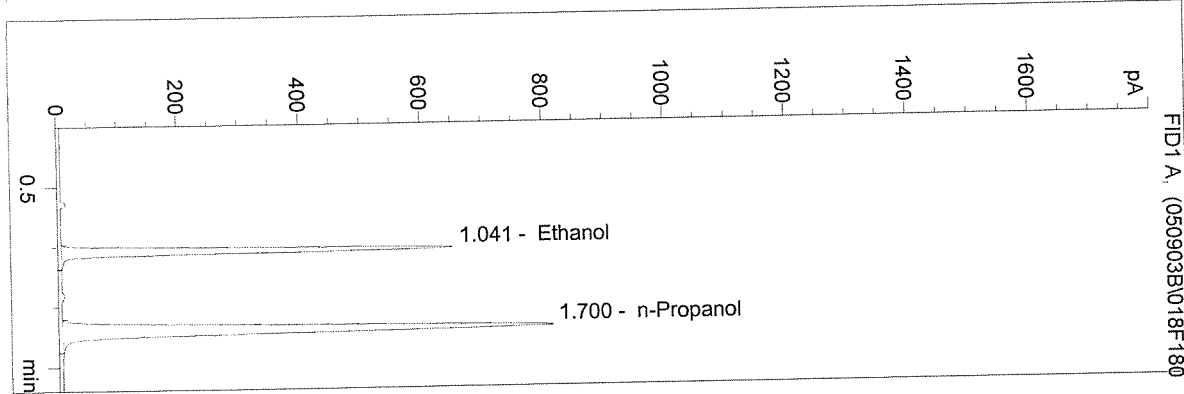


n-Propanol 1.000 g/100ml

HPCHEM\1\METHODS\BLDALCO.M  
 /03 6:19:59 PM  
 trument 1  
 ALC1

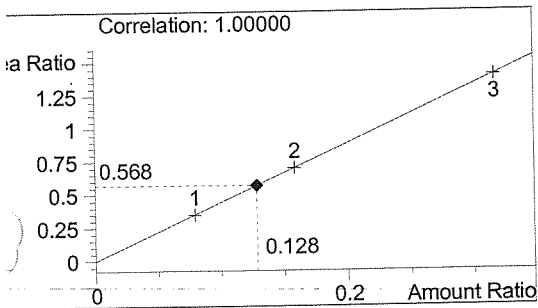
03013-4QA  
 N Nuwayhid, PhD

vial # 18

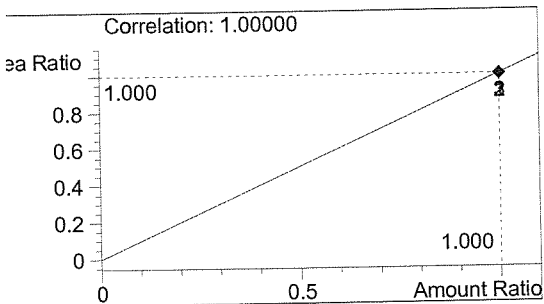


#	Compound	Area	RT
1	Ethanol	1926	1.041
2	n-Propanol	3390	1.700

Totals:



Ethanol 0.128 g/100ml



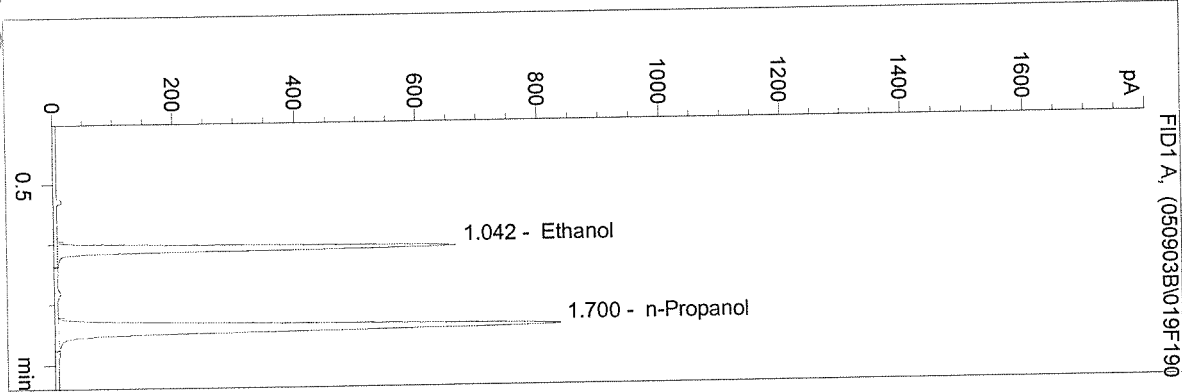
n-Propanol 1.000 g/100ml



HPCHEM\1\METHODS\BLDALCO.M  
 10/03 6:23:01 PM  
 Instrument 1  
 VIAL1

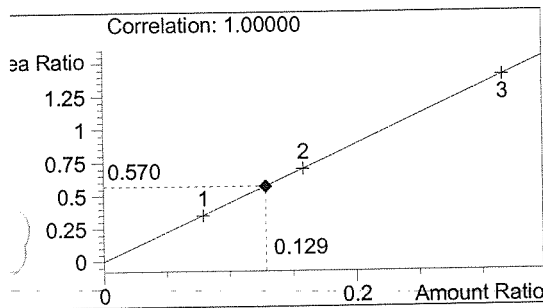
03013-5QA  
 N Nuwayhid, PhD

vial # 19

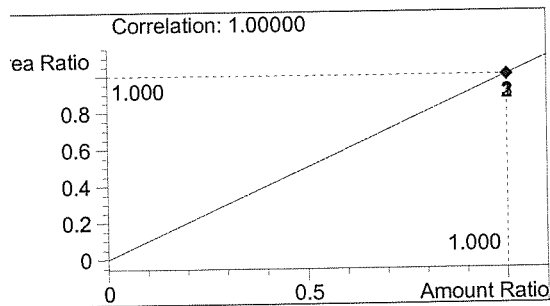


#	Compound	Area	RT
1	Ethanol	1985	1.042
2	n-Propanol	3481	1.700

Totals:



Ethanol 0.129 g/100ml

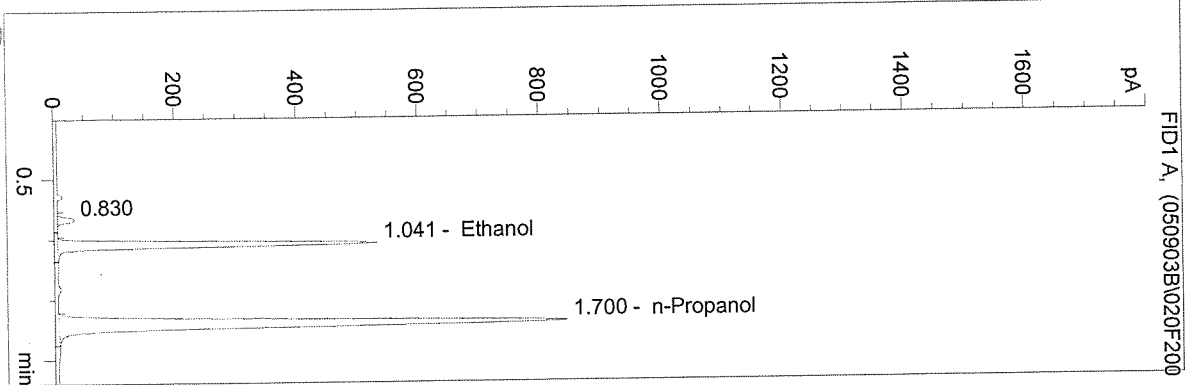


n-Propanol 1.000 g/100ml

HPCHEM\1\METHODS\BLDALCO.M  
 03/03 6:26:03 PM  
 Instrument 1  
 ALC1

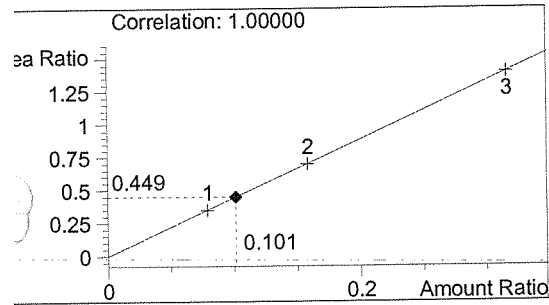
0.100 CTRL  
 N Nuwayhid, PhD

vial # 20

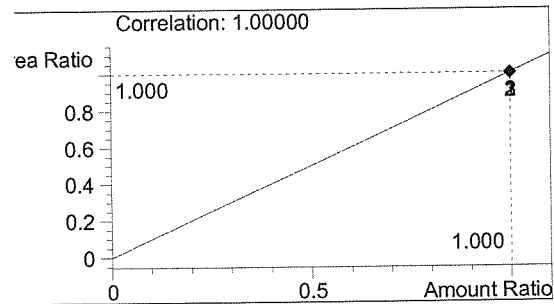


#	Compound	Area	RT
1		84	0.830
2	Ethanol	1581	1.041
3	n-Propanol	3520	1.700

Totals:



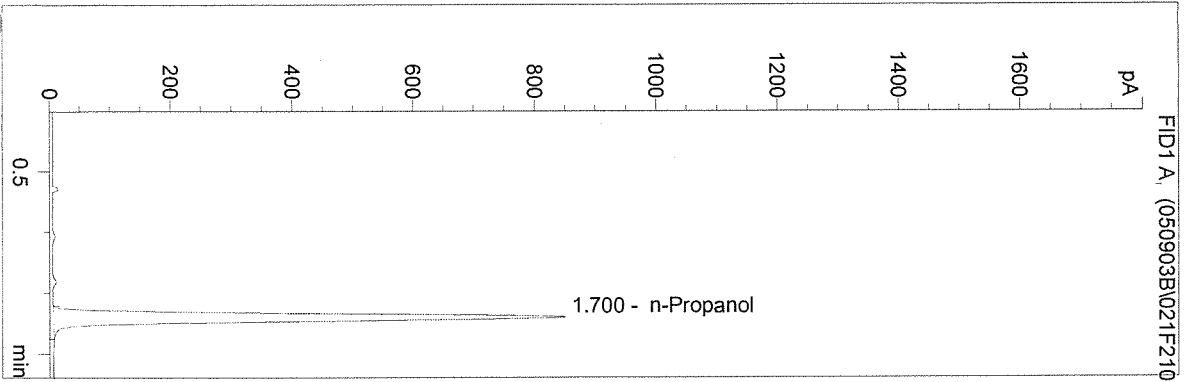
Ethanol 0.101 g/100ml



n-Propanol 1.000 g/100ml

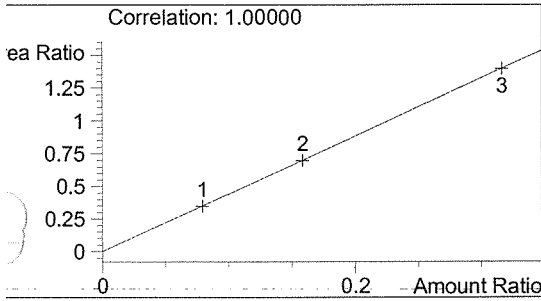
\HPCHEM\1\METHODS\BLDALCO.M  
 '9/03 6:29:27 PM  
 Instrument 1  
 ALC1

Blank  
 N Nuwayhid, PhD  
 vial # 21

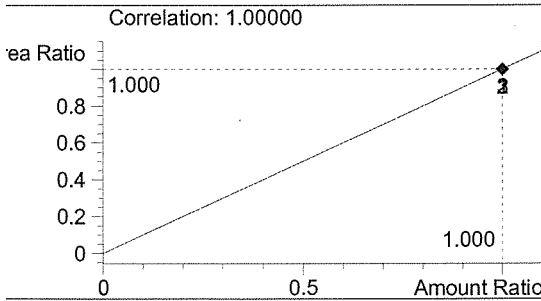


#	Compound	Area	RT
1	Ethanol	0	0.000
2	n-Propanol	3539	1.700

Totals:



Ethanol 0.000 g/100ml



n-Propanol 1.000 g/100ml