VERMONT FORENSIC LABORATORY

45 State Drive
PO BOX 47
WATERBURY, VERMONT 05676-1300
TEL: 802-244-8788
FAX: 802-241-5557
http://vfl.vermont.gov

Certificate of Analysis of DataMaster External Standard Solution

On 11/12/2015, an ethanol solution was prepared by Jeffery Dukette for use as a DataMaster external standard solution. The solution was prepared per standard laboratory practice and assigned the lot number 15-24-100 and an expiration date of 11/12/2016.

On 11/16/2015 and 11/17/2015, the solution was analyzed against calibration version VFL11162015.cal and VFL11172015.cal. Analysis of the solution was performed using headspace gas chromatography. The instrument was calibrated prior to analyses. It was found to have met required quality assurance performance specifications and was operating properly. Quality checks throughout the analytical process demonstrated that the instrument continued to operate properly.

This solution is certified as presenting 0.099 g/210 L simulated breath ethanol concentration and approved for use as a DataMaster external standard solution.

Dated at Waterbury, Vermont this 23rd day of November, 2015.

David Patlak

VERMONT FORENSIC LABORATORY

SIMULATOR SOLUTION REVIEW CHECKLIST

SOLUTION TYPE AND VOLUME: 0.100 EXTERNAL STANDARD, 20L

LOT NUMBER#: 15-24-100 **ANALYST:** DS

TECHNICAL REVIEWER: [illegible] **DATE:** 11/23/15

- ☑ QC done and complete?
- ☑ Pertinent standard lot numbers listed?
- ☑ Data package complete?
- ☑ Transcribed data and calculations verified?
- ☑ Calibration and control results all within ± 10% (± 20% for Std A) of the known values?
- ☑ Calibration line correlation factor at least 0.99xx?
- ☑ Average error for components of the calibration line less than 10%?
- ☑ Timing mix chromatogram demonstrates appropriate identification of components and separation from ethanol?
- ☑ Surrogate compound concentrations all within 0.900 to 1.100 range, inclusive?
- ☑ Statistical means of the continuing calibration check sample duplicate analysis all within +/- 10% of the known value?
- ☑ Calculated average within acceptable range of the target concentration for specific solution type?
- ☑ All individual readings within 3 standard deviations of the average for each run and for the total average?
- ☑ RPD <10%?

Comments: Additional samples on 1st run prepared within 24 hours of calibration. [illegible] 11/23/15

ADMINISTRATIVE REVIEWER: [illegible] **DATE:** 11/23/15

- ☑ Are all pages numbered and initialed on the Examination Documents?
- ☑ Solution lot number written on all pages?
- ☑ Is the Reagent Preparation Log filled out properly?
- ☑ Is the Certificate of Analysis filled out properly?
- ☑ Has a label sheet been created, and is it correct?

Comments:

Check Mark or X = pass, NA= Not Applicable

DataMaster External Standard Solution
Lot # 15-24-100 EtOHaq Conc: 0.099
Range: 0.094 - 0.104
Preparation Date: 11/12/2015 Expires: 11/12/2016

OPENED:

DataMaster External Standard Solution
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Preparation Date: 11/12/2015 Expires: 11/12/2016

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OPENED:

VERMONT FORENSIC LABORATORY
Simulator Solution Worksheet

0.100 External Standard Solution 20L
Lot # 15-24-100
Prepared 11/12/2015 by JSD
Exp 11/12/2016

DJP Cal VFL11162015.cal
JSD/DJP Vials
Analyzed on 11/16/2015

0.0988	JSD
0.0977	
0.1000	
0.0987	
0.0991	
0.0980	
0.1001	
0.0983	DJP
0.0973	
0.0994	
0.0972	
0.0996	
0.0979	
0.0995	

Ave. =	0.0987
Std Dev. =	0.0010
Min. =	0.0972
Max. =	0.1001

AQ QC Manf.	Cerilliant
AQ QC Lot #	FN09051304
Cal Std A Lot #	FN01131401
Cal Std B Lot #	FN08101401
Cal Std C Lot #	FN05211402
Cal Std D Lot #	FN12011401
Cal Std E Lot #	FN11191402
Int Std Lot #	IS-09292015
TMX Lot #	TMX-08142015
Bulk Lot #	BL-01162015

DJP Cal VFL11172015.cal
JSD/DJP Vials
Analyzed on 11/17/2015

0.1001	JSD
0.0986	
0.1002	
0.0978	
0.0997	
0.0980	
0.1003	
0.1010	DJP
0.0983	
0.1001	
0.0980	
0.1010	
0.0992	
0.1004	

Ave. =	0.0995
Std Dev. =	0.0011
Min. =	0.0978
Max. =	0.1010

AQ QC Manf.	Cerilliant
AQ QC Lot #	FN09051304
Cal Std A Lot #	FN01131401
Cal Std B Lot #	FN08101401
Cal Std C Lot #	FN05211402
Cal Std D Lot #	FN12011401
Cal Std E Lot #	FN11191402
Int Std Lot #	IS-09292015
TMX Lot #	TMX-08142015
Bulk Lot #	BL-01162015

Total Values from Both Runs

Average	**Mean**
0.0988	0.0972
0.0977	0.0973
0.1000	0.0977
0.0987	0.0978
0.0991	0.0979
0.0980	0.0980
0.1001	
0.0983	
0.0973	0.0983
0.0994	
0.0972	0.0986
0.0996	0.0987
0.0979	0.0988
0.0995	0.0991
0.1001	0.0992
0.0986	0.0994
0.1002	0.0995
0.0978	0.0996
0.0997	0.0997
0.0980	0.1000
0.1003	0.1001
0.1010	
0.0983	
0.1001	0.1002
0.0980	0.1003
0.1010	0.1004
0.0992	0.1010
0.1004	

Ave. =	0.0991
Avg Std Dev. =	0.0011
Mean =	0.0990
Mean Std Dev. =	0.0011
Min. =	0.0972
Max =	0.1010
RPD =	3.84%

11/18/15

File Name = C:\Alcohol Data\VFL11162015\VFL11162015.SEQ
Version = 3
File Date = 11/17/2015 10:13:29 AM

Entry #	Raw File Name	Method File Name	Sample Name	Sample Wt.	Int. Std. Amount
1	VFL11162015.0001.raw	Blood Alc temp VFL.MET	BLANK	1.00	1.00
2	VFL11162015.0002.raw	Blood Alc temp VFL.MET	TMX	1.00	1.00
3	VFL11162015.0003.raw	Blood Alc temp VFL.MET	STD A	1.00	1.00
4	VFL11162015.0004.raw	Blood Alc temp VFL.MET	STD B	1.00	1.00
5	VFL11162015.0005.raw	Blood Alc temp VFL.MET	STD C	1.00	1.00
6	VFL11162015.0006.raw	Blood Alc temp VFL.MET	STD D	1.00	1.00
7	VFL11162015.0007.raw	Blood Alc temp VFL.MET	STD E	1.00	1.00
8	VFL11162015.0008.raw	Blood Alc temp VFL.MET	AQ	1.00	1.00
9	VFL11162015.0009.raw	Blood Alc temp VFL.MET	AQ	1.00	1.00
10	VFL11162015.0010.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
11	VFL11162015.0011.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
12	VFL11162015.0012.raw	simsoln.met	100 DP	1.00	1.00
13	VFL11162015.0013.raw	simsoln.met	100 DP	1.00	1.00
14	VFL11162015.0014.raw	simsoln.met	100 DP	1.00	1.00
15	VFL11162015.0015.raw	simsoln.met	100 DP	1.00	1.00
16	VFL11162015.0016.raw	simsoln.met	100 DP	1.00	1.00
17	VFL11162015.0017.raw	simsoln.met	100 DP	1.00	1.00
18	VFL11162015.0018.raw	simsoln.met	100 DP	1.00	1.00
19	VFL11162015.0019.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
20	VFL11162015.0020.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
21	VFL11162015.0021.raw	simsoln.met	100 JD	1.00	1.00
22	VFL11162015.0022.raw	simsoln.met	100 JD	1.00	1.00
23	VFL11162015.0023.raw	simsoln.met	100 JD	1.00	1.00
24	VFL11162015.0024.raw	simsoln.met	100 JD	1.00	1.00
25	VFL11162015.0025.raw	simsoln.met	100 JD	1.00	1.00
26	VFL11162015.0026.raw	simsoln.met	100 JD	1.00	1.00
27	VFL11162015.0027.raw	simsoln.met	100 JD	1.00	1.00
28	VFL11162015.0028.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
29	VFL11162015.0029.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
30	VFL11162015.0030.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
31	VFL11162015.0031.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
32	VFL11162015.0032.raw	simsoln.met	100 DP	1.00	1.00
33	VFL11162015.0033.raw	simsoln.met	100 DP	1.00	1.00
34	VFL11162015.0034.raw	simsoln.met	100 DP	1.00	1.00
35	VFL11162015.0035.raw	simsoln.met	100 DP	1.00	1.00
36	VFL11162015.0036.raw	simsoln.met	100 DP	1.00	1.00
37	VFL11162015.0037.raw	simsoln.met	100 DP	1.00	1.00
38	VFL11162015.0038.raw	simsoln.met	100 DP	1.00	1.00
39	VFL11162015.0039.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
40	VFL11162015.0040.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00

SAMPLES EXCLUDED DUE TO FAILED CCS. 11/23/15

ADDITIONAL SAMPLES RUN WITHIN 24 HOURS OF CHANGE 11/18/15

File Name: C:\Methods\VFL11162015.CAL
Version: 7

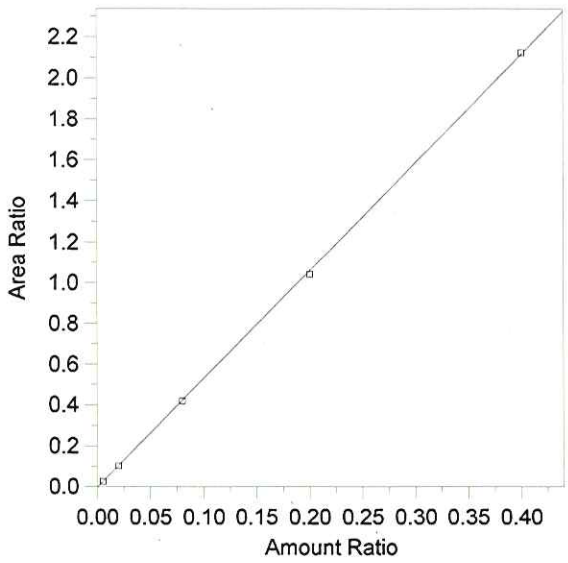
Creator:
Description:
Reason for change:

Internal standard calibration
No injection volume correction
No sample weight correction
Area reject threshold: 1500
Reference peak area reject threshold: 0
Amount units:
No default component

Method of calculating data point averages: Equal weight for all updates
No calibration update report

All levels are normal data points.

3 Ethanol



Expected retention time:	2.656 minutes
Search window:	0.1 minutes
Internal standard component:	7 (n-Propanol)
No retention time reference component	
Group number:	0
High alarm limit:	0
Low alarm limit:	0
Component constant:	0

Single peak quantification by area

Y = 5.285787 X + 0

Linear fit with equal weighting, forced to origin

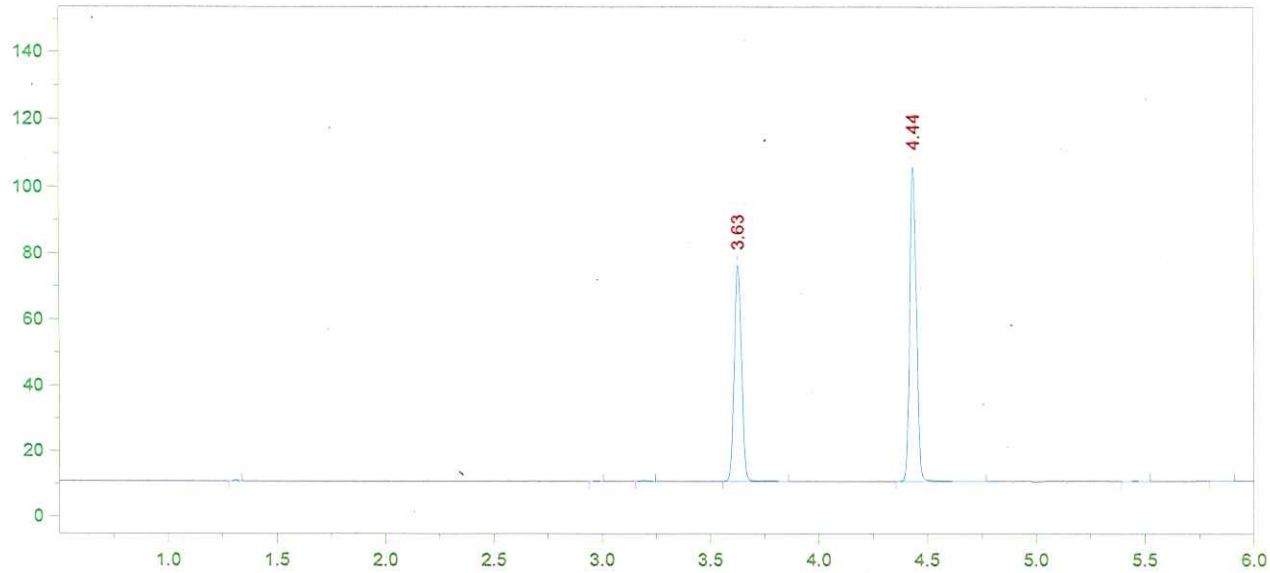
Coefficient of determination:	0.9998708
Average error:	1.348%
Average CF:	5.252878
RSD:	1.601%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source	Date and time
1	(0.078)	(85146)	--	--	0.078	85146	Manual	8/18/2015 8:39:13 AM
2	0.005	5126.038	1025208	1.379	0.005	2.679326E-02	C:\Alcohol Data\VFL11162015\VFL11162015.0003.BND	11/16/2015 10:52:06 AM
3	0.02	19079.39	953969.6	-2.628	0.02	0.1029375	C:\Alcohol Data\VFL11162015\VFL11162015.0004.BND	11/16/2015 11:09:40 AM
4	0.08	79098.16	988727	-0.692	0.08	0.4199386	C:\Alcohol Data\VFL11162015\VFL11162015.0005.BND	11/16/2015 11:22:51 AM
5	0.2	187539.1	937695.4	-1.608	0.2	1.040159	C:\Alcohol Data\VFL11162015\VFL11162015.0006.BND	11/16/2015 11:41:06 AM
6	0.4	393040.3	982600.8	0.436	0.4	2.123533	C:\Alcohol Data\VFL11162015\VFL11162015.0007.BND	11/16/2015 11:54:48 AM

15-24-100

8

3



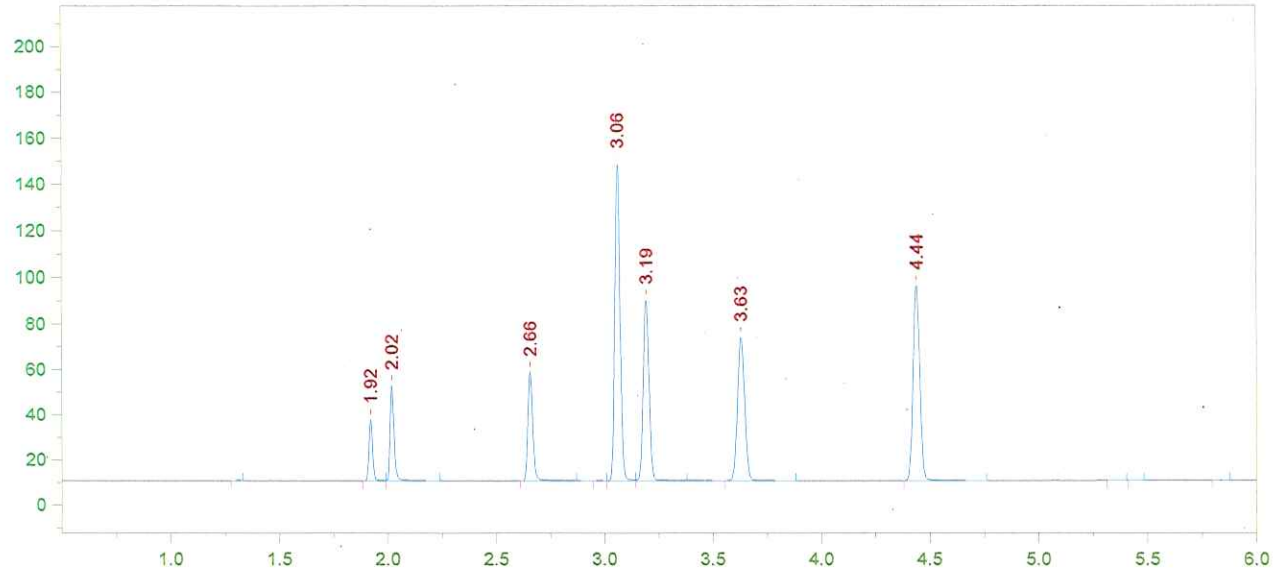
Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 7:52:04 AM
Bound File Name = VFL11162015.0001.RAW
Sample Name = BLANK
Date Taken = 11/16/2015 10:20:38 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
4	3.63	t-Butanol	151824	0.9648
5	4.44	n-Propanol	202034	1.0000

15-24-100

4



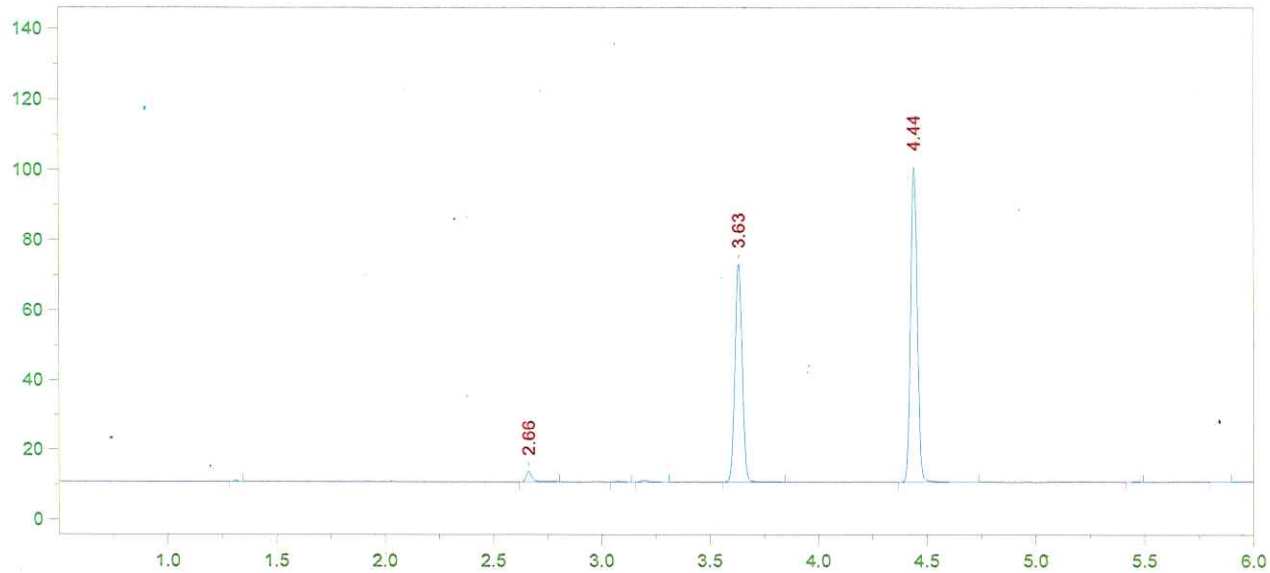
Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 7:52:10 AM
Bound File Name = VFL11162015.0002.RAW
Sample Name = TMX
Date Taken = 11/16/2015 10:38:09 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	1.92	Acetaldehyde	31640	0.0686
3	2.02	Methanol	53308	0.1169
4	2.66	Ethanol	74807	0.0774
6	3.06	Acetone	235087	0.0612
7	3.19	Isopropanol	149384	0.0780
8	3.63	t-Butanol	145716	1.0234
9	4.44	n-Propanol	182808	1.0000

15-24-100

5



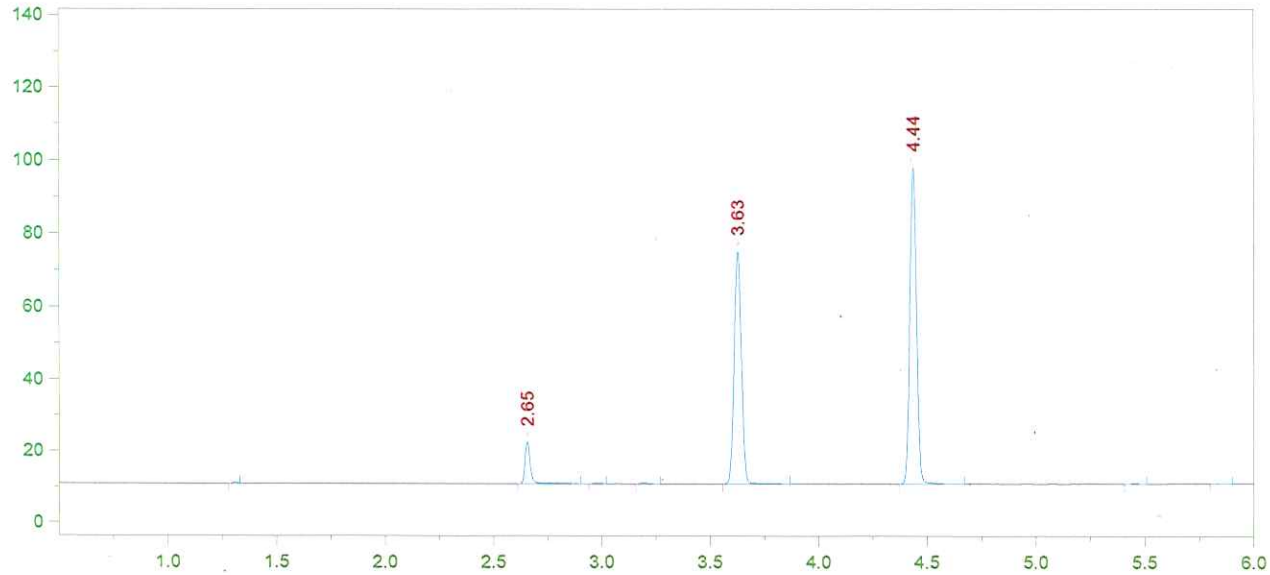
Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 7:52:15 AM
Bound File Name = VFL11162015.0003.RAW
Sample Name = STD A
Date Taken = 11/16/2015 10:51:57 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	05126	0.0051
5	3.63	t-Butanol	144415	0.9691
6	4.44	n-Propanol	191318	1.0000

15-24-100

6



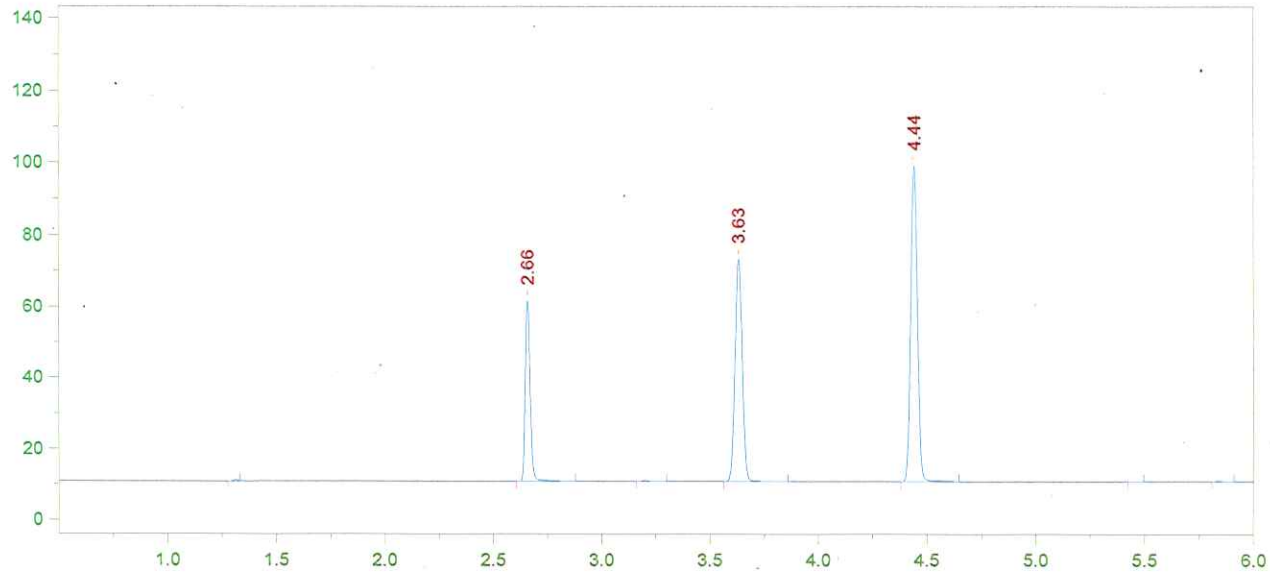
Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 7:52:21 AM
Bound File Name = VFL11162015.0004.RAW
Sample Name = STD B
Date Taken = 11/16/2015 11:09:33 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	19079	0.0195
5	3.63	t-Butanol	148713	1.0301
6	4.44	n-Propanol	185349	1.0000

15-24-100

7



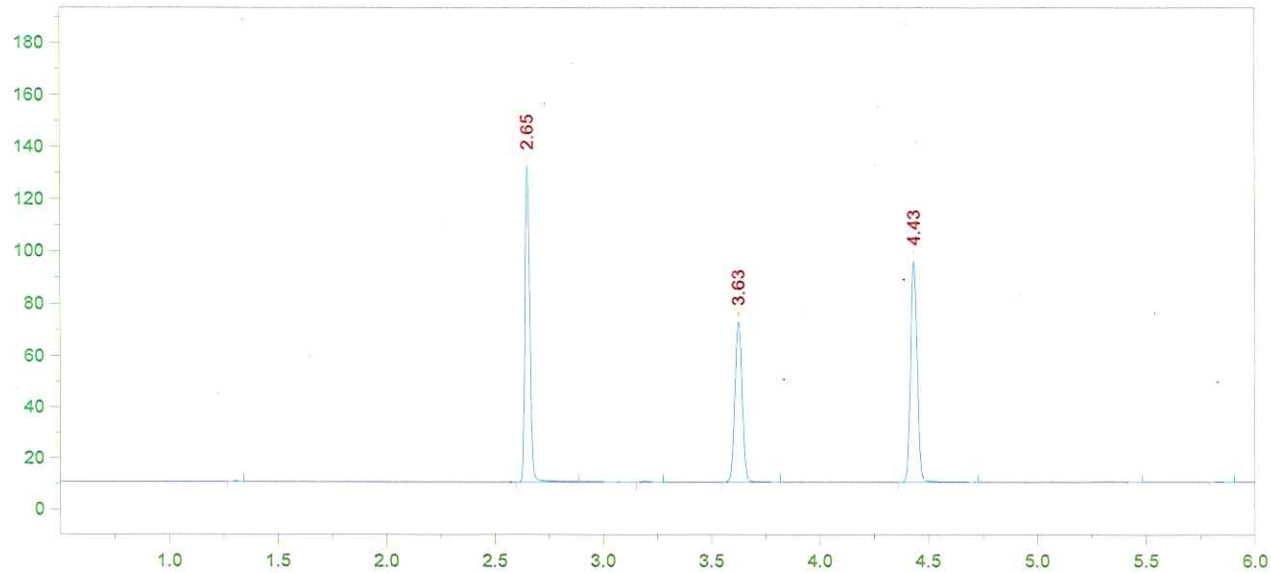
Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 7:52:27 AM
Bound File Name = VFL11162015.0005.RAW
Sample Name = STD C
Date Taken = 11/16/2015 11:22:47 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	79098	0.0794
4	3.63	t-Butanol	144106	0.9823
5	4.44	n-Propanol	188357	1.0000

15-24-100

8



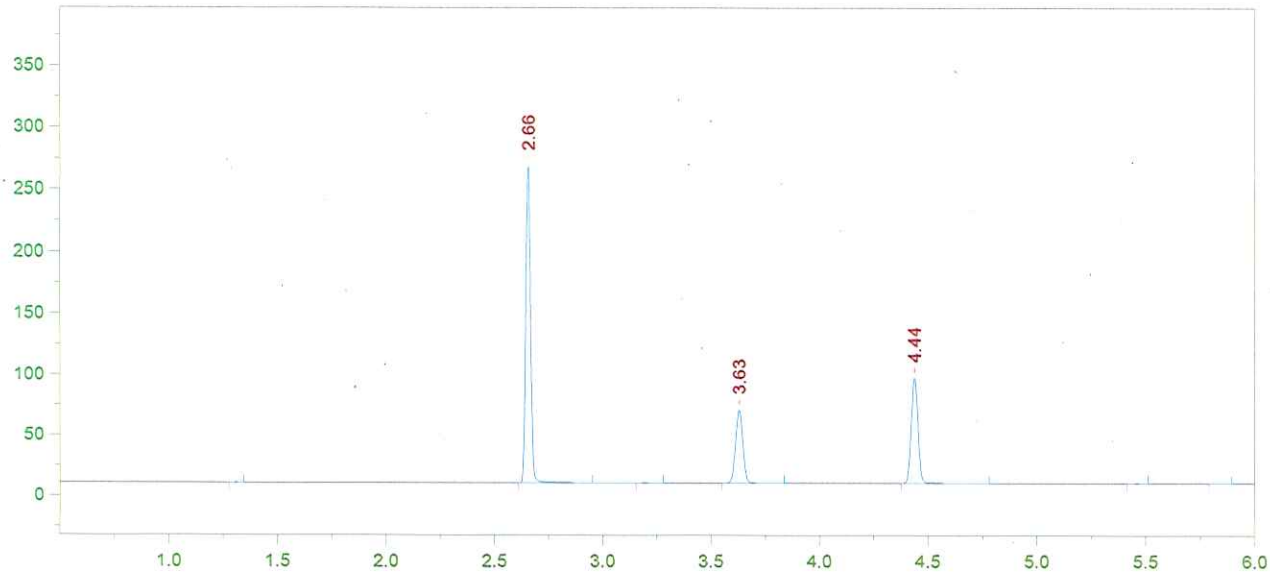
Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 7:52:32 AM
Bound File Name = VFL11162015.0006.RAW
Sample Name = STD D
Date Taken = 11/16/2015 11:40:58 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	187539	0.1968
4	3.63	t-Butanol	144409	1.0283
5	4.43	n-Propanol	180299	1.0000

15-24-100

9



Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 7:52:38 AM
Bound File Name = VFL11162015.0007.RAW
Sample Name = STD E
Date Taken = 11/16/2015 11:54:39 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	393040	0.4017
4	3.63	t-Butanol	139384	0.9668
5	4.44	n-Propanol	185088	1.0000

1524-100

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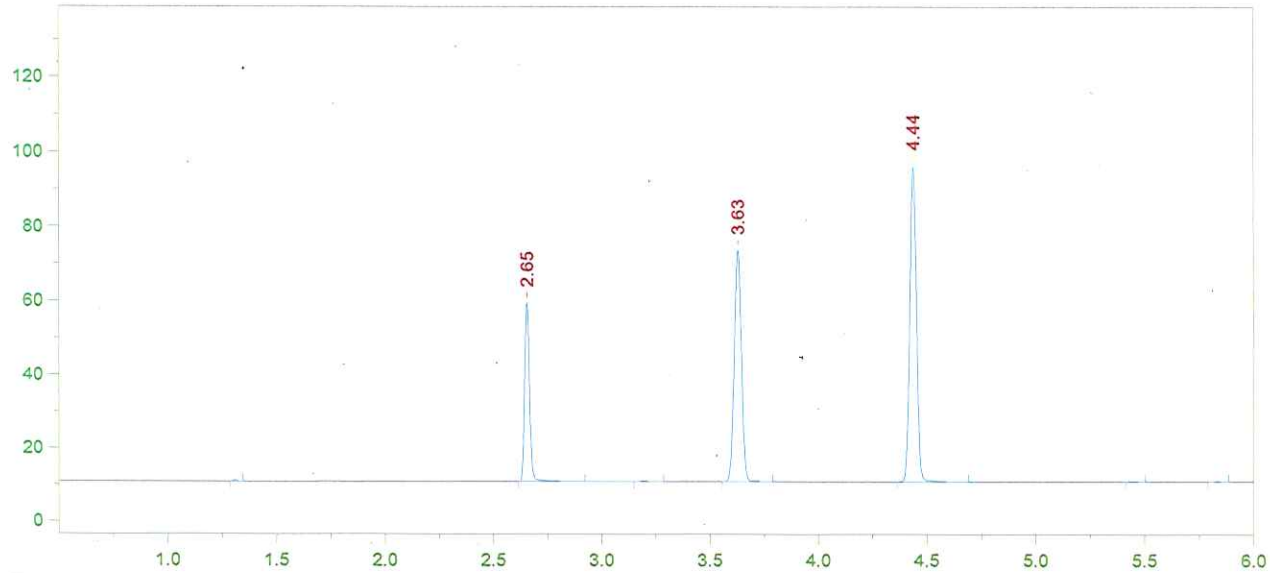

Format File Name = AlcoholVFL.FMT

Today's Date = 11/16/2015
Today's Time = 12:12:27 PM
Bound File Name = VFL11162015.0008.RAW
Sample Name = AQ
Date Taken = 11/16/2015 12:12:22 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	76480	0.0800
4	3.63	t-Butanol	144653	1.0272
5	4.44	n-Propanol	180804	1.0000

15-24-100

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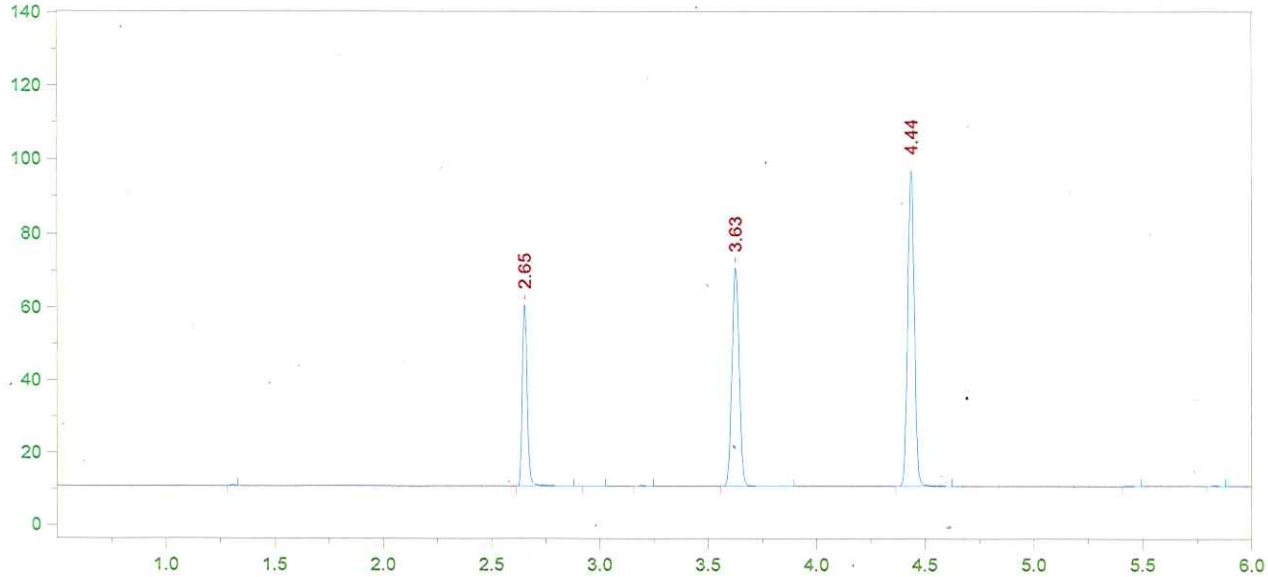


Format File Name = AlcoholVFL.FMT

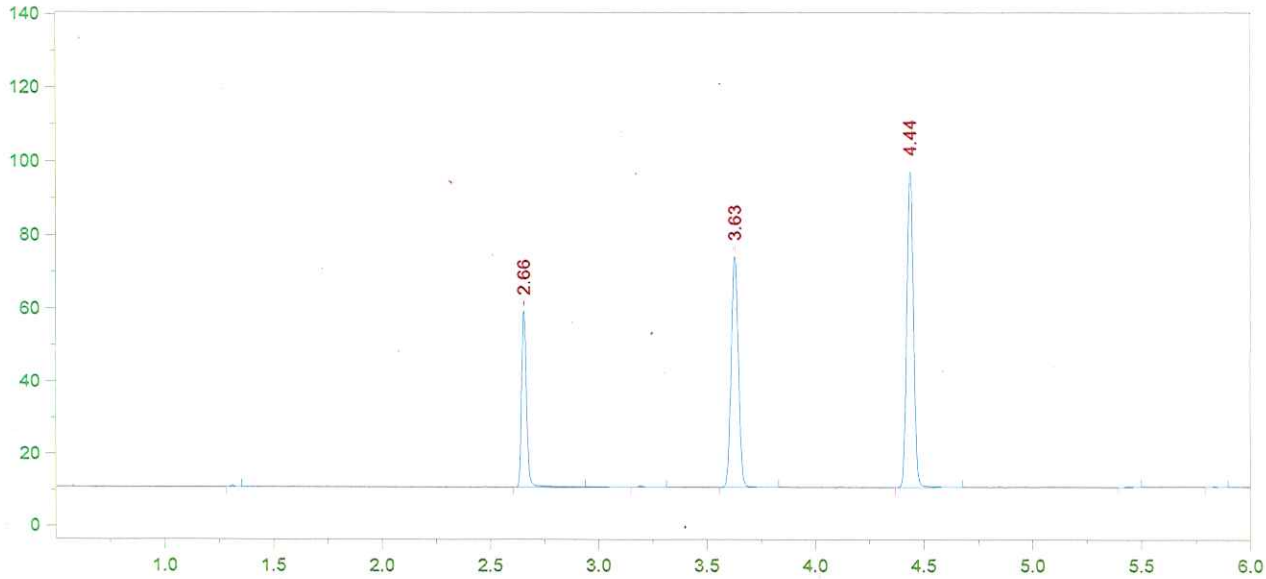
Today's Date = 11/16/2015
Today's Time = 12:26:20 PM
Bound File Name = VFL11162015.0009.RAW
Sample Name = AQ
Date Taken = 11/16/2015 12:26:10 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	77811	0.0804
5	3.63	t-Butanol	138706	0.9732
6	4.44	n-Propanol	182989	1.0000

AQ MEAN: ~~0.8~~ 0.0802 g/100 ml EtOH

±5% : 0.0762 - 0.0842

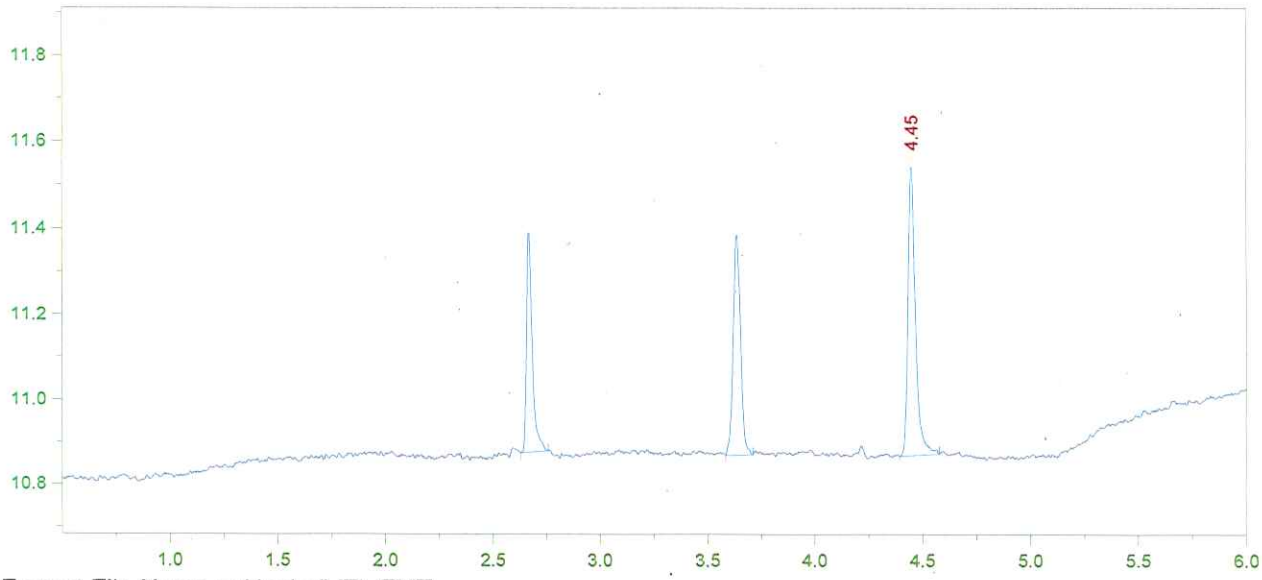
Recovery: $\frac{0.080}{0.080}$ = 100%



Format File Name = AlcoholVFL.FMT

Today's Date = 11/16/2015
Today's Time = 12:43:59 PM
Bound File Name = VFL11162015.0010.RAW
Sample Name = CCS
Date Taken = 11/16/2015 12:43:49 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	76330	0.0784
4	3.63	t-Butanol	146792	1.0234
5	4.44	n-Propanol	184158	1.0000



Format File Name = AlcoholVFL.FMT

Today's Date = 11/16/2015
Today's Time = 12:58:26 PM
Bound File Name = VFL11162015.0011.RAW
Sample Name = CCS
Date Taken = 11/16/2015 12:58:20 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
3	4.45	n-Propanol	01647	1.0000

CCS FAILED DUE TO LEAK; ALL VIALS BETWEEN FAILING CCS AND PASSING CCS RERUN WITH ADDITIONAL CCS SAMPLES.

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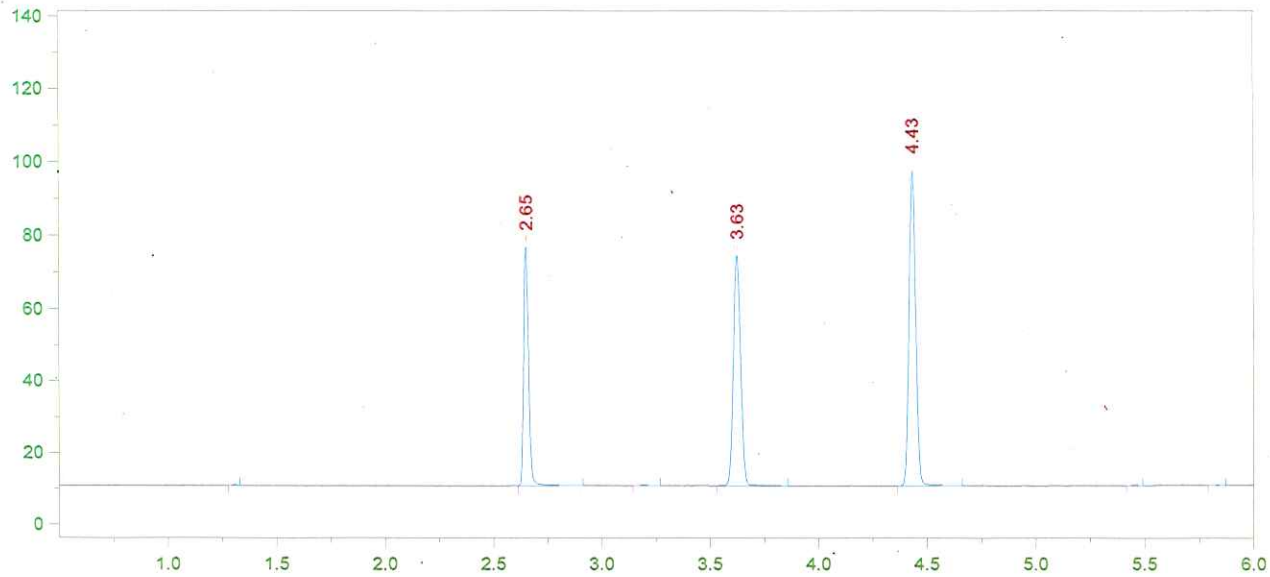
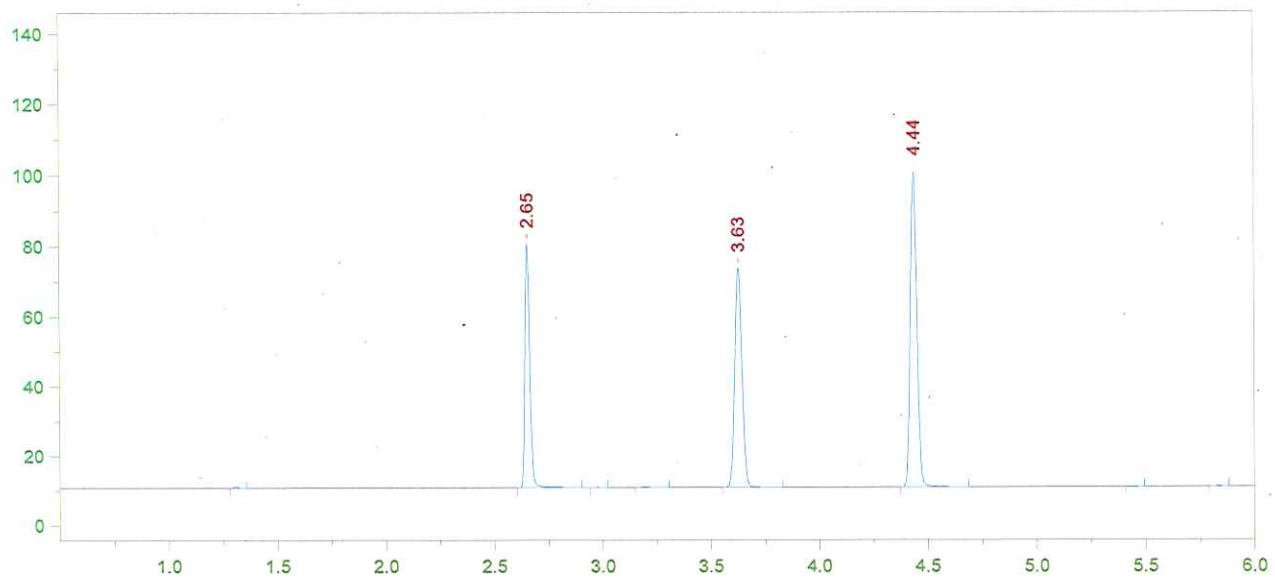


Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 1:15:20 PM
Bound File Name = VFL11162015.0012.RAW
Sample Name = 100 DP
Date Taken = 11/16/2015 1:15:14 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	102090	0.1046	0.0854
4	3.63	t-Butanol	148056	1.0292	0.8401
5	4.43	n-Propanol	184686	1.0000	0.8162



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 1:29:11 PM
Bound File Name = VFL11162015.0013.RAW
Sample Name = 100 DP
Date Taken = 11/16/2015 1:29:07 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	107422	0.1066	0.0870
5	3.63	t-Butanol	145440	0.9790	0.7991
6	4.44	n-Propanol	190724	1.0000	0.8162

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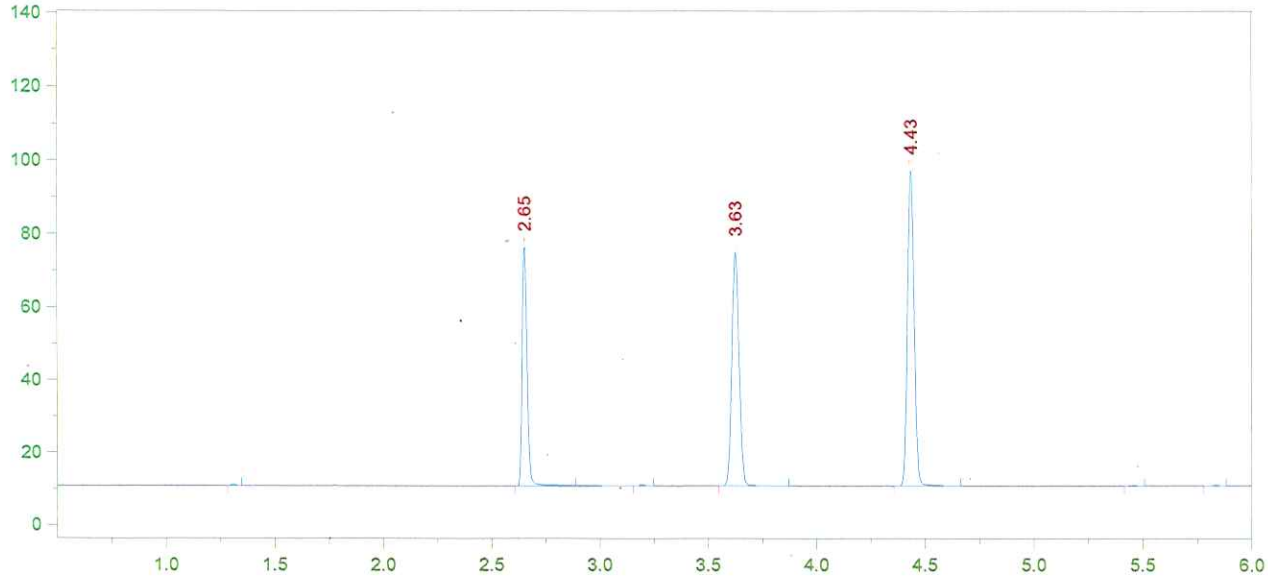

Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 1:46:46 PM
Bound File Name = VFL11162015.0014.RAW
Sample Name = 100 DP
Date Taken = 11/16/2015 1:46:38 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	102174	0.1051	0.0858
4	3.63	t-Butanol	148278	1.0347	0.8445
5	4.43	n-Propanol	183981	1.0000	0.8162

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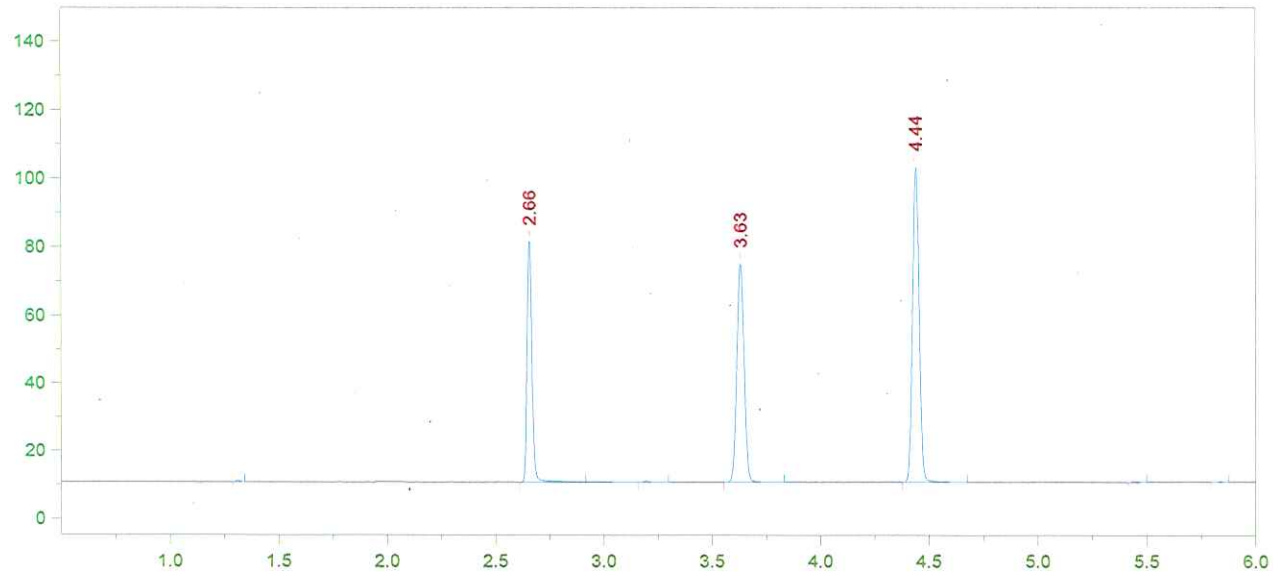
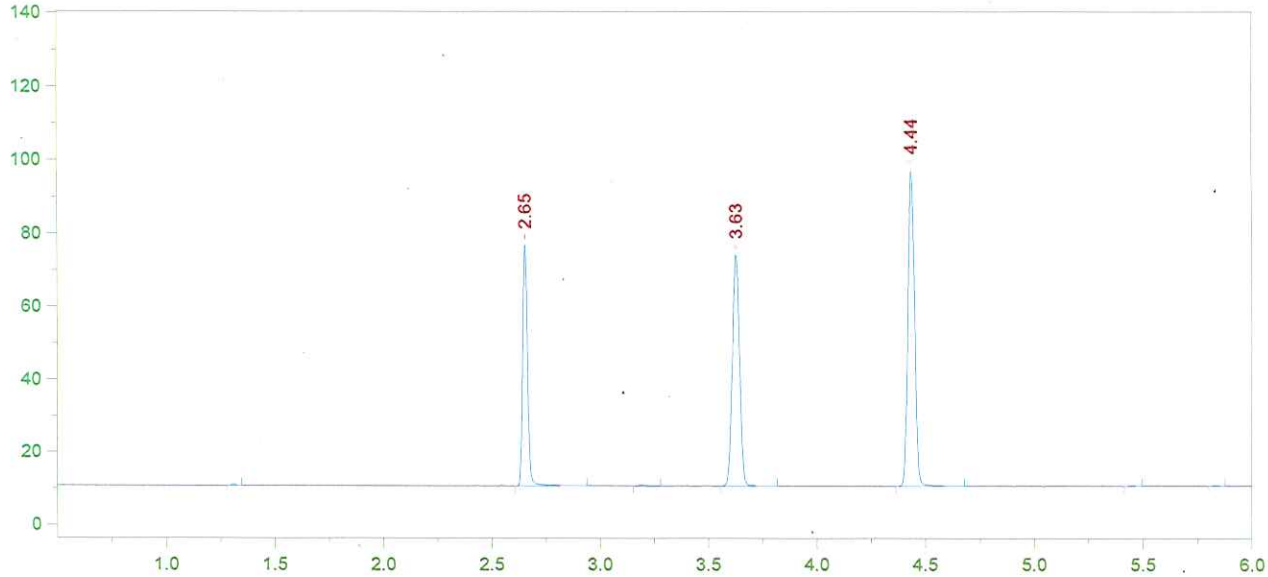


Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 2:00:31 PM
Bound File Name = VFL11162015.0015.RAW
Sample Name = 100 DP
Date Taken = 11/16/2015 2:00:28 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

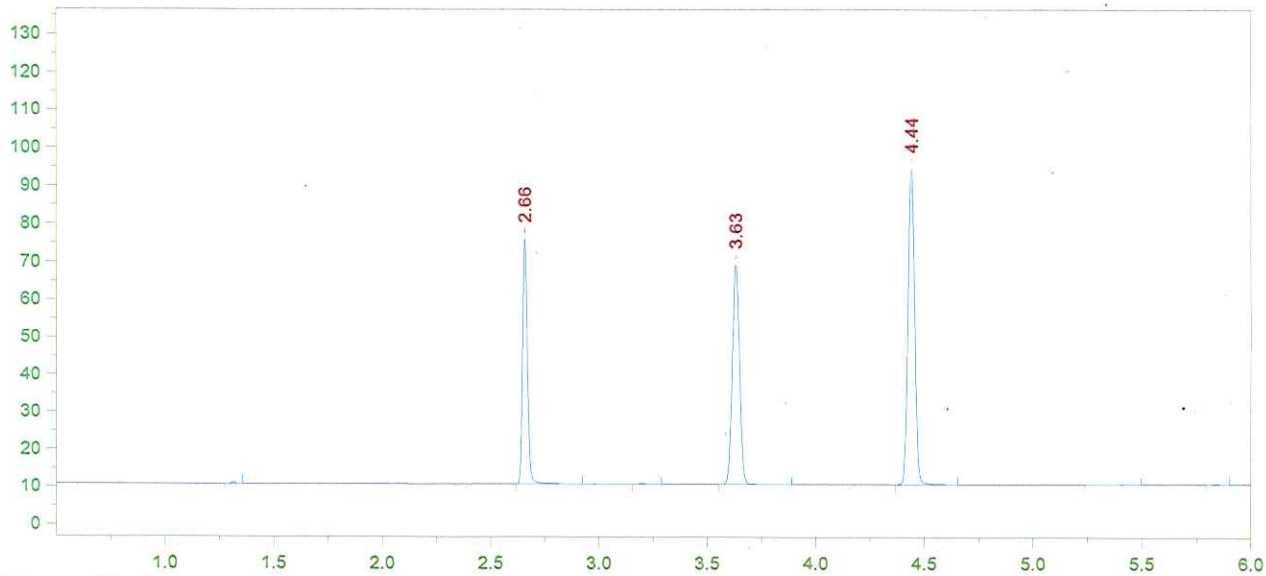
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	109840	0.1058	0.0864
4	3.63	t-Butanol	149028	0.9744	0.7953
5	4.44	n-Propanol	196366	1.0000	0.8162



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 2:18:09 PM
Bound File Name = VFL11162015.0016.RAW
Sample Name = 100 DP
Date Taken = 11/16/2015 2:18:02 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	102058	0.1052	0.0859
4	3.63	t-Butanol	146787	1.0270	0.8382
5	4.44	n-Propanol	183509	1.0000	0.8162



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 2:32:08 PM
Bound File Name = VFL11162015.0017.RAW
Sample Name = 100 DP
Date Taken = 11/16/2015 2:31:57 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	101188	0.1078	0.0880
4	3.63	t-Butanol	135733	0.9812	0.8008
5	4.44	n-Propanol	177607	1.0000	0.8162

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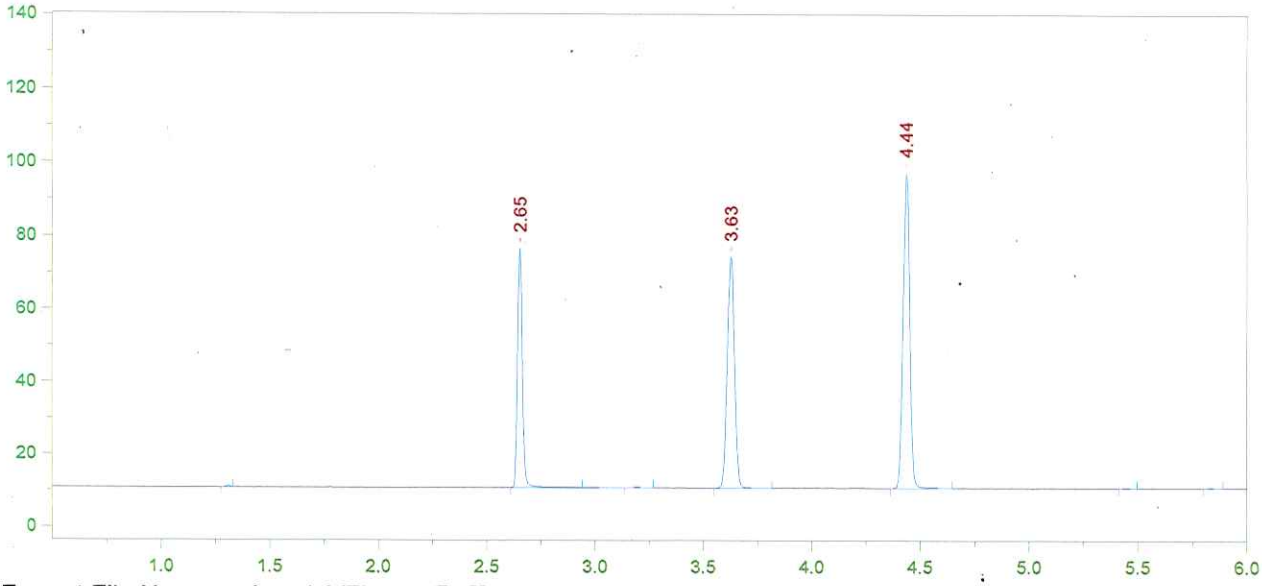

Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 2:49:37 PM
Bound File Name = VFL11162015.0018.RAW
Sample Name = 100 DP
Date Taken = 11/16/2015 2:49:27 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	101921	0.1053	0.0860
4	3.63	t-Butanol	147504	1.0343	0.8442
5	4.44	n-Propanol	183089	1.0000	0.8162

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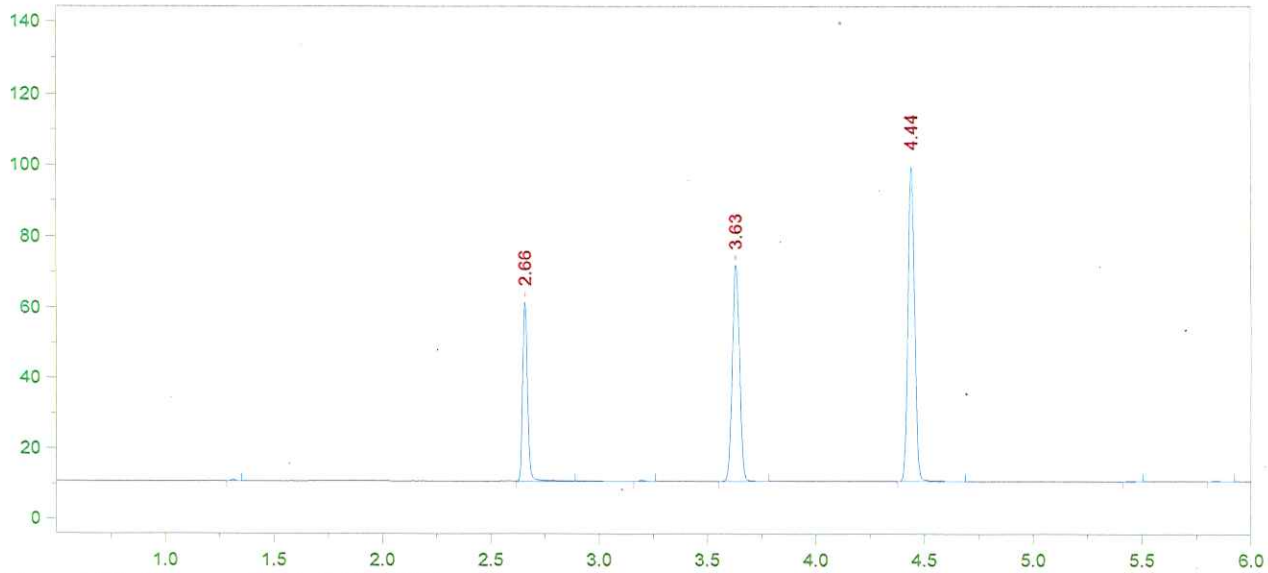
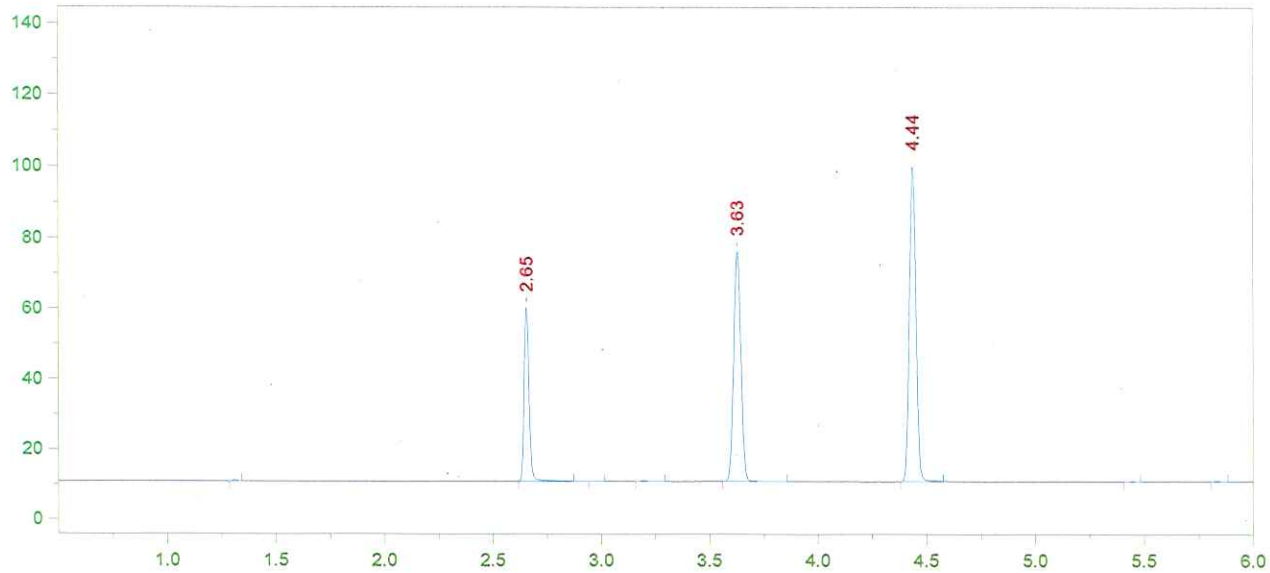


Format File Name = AlcoholVFL.FMT

Today's Date = 11/16/2015
Today's Time = 3:03:20 PM
Bound File Name = VFL11162015.0019.RAW
Sample Name = CCS
Date Taken = 11/16/2015 3:03:17 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	78975	0.0792
4	3.63	t-Butanol	141562	0.9637
5	4.44	n-Propanol	188600	1.0000



Format File Name = AlcoholVFL.FMT

Today's Date = 11/16/2015
Today's Time = 3:20:58 PM
Bound File Name = VFL11162015.0020.RAW
Sample Name = CCS
Date Taken = 11/16/2015 3:20:53 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

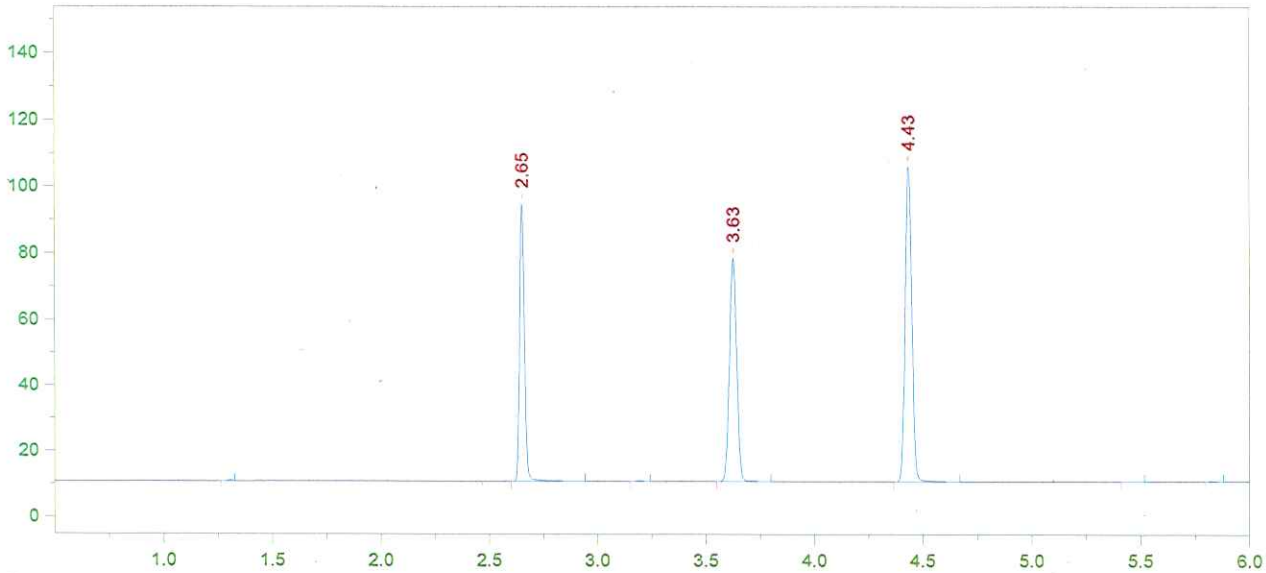
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	77247	0.0777
5	3.63	t-Butanol	151331	1.0332
6	4.44	n-Propanol	188052	1.0000

CCS mean: 0.0784 g/100 mL

±5%: 0.0745 - 0.0823

Recovery: $\frac{0.078}{0.080}$ = 97.5%

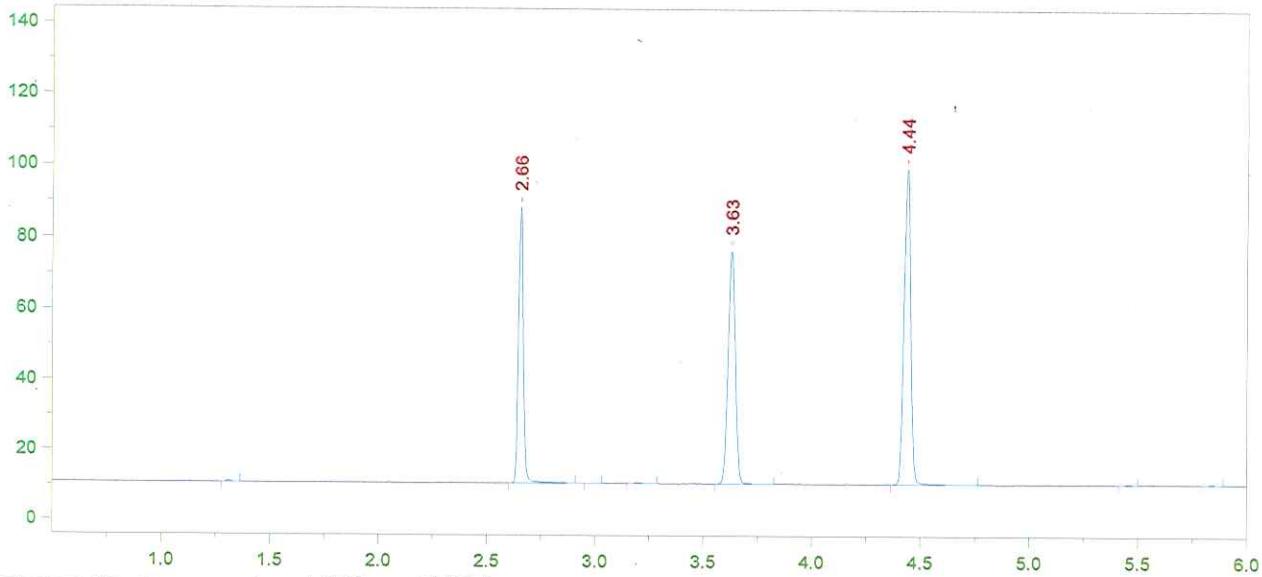
DO 11/18/15



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 3:34:15 PM
Bound File Name = VFL11162015.0021.RAW
Sample Name = 100 JD
Date Taken = 11/16/2015 3:34:06 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	129819	0.1210	0.0988
4	3.63	t-Butanol	156687	0.9913	0.8091
5	4.43	n-Propanol	202941	1.0000	0.8162



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 3:52:20 PM
Bound File Name = VFL11162015.0022.RAW
Sample Name = 100 JD
Date Taken = 11/16/2015 3:52:15 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	119881	0.1196	0.0977
5	3.63	t-Butanol	152394	1.0321	0.8424
6	4.44	n-Propanol	189566	1.0000	0.8162

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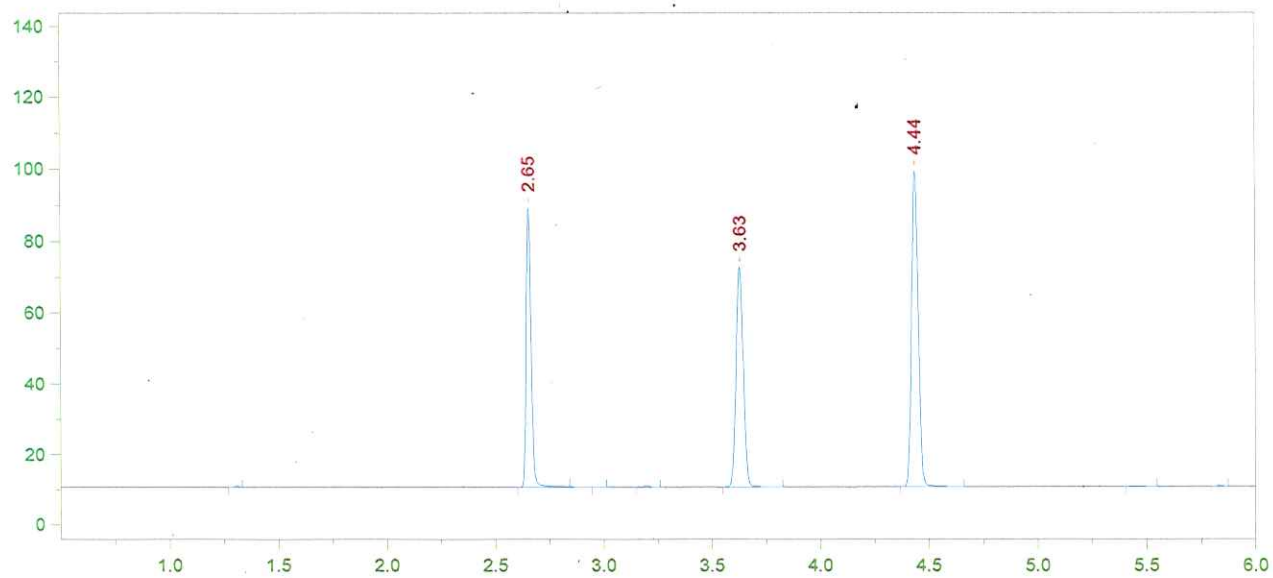

Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 4:06:00 PM
Bound File Name = VFL11162015.0023.RAW
Sample Name = 100 JD
Date Taken = 11/16/2015 4:05:55 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	121658	0.1225	0.1000
5	3.63	t-Butanol	143241	0.9787	0.7988
6	4.44	n-Propanol	187900	1.0000	0.8162

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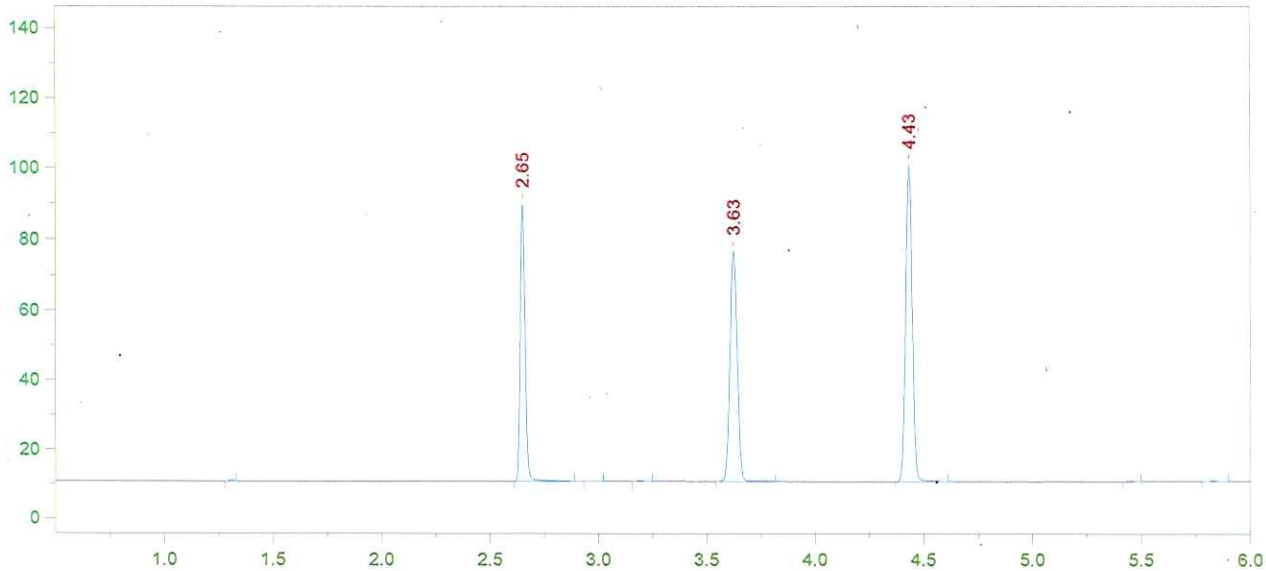

Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 4:23:47 PM
Bound File Name = VFL11162015.0024.RAW
Sample Name = 100 JD
Date Taken = 11/16/2015 4:23:40 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	121939	0.1209	0.0987
5	3.63	t-Butanol	153148	1.0305	0.8411
6	4.43	n-Propanol	190805	1.0000	0.8162

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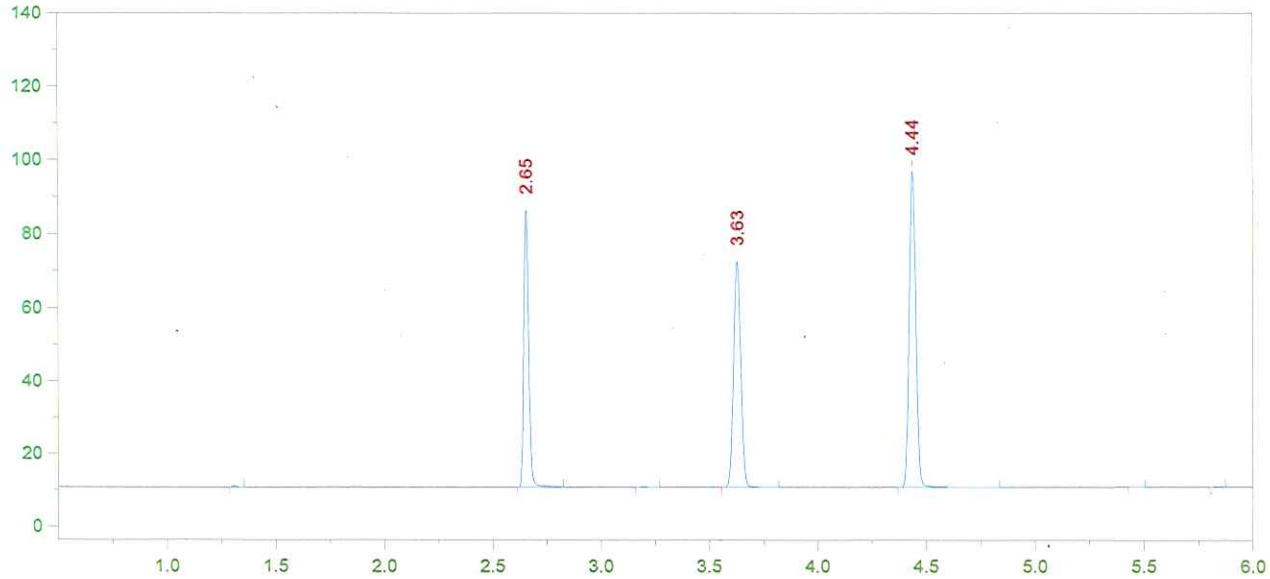
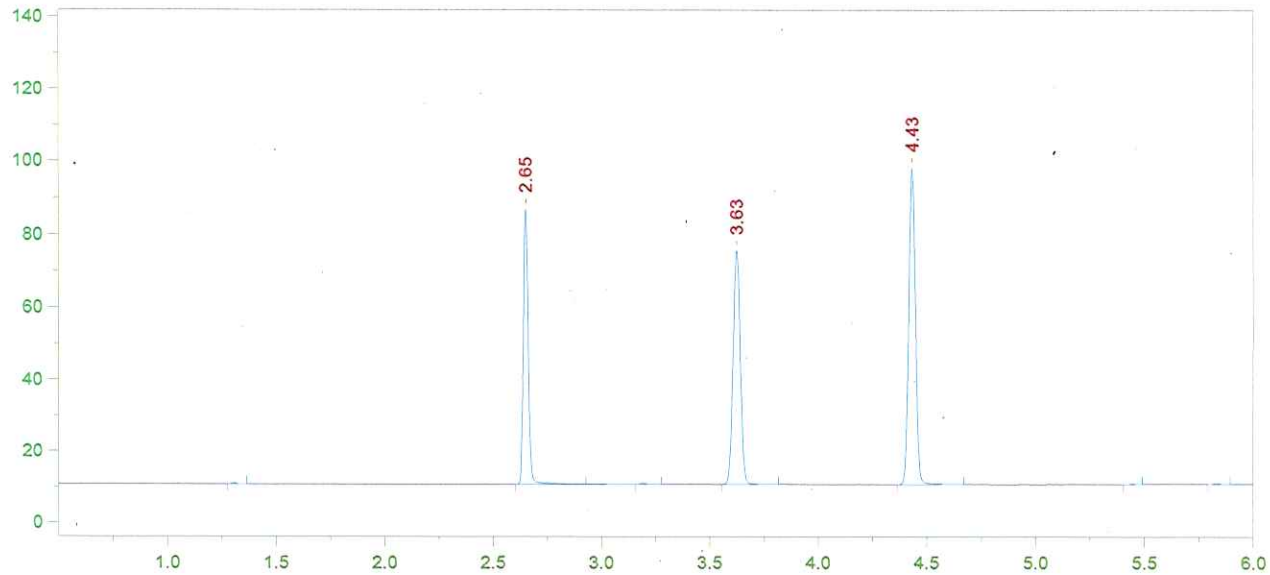


Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 7:52:46 AM
Bound File Name = VFL11162015.0025.RAW
Sample Name = 100 JD
Date Taken = 11/16/2015 4:38:35 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

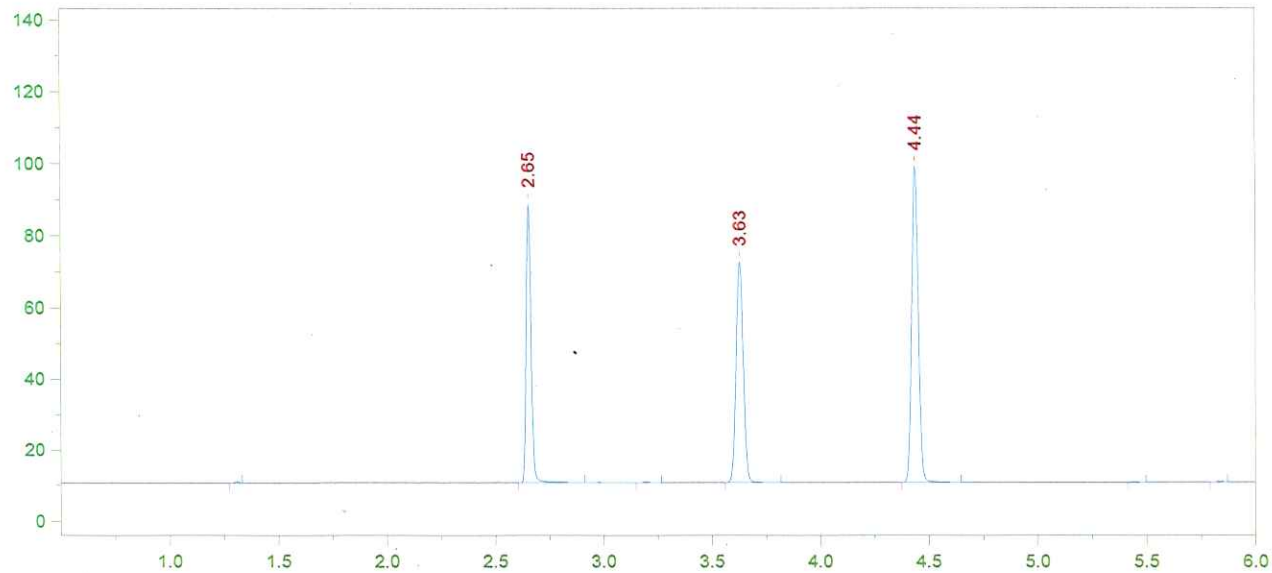
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	117149	0.1214	0.0991
4	3.63	t-Butanol	142794	1.0046	0.8199
5	4.44	n-Propanol	182496	1.0000	0.8162



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 4:55:13 PM
Bound File Name = VFL11162015.0026.RAW
Sample Name = 100 JD
Date Taken = 11/16/2015 4:55:04 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	117638	0.1201	0.0980
4	3.63	t-Butanol	149768	1.0374	0.8467
5	4.43	n-Propanol	185358	1.0000	0.8162

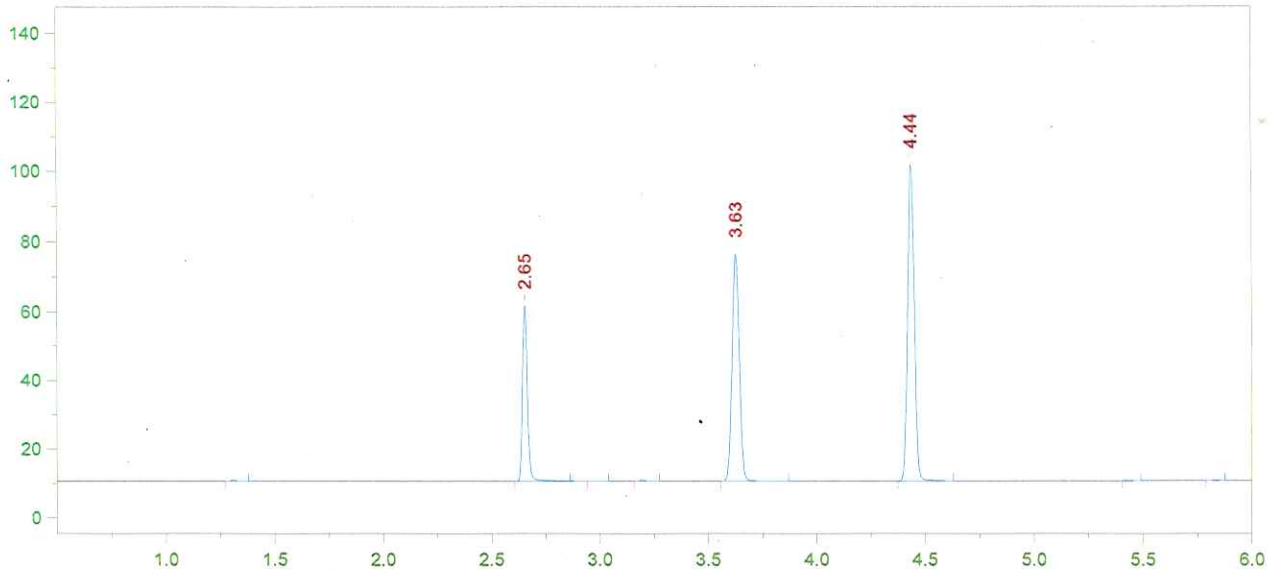


Format File Name = simsolnVFL.met.FMT

Today's Date = 11/16/2015
Today's Time = 5:08:55 PM
Bound File Name = VFL11162015.0027.RAW
Sample Name = 100 JD
Date Taken = 11/16/2015 5:08:47 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	120812	0.1227	0.1001
4	3.63	t-Butanol	142944	0.9852	0.8041
5	4.44	n-Propanol	186279	1.0000	0.8162

15-24-100 Ds 30



Format File Name = AlcoholVFL.FMT

Today's Date = 11/16/2015
Today's Time = 5:26:32 PM
Bound File Name = VFL11162015.0028.RAW
Sample Name = CCS
Date Taken = 11/16/2015 5:26:28 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	79333	0.0777
5	3.63	t-Butanol	152388	1.0132
6	4.44	n-Propanol	193107	1.0000

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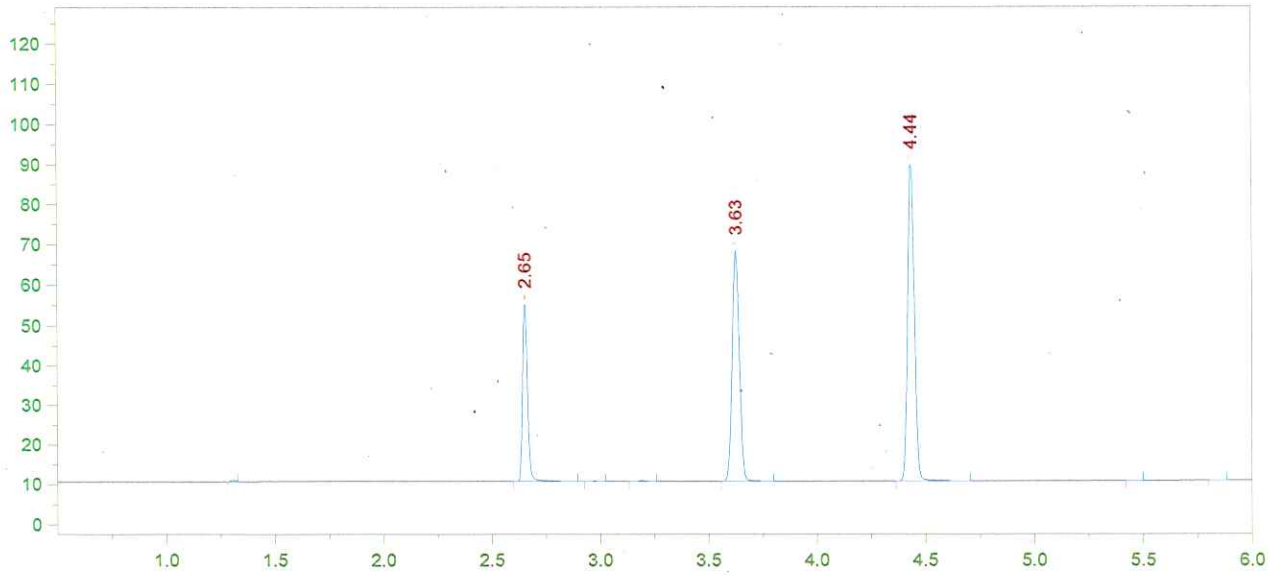

Format File Name = AlcoholVFL.FMT

Today's Date = 11/16/2015
Today's Time = 5:40:24 PM
Bound File Name = VFL11162015.0029.RAW
Sample Name = CCS
Date Taken = 11/16/2015 5:40:17 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	69576	0.0781
5	3.63	t-Butanol	132869	1.0125
6	4.44	n-Propanol	168484	1.0000

CCS mean: 0.0779 g/100 ml ethanol

±5%: 0.0740 - 0.0818

Recovery: $\frac{0.078}{0.080}$ = 97.5%

[illegible] 11/18/15

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[illegible]

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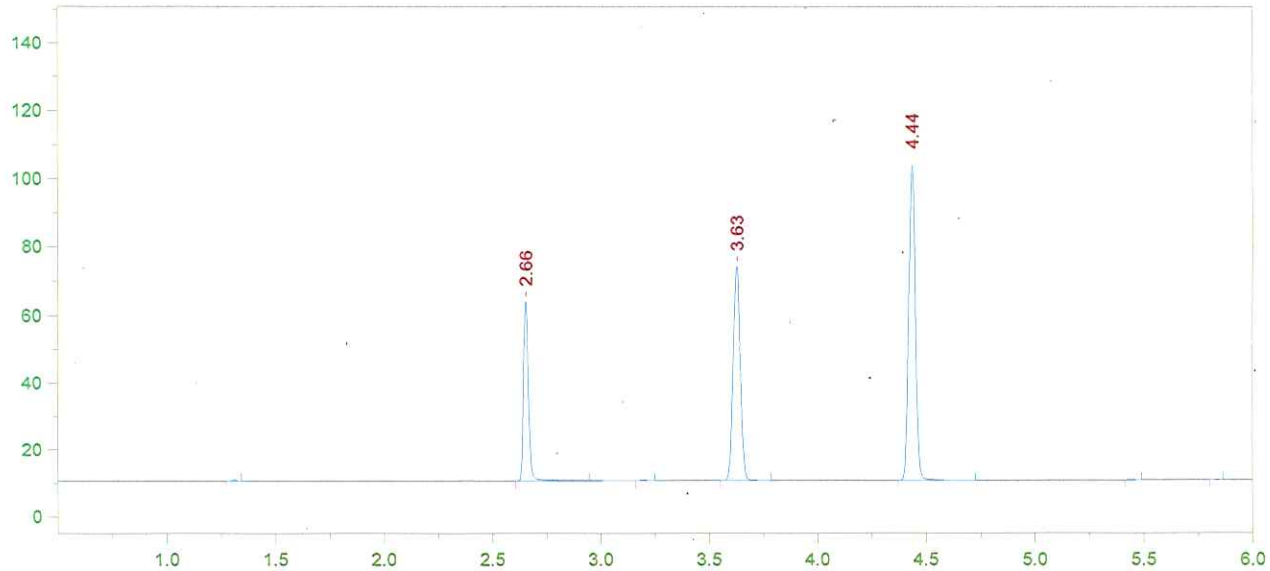

Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 10:51:08 AM
Bound File Name = VFL11162015.0030.RAW
Sample Name = CCS
Date Taken = 11/17/2015 10:50:59 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	83757	0.0801
4	3.63	t-Butanol	146681	0.9523
5	4.44	n-Propanol	197751	1.0000

15-24-100

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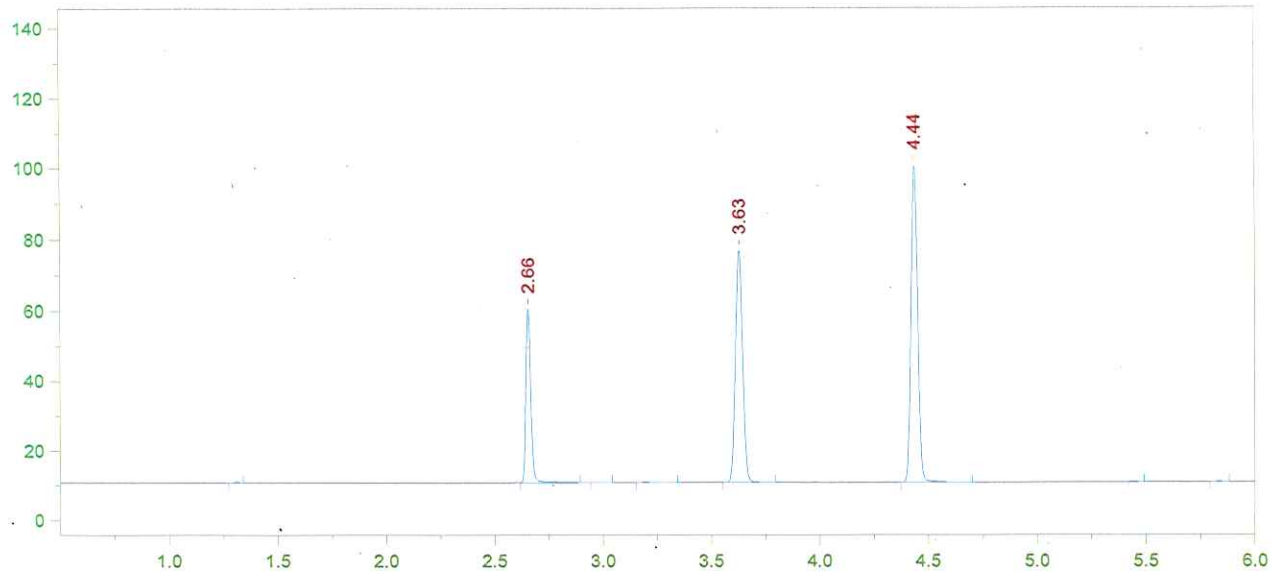


Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 11:08:27 AM
Bound File Name = VFL11162015.0031.RAW
Sample Name = CCS
Date Taken = 11/17/2015 11:08:20 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

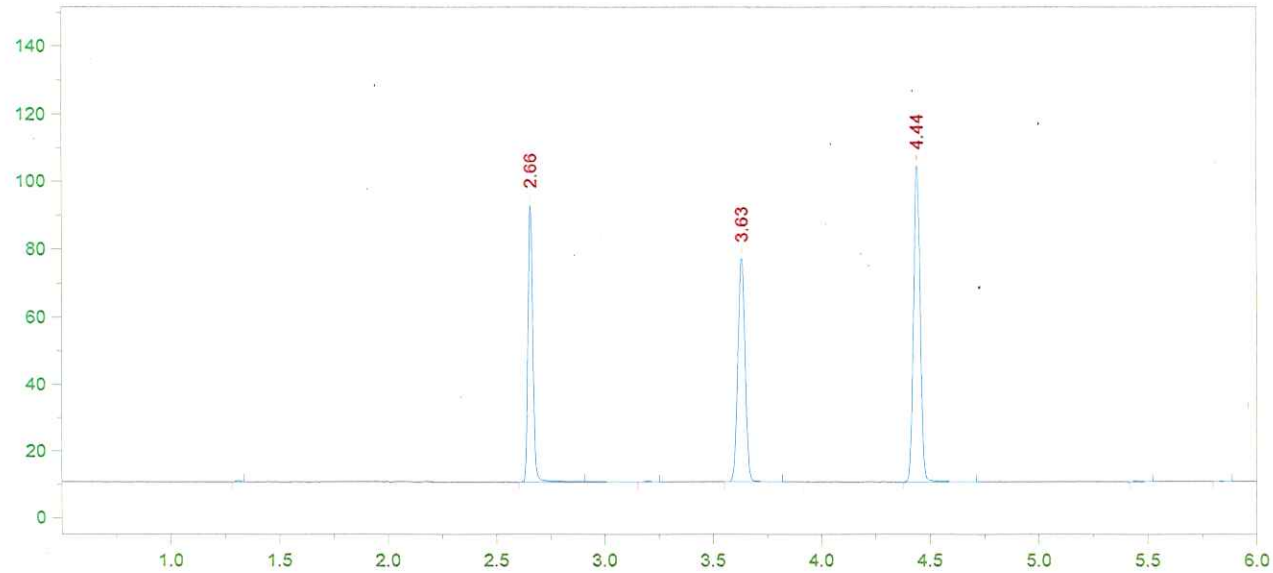
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	77900	0.0776
5	3.63	t-Butanol	152609	1.0310
6	4.44	n-Propanol	190035	1.0000

CCS MEAN: 0.0788 g/100 mL EtOH
±5% = 0.0748 - 0.0827

Recovery: $\frac{0.079}{0.080}$ = 98.7%

1524-00

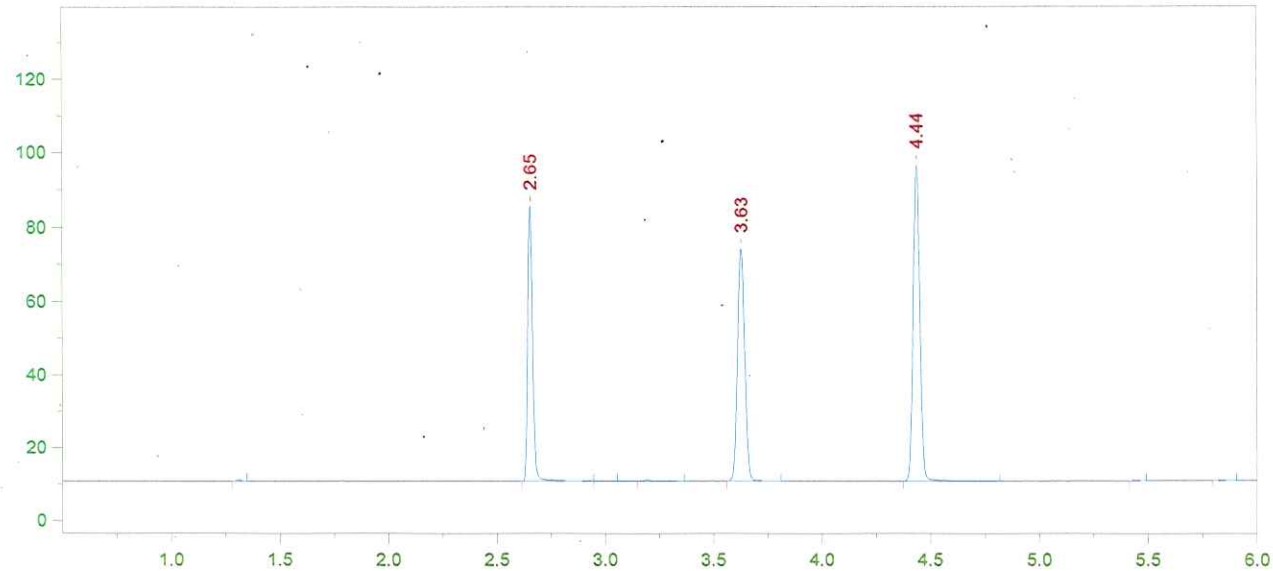
34



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015 Today's Time = 11:21:38 AM
Bound File Name = VFL11162015.0032.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 11:21:31 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL Calibration Version = 7

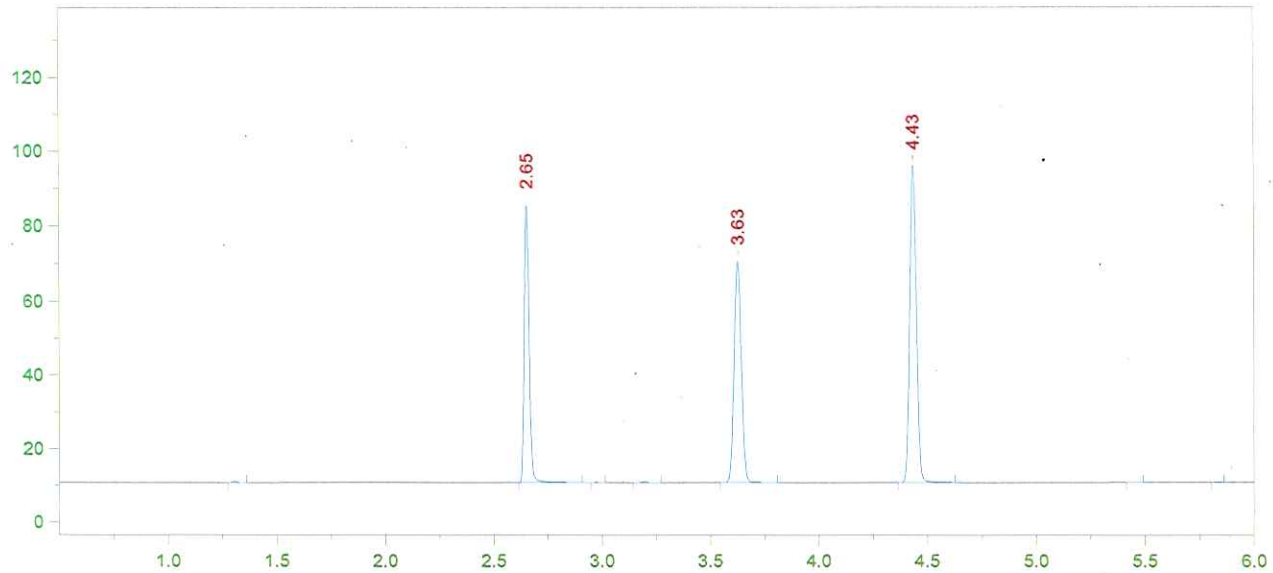
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	126805	0.1205	0.0983
4	3.63	t-Butanol	154001	0.9930	0.8105
5	4.44	n-Propanol	199113	1.0000	0.8162



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 11:39:53 AM
Bound File Name = VFL11162015.0033.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 11:39:45 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

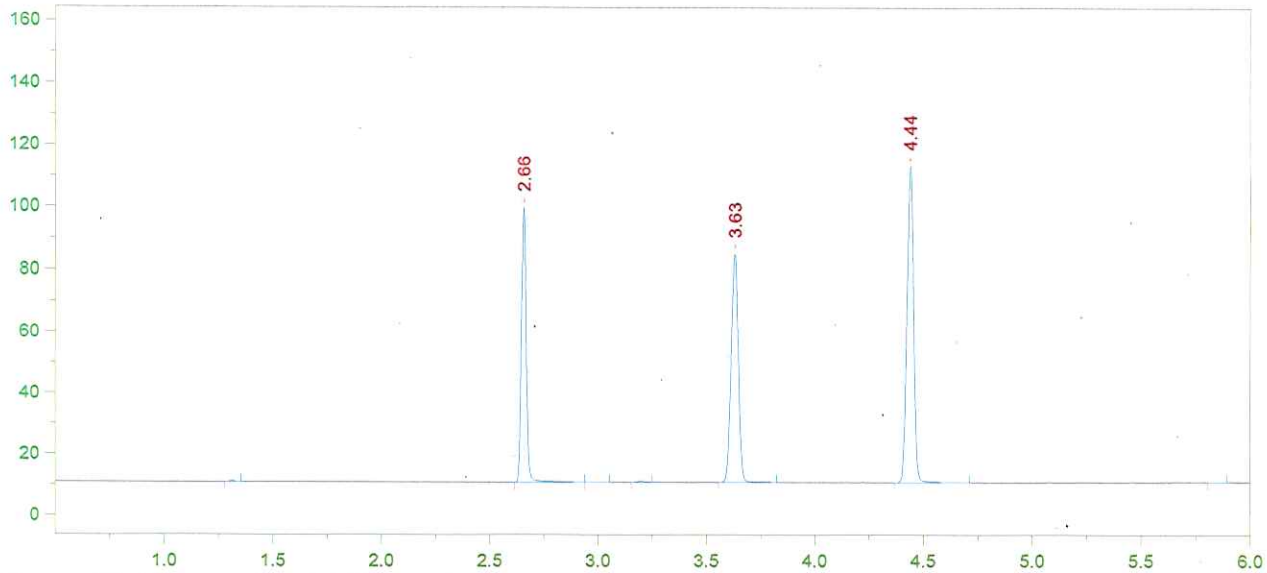
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	115340	0.1192	0.0973
5	3.63	t-Butanol	146817	1.0300	0.8407
6	4.44	n-Propanol	182998	1.0000	0.8162



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 11:53:07 AM
Bound File Name = VFL11162015.0034.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 11:53:00 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	116681	0.1218	0.0994
5	3.63	t-Butanol	138349	0.9797	0.7996
6	4.43	n-Propanol	181299	1.0000	0.8162



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 12:09:34 PM
Bound File Name = VFL11162015.0035.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 12:09:29 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	136594	0.1191	0.0972
5	3.63	t-Butanol	171418	1.0144	0.8280
6	4.44	n-Propanol	216952	1.0000	0.8162

15-24-100

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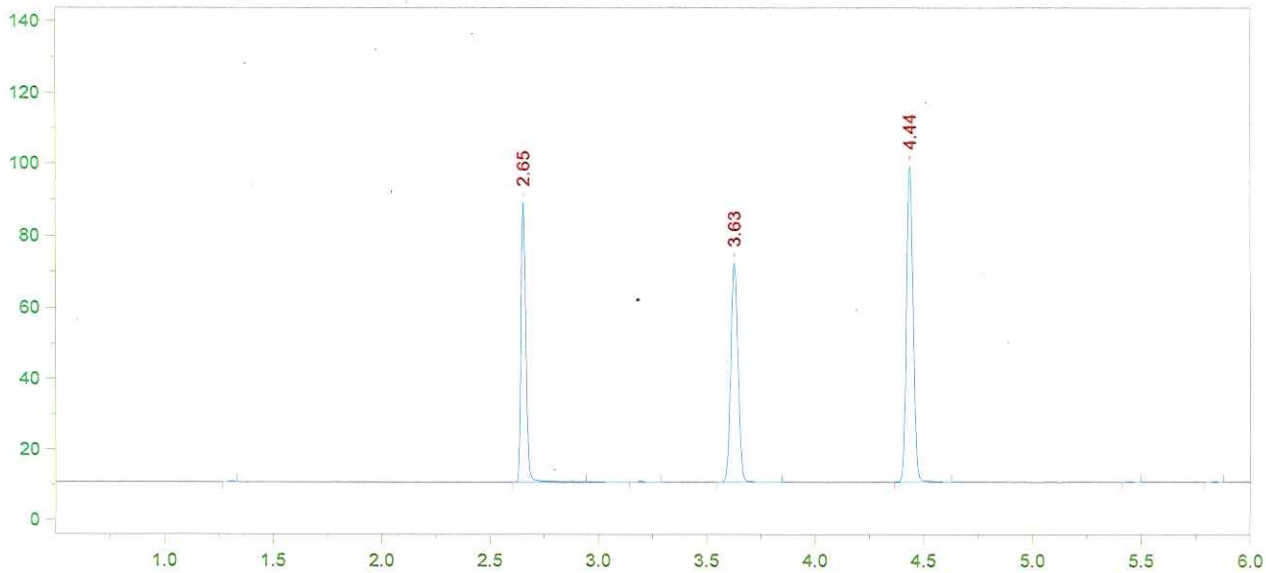


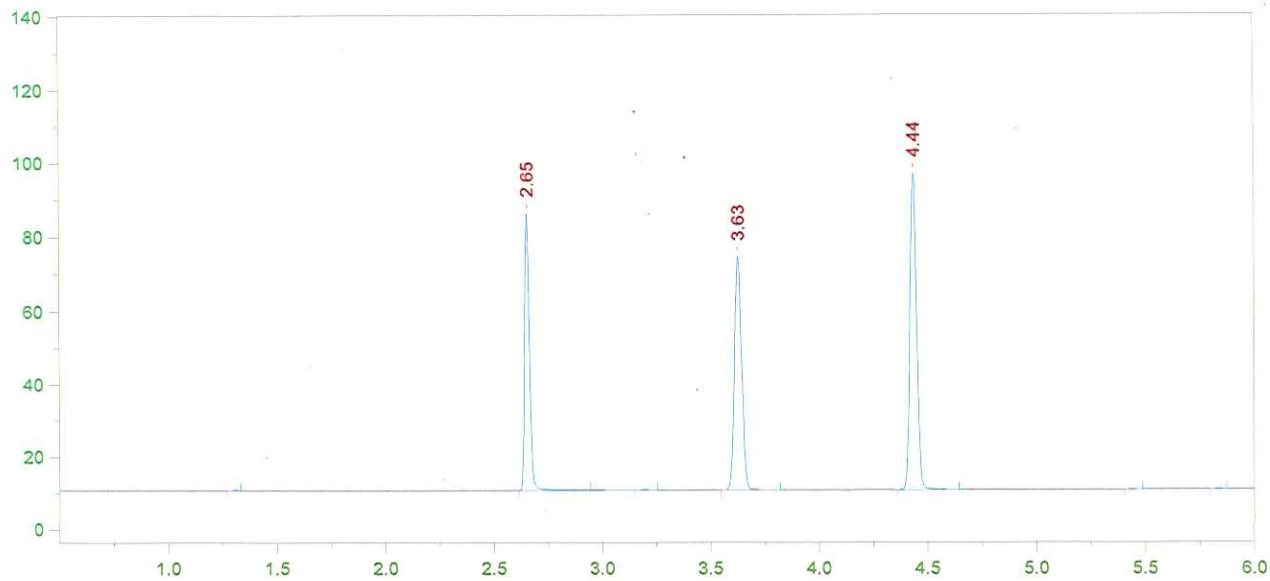
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 12:24:55 PM
Bound File Name = VFL11162015.0036.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 12:24:47 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	120844	0.1220	0.0996
4	3.63	t-Butanol	142974	0.9793	0.7993
5	4.44	n-Propanol	187440	1.0000	0.8162

15-24-100

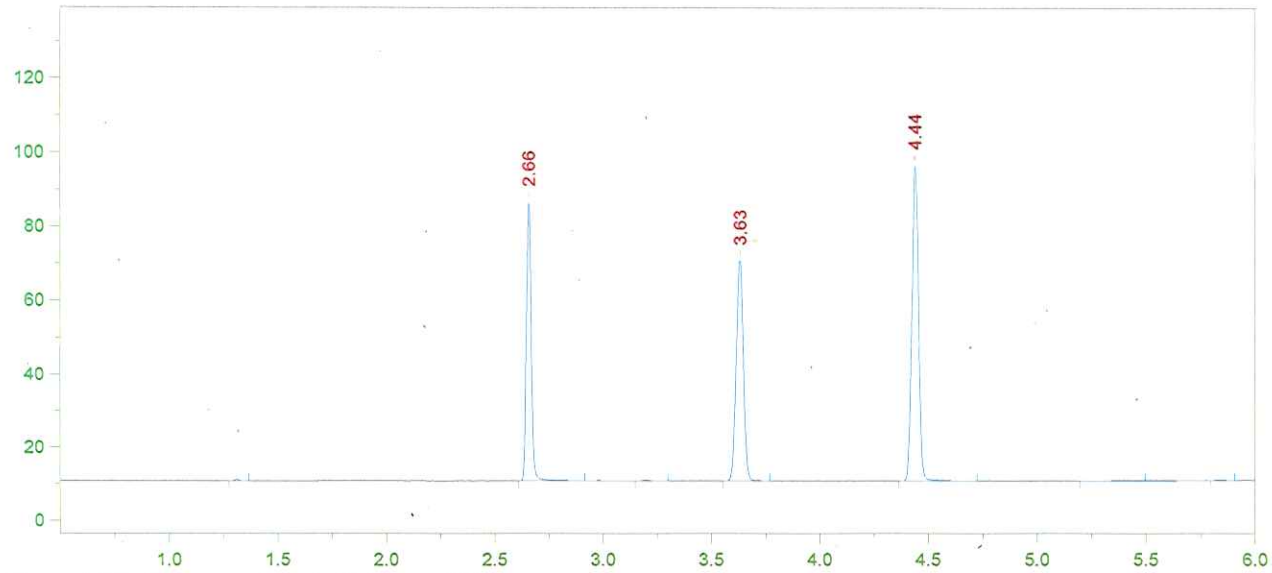
39



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015 Today's Time = 12:41:07 PM
Bound File Name = VFL11162015.0037.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 12:41:00 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	116324	0.1199	0.0979
4	3.63	t-Butanol	147163	1.0294	0.8402
5	4.44	n-Propanol	183546	1.0000	0.8162



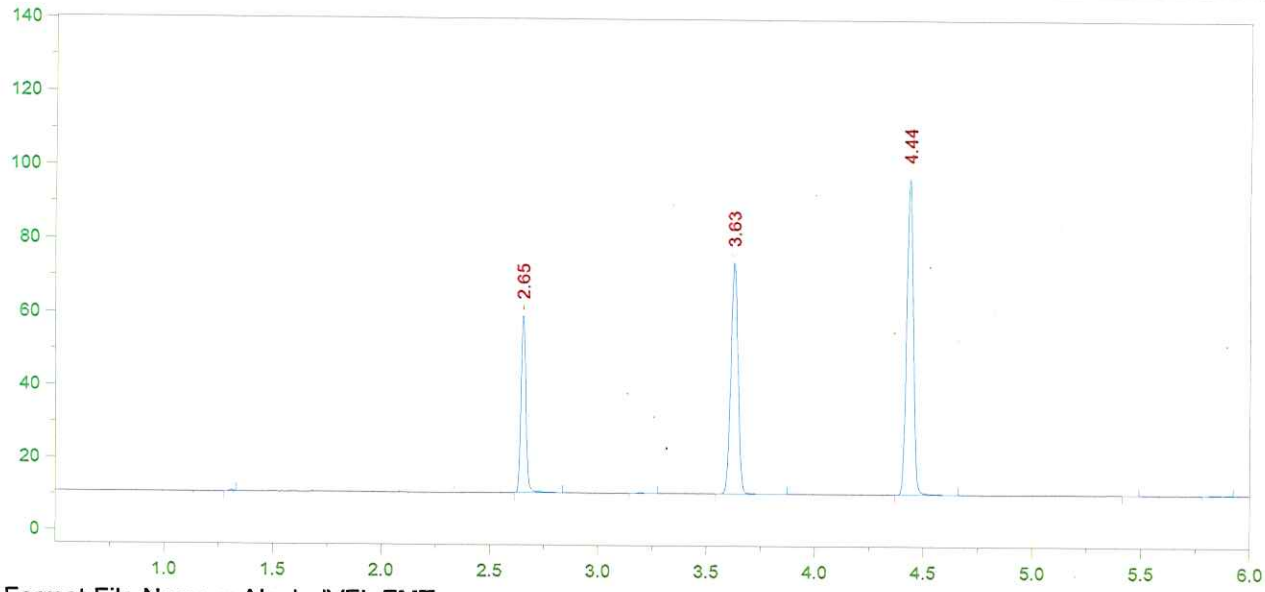
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 12:55:12 PM
Bound File Name = VFL11162015.0038.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 12:55:06 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	116825	0.1219	0.0995
4	3.63	t-Butanol	138802	0.9828	0.8022
5	4.44	n-Propanol	181317	1.0000	0.8162

15-24-100

41



Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 1:26:43 PM
Bound File Name = VFL11162015.0040.RAW
Sample Name = CCS
Date Taken = 11/17/2015 1:26:38 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11162015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	75473	0.0778
4	3.63	t-Butanol	146347	1.0239
5	4.44	n-Propanol	183506	1.0000

CCS Mean 0.0777 g/100mL EtOH

Target: 0.0738 - 0.0816

Recovery: $\frac{0.078}{0.080}$ = 97.5%

10-24-100

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File Name = C:\Alcohol Data\VFL11172015\VFL11172015.SEQ
Version = 5
File Date = 11/18/2015 11:20:09 AM

Entry #	Raw File Name	Method File Name	Sample Name	Sample Wt.	Int. Std. Amount
1	VFL11172015.0001.raw	Blood Alc temp VFL.MET	BLANK	1.00	1.00
2	VFL11172015.0002.raw	Blood Alc temp VFL.MET	TMX	1.00	1.00
3	VFL11172015.0003.raw	Blood Alc temp VFL.MET	STD A	1.00	1.00
4	VFL11172015.0004.raw	Blood Alc temp VFL.MET	STD B	1.00	1.00
5	VFL11172015.0005.raw	Blood Alc temp VFL.MET	STD C	1.00	1.00
6	VFL11172015.0006.raw	Blood Alc temp VFL.MET	STD D	1.00	1.00
7	VFL11172015.0007.raw	Blood Alc temp VFL.MET	STD E	1.00	1.00
8	VFL11172015.0008.raw	Blood Alc temp VFL.MET	AQ	1.00	1.00
9	VFL11172015.0009.raw	Blood Alc temp VFL.MET	AQ	1.00	1.00
10	VFL11172015.0010.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
11	VFL11172015.0011.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
12	VFL11172015.0012.raw	simsoln.met	100 DP	1.00	1.00
13	VFL11172015.0013.raw	simsoln.met	100 DP	1.00	1.00
14	VFL11172015.0014.raw	simsoln.met	100 DP	1.00	1.00
15	VFL11172015.0015.raw	simsoln.met	100 DP	1.00	1.00
16	VFL11172015.0016.raw	simsoln.met	100 DP	1.00	1.00
17	VFL11172015.0017.raw	simsoln.met	100 DP	1.00	1.00
18	VFL11172015.0018.raw	simsoln.met	100 DP	1.00	1.00
19	VFL11172015.0019.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
20	VFL11172015.0020.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
21	VFL11172015.0021.raw	simsoln.met	100 JD	1.00	1.00
22	VFL11172015.0022.raw	simsoln.met	100 JD	1.00	1.00
23	VFL11172015.0023.raw	simsoln.met	100 JD	1.00	1.00
24	VFL11172015.0024.raw	simsoln.met	100 JD	1.00	1.00
25	VFL11172015.0025.raw	simsoln.met	100 JD	1.00	1.00
26	VFL11172015.0026.raw	simsoln.met	100 JD	1.00	1.00
27	VFL11172015.0027.raw	simsoln.met	100 JD	1.00	1.00
28	VFL11172015.0028.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
29	VFL11172015.0029.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
30	VFL11172015.0030.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
31	VFL11172015.0031.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
32	VFL11172015.0032.raw	simsoln.met	100 DP	1.00	1.00
33	VFL11172015.0033.raw	simsoln.met	100 DP	1.00	1.00
34	VFL11172015.0034.raw	simsoln.met	100 DP	1.00	1.00
35	VFL11172015.0035.raw	simsoln.met	100 DP	1.00	1.00
36	VFL11172015.0036.raw	simsoln.met	100 DP	1.00	1.00
37	VFL11172015.0037.raw	simsoln.met	100 DP	1.00	1.00
38	VFL11172015.0038.raw	simsoln.met	100 DP	1.00	1.00
39	VFL11172015.0039.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
40	VFL11172015.0040.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00

INITIAL SET OF REPLICATES DID NOT FALL WITHIN 3% OF TARGET VALUE, LIKELY DUE TO SAMPLING FROM SOLUTION. ADDITIONAL REPLICATES PREPARED AND RUN. DS 11/18/15

SAMPLES RUN WITHIN 24 HOURS OF CALIBRATION DS 11/18/15

15-24-100

DS

44

File Name: C:\Methods\VFL11172015.CAL
Version: 7

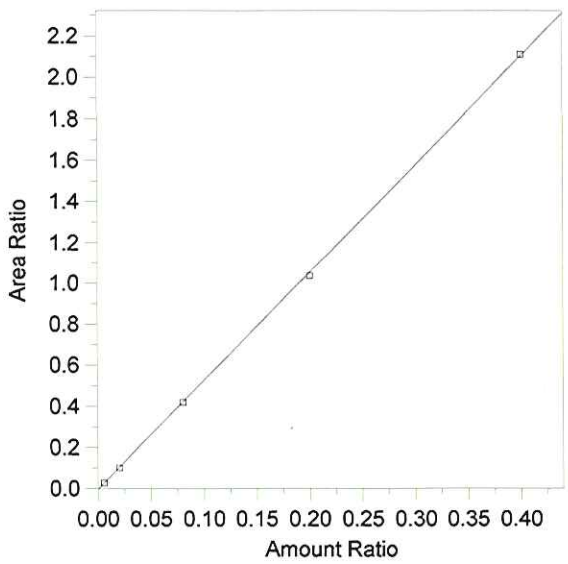
Creator:
Description:
Reason for change:

Internal standard calibration
No injection volume correction
No sample weight correction
Area reject threshold: 1500
Reference peak area reject threshold: 0
Amount units:
No default component

Method of calculating data point averages: Equal weight for all updates
No calibration update report

All levels are normal data points.

3 Ethanol



Expected retention time:	2.656 minutes
Search window:	0.1 minutes
Internal standard component:	7 (n-Propanol)
No retention time reference component	
Group number:	0
High alarm limit:	0
Low alarm limit:	0
Component constant:	0

Single peak quantification by area

Y = 5.25716 X + 0

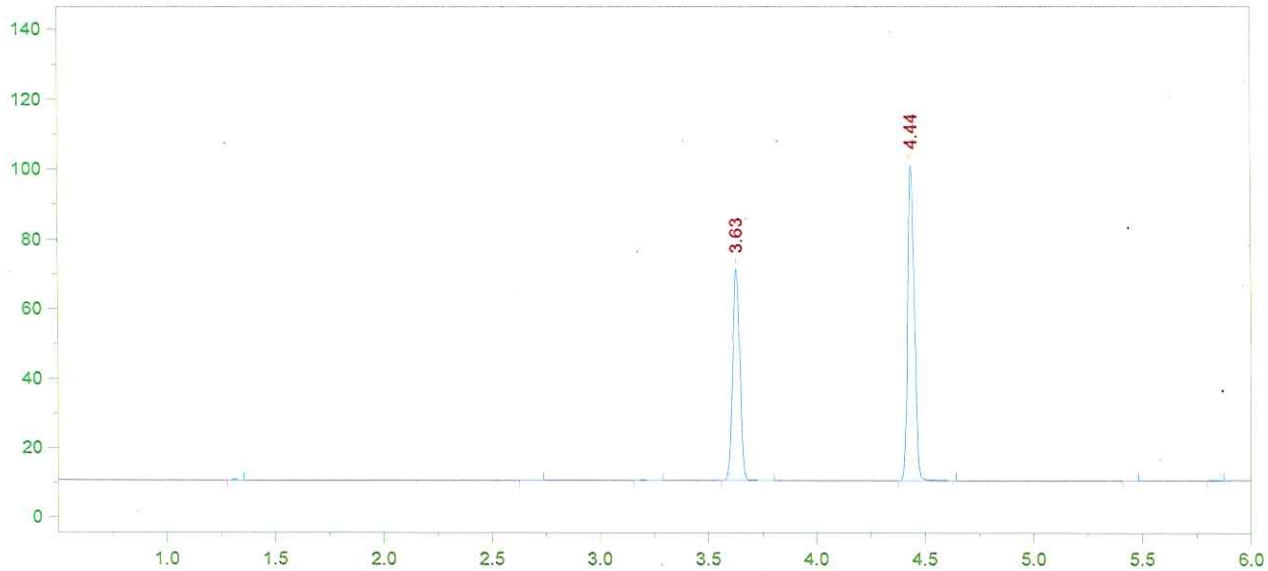
Linear fit with equal weighting, forced to origin

Coefficient of determination:	0.9998927
Average error:	2.283%
Average CF:	5.260494
RSD:	3.346%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source	Date and time
1	(0.078)	(85146)	--	--	0.078	85146	Manual	8/18/2015 8:39:13 AM
2	0.005	5107.273	1021455	5.473	0.005	2.772449E-02	C:\Alcohol Data\VFL11172015\VFL11172015.0003.BND	11/17/2015 2:39:33 PM
3	0.02	19073.65	953682.6	-3.507	0.02	0.101456	C:\Alcohol Data\VFL11172015\VFL11172015.0004.BND	11/17/2015 2:57:09 PM
4	0.08	75225.55	940319.4	-0.599	0.08	0.4180554	C:\Alcohol Data\VFL11172015\VFL11172015.0005.BND	11/17/2015 3:11:02 PM
5	0.2	197089.1	985445.4	-1.444	0.2	1.036254	C:\Alcohol Data\VFL11172015\VFL11172015.0006.BND	11/17/2015 3:28:31 PM
6	0.4	406483.2	1016208	0.393	0.4	2.111123	C:\Alcohol Data\VFL11172015\VFL11172015.0007.BND	11/17/2015 3:43:31 PM

15-24-100

45



Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 10:35:38 AM
Bound File Name = VFL11172015.0001.RAW
Sample Name = BLANK
Date Taken = 11/17/2015 2:08:24 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
4	3.63	t-Butanol	140752	0.9413
5	4.44	n-Propanol	191772	1.0000

15-24-100

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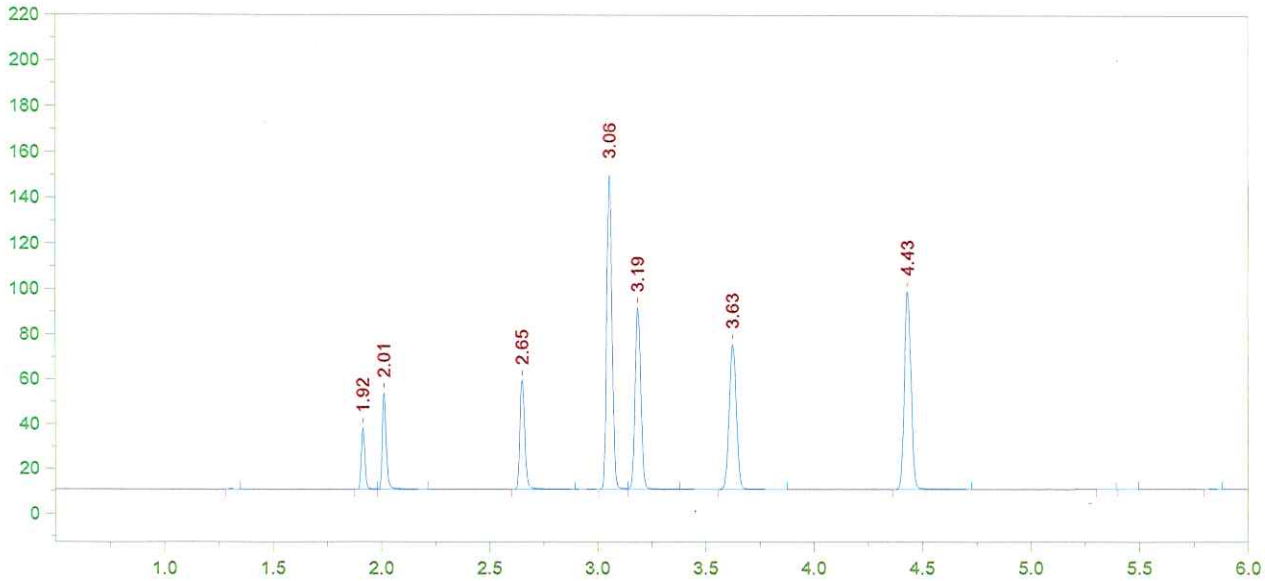

Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 10:35:47 AM
Bound File Name = VFL11172015.0002.RAW
Sample Name = TMX
Date Taken = 11/17/2015 2:25:39 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	1.92	Acetaldehyde	31898	0.0686
3	2.01	Methanol	54045	0.1169
4	2.65	Ethanol	76392	0.0774
5	3.06	Acetone	238197	0.0612
6	3.19	Isopropanol	152382	0.0780
7	3.63	t-Butanol	149595	1.0224
8	4.43	n-Propanol	187661	1.0000

15-24-100

DS

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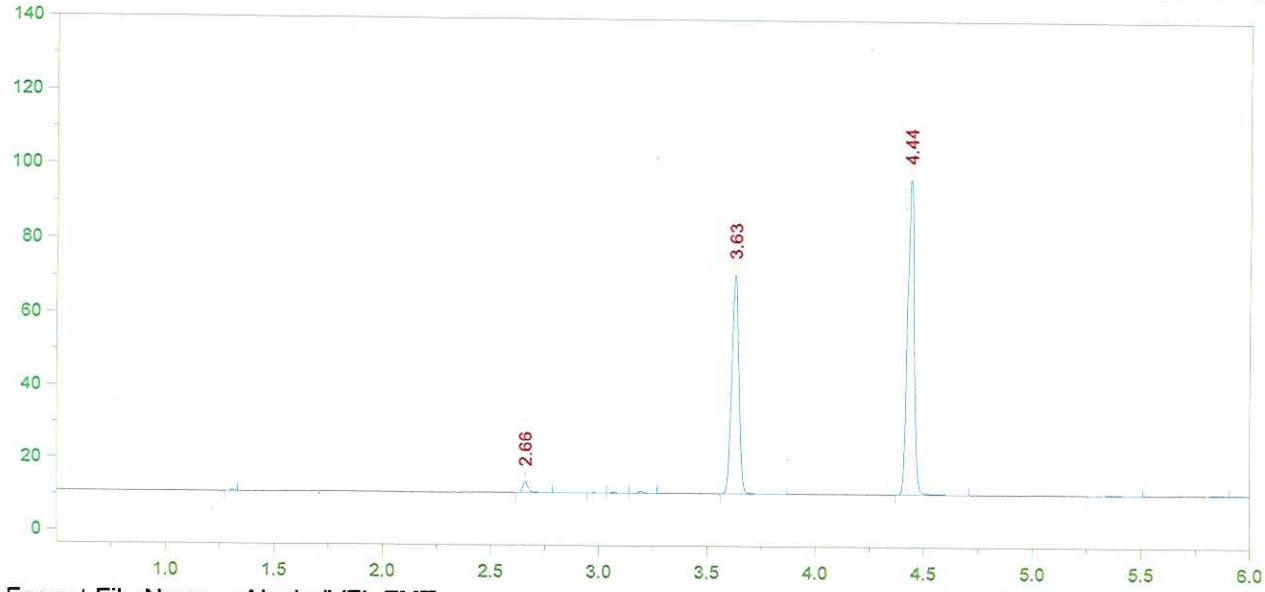
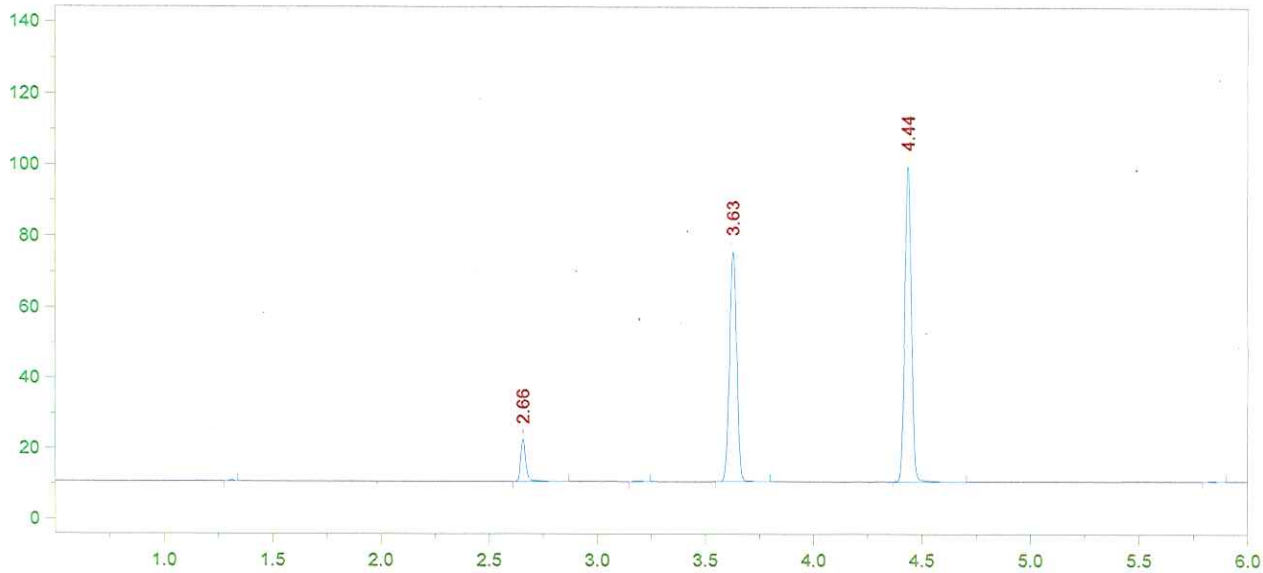


Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 10:35:53 AM
Bound File Name = VFL11172015.0003.RAW
Sample Name = STD A
Date Taken = 11/17/2015 2:39:26 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

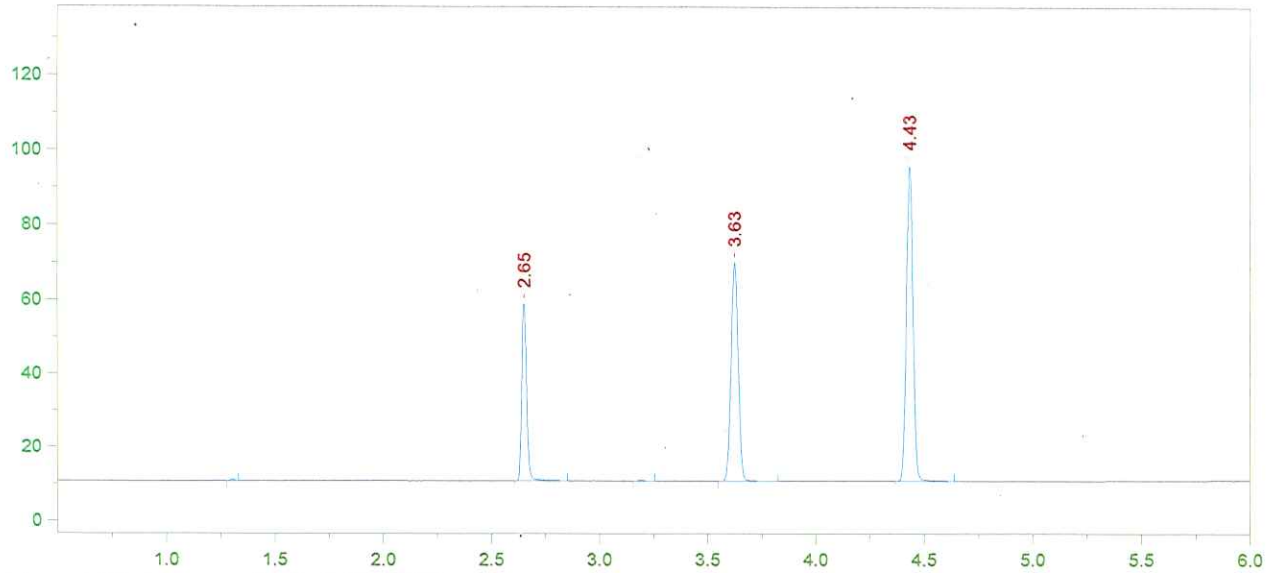
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	05107	0.0053
6	3.63	t-Butanol	139047	0.9681
7	4.44	n-Propanol	184215	1.0000



Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 10:35:59 AM
Bound File Name = VFL11172015.0004.RAW
Sample Name = STD B
Date Taken = 11/17/2015 2:57:03 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	19074	0.0193
4	3.63	t-Butanol	150150	1.0244
5	4.44	n-Propanol	187999	1.0000



Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 10:36:06 AM
Bound File Name = VFL11172015.0005.RAW
Sample Name = STD C
Date Taken = 11/17/2015 3:10:56 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	75226	0.0795
4	3.63	t-Butanol	136874	0.9756
5	4.43	n-Propanol	179942	1.0000

15-24-100

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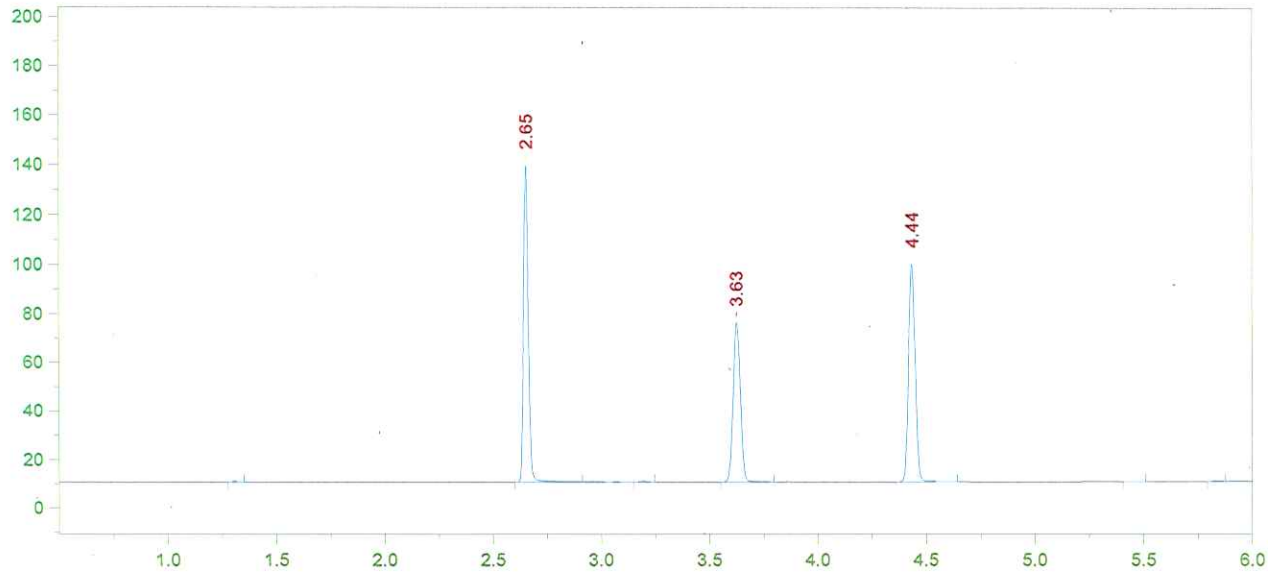


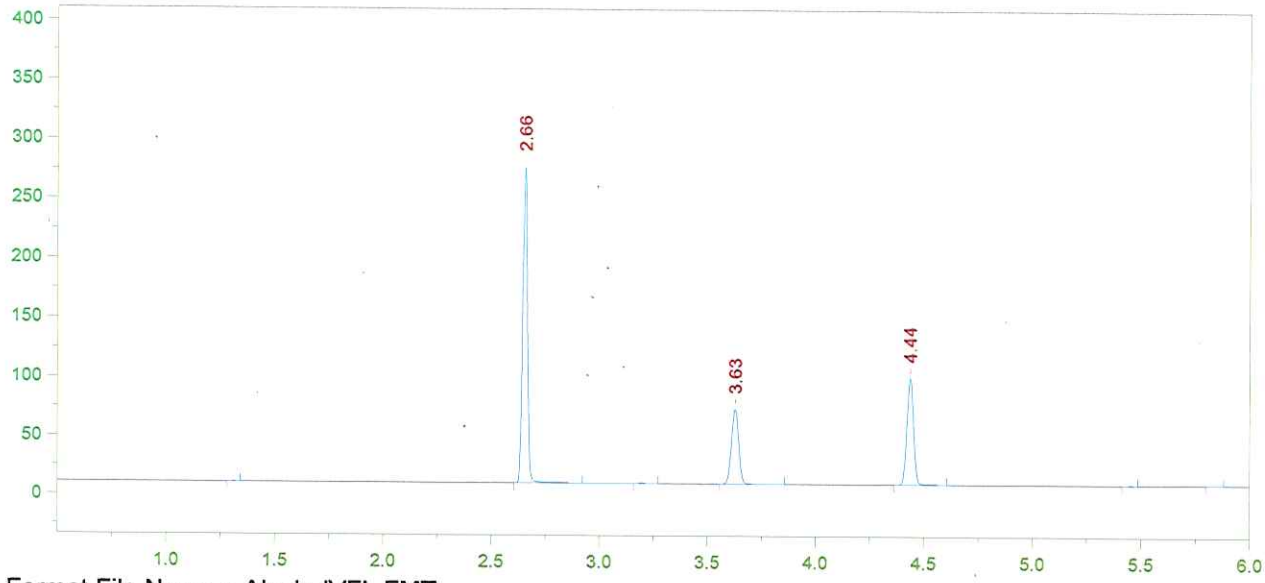
Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 10:36:13 AM
Bound File Name = VFL11172015.0006.RAW
Sample Name = STD D
Date Taken = 11/17/2015 3:28:25 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	197089	0.1971
4	3.63	t-Butanol	151430	1.0212
5	4.44	n-Propanol	190194	1.0000

15-24-100

51



Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 10:36:19 AM
Bound File Name = VFL11172015.0007.RAW
Sample Name = STD E
Date Taken = 11/17/2015 3:43:25 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	406483	0.4016
4	3.63	t-Butanol	148383	0.9884
5	4.44	n-Propanol	192544	1.0000

10-24-100

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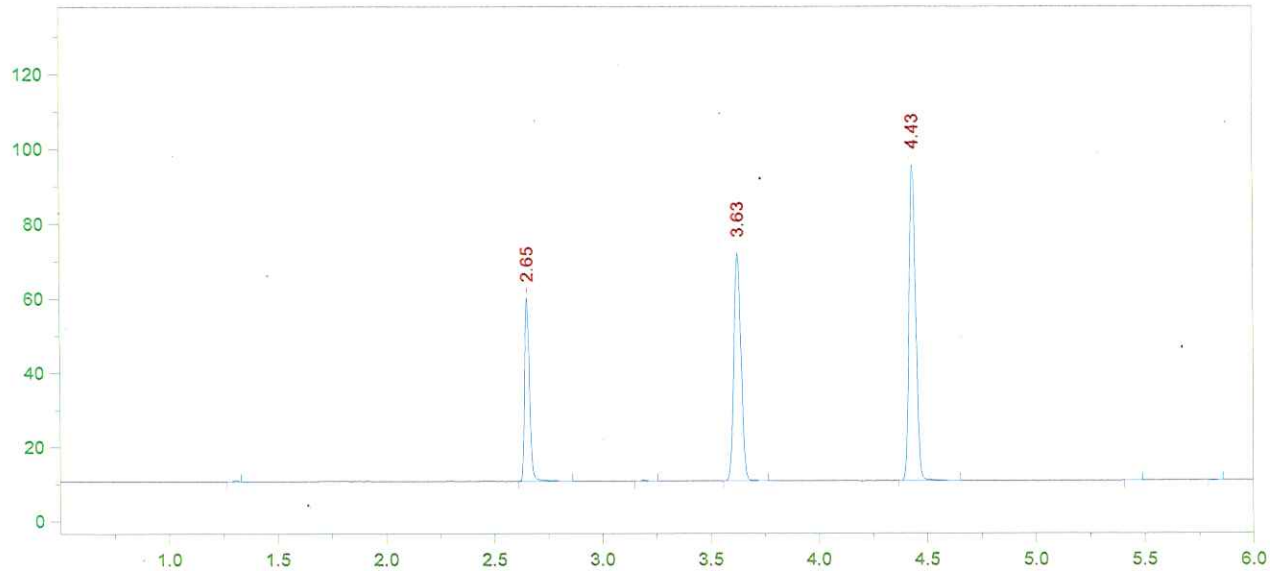
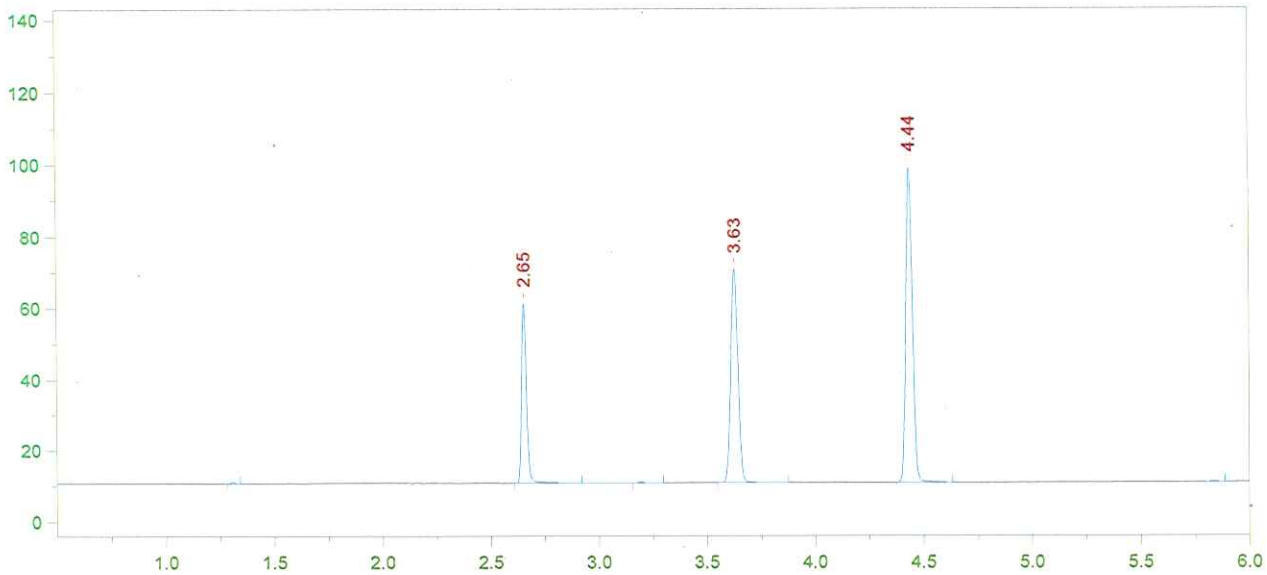


Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 3:59:54 PM
Bound File Name = VFL11172015.0008.RAW
Sample Name = AQ
Date Taken = 11/17/2015 3:59:49 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	76381	0.0805
4	3.63	t-Butanol	141425	1.0055
5	4.43	n-Propanol	180400	1.0000



Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 4:13:51 PM
Bound File Name = VFL11172015.0009.RAW
Sample Name = AQ
Date Taken = 11/17/2015 4:13:47 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	79276	0.0808
4	3.63	t-Butanol	138984	0.9556
5	4.44	n-Propanol	186538	1.0000

AQ Meth: 0.0806 g/100 ml EtOH

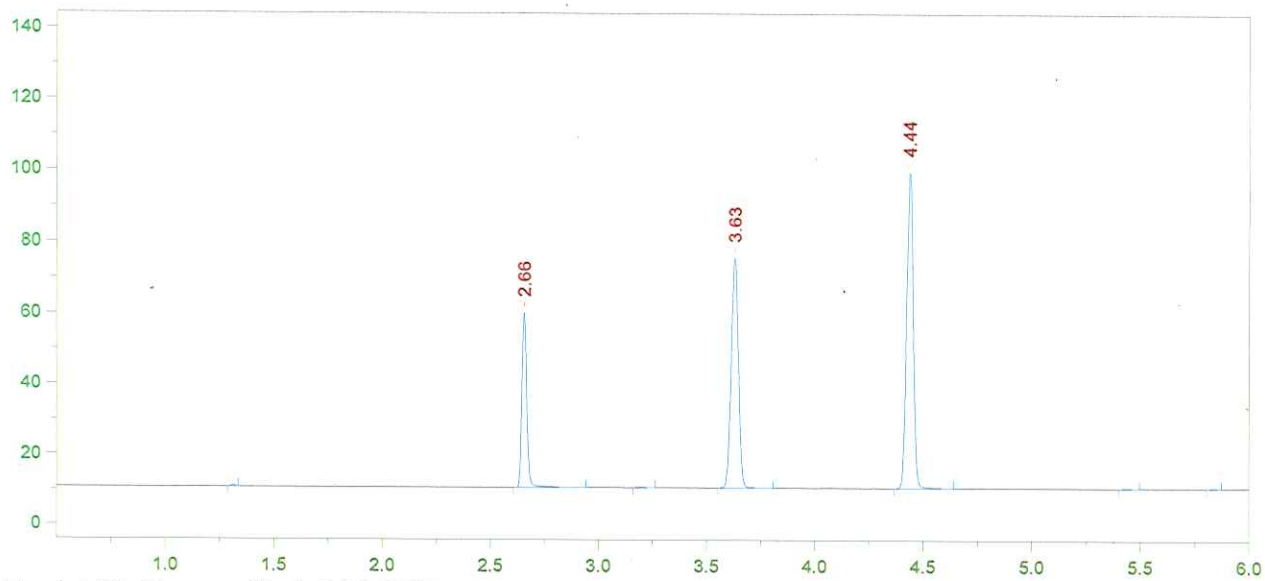
±5%: 0.0766 – 0.0846

Recovery: $\frac{0.080}{0.080} = 100\%$

11/18/15

19-24-100

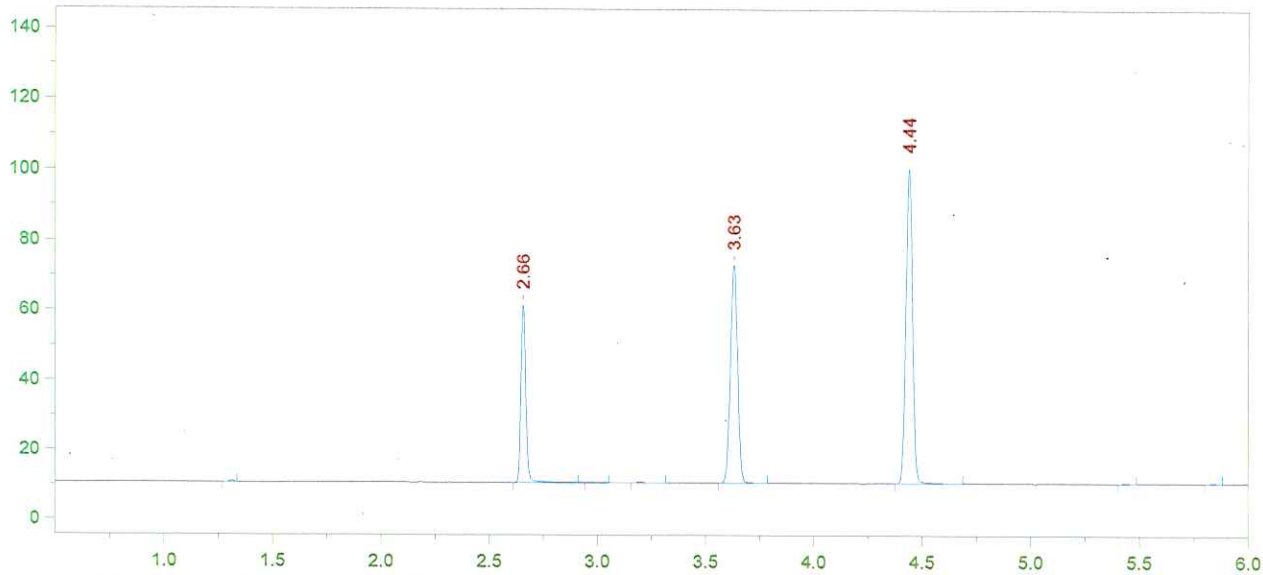
54



Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 4:31:17 PM
Bound File Name = VFL11172015.0010.RAW
Sample Name = CCS
Date Taken = 11/17/2015 4:31:13 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	76902	0.0775
4	3.63	t-Butanol	150196	1.0209
5	4.44	n-Propanol	188690	1.0000



Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 4:45:05 PM
Bound File Name = VFL11172015.0011.RAW
Sample Name = CCS
Date Taken = 11/17/2015 4:44:59 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	79059	0.0791
5	3.63	t-Butanol	144140	0.9723
6	4.44	n-Propanol	190137	1.0000

CCS MEAN : 0.0783 g/100 ml EtOH

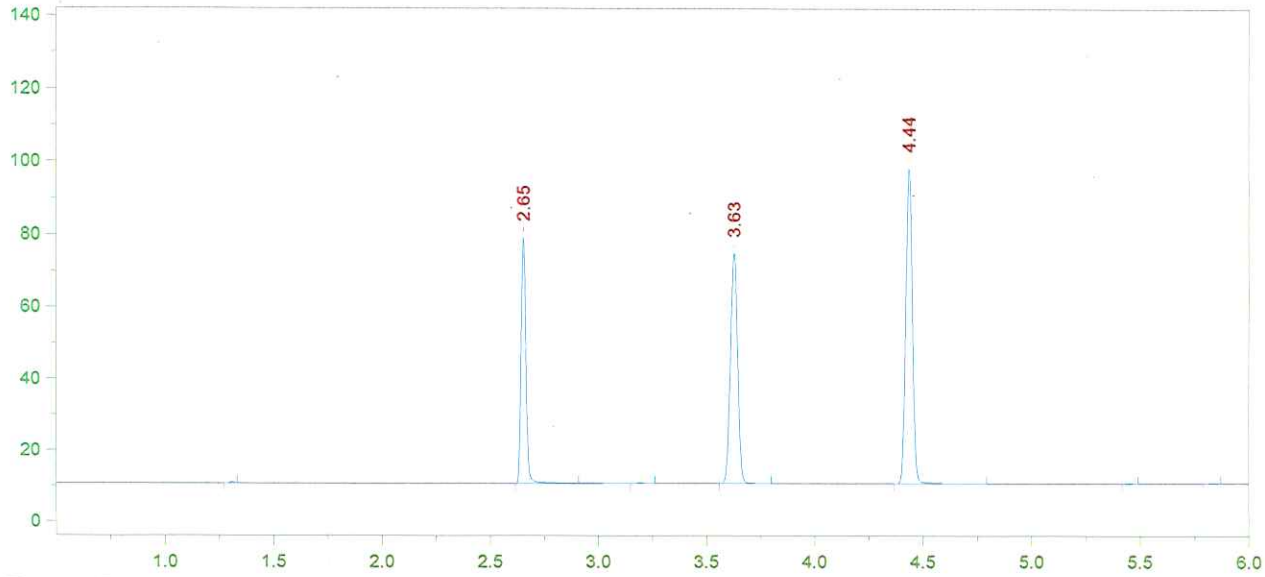
±5% : 0.0744 - 0.0822

Recovery : $\frac{0.078}{0.080}$ = 97.5%

11/18/15

15-24-100

56



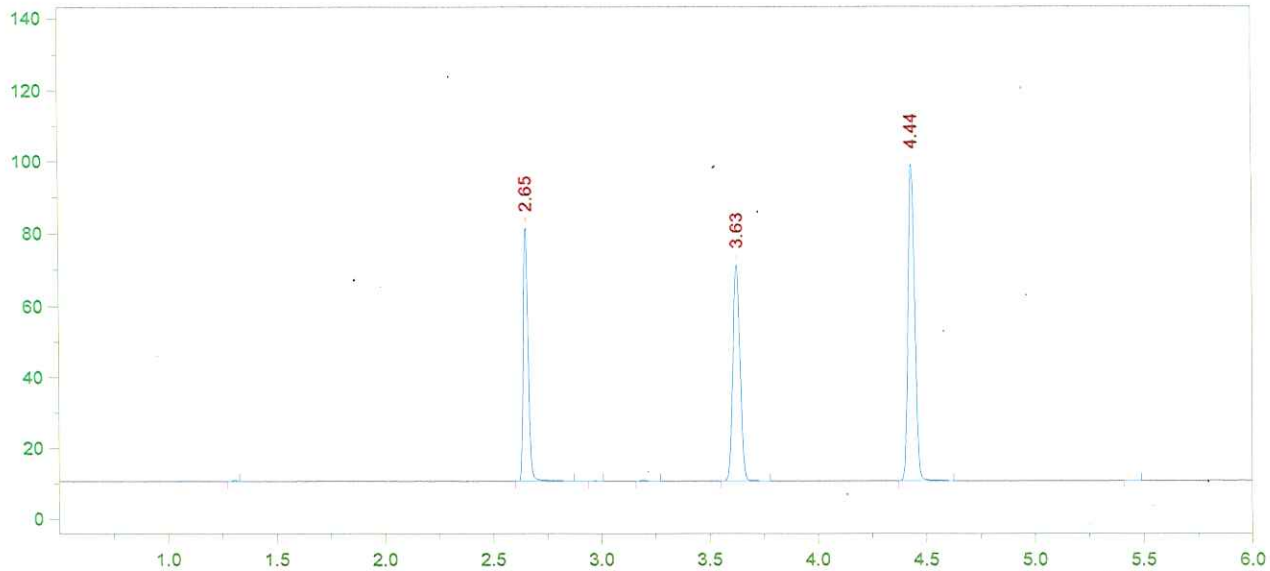
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 5:02:48 PM
Bound File Name = VFL11172015.0012.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 5:02:38 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	105978	0.1086	0.0887
4	3.63	t-Butanol	148761	1.0282	0.8392
5	4.44	n-Propanol	185571	1.0000	0.8162

18-24-100

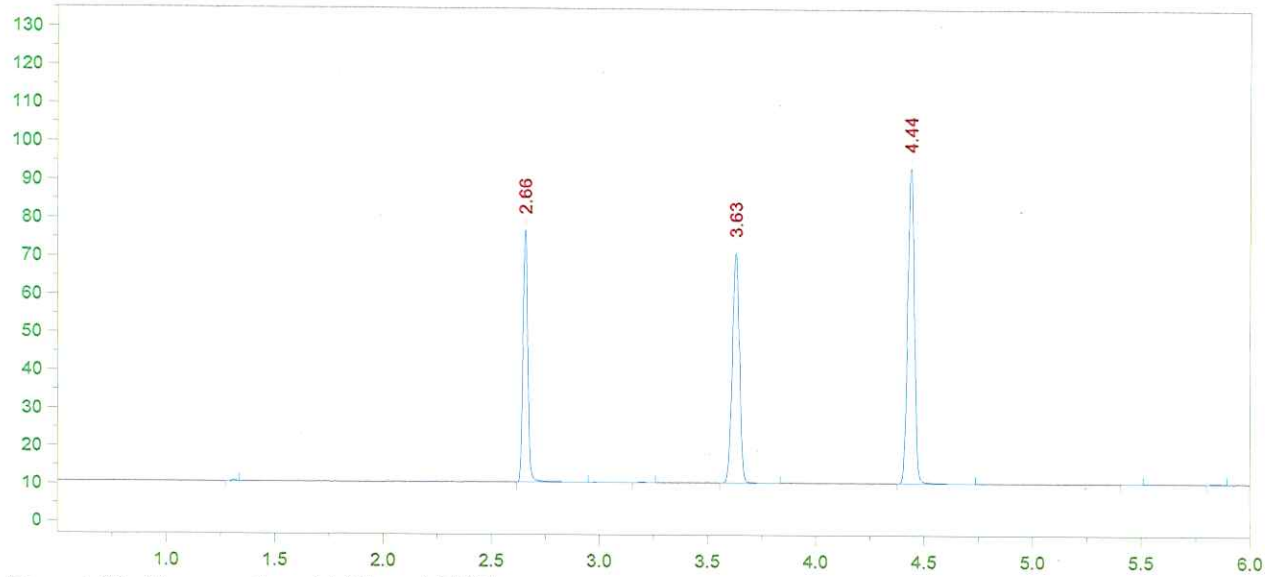
57



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015 Today's Time = 5:16:47 PM
Bound File Name = VFL11172015.0013.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 5:16:39 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	110114	0.1115	0.0910
5	3.63	t-Butanol	140217	0.9576	0.7816
6	4.44	n-Propanol	187802	1.0000	0.8162



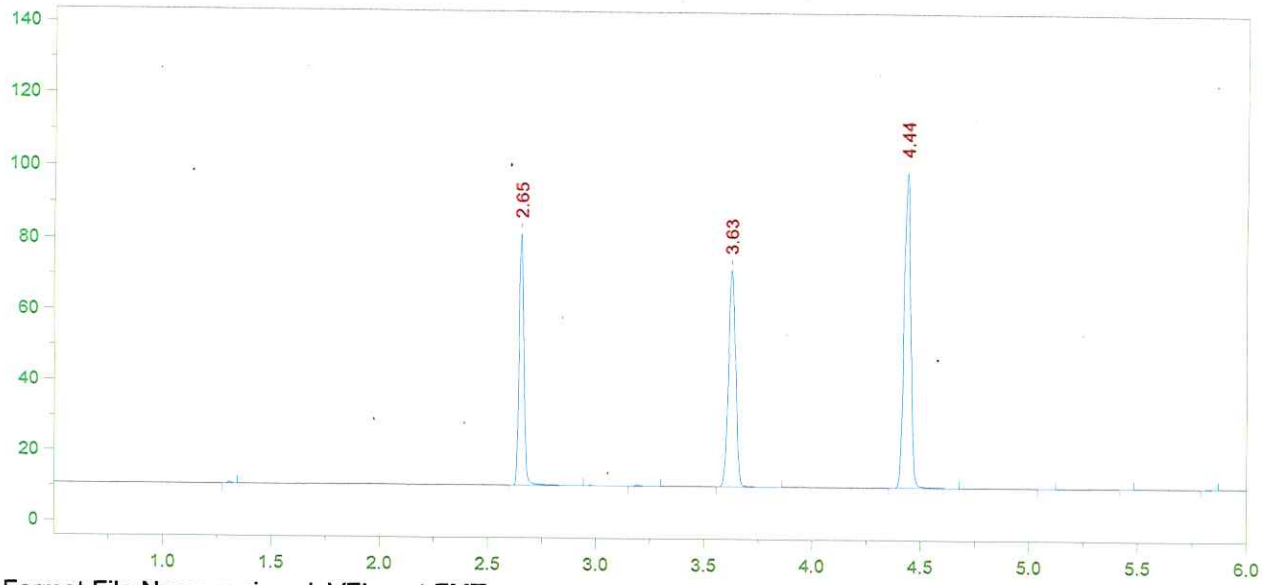
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 5:34:09 PM
Bound File Name = VFL11172015.0014.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 5:34:02 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	102428	0.1099	0.0897
4	3.63	t-Butanol	139672	1.0103	0.8246
5	4.44	n-Propanol	177320	1.0000	0.8162

15-24-100

59



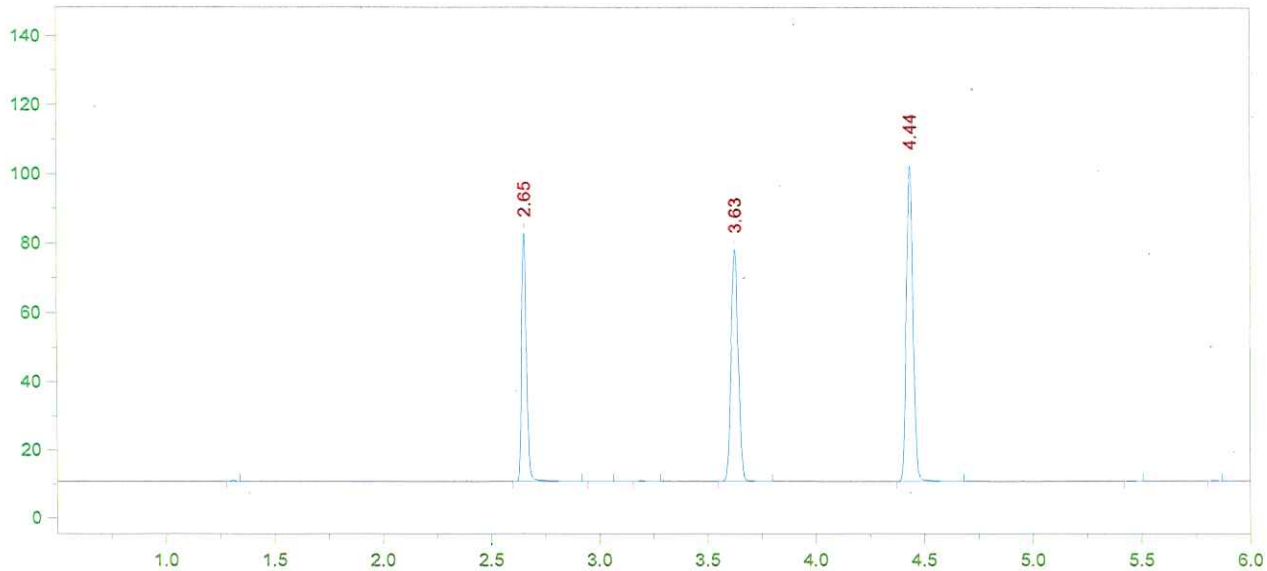
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 5:47:49 PM
Bound File Name = VFL11172015.0015.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 5:47:45 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	109740	0.1112	0.0907
4	3.63	t-Butanol	141543	0.9667	0.7890
5	4.44	n-Propanol	187785	1.0000	0.8162

10-24-100

60



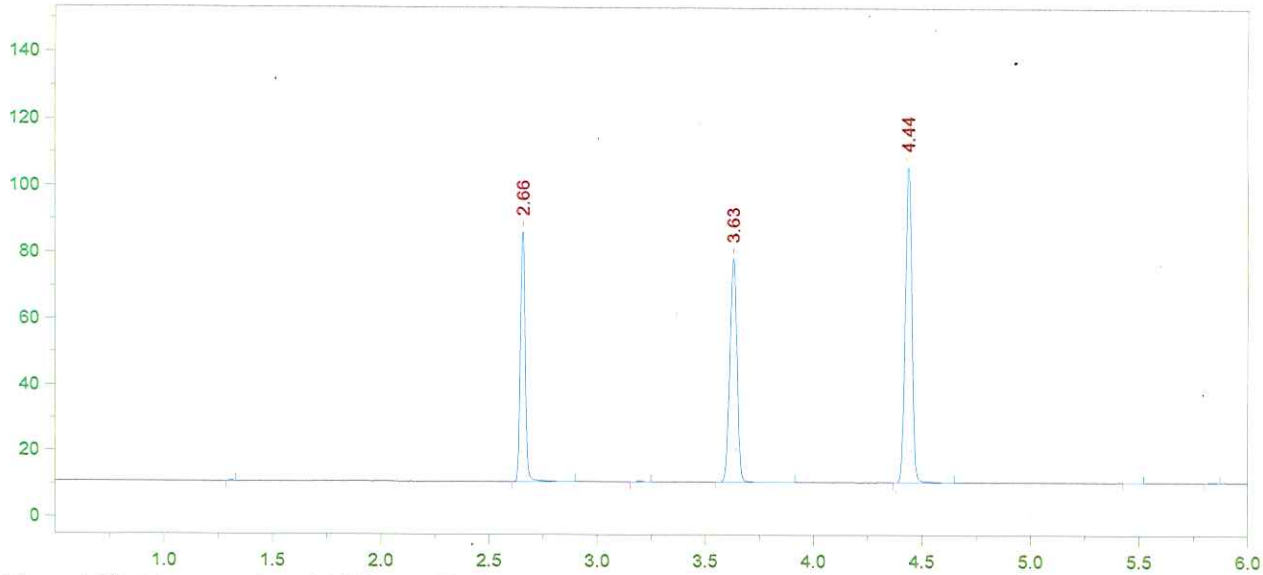
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 6:05:30 PM
Bound File Name = VFL11172015.0016.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 6:05:24 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	111380	0.1087	0.0887
5	3.63	t-Butanol	156022	1.0269	0.8382
6	4.44	n-Propanol	194860	1.0000	0.8162

10-24-100

61



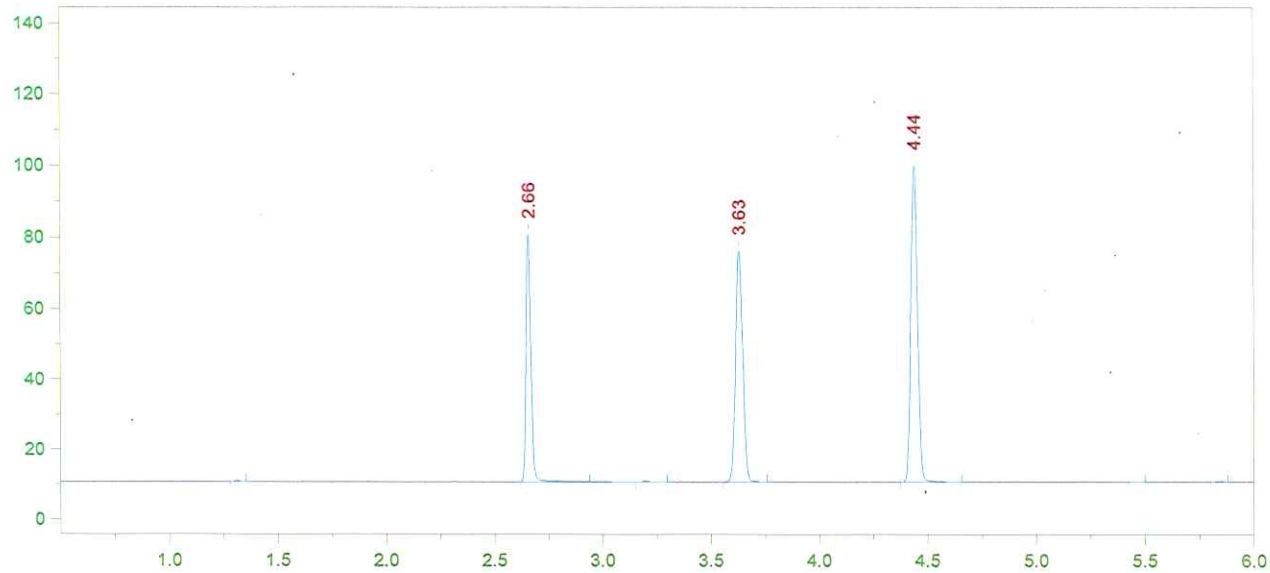
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 6:19:16 PM
Bound File Name = VFL11172015.0017.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 6:19:12 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	116782	0.1101	0.0899
4	3.63	t-Butanol	156185	0.9928	0.8103
5	4.44	n-Propanol	201777	1.0000	0.8162

15-24-100

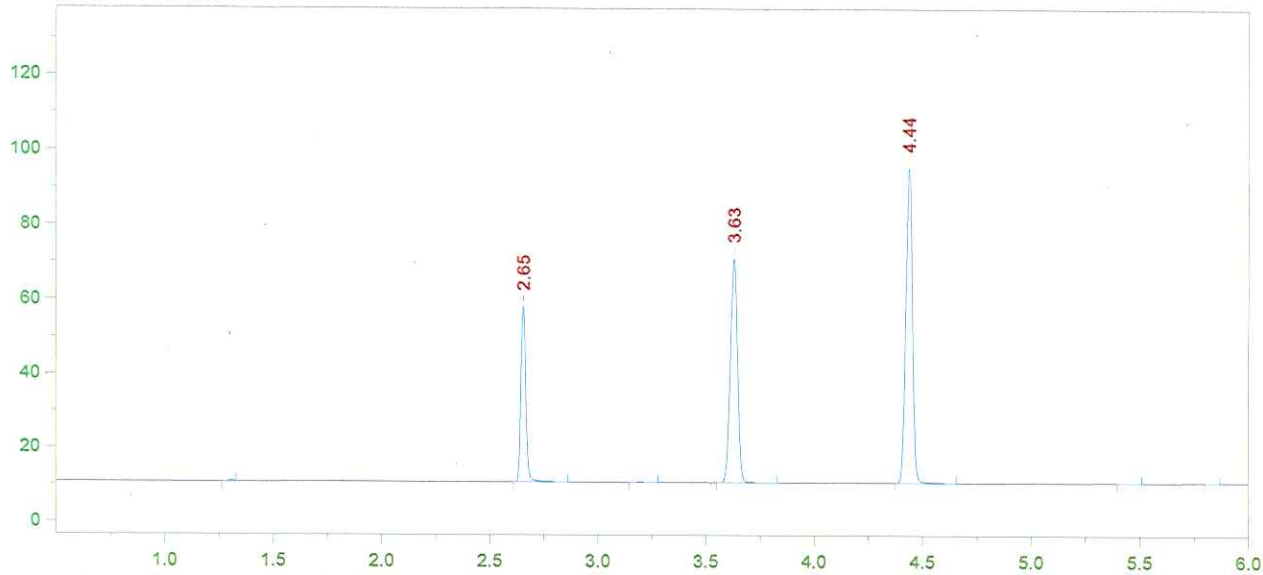
62



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 6:36:51 PM
Bound File Name = VFL11172015.0018.RAW
Sample Name = 100 DP
Date Taken = 11/17/2015 6:36:45 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	108075	0.1089	0.0889
4	3.63	t-Butanol	151196	1.0271	0.8384
5	4.44	n-Propanol	188793	1.0000	0.8162



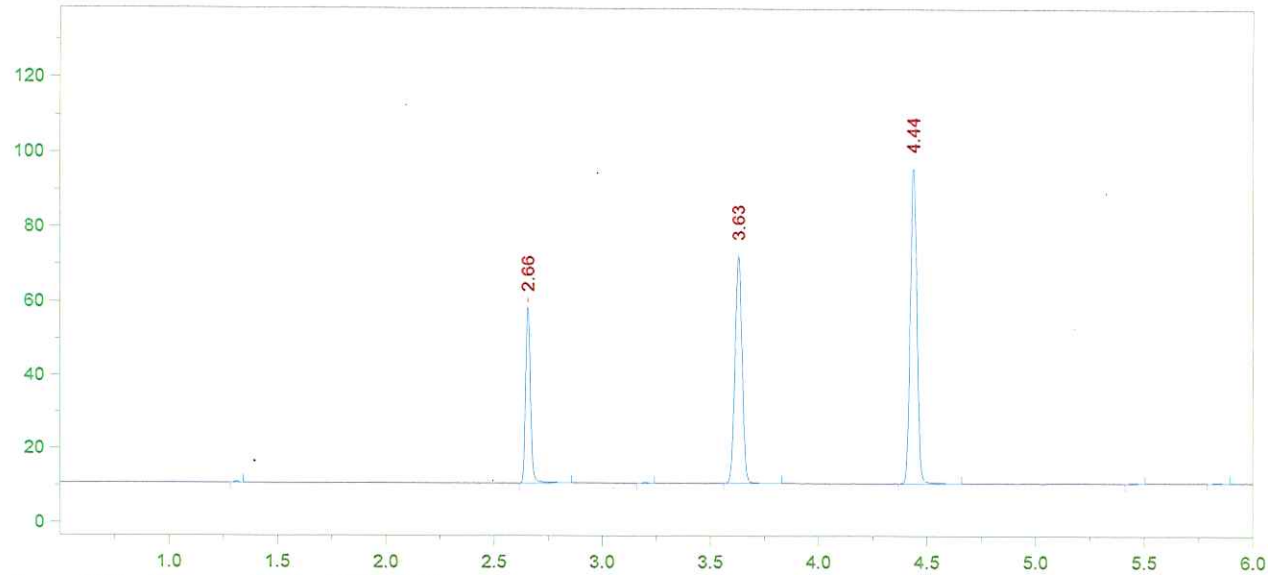
Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 6:50:37 PM
Bound File Name = VFL11172015.0019.RAW
Sample Name = CCS
Date Taken = 11/17/2015 6:50:31 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	74146	0.0785
4	3.63	t-Butanol	139490	0.9962
5	4.44	n-Propanol	179581	1.0000

15-24-100

64



Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 7:08:18 PM
Bound File Name = VFL11172015.0020.RAW
Sample Name = CCS
Date Taken = 11/17/2015 7:08:12 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	74010	0.0779
4	3.63	t-Butanol	142073	1.0086
5	4.44	n-Propanol	180672	1.0000

CCS mean: 11/18/15 ~~0.077~~ 0.0782 g/100 mL EtOH

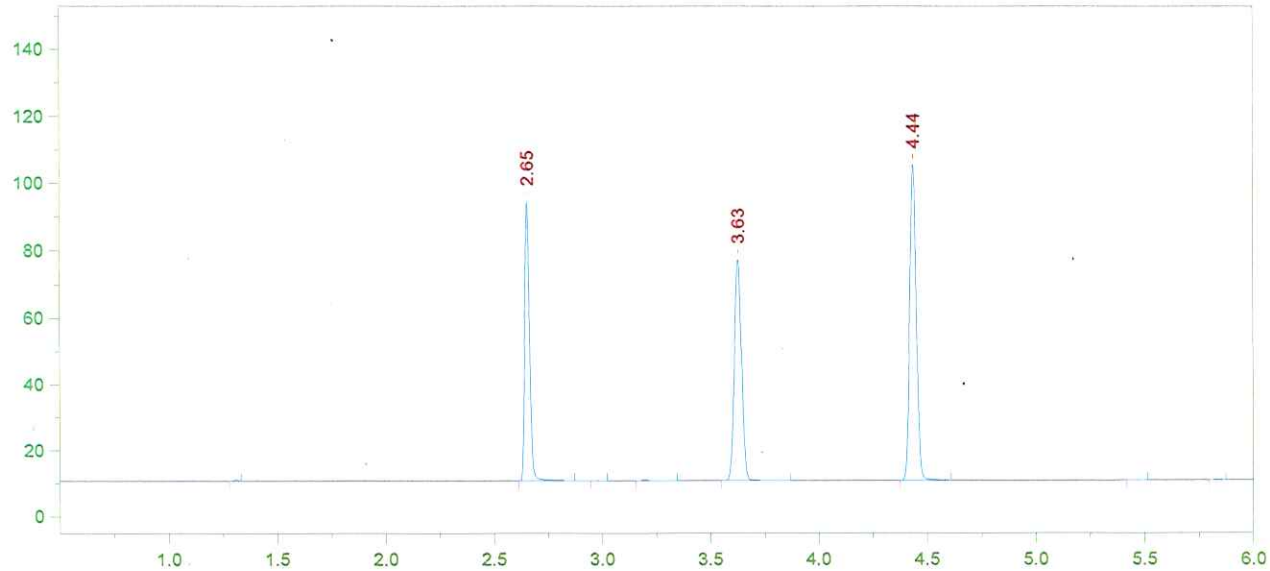
±5%: 0.0743 - 0.0821

Recovery: $\frac{0.078}{0.080}$ = 97.5%

11/18/15

15-24-100

65



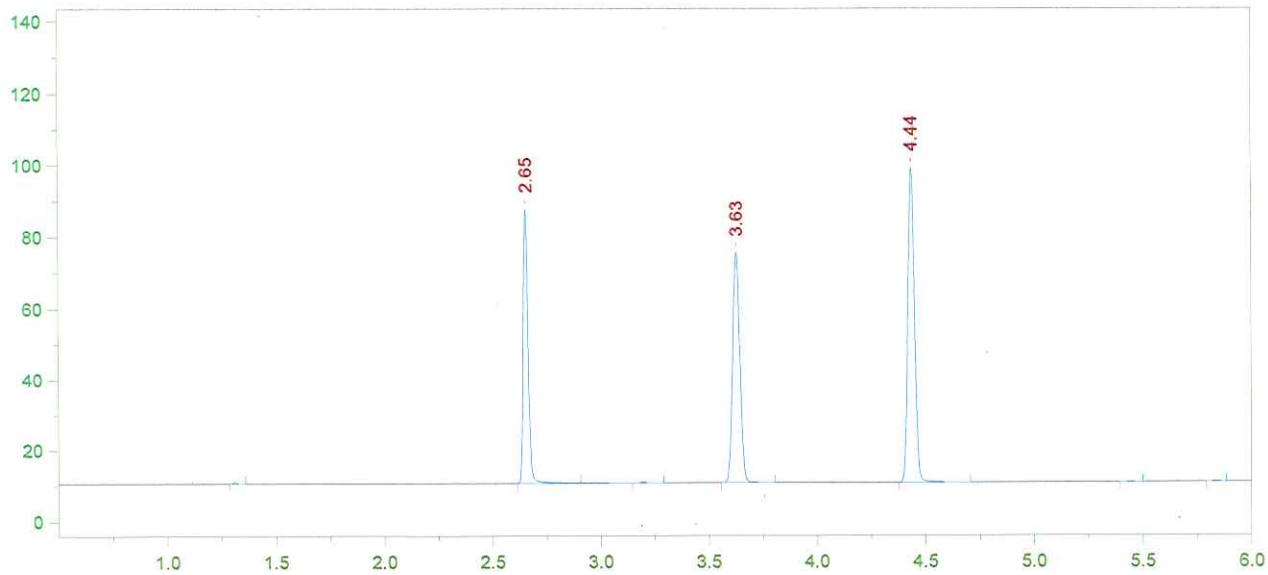
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 7:22:21 PM
Bound File Name = VFL11172015.0021.RAW
Sample Name = 100 JD
Date Taken = 11/17/2015 7:22:13 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	129049	0.1226	0.1001
5	3.63	t-Butanol	153662	0.9842	0.8033
6	4.44	n-Propanol	200246	1.0000	0.8162

10-24-100

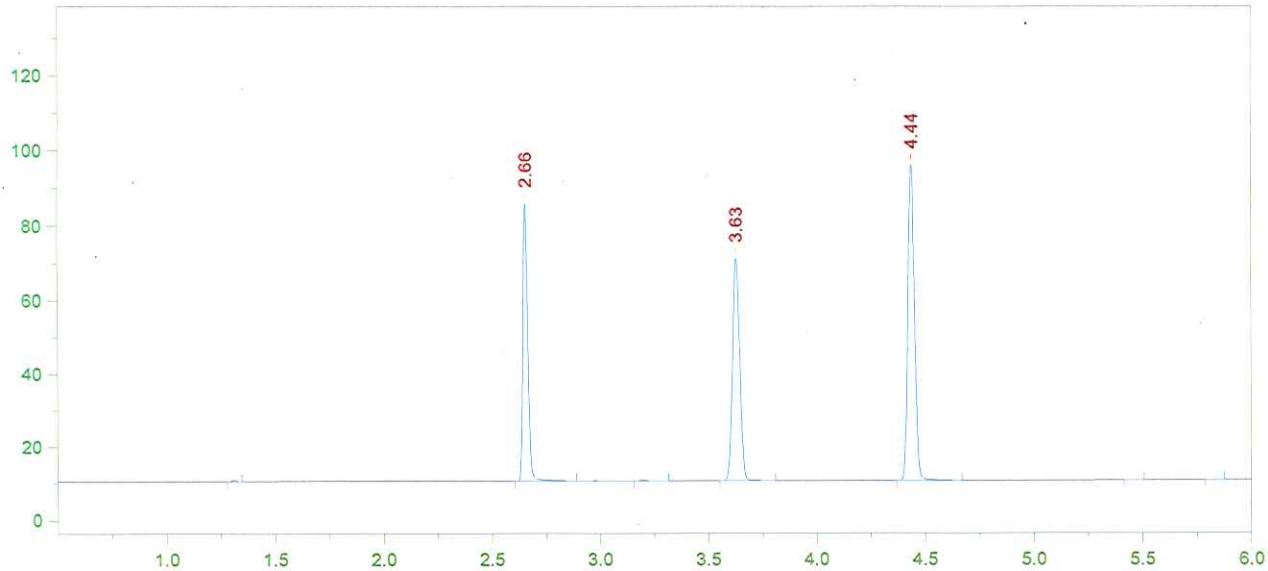
66



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 7:39:45 PM
Bound File Name = VFL11172015.0022.RAW
Sample Name = 100 JD
Date Taken = 11/17/2015 7:39:40 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	119114	0.1208	0.0986
4	3.63	t-Butanol	150020	1.0254	0.8370
5	4.44	n-Propanol	187639	1.0000	0.8162



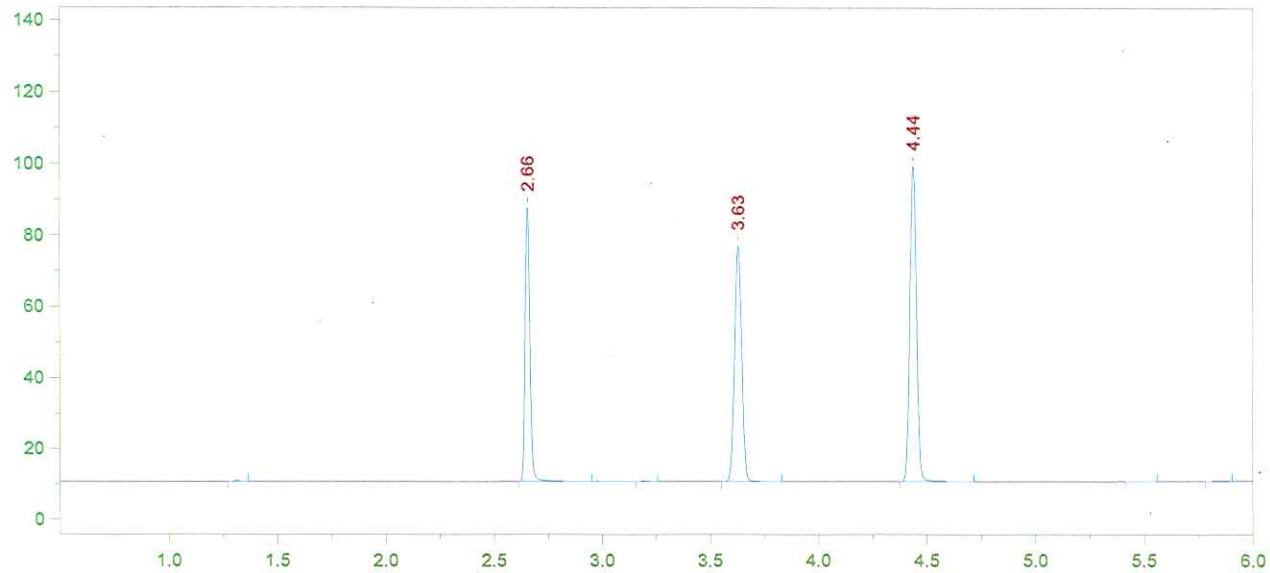
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 7:53:04 PM
Bound File Name = VFL11172015.0023.RAW
Sample Name = 100 JD
Date Taken = 11/17/2015 7:52:55 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	116915	0.1227	0.1002
4	3.63	t-Butanol	139164	0.9851	0.8040
5	4.44	n-Propanol	181184	1.0000	0.8162

15-24-100

68



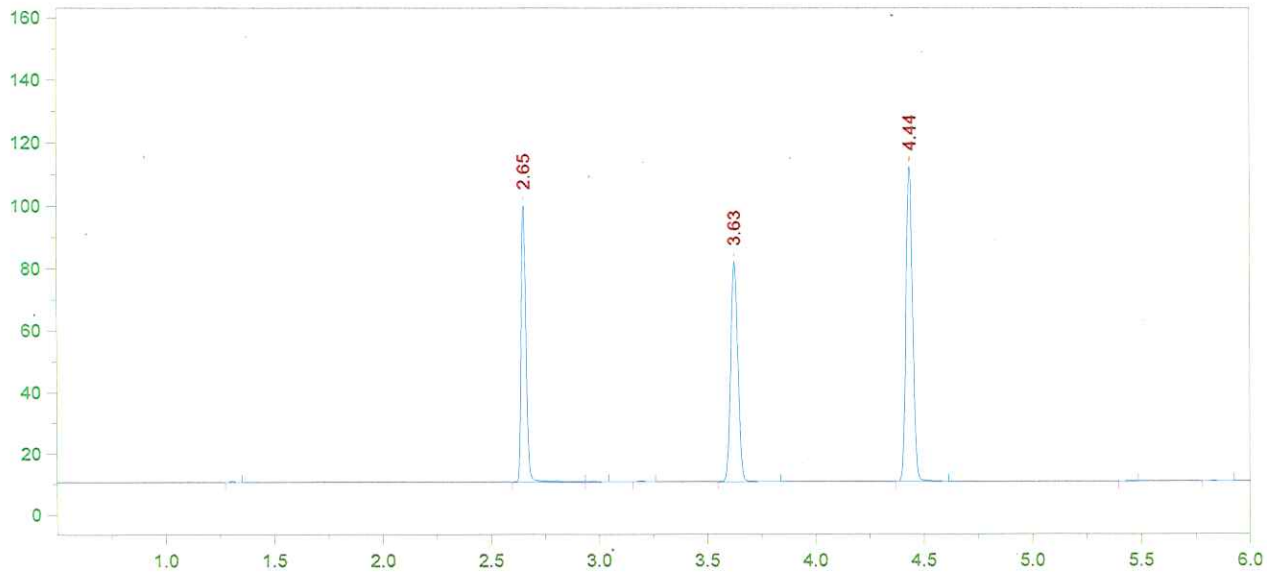
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 8:11:09 PM
Bound File Name = VFL11172015.0024.RAW
Sample Name = 100 JD
Date Taken = 11/17/2015 8:11:04 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	118905	0.1198	0.0978
4	3.63	t-Butanol	152781	1.0383	0.8474
5	4.44	n-Propanol	188732	1.0000	0.8162

15-24-100

69



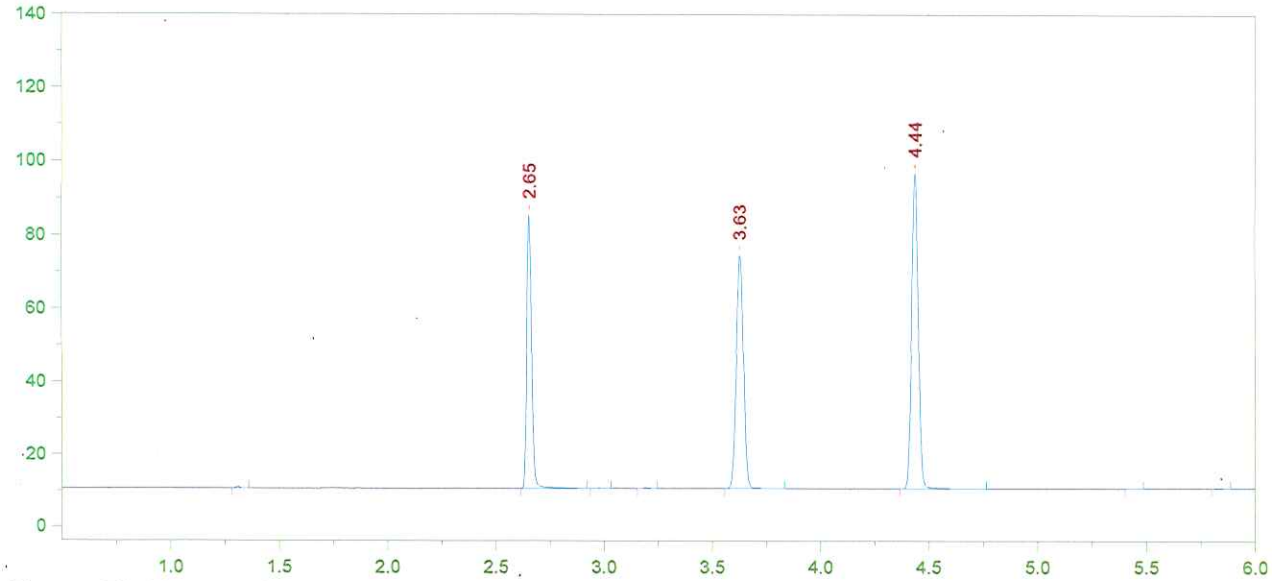
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 8:25:15 PM
Bound File Name = VFL11172015.0025.RAW
Sample Name = 100 JD
Date Taken = 11/17/2015 8:25:07 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	138683	0.1222	0.0997
5	3.63	t-Butanol	164730	0.9788	0.7989
6	4.44	n-Propanol	215861	1.0000	0.8162

10-24-100

70



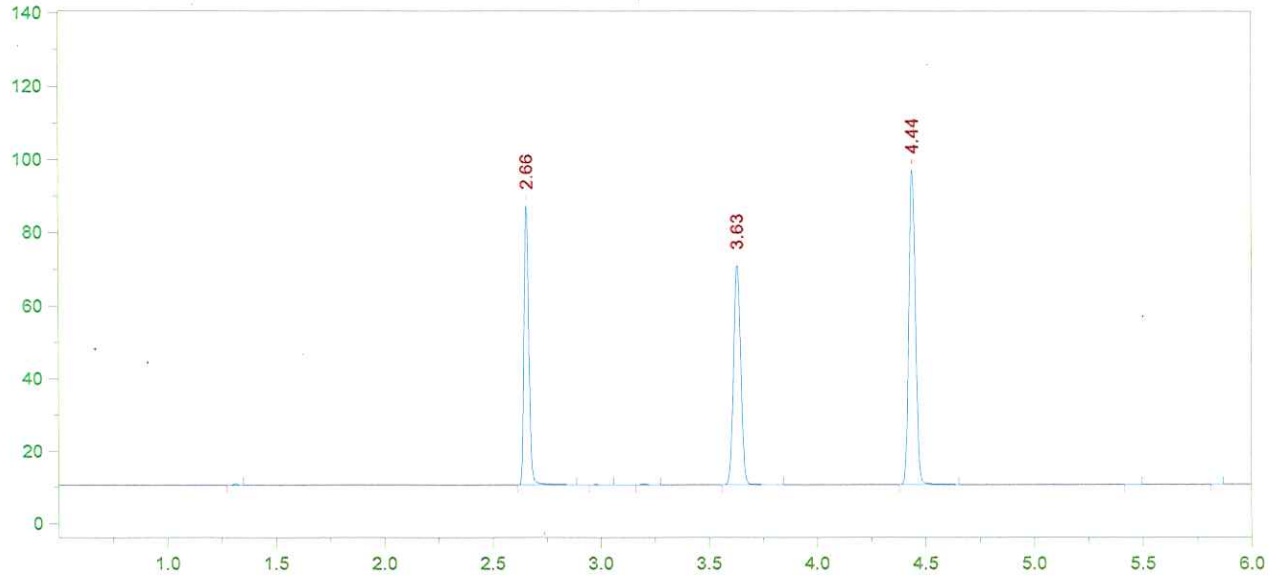
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 8:42:38 PM
Bound File Name = VFL11172015.0026.RAW
Sample Name = 100 JD
Date Taken = 11/17/2015 8:42:28 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	115533	0.1200	0.0980
5	3.63	t-Butanol	147856	1.0359	0.8455
6	4.44	n-Propanol	183066	1.0000	0.8162

10-24-100

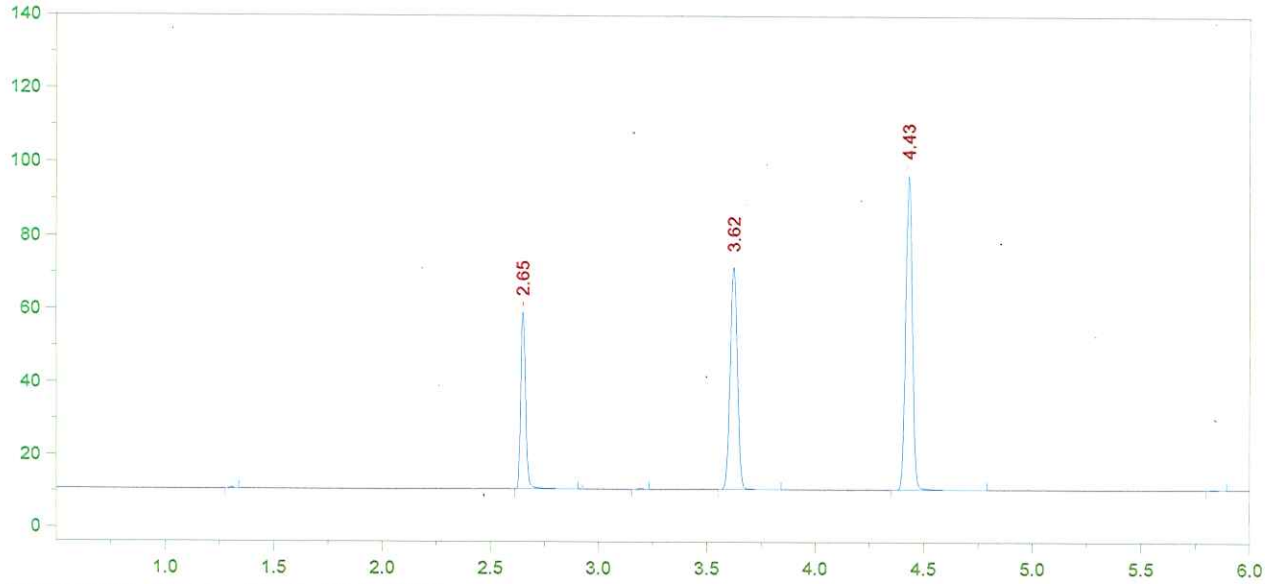
71



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/17/2015
Today's Time = 8:55:48 PM
Bound File Name = VFL11172015.0027.RAW
Sample Name = 100 JD
Date Taken = 11/17/2015 8:55:43 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	118172	0.1229	0.1003
5	3.63	t-Butanol	139955	0.9817	0.8013
6	4.44	n-Propanol	182848	1.0000	0.8162



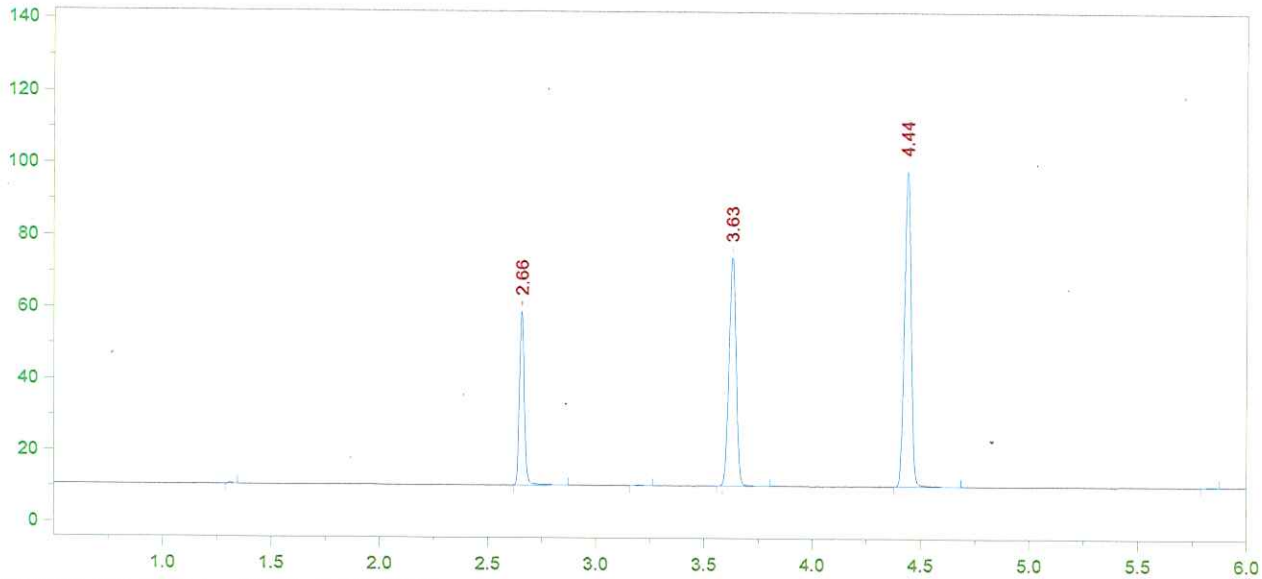
Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 9:13:59 PM
Bound File Name = VFL11172015.0028.RAW
Sample Name = CCS
Date Taken = 11/17/2015 9:13:50 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	75745	0.0788
4	3.62	t-Butanol	141703	0.9944
5	4.43	n-Propanol	182765	1.0000

15-24-100 DG

73



Format File Name = AlcoholVFL.FMT

Today's Date = 11/17/2015
Today's Time = 9:28:08 PM
Bound File Name = VFL11172015.0029.RAW
Sample Name = CCS
Date Taken = 11/17/2015 9:28:03 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	75391	0.0773
4	3.63	t-Butanol	147407	1.0185
5	4.44	n-Propanol	185634	1.0000

CCS NEW: 0.0780 g/100mL EtOH

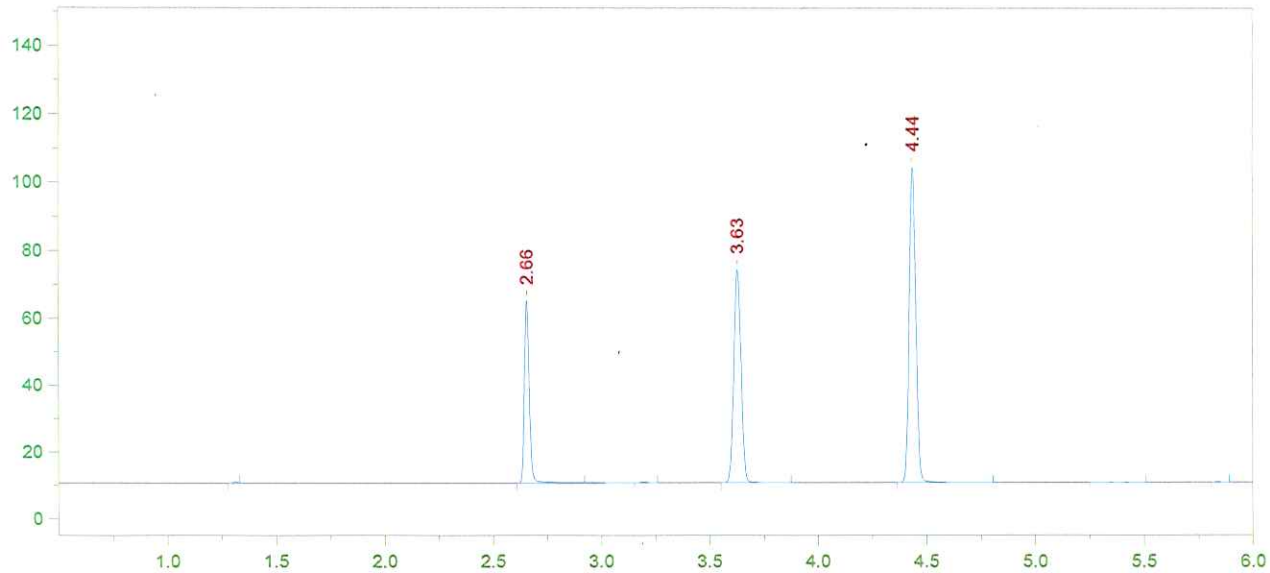
±5%: 0.0741 - 0.0819

Recovery: $\frac{0.078}{0.080} = 97.5\%$

DS 11/18/15

10-24-100 DS

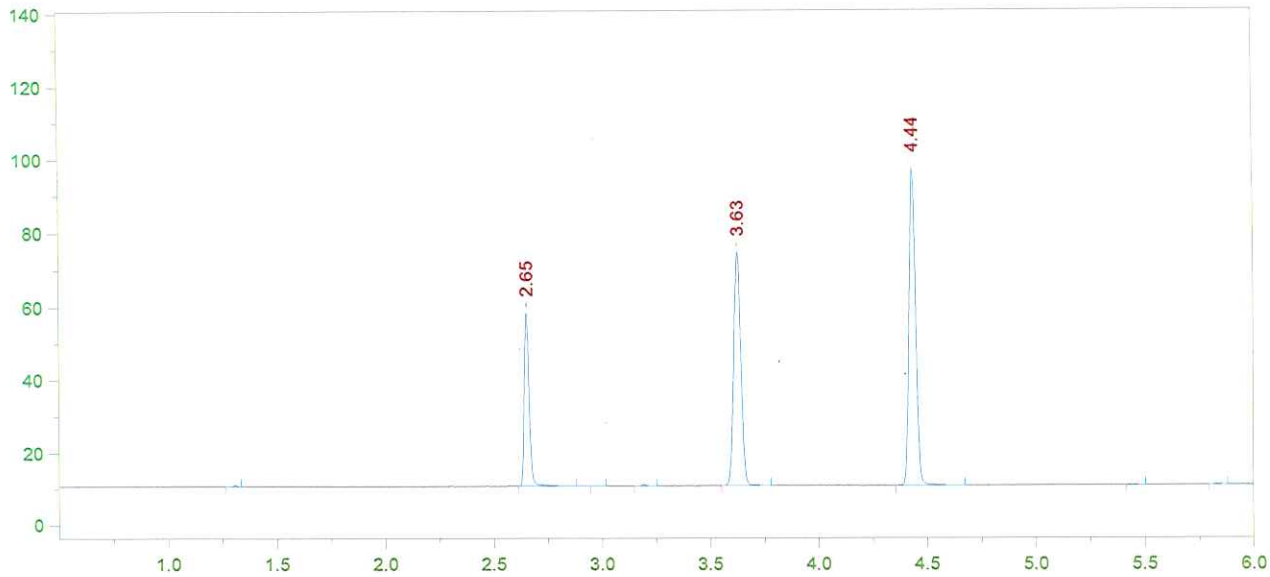
74



Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 11:56:05 AM
Bound File Name = VFL11172015.0030.RAW
Sample Name = CCS
Date Taken = 11/18/2015 11:55:55 AM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	84340	0.0806
4	3.63	t-Butanol	146584	0.9440
5	4.44	n-Propanol	199165	1.0000



Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 12:13:21 PM
Bound File Name = VFL11172015.0031.RAW
Sample Name = CCS
Date Taken = 11/18/2015 12:13:12 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	74116	0.0768
5	3.63	t-Butanol	148354	1.0360
6	4.44	n-Propanol	183656	1.0000

CCS Mean: 0.0787 g/100 mL EtOH

±5%: 0.0747 - 0.0826

Recovery: $\frac{0.079}{0.080}$ = 98.7%

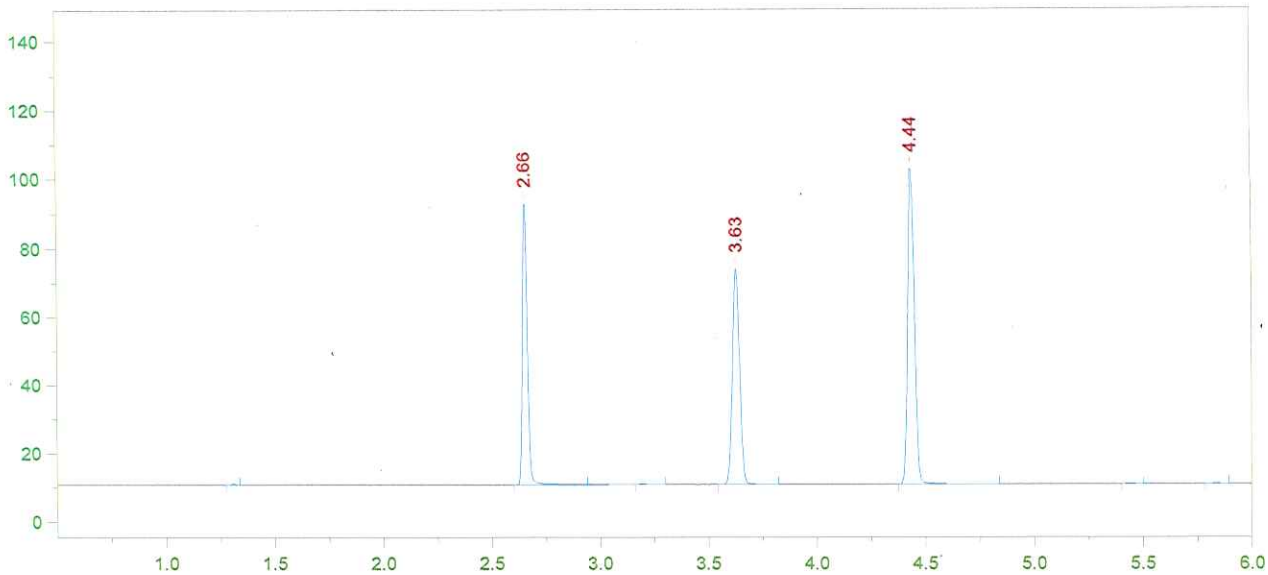
DG 11/18/15

11/18/15

15-24-100

DG

76



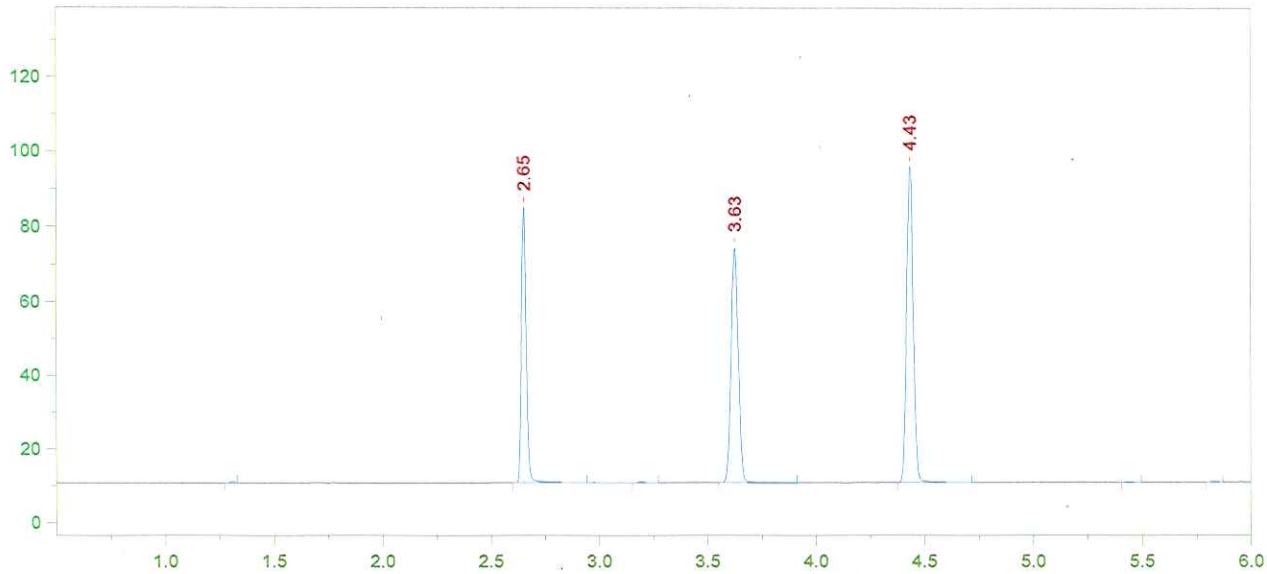
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/18/2015
Today's Time = 12:27:42 PM
Bound File Name = VFL11172015.0032.RAW
Sample Name = 100 DP
Date Taken = 11/18/2015 12:27:32 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	127709	0.1237	0.1010
4	3.63	t-Butanol	146034	0.9539	0.7786
5	4.44	n-Propanol	196344	1.0000	0.8162

15-24-100

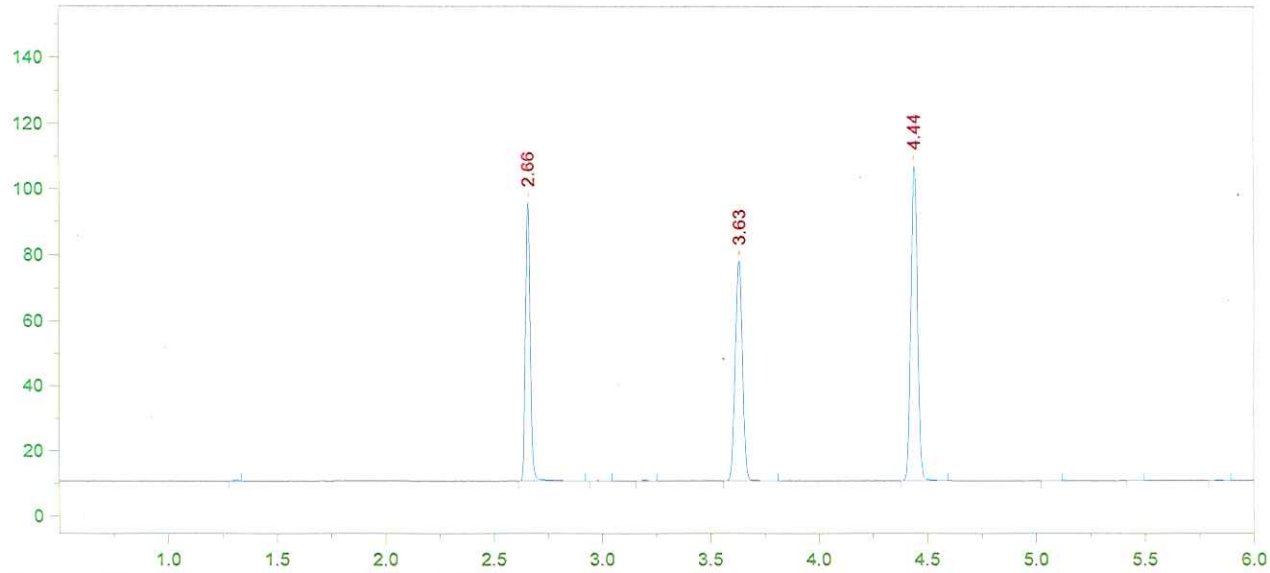
77



Format File Name = simsolnVFL.met.FMT

Today's Date = 11/18/2015
Today's Time = 12:44:45 PM
Bound File Name = VFL11172015.0033.RAW
Sample Name = 100 DP
Date Taken = 11/18/2015 12:44:36 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	115050	0.1205	0.0983
4	3.63	t-Butanol	146667	1.0355	0.8452
5	4.43	n-Propanol	181654	1.0000	0.8162



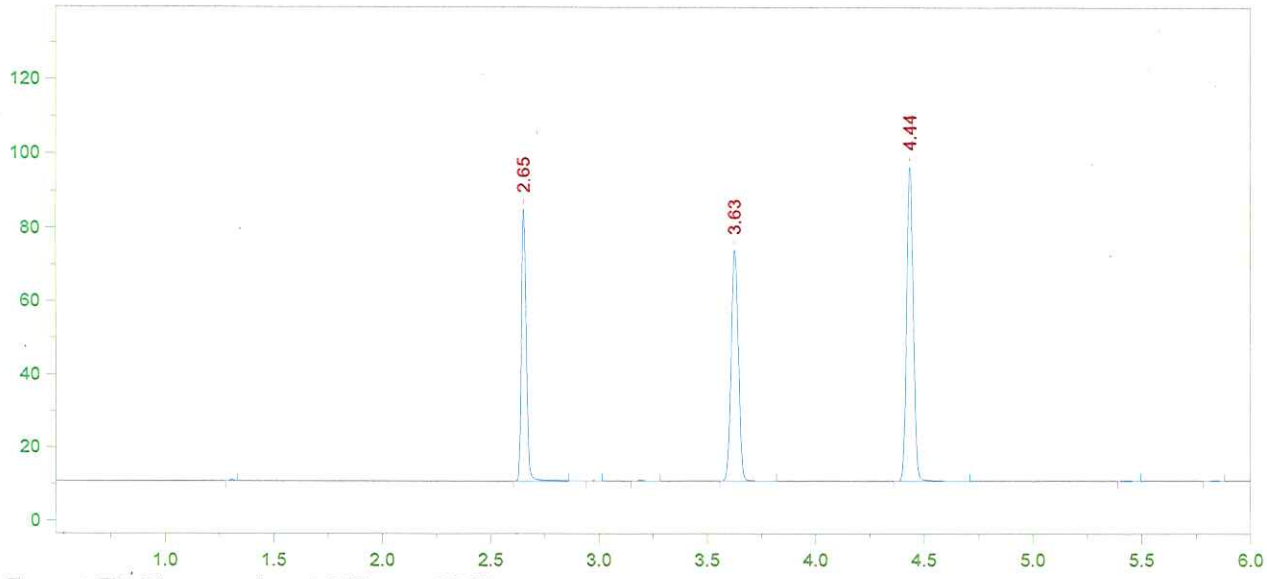
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/18/2015
Today's Time = 12:58:36 PM
Bound File Name = VFL11172015.0034.RAW
Sample Name = 100 DP
Date Taken = 11/18/2015 12:58:31 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	131089	0.1226	0.1001
5	3.63	t-Butanol	156187	0.9850	0.8039
6	4.44	n-Propanol	203375	1.0000	0.8162

15-24-100

79



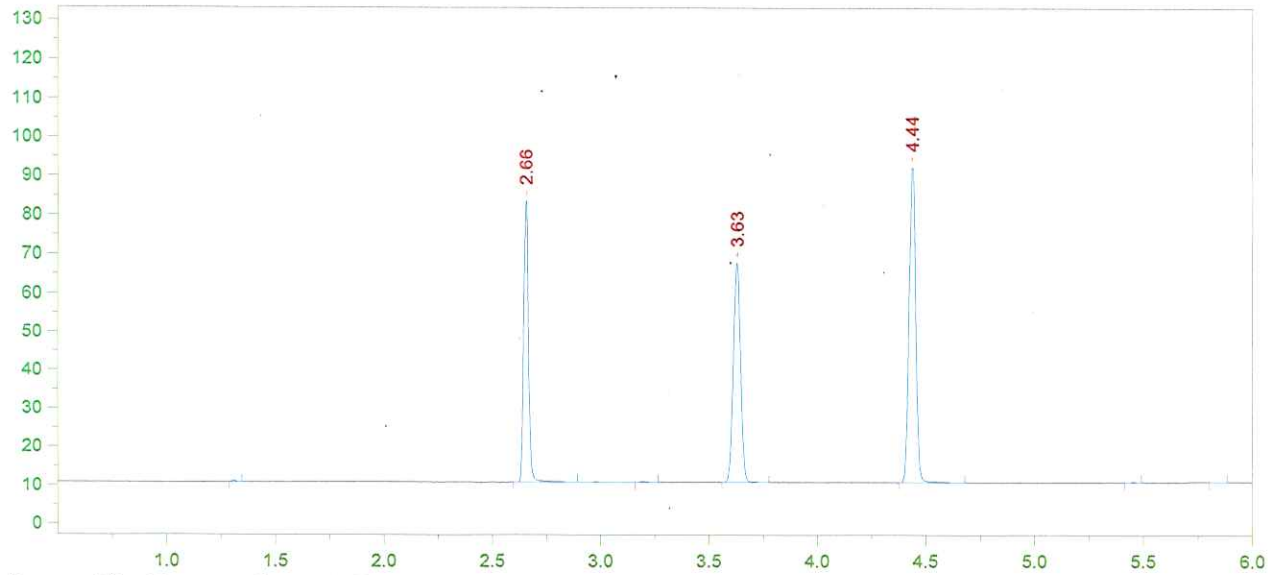
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/18/2015
Today's Time = 1:16:12 PM
Bound File Name = VFL11172015.0035.RAW
Sample Name = 100 DP
Date Taken = 11/18/2015 1:16:03 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.65	Ethanol	114716	0.1200	0.0980
5	3.63	t-Butanol	146253	1.0316	0.8420
6	4.44	n-Propanol	181826	1.0000	0.8162

15-24-100

80



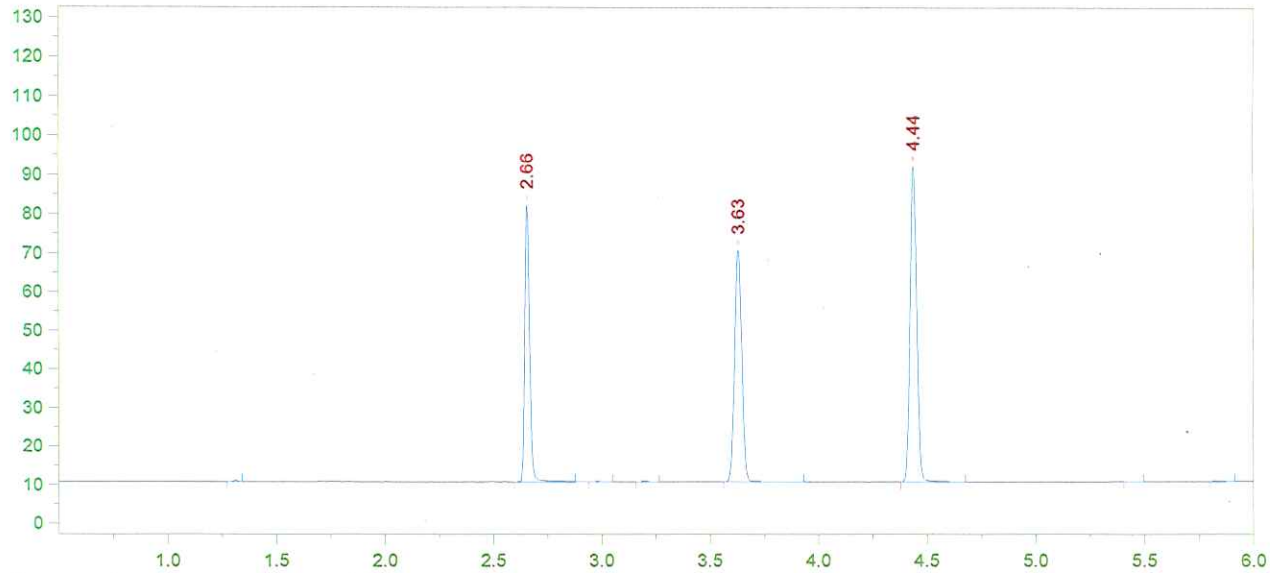
Format File Name = simsolnVFL.met.FMT

Today's Date = 11/18/2015
Today's Time = 1:29:51 PM
Bound File Name = VFL11172015.0036.RAW
Sample Name = 100 DP
Date Taken = 11/18/2015 1:29:43 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	113425	0.1238	0.1010
4	3.63	t-Butanol	131748	0.9694	0.7912
5	4.44	n-Propanol	174315	1.0000	0.8162

15-24-100 SB

81

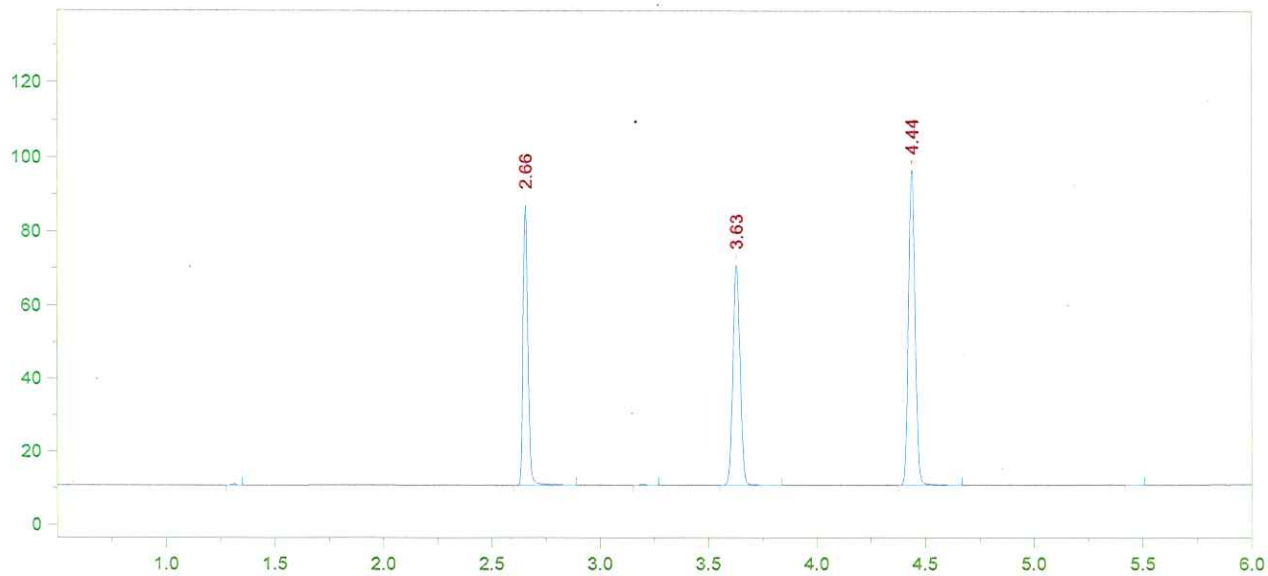


Format File Name = simsolnVFL.met.FMT

Today's Date = 11/18/2015 Today's Time = 1:47:35 PM
Bound File Name = VFL11172015.0037.RAW
Sample Name = 100 DP
Date Taken = 11/18/2015 1:47:30 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	109983	0.1215	0.0992
5	3.63	t-Butanol	138783	1.0337	0.8437
6	4.44	n-Propanol	172190	1.0000	0.8162

15-24-100 82

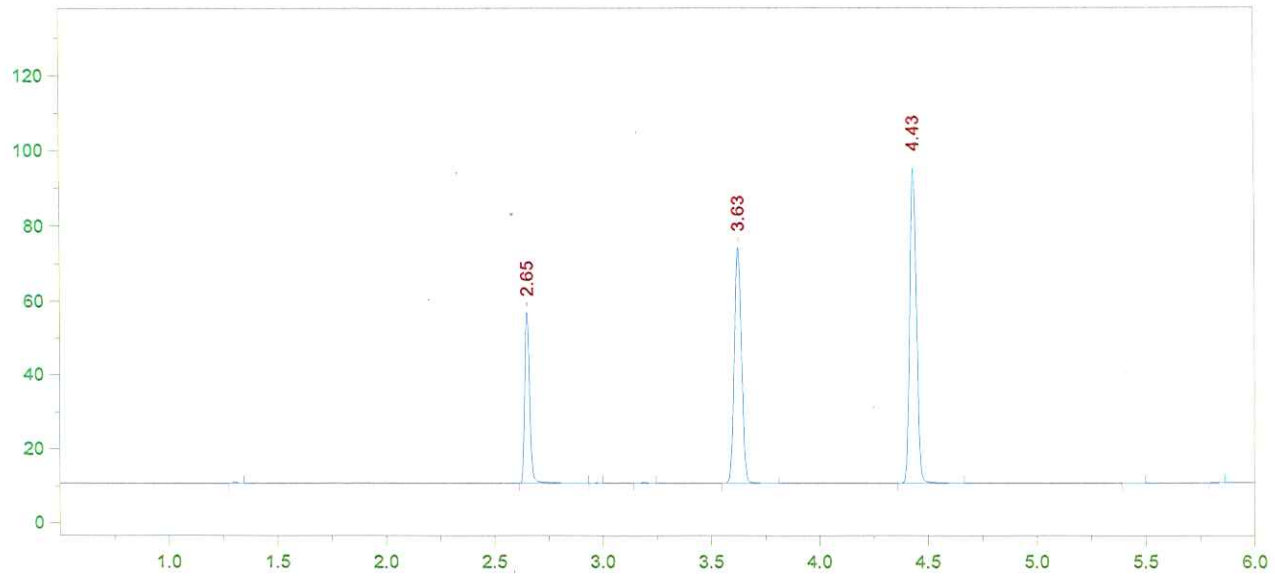


Format File Name = simsolnVFL.met.FMT

Today's Date = 11/18/2015
Today's Time = 2:01:40 PM
Bound File Name = VFL11172015.0038.RAW
Sample Name = 100 DP
Date Taken = 11/18/2015 2:01:33 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	117532	0.1230	0.1004
4	3.63	t-Butanol	138614	0.9785	0.7986
5	4.44	n-Propanol	181691	1.0000	0.8162

15-24-100 83



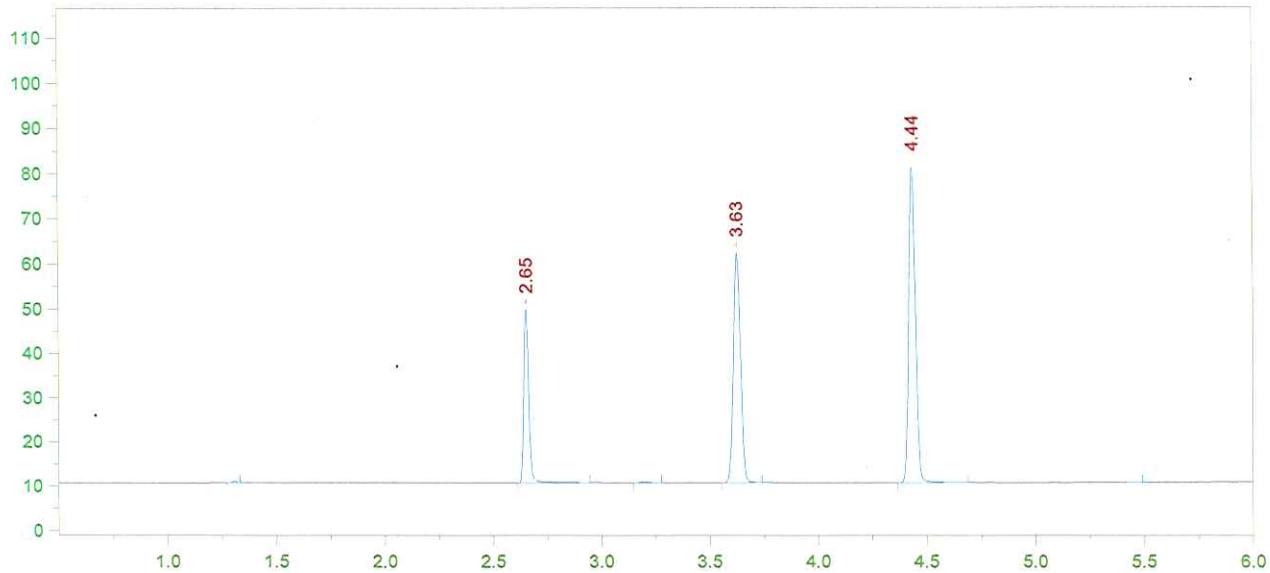
Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 2:19:04 PM
Bound File Name = VFL11172015.0039.RAW
Sample Name = CCS
Date Taken = 11/18/2015 2:18:54 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	72125	0.0761
5	3.63	t-Butanol	147415	1.0486
6	4.43	n-Propanol	180305	1.0000

15-24-100

84



Format File Name = AlcoholVFL.FMT

Today's Date = 11/18/2015
Today's Time = 2:32:13 PM
Bound File Name = VFL11172015.0040.RAW
Sample Name = CCS
Date Taken = 11/18/2015 2:32:07 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL11172015.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	61236	0.0774
4	3.63	t-Butanol	119033	1.0151
5	4.44	n-Propanol	150398	1.0000

CCS Mean : 0.0767 g/100 mL EtOH

±5% : 0.0728-0.0805

Recovery: $\frac{0.077}{0.080}$ = 96.2%

11/18/15

15-24-100