VERMONT FORENSIC LABORATORY

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Certificate of Analysis of DataMaster Certification Solution

On 4/27/2012, an ethanol solution was prepared by Amanda Bolduc for use as a DataMaster Certification solution. The solution was prepared per standard laboratory practice and assigned the lot number 12-74-080 and an expiration date of 4/27/2013.

On 4/30/2012 and 5/1/2012, the solution was analyzed against calibration SimCal04302012 and SimCal05012012. 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 0.079 g/210L simulated breath ethanol concentration and approved for use as a DataMaster Certification solution.

Dated at Waterbury, Vermont on Thursday, May 03, 2012.

Amanda Bolduc

0.08 Certification Solution 5L
Lot # 12-74-080
Prepared 04/27/2012 by ALB
Exp 04/27/2013

TLC CAL SimCal 04302012
ALB/TLC Vials
Analyzed on 4/30/2012

0.0778 tlc
0.0803
0.0773
0.0793
0.0778
0.0798
0.0779
0.0801 alb
0.0780
0.0801
0.0786
0.0797
0.0779
0.0793

Ave. = 0.0789
Std Dev. = 0.0011
Range = 0.0773 - 0.0803

ALB CAL SimCal 05012012
ALB/TLC Vials
Analyzed on 5/1/12

0.0775 tlc
0.0787
0.0748
0.0780
0.0752
0.0774
0.0757
0.0811 alb
0.0794
0.0818
0.0795
0.0820
0.0790
0.0794

Ave. = 0.0785
Std Dev. = 0.0023
Range = 0.0748 - 0.0820

Total Values from Both Runs

Average	**Mean**
0.0778	0.0748
0.0803	0.0752
0.0773	0.0757
0.0793	0.0773
0.0778	0.0774
0.0798	0.0775
0.0779	
0.0801	0.0778
0.0780	
0.0801	0.0779
0.0786	0.0780
0.0797	
0.0779	0.0786
0.0793	0.0787
0.0775	0.0790
0.0787	0.0793
0.0748	
0.0780	
0.0752	0.0794
0.0774	0.0795
0.0757	0.0797
0.0811	0.0798
0.0794	
0.0818	0.0801
0.0795	0.0803
0.0820	0.0811
0.0790	0.0818
0.0794	0.0820

Ave. =	0.0787
Std Dev. =	0.0018
Range =	0.0748 - 0.0820
Mean =	0.0787
Mean Std Dev. =	0.0019
RPD (Mean to Ave.)=	0.00%

TLC
5/3/2012

Headspace Alcohol Analysis Standards Coversheet

Analyst: TLC Date: 4/30/2012

Calibration Standards:

Lot ID: ES-03052012 Preparation Date: 03/05/2012* Expiration Date: 06/05/2012

*Standard E was re-prepared on 3/7/2012

	Standard A	Standard B	Standard C	Standard D	Standard E	Calibration Check (c)
% Ethanol (w/v)	0.005	0.022	0.082	0.202	0.409	0.082
Acceptance Range (± 10%)	0.006	0.024	0.090	0.222	0.450	0.090
	0.004	0.020	0.074	0.182	0.368	0.074

Control Sample:

Sample	Source	Lot number	Target Value	Acceptance Range	
Aqueous	Cerilliant	FN111711-01	0.100	0.110	0.090

Calibration and Control Sample Data:

Vial No.	Sample Identification		Result	In Range?	Comments
1	Blank		<0.005	(Y) N	
2	Compound Retention Times:			N/A	
		Acetaldehyde	1.92		
		Methanol	2.03		
		Ethanol	2.67		
		Acetone	3.07		
		Isopropanol	3.20		
		T- butanol	3.64		
		n-propanol	4.45		
3	Standard A		0.005	(Y) N	
4	Standard B		0.021	(Y) N	
5	Standard C		0.082	(Y) N	
6	Standard D		0.198	(Y) N	
7	Standard E		0.411	(Y) N	
8	Aqueous QC		0.0977	(Y) N	AVG AQ QC = 0.099
9	Aqueous QC		0.1003	(Y) N	

TLC 5/3/2012

File Name: C:\Methods\SimCal 04302012.cal
Version: 2

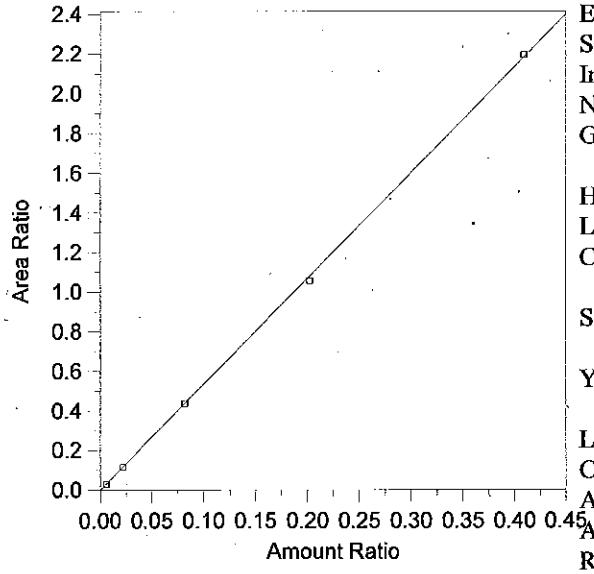
Creator:
Description:
Reason for change:

Internal standard calibration
No injection volume correction
No sample weight correction
Area reject threshold: 1000
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:	2.666 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

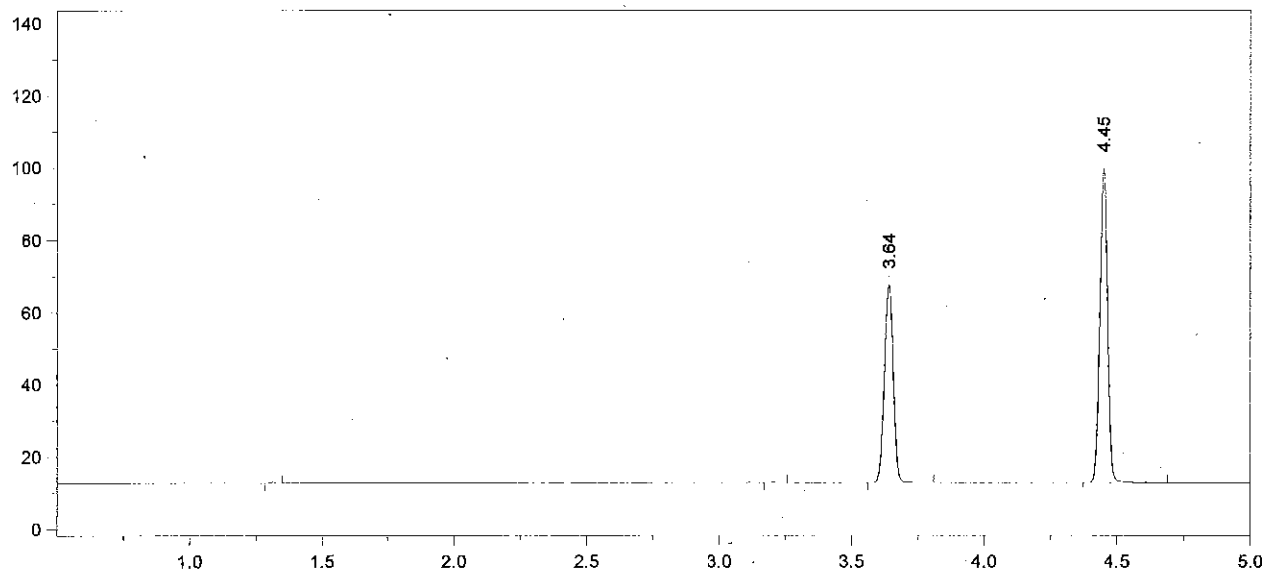
Single peak quantification by area

$Y = 5.339656 X + 0$

Linear fit with equal weighting, forced to origin

Coefficient of determination:	0.999788
Average error:	1.744%
Average CF:	5.25803
RSD:	1.629%

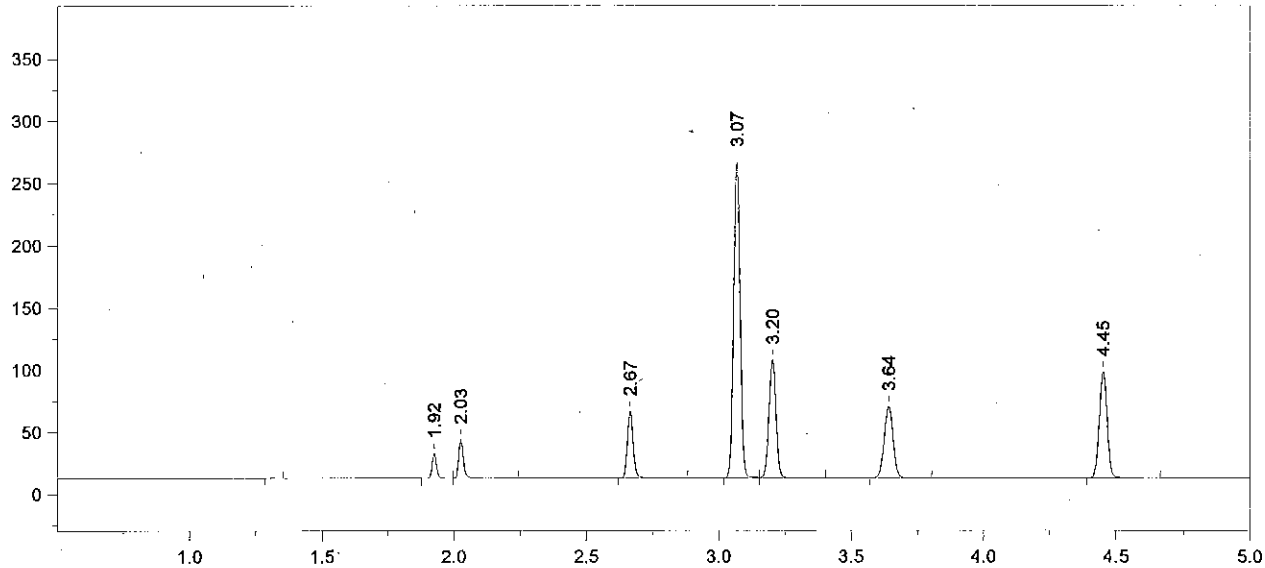
Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source	Date and time
1	(0.088)	(85146)	--	--	0.088	85146	Manual	2/24/2012 1:50:47 PM
2	0.0055	5220.286	949142.9	-3.227	0.0055	0.0284203	C:\Alcohol Data\SIM04302012\SIM04302012.0003.BND	4/30/2012 4:33:05 PM
3	0.022	20463.9	930177.3	-2.580	0.022	0.1144414	C:\Alcohol Data\SIM04302012\SIM04302012.0004.BND	4/30/2012 4:51:27 PM
4	0.082	78042.62	951739.2	-0.240	0.082	0.4368017	C:\Alcohol Data\SIM04302012\SIM04302012.0005.BND	4/30/2012 5:05:00 PM
5	0.202	187698.2	929199	-2.134	0.202	1.05559	C:\Alcohol Data\SIM04302012\SIM04302012.0006.BND	4/30/2012 5:22:53 PM
6	0.409	398669.8	974742.8	0.538	0.409	2.195675	C:\Alcohol Data\SIM04302012\SIM04302012.0007.BND	4/30/2012 5:36:27 PM



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:21:21 AM
Bound File Name = SIM04302012.0001.RAW
Sample Name = Blank
Date Taken = 4/30/2012 4:02:24 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal
Calibration Version = 2

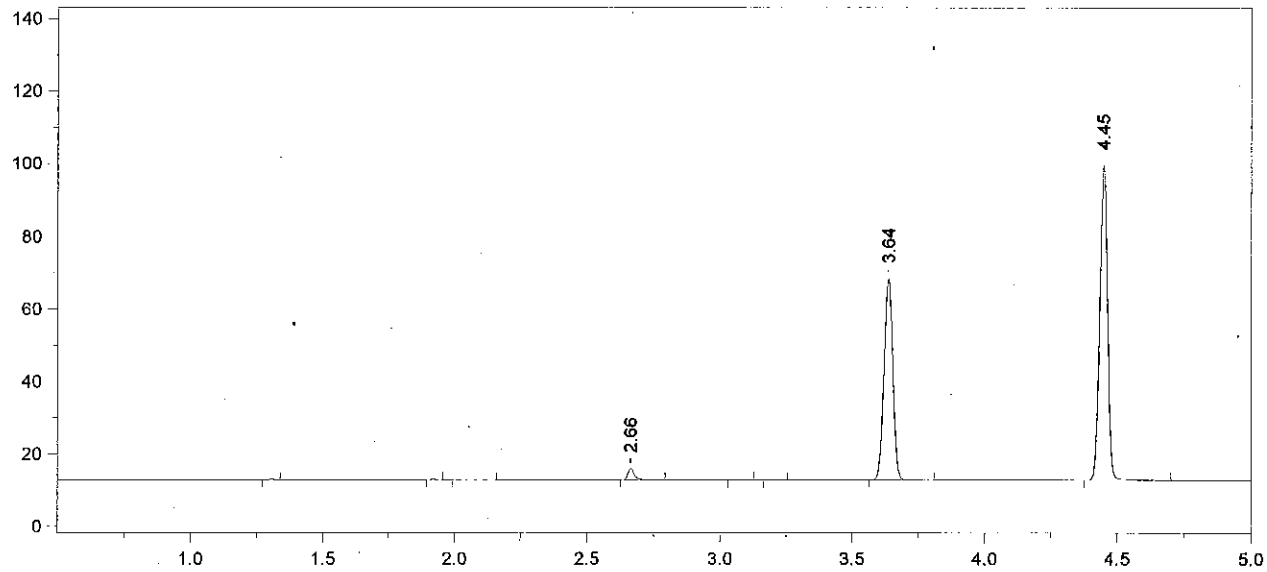
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
3	3.64	t-Butanol	127024	0.9628	0.7859
4	4.45	n-Propanol	184459	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:21:30 AM
Bound File Name = SIM04302012.0002.RAW
Sample Name = TMX
Date Taken = 4/30/2012 4:19:50 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

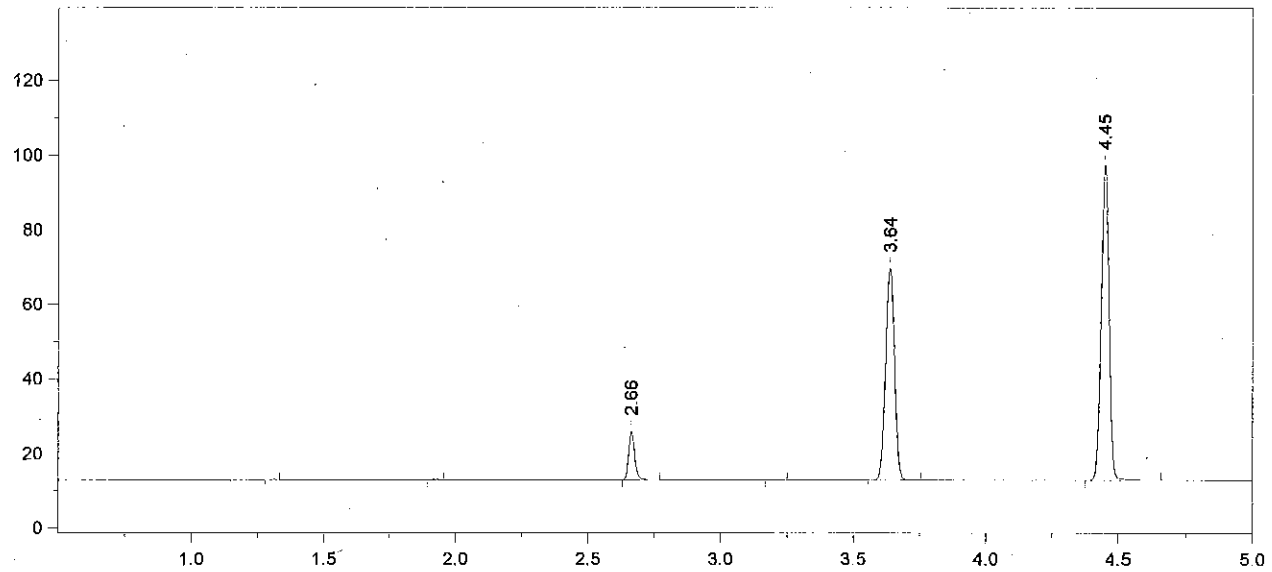
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	1.92	Acetaldehyde	23098	0.0650	0.0531
3	2.03	Methanol	39625	0.0890	0.0726
4	2.67	Ethanol	83244	0.0859	0.0702
5	3.07	Acetone	431976	0.1030	0.0841
6	3.20	Isopropanol	176700	0.0910	0.0743
7	3.64	t-Butanol	132248	1.0194	0.8321
8	4.45	n-Propanol	181383	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:21:38 AM
Bound File Name = SIM04302012.0003.RAW
Sample Name = STD A
Date Taken = 4/30/2012 4:32:58 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal
Calibration Version = 2

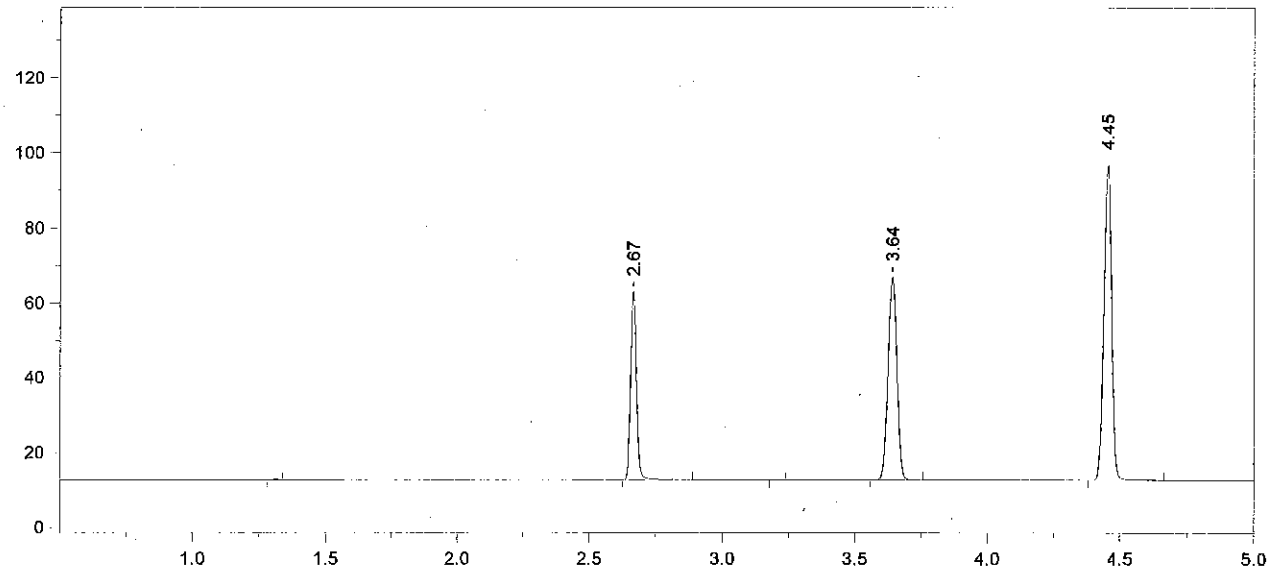
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
4	2.66	Ethanol	05220	0.0053	0.0043
7	3.64	t-Butanol	127940	0.9739	0.7949
8	4.45	n-Propanol	183682	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:21:47 AM
Bound File Name = SIM04302012.0004.RAW
Sample Name = STD B
Date Taken = 4/30/2012 4:51:17 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

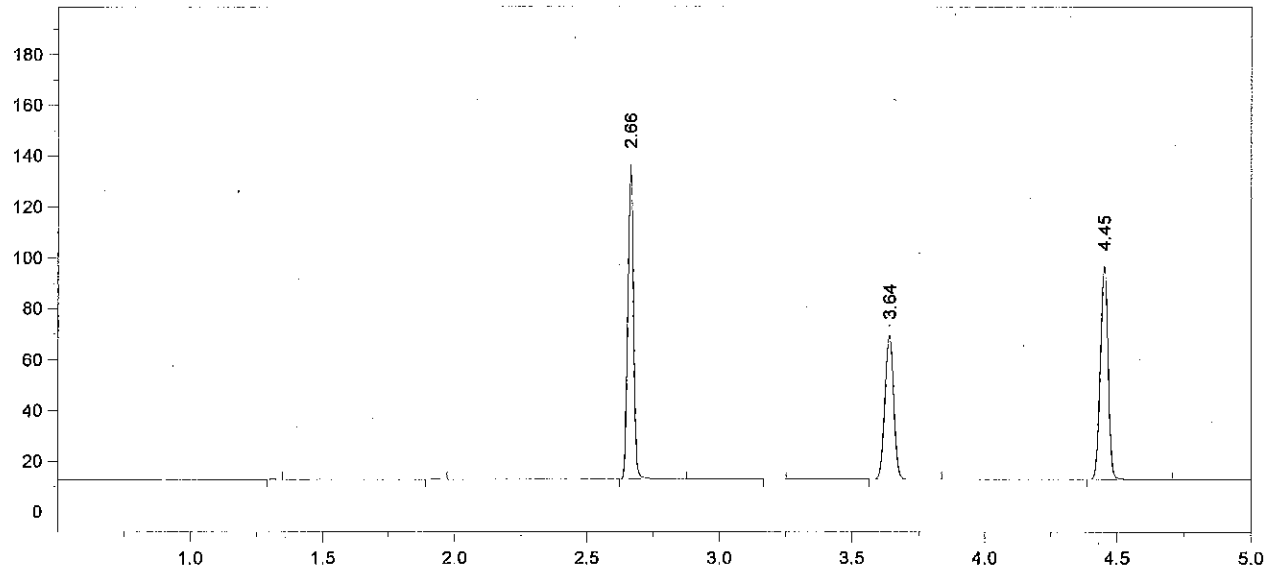
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
3	2.66	Ethanol	20464	0.0214	0.0175
5	3.64	t-Butanol	131399	1.0274	0.8386
6	4.45	n-Propanol	178816	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:21:55 AM
Bound File Name = SIM04302012.0005.RAW
Sample Name = STD C
Date Taken = 4/30/2012 5:04:55 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

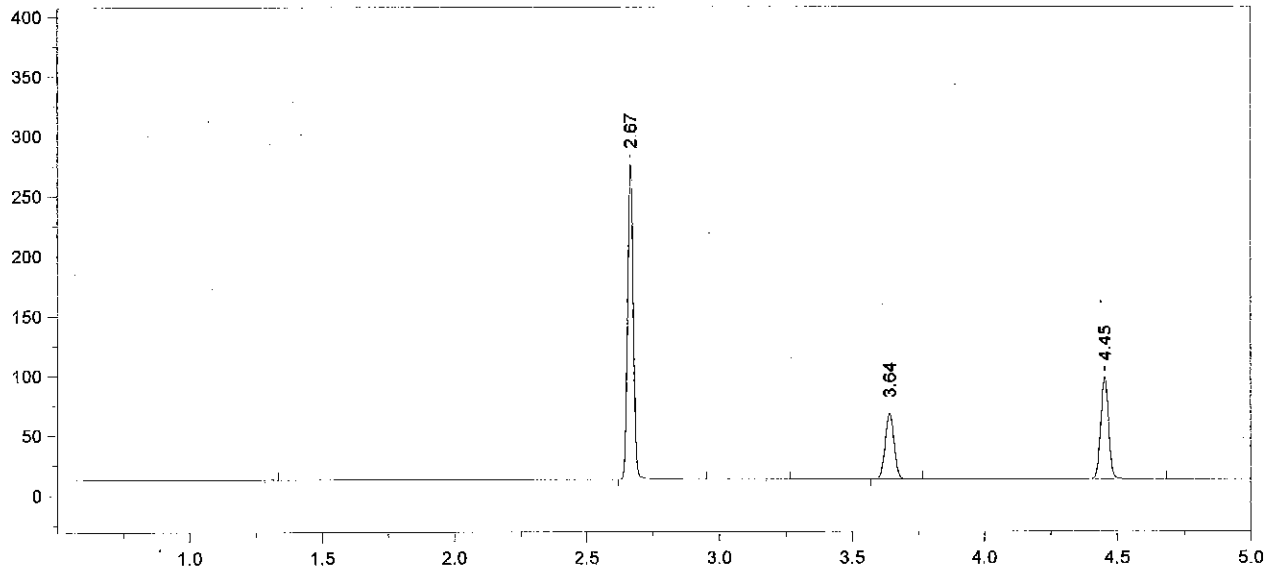
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.67	Ethanol	78043	0.0818	0.0668
4	3.64	t-Butanol	125367	0.9811	0.8008
5	4.45	n-Propanol	178668	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:22:04 AM
Bound File Name = SIM04302012.0006.RAW
Sample Name = STD D
Date Taken = 4/30/2012 5:22:44 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

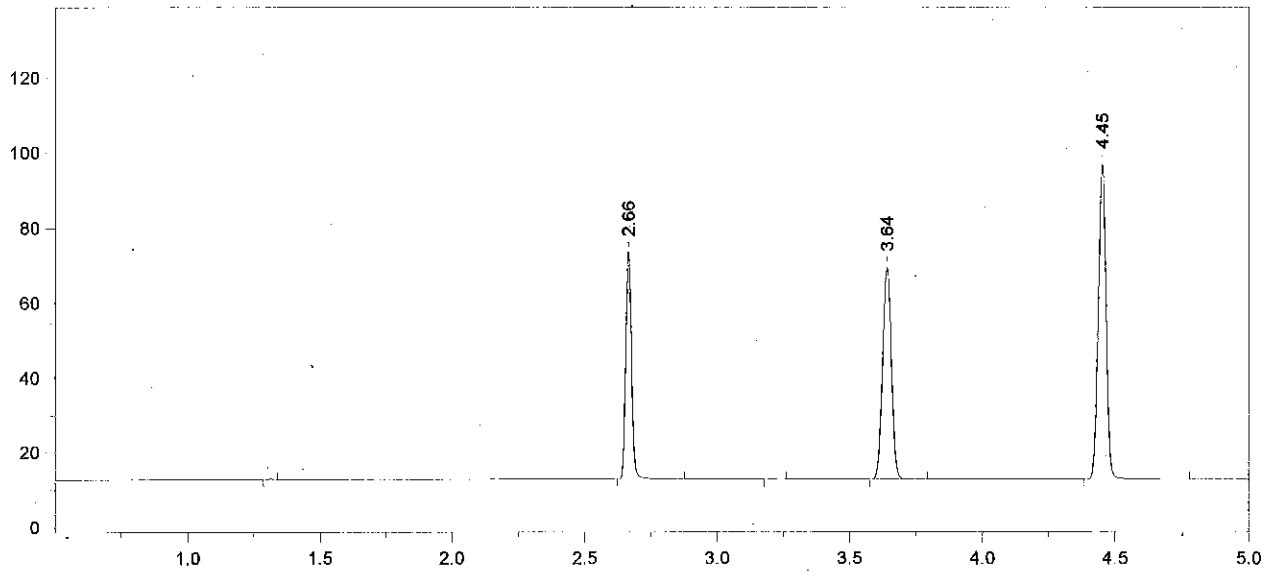
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
3	2.66	Ethanol	187698	0.1977	0.1614
5	3.64	t-Butanol	130620	1.0271	0.8383
6	4.45	n-Propanol	177814	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:22:12 AM
Bound File Name = SIM04302012.0007.RAW
Sample Name = STD E
Date Taken = 4/30/2012 5:36:22 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal
Calibration Version = 2

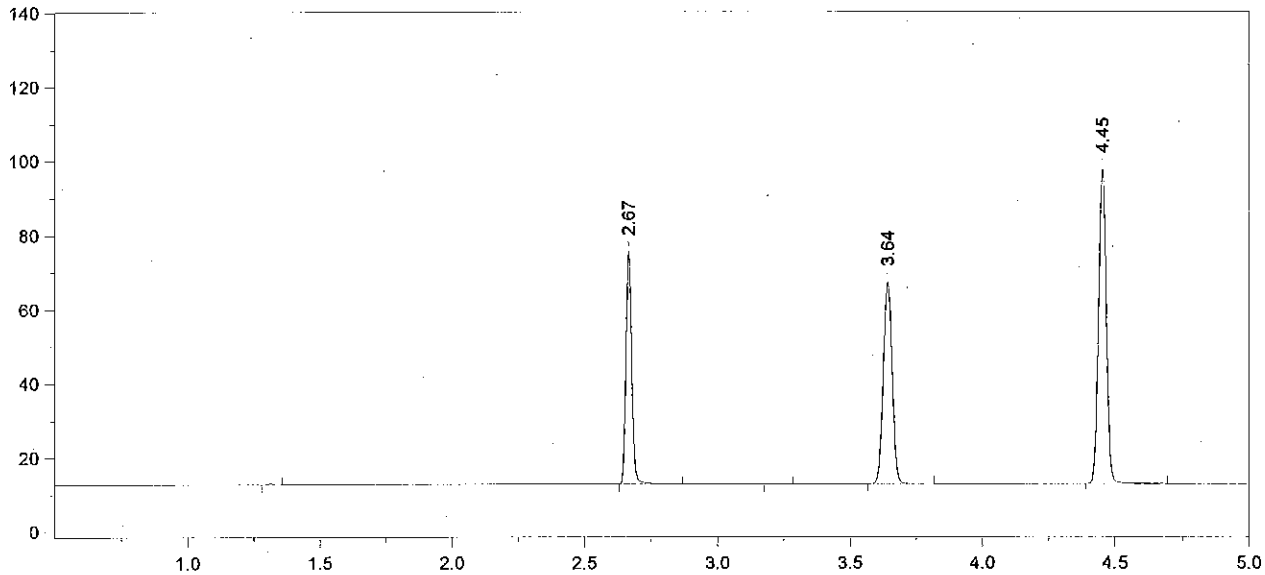
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.67	Ethanol	398670	0.4112	0.3356
4	3.64	t-Butanol	126094	0.9710	0.7925
5	4.45	n-Propanol	181571	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:22:21 AM
Bound File Name = SIM04302012.0008.RAW
Sample Name = AQ QC
Date Taken = 4/30/2012 5:54:08 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

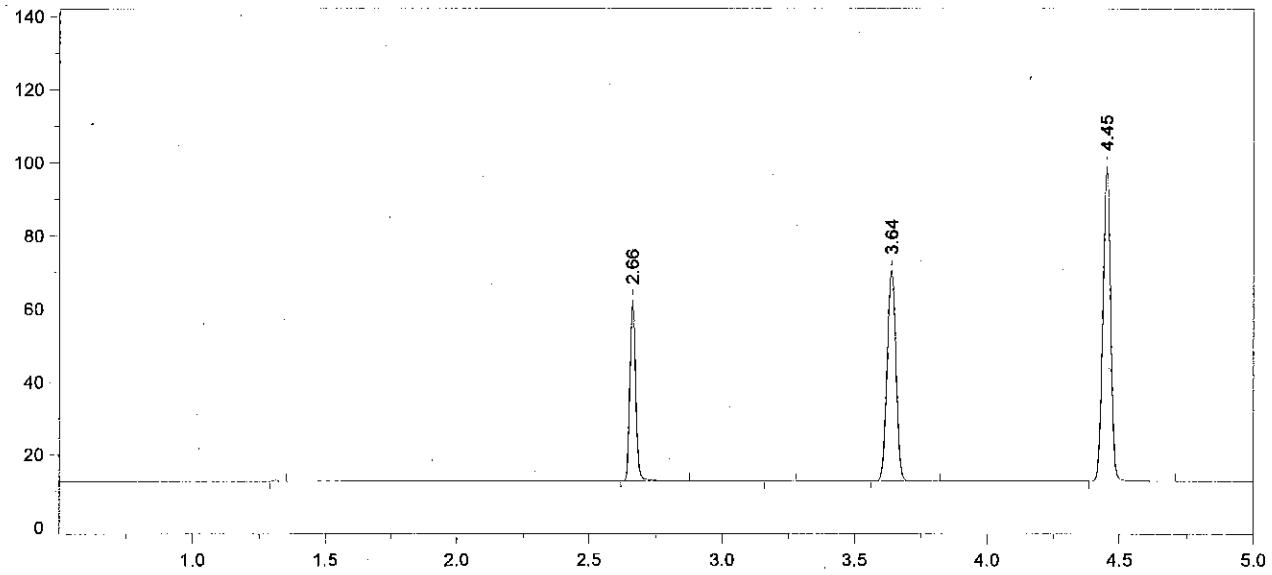
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	93296	0.0977	0.0798
4	3.64	t-Butanol	130609	1.0215	0.8338
5	4.45	n-Propanol	178768	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:22:29 AM
Bound File Name = SIM04302012.0009.RAW
Sample Name = AQ QC
Date Taken = 4/30/2012 6:07:46 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

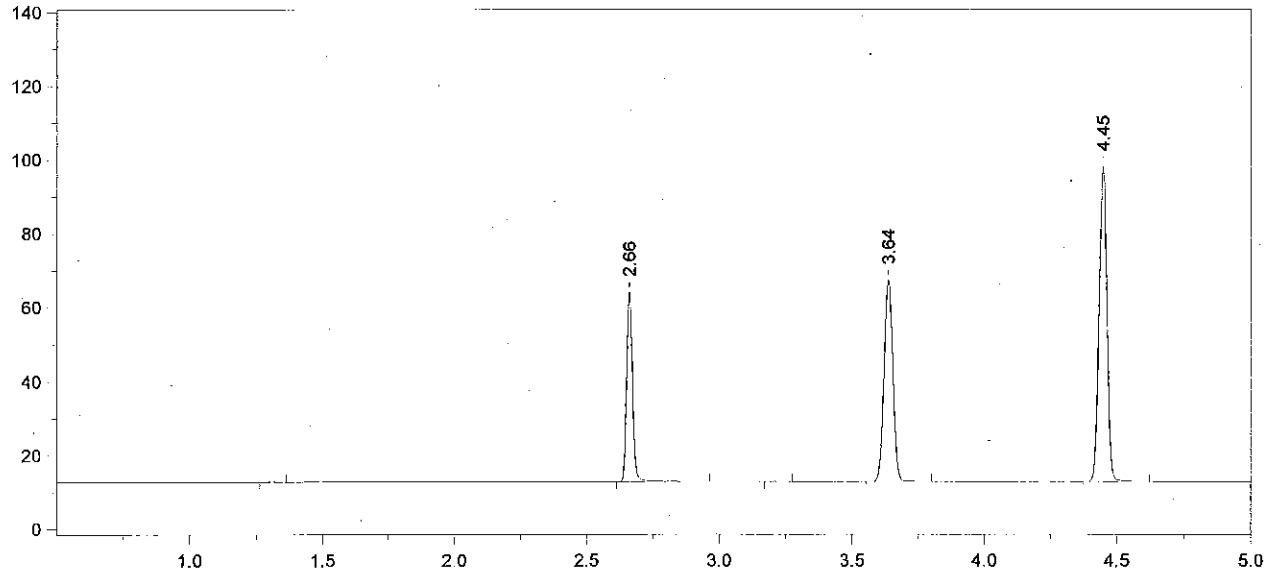
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.67	Ethanol	96444	0.1003	0.0819
4	3.64	t-Butanol	125795	0.9772	0.7976
5	4.45	n-Propanol	179999	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:22:37 AM
Bound File Name = SIM04302012.0028.RAW
Sample Name = CCS
Date Taken = 4/30/2012 11:05:06 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

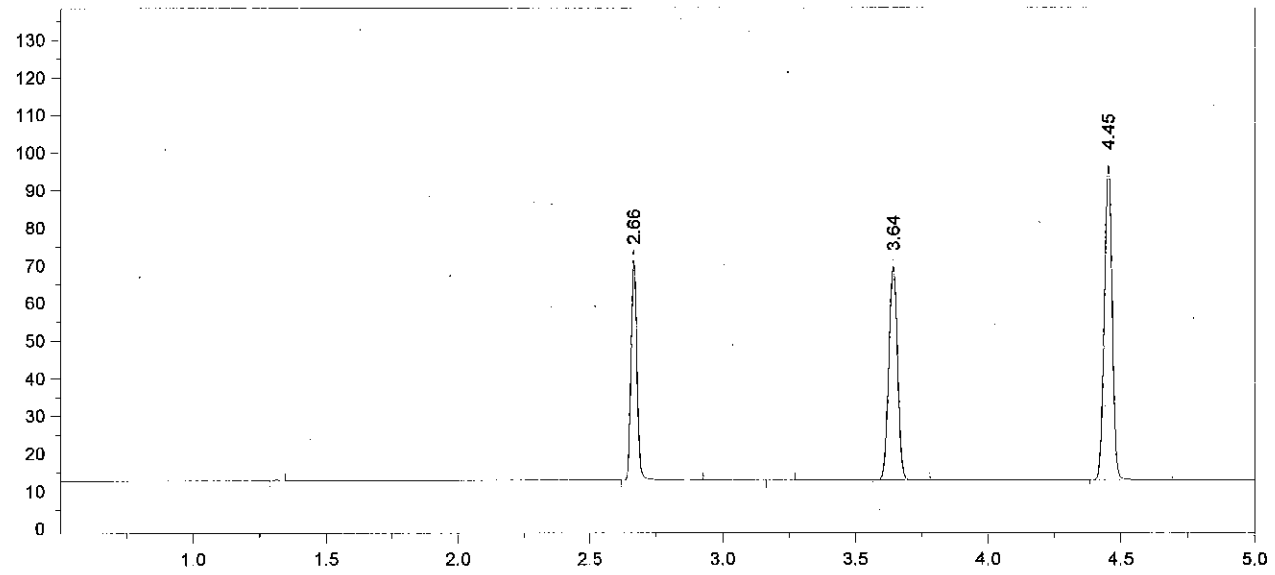
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	76172	0.0784	0.0640
4	3.64	t-Butanol	133450	1.0251	0.8367
5	4.45	n-Propanol	182023	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:22:46 AM
Bound File Name = SIM04302012.0029.RAW
Sample Name = CCS
Date Taken = 4/30/2012 11:19:27 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

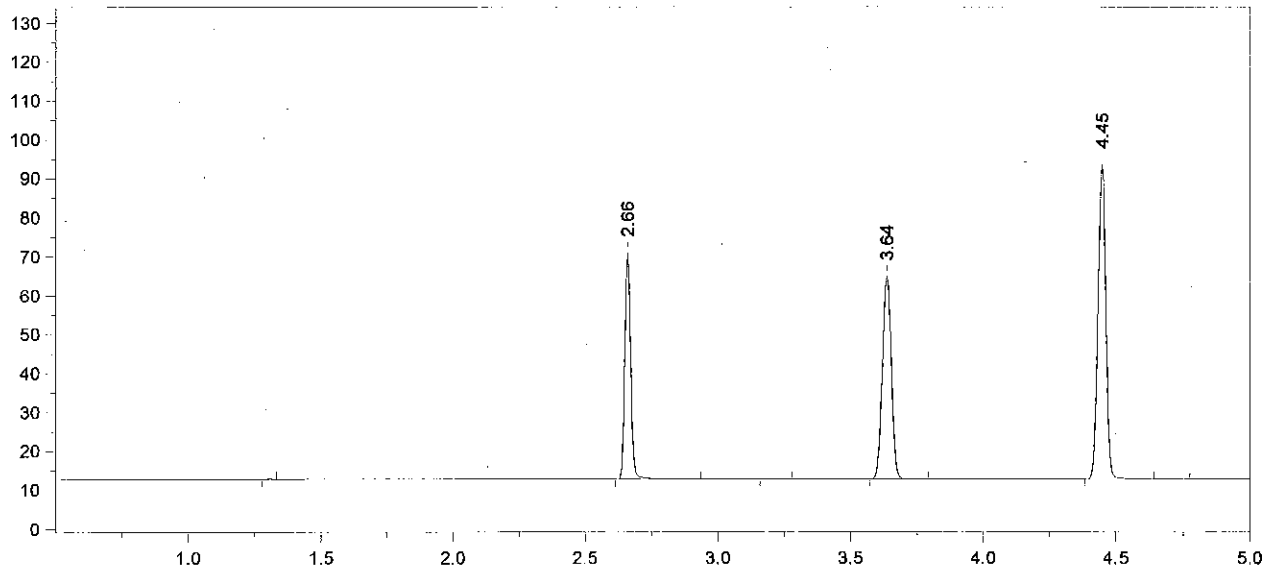
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	79462	0.0823 ✓	0.0672
4	3.64	t-Butanol	125961	0.9737	0.7947
5	4.45	n-Propanol	180881	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:18:49 AM
Bound File Name = SIM04302012.0030.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 4/30/2012 11:36:31 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal
Calibration Version = 2

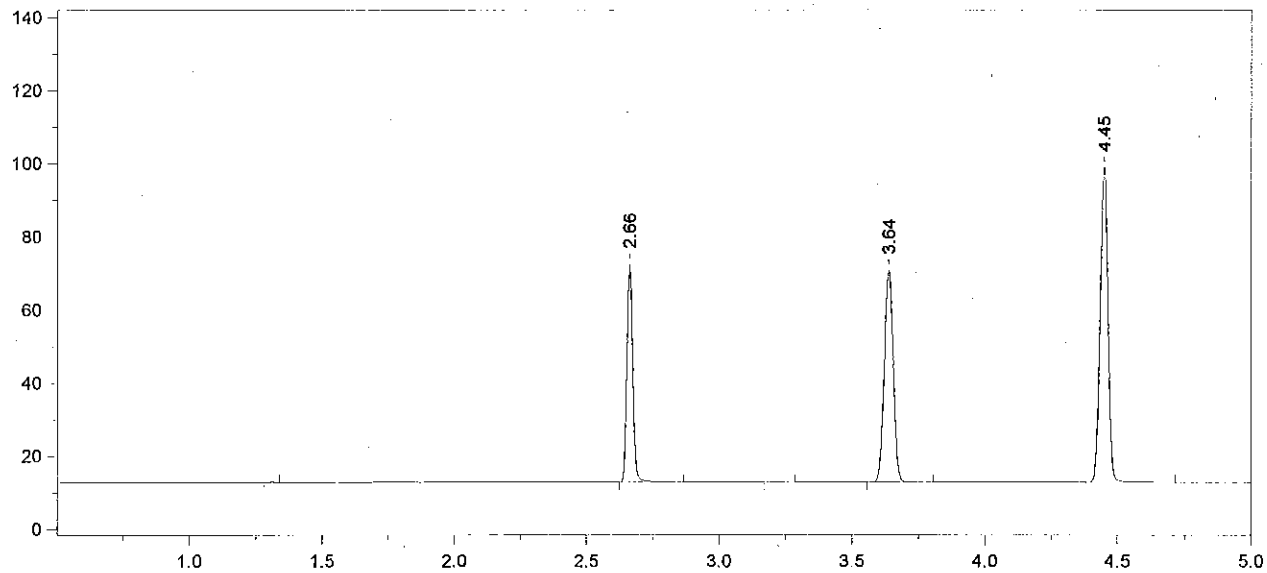
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	90774	0.0953	0.0778
4	3.64	t-Butanol	130863	1.0257	0.8372
5	4.45	n-Propanol	178384	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:18:57 AM
Bound File Name = SIM04302012.0031.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 4/30/2012 11:49:51 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

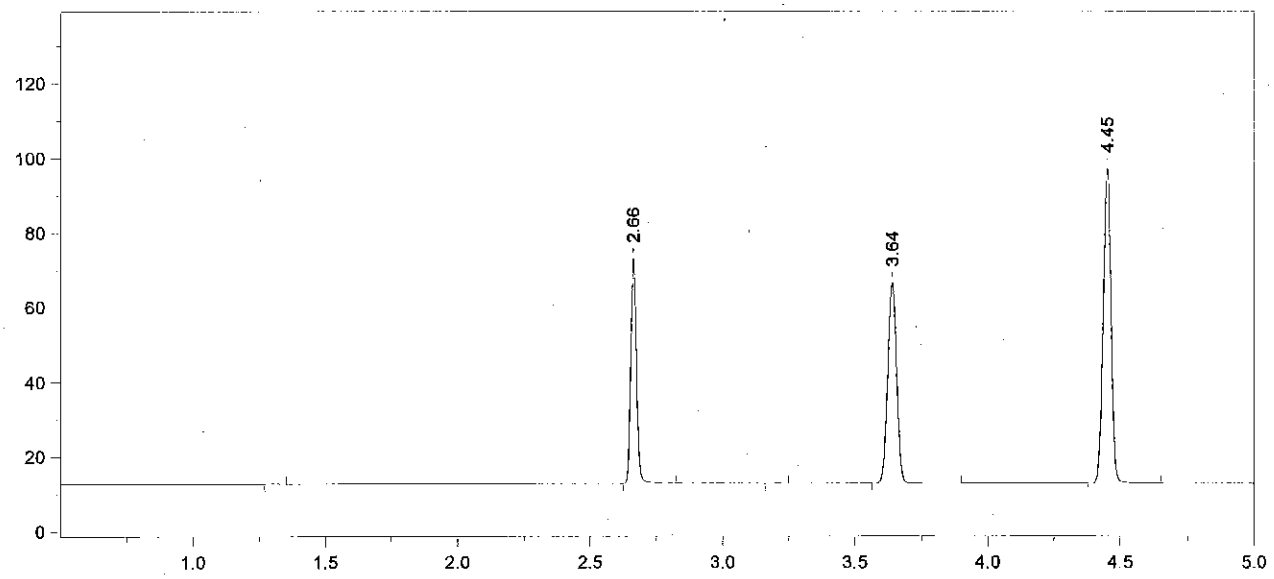
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	90053	0.0984	0.0803
4	3.64	t-Butanol	120366	0.9819	0.8014
5	4.45	n-Propanol	171397	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:19:05 AM
Bound File Name = SIM04302012.0032.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 12:06:17 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

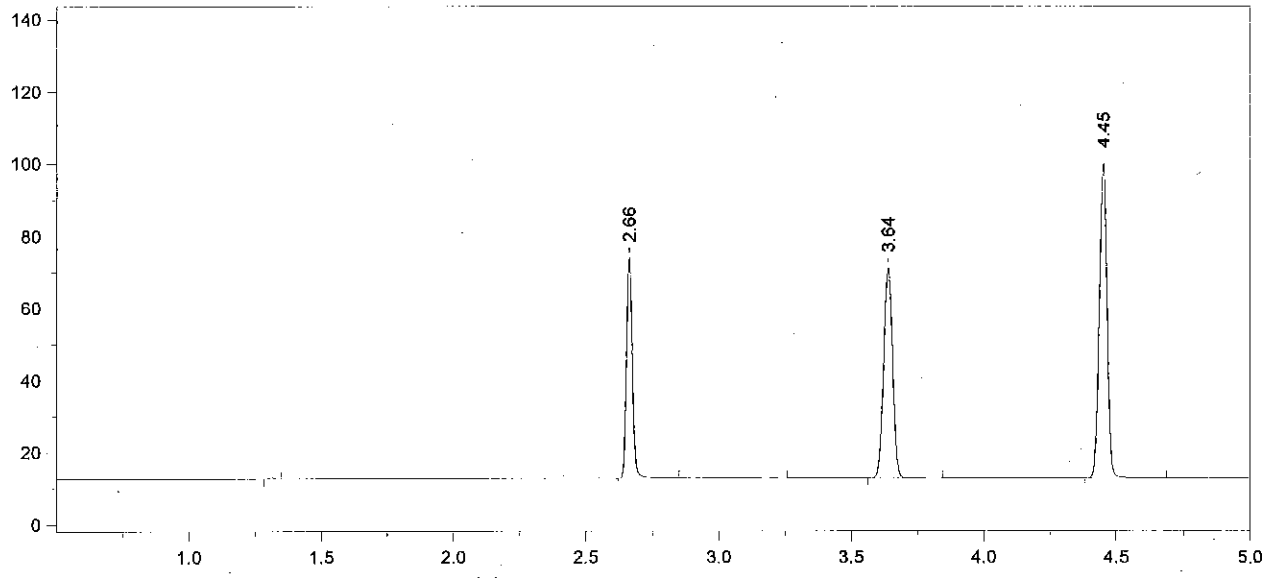
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	92300	0.0947	0.0773
4	3.64	t-Butanol	134108	1.0268	0.8381
5	4.45	n-Propanol	182616	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:19:13 AM
Bound File Name = SIM04302012.0033.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 12:21:43 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal
Calibration Version = 2

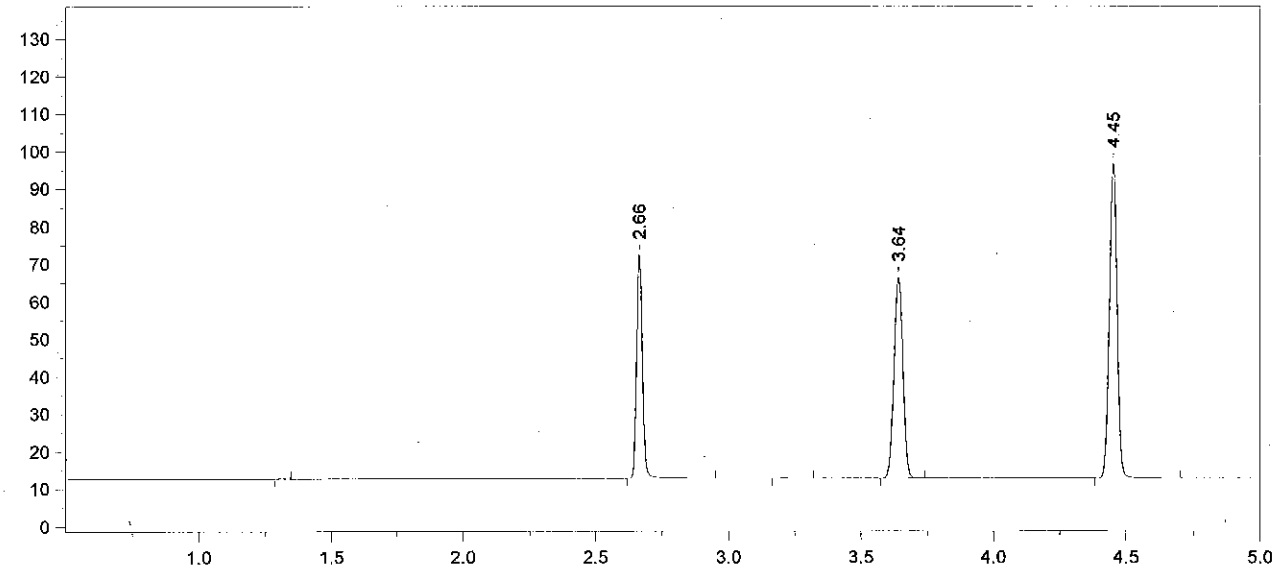
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	92059	0.0971	0.0793
4	3.64	t-Butanol	124330	0.9791	0.7992
5	4.45	n-Propanol	177544	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:19:22 AM
Bound File Name = SIM04302012.0034.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 12:36:06 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

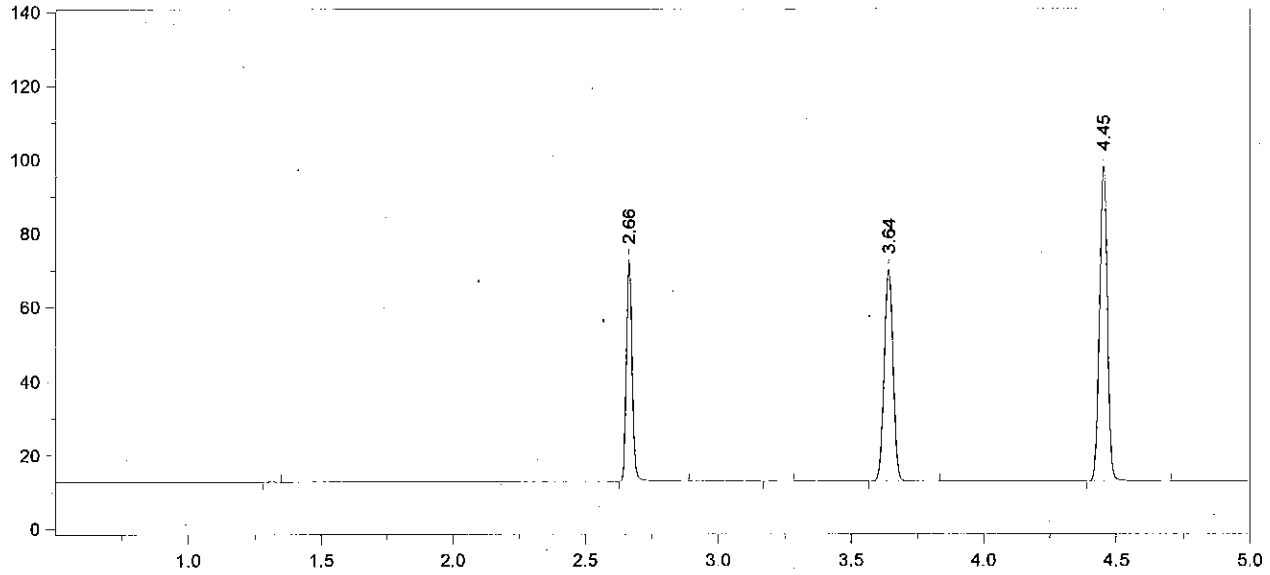
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	93764	0.0954	0.0778
4	3.64	t-Butanol	134331	1.0201	0.8326
5	4.45	n-Propanol	184129	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:19:30 AM
Bound File Name = SIM04302012.0035.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 12:52:10 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal
Calibration Version = 2

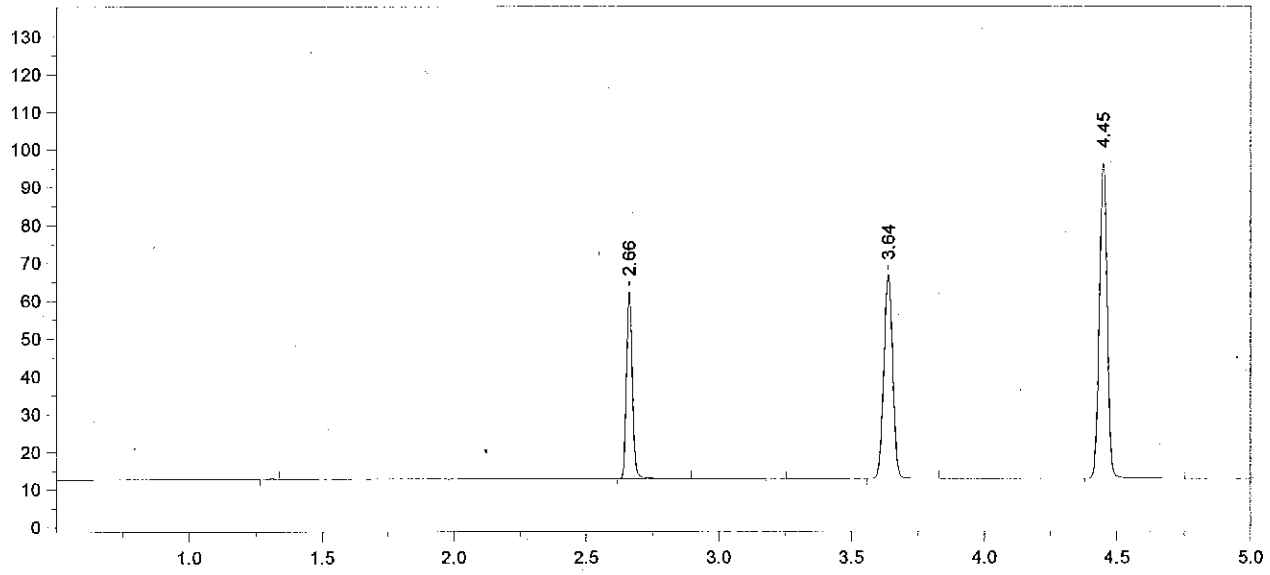
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	92417	0.0978	0.0798
4	3.64	t-Butanol	123689	0.9771	0.7975
5	4.45	n-Propanol	176996	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:19:38 AM
Bound File Name = SIM04302012.0036.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 1:06:23 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

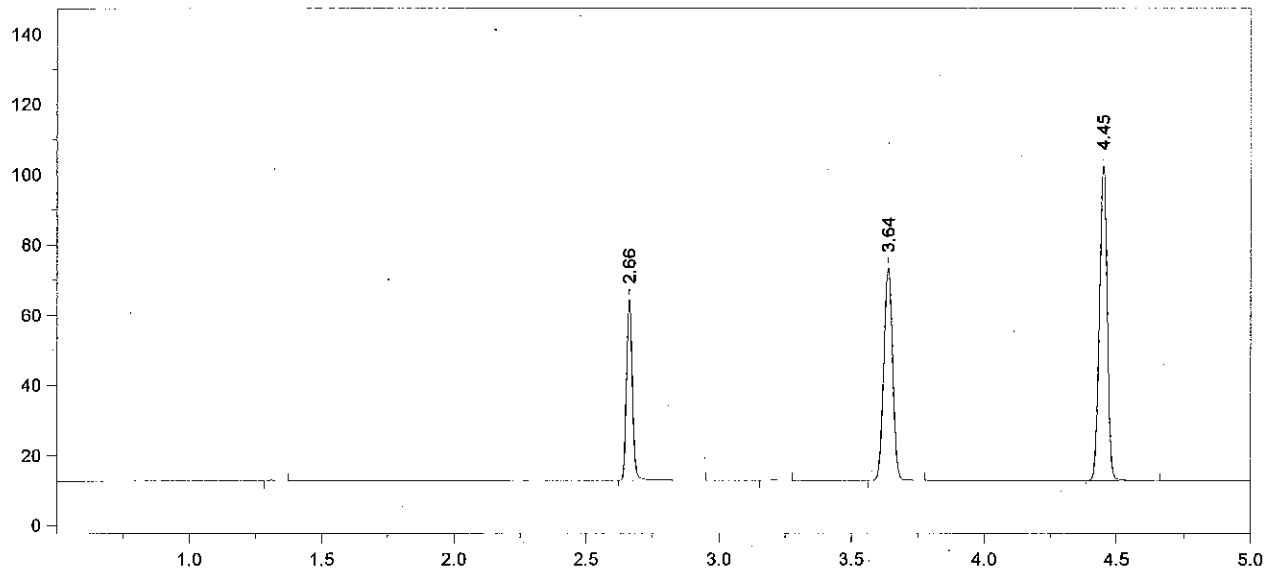
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	92624	0.0954	0.0779
4	3.64	t-Butanol	132684	1.0206	0.8330
5	4.45	n-Propanol	181773	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:19:46 AM
Bound File Name = SIM04302012.0037.RAW
Sample Name = CCS
Date Taken = 5/1/2012 1:22:21 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

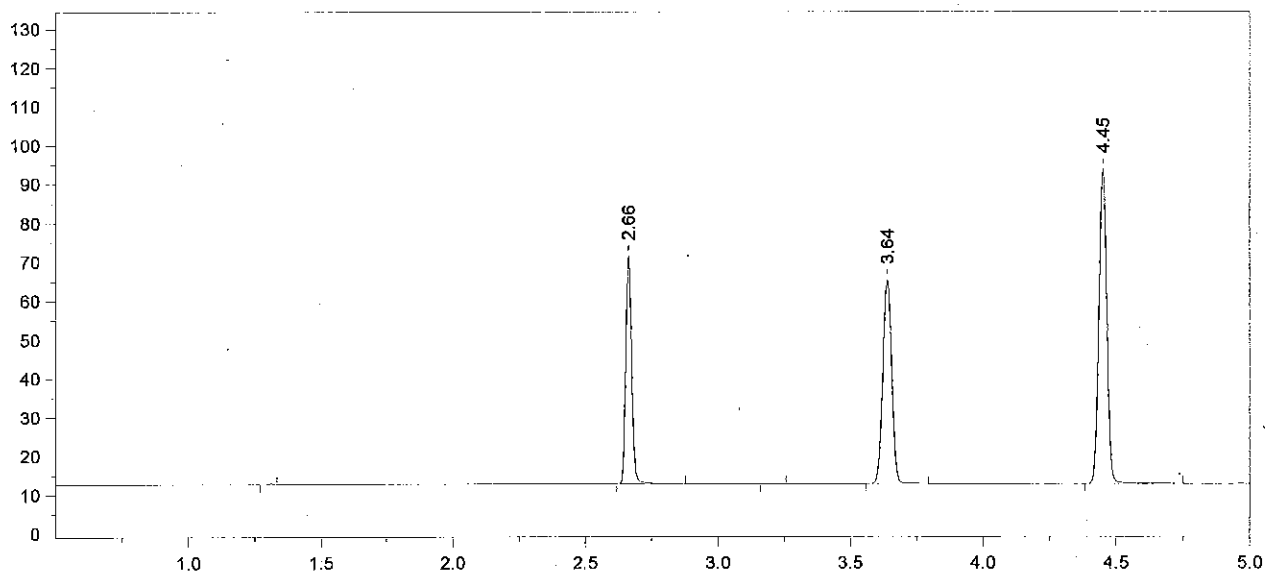
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	76842	0.0808	0.0660
4	3.64	t-Butanol	124522	0.9779	0.7982
5	4.45	n-Propanol	178039	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:19:55 AM
Bound File Name = SIM04302012.0038.RAW
Sample Name = CCS
Date Taken = 5/1/2012 1:38:30 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

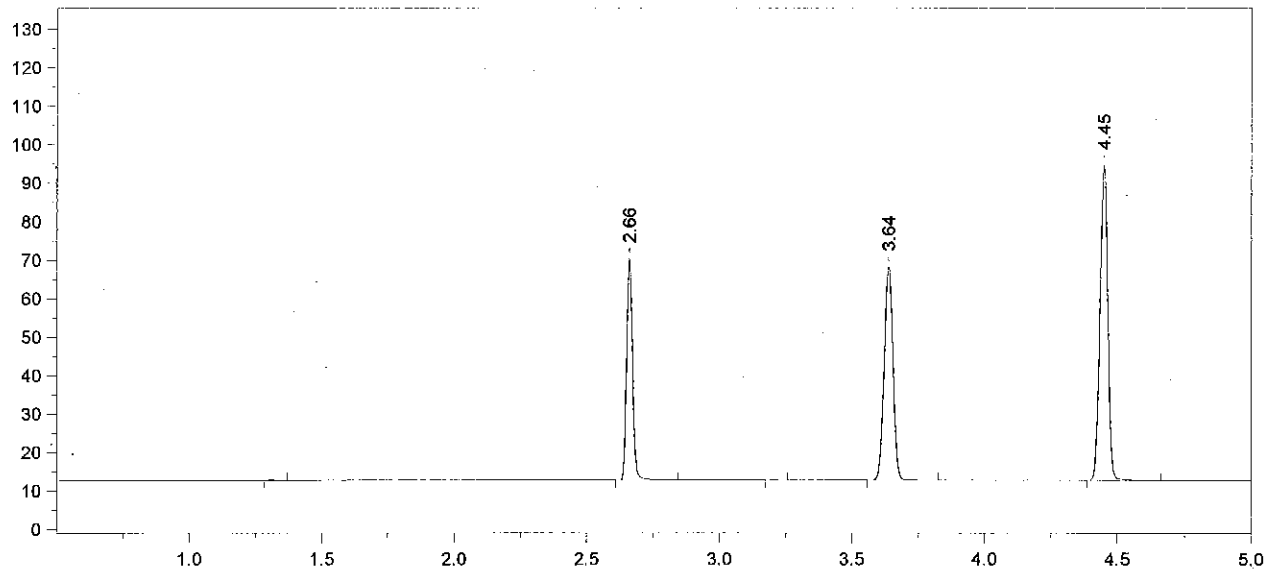
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	80299	0.0790 ✓	0.0645
4	3.64	t-Butanol	140030	1.0290	0.8399
5	4.45	n-Propanol	190265	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:20:02 AM
Bound File Name = SIM04302012.0039.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 1:52:30 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

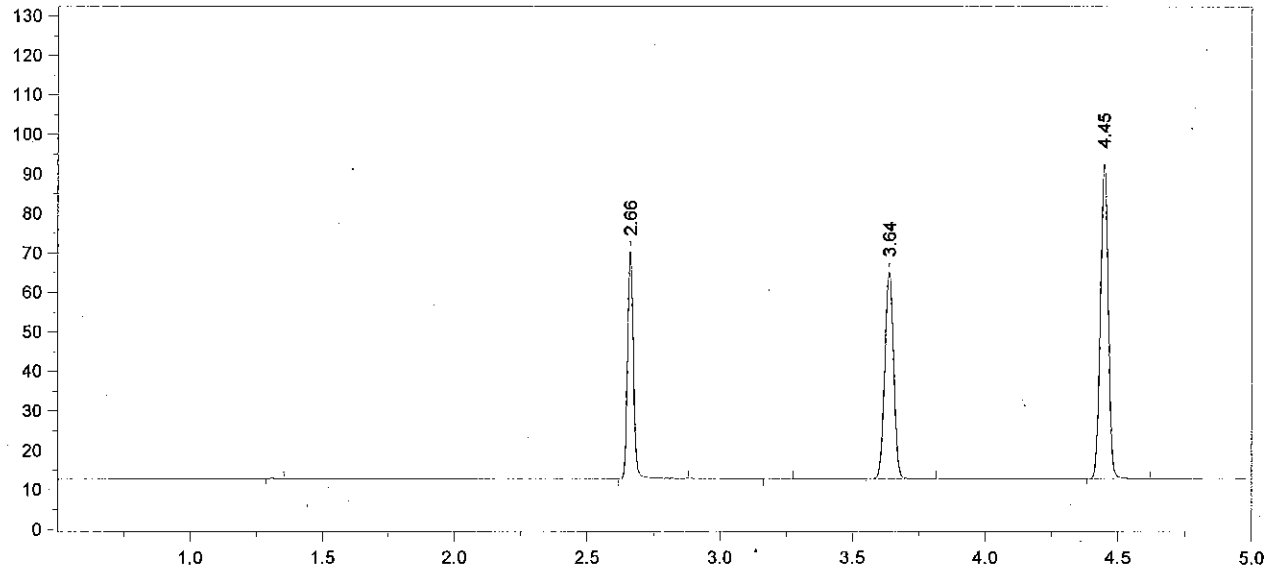
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	90143	0.0981	0.0801
4	3.64	t-Butanol	121022	0.9837	0.8029
5	4.45	n-Propanol	172024	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:20:11 AM
Bound File Name = SIM04302012.0040.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 2:09:54 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

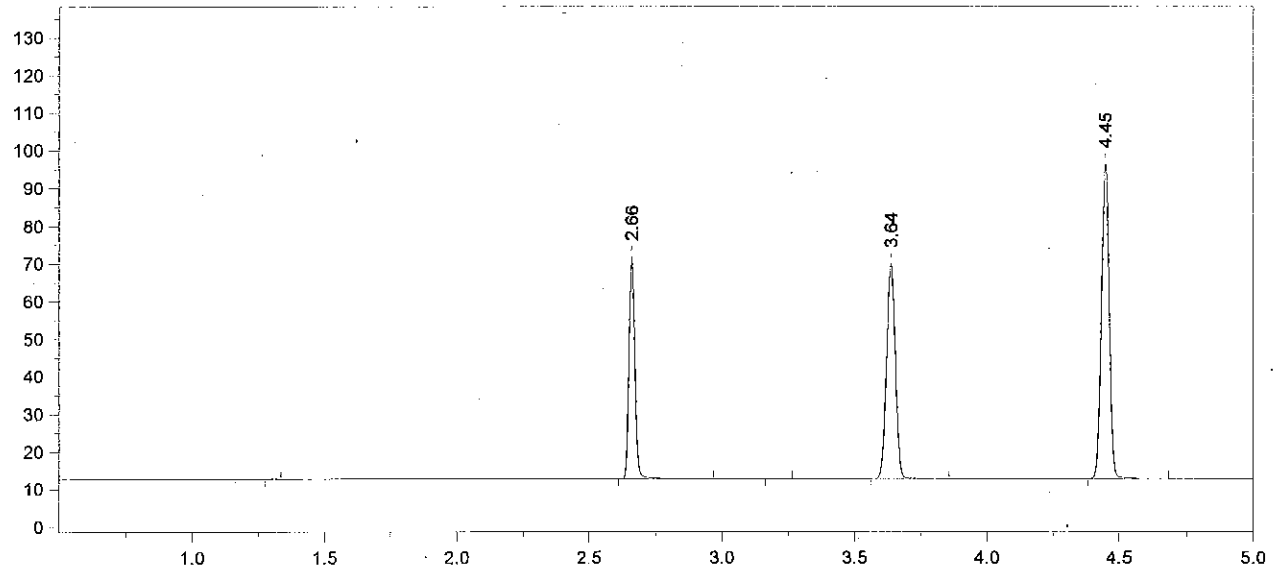
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	88327	0.0956	0.0780
4	3.64	t-Butanol	127891	1.0334	0.8434
5	4.45	n-Propanol	173047	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:20:20 AM
Bound File Name = SIM04302012.0041.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 2:23:40 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

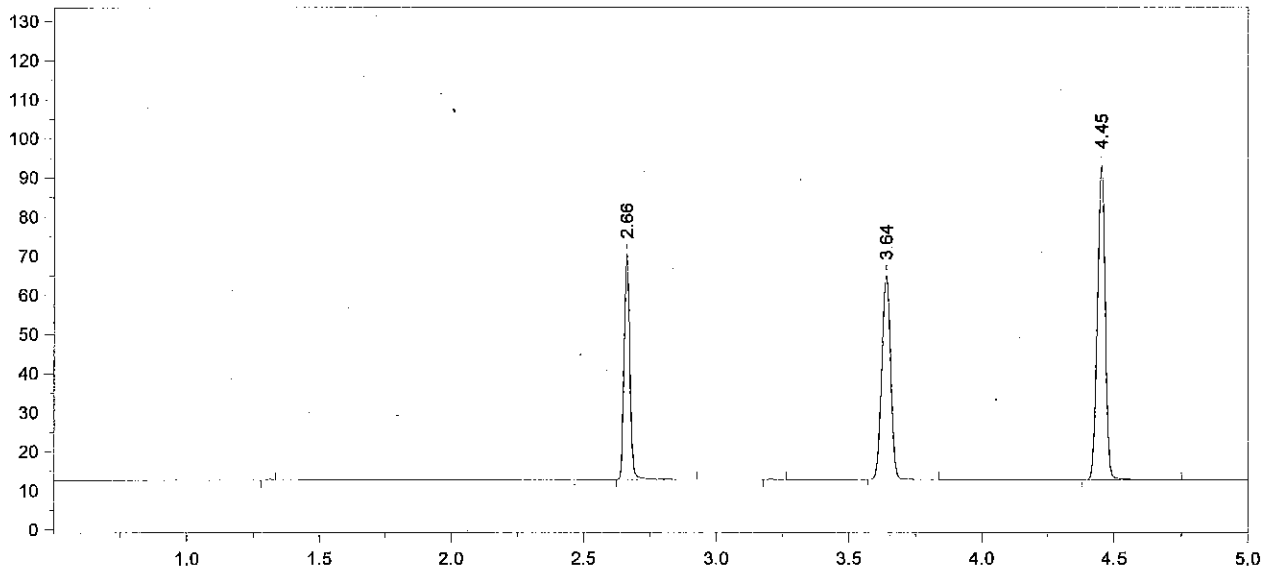
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	88897	0.0981	0.0801
4	3.64	t-Butanol	120215	0.9909	0.8088
5	4.45	n-Propanol	169627	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:20:29 AM
Bound File Name = SIM04302012.0042.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 2:41:21 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

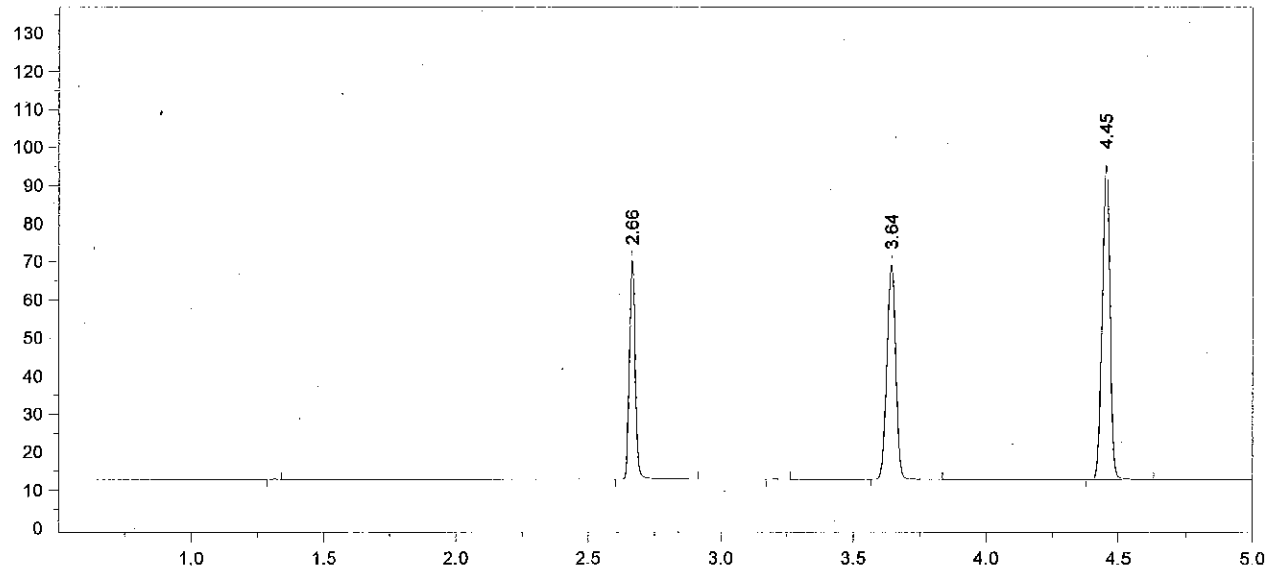
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	91327	0.0963	0.0786
4	3.64	t-Butanol	131198	1.0329	0.8430
5	4.45	n-Propanol	177601	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:20:36 AM
Bound File Name = SIM04302012.0043.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 2:54:36 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

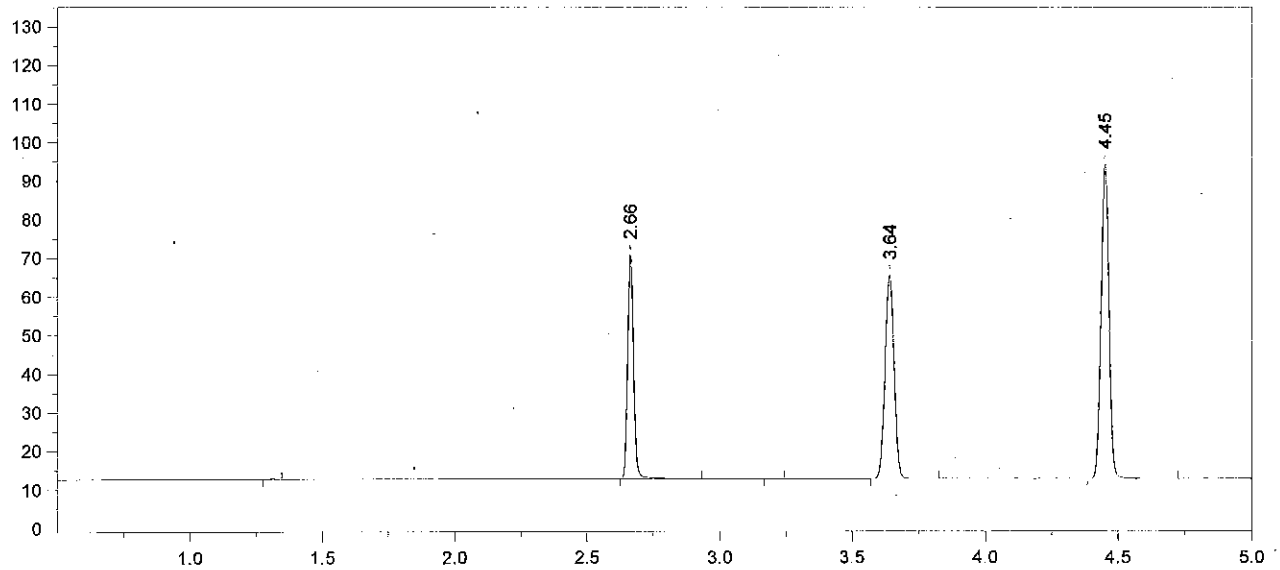
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	88710	0.0976	0.0797
4	3.64	t-Butanol	120165	0.9874	0.8059
5	4.45	n-Propanol	170156	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:20:45 AM
Bound File Name = SIM04302012.0044.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 3:12:48 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

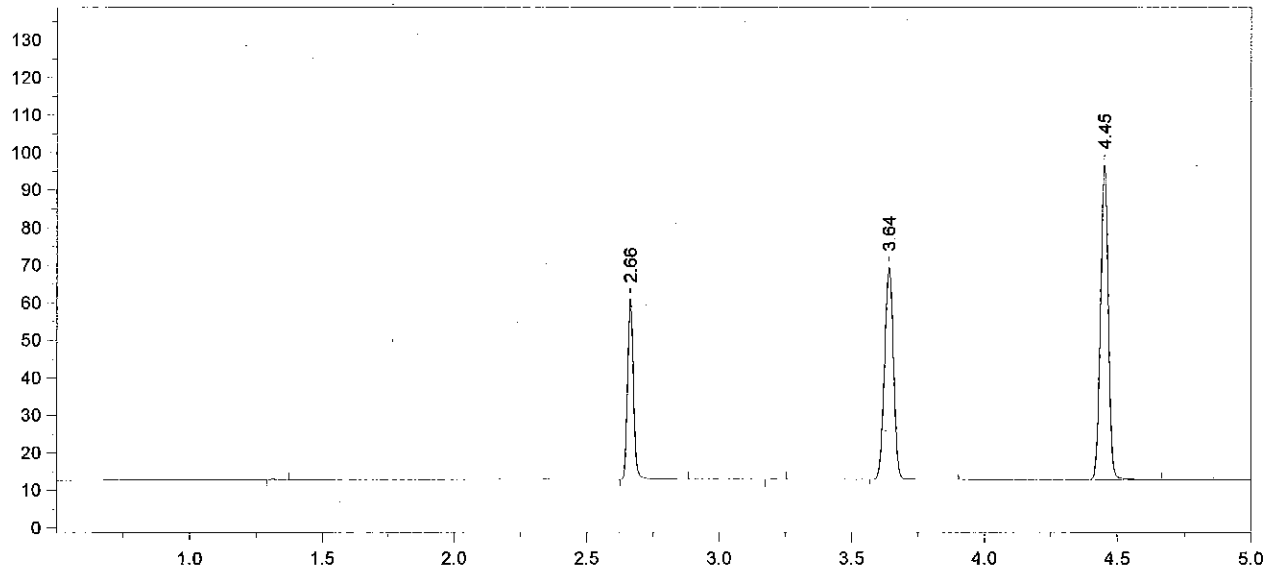
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	89476	0.0955	0.0779
4	3.64	t-Butanol	129940	1.0351	0.8448
5	4.45	n-Propanol	175527	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:20:53 AM
Bound File Name = SIM04302012.0045.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 3:26:41 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

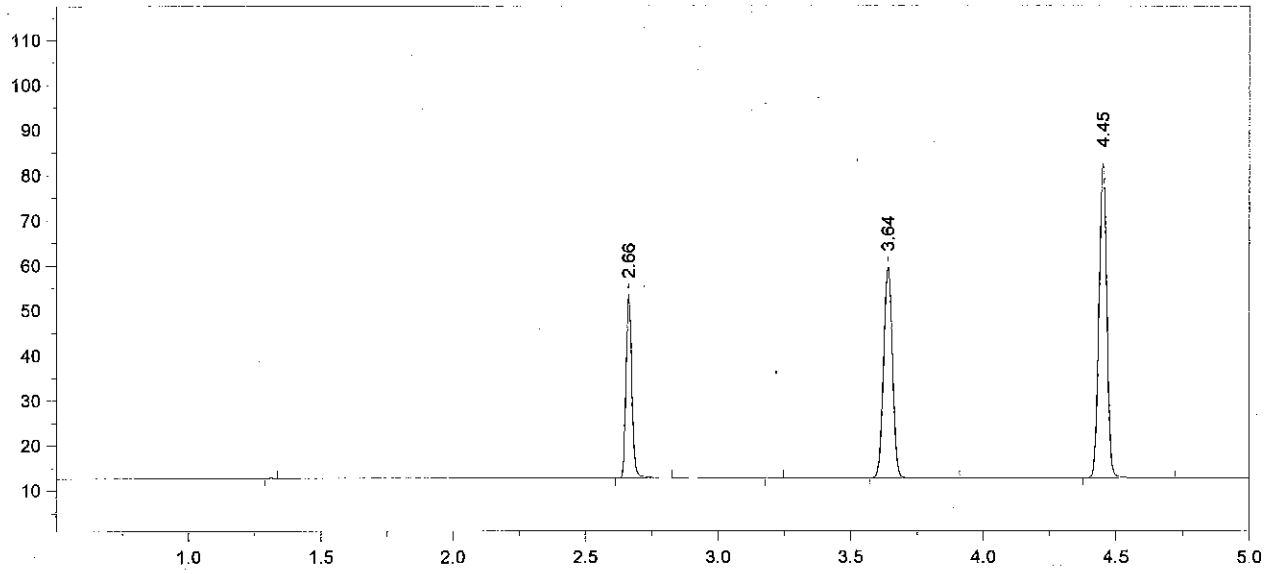
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	90117	0.0972	0.0793
4	3.64	t-Butanol	122016	0.9823	0.8017
5	4.45	n-Propanol	173686	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:21:01 AM
Bound File Name = SIM04302012.0046.RAW
Sample Name = CCS
Date Taken = 5/1/2012 3:44:15 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal Calibration Version = 2

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	74495	0.0788 ✓	0.0643
4	3.64	t-Butanol	130911	1.0335	0.8435
5	4.45	n-Propanol	177112	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:21:10 AM
Bound File Name = SIM04302012.0047.RAW
Sample Name = CCS
Date Taken = 5/1/2012 3:58:13 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 04302012.cal
Calibration Version = 2

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	62824	0.0794	0.0648
4	3.64	t-Butanol	108254	1.0210	0.8333
5	4.45	n-Propanol	148253	1.0000	0.8162

Headspace Alcohol Analysis Standards Coversheet

Analyst: AeB Date: 5/1/12

Calibration Standards:

Lot ID: ES-03052012 Preparation Date: 03/05/2012* Expiration Date: 06/05/2012

*Standard E was re-prepared on 3/7/2012

	Standard A	Standard B	Standard C	Standard D	Standard E	Calibration Check
% Ethanol (w/v)	0.005	0.022	0.082	0.202	0.409	
Acceptance Range (± 10%)	0.006	0.024	0.090	0.222	0.450	
	0.004	0.020	0.074	0.182	0.368	

Control Sample:

Sample	Source	Lot number	Target Value	Acceptance Range	
Aqueous	Cerilliant	FN111711-01	0.100	0.110	0.090

Calibration and Control Sample Data:

Vial No.	Sample Identification		Result	In Range?	Comments
1	Blank		<0.005	(Y) N	
2	Compound Retention Times:			N/A	
		Acetaldehyde	1.92		
		Methanol	2.02		
		Ethanol	2.66		
		Acetone	3.07		
		Isopropanol	3.20		
		T- butanol	3.64		
		n-propanol	4.45		
3	Standard A		0.0054	(Y) N	
4	Standard B		0.022	(Y) N	
5	Standard C		0.081	(Y) N	
6	Standard D		0.197	(Y) N	
7	Standard E		0.411	(Y) N	
8	Aqueous QC		0.0997	(Y) N	
9	Aqueous QC		0.0991	(Y) N	$\bar{x}$ = 0.099 ✓

ELA 5/3/2012

File Name: C:\Methods\SimCal 05012012.cal
Version: 7

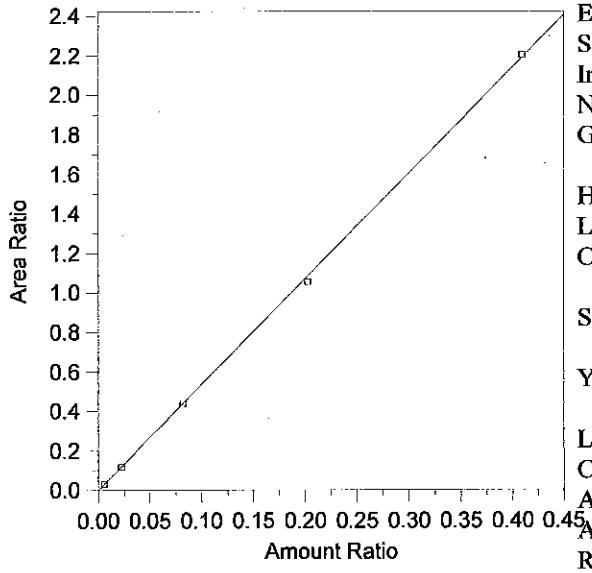
Creator:
Description:
Reason for change:

Internal standard calibration
No injection volume correction
No sample weight correction
Area reject threshold: 1000
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:	2.666 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

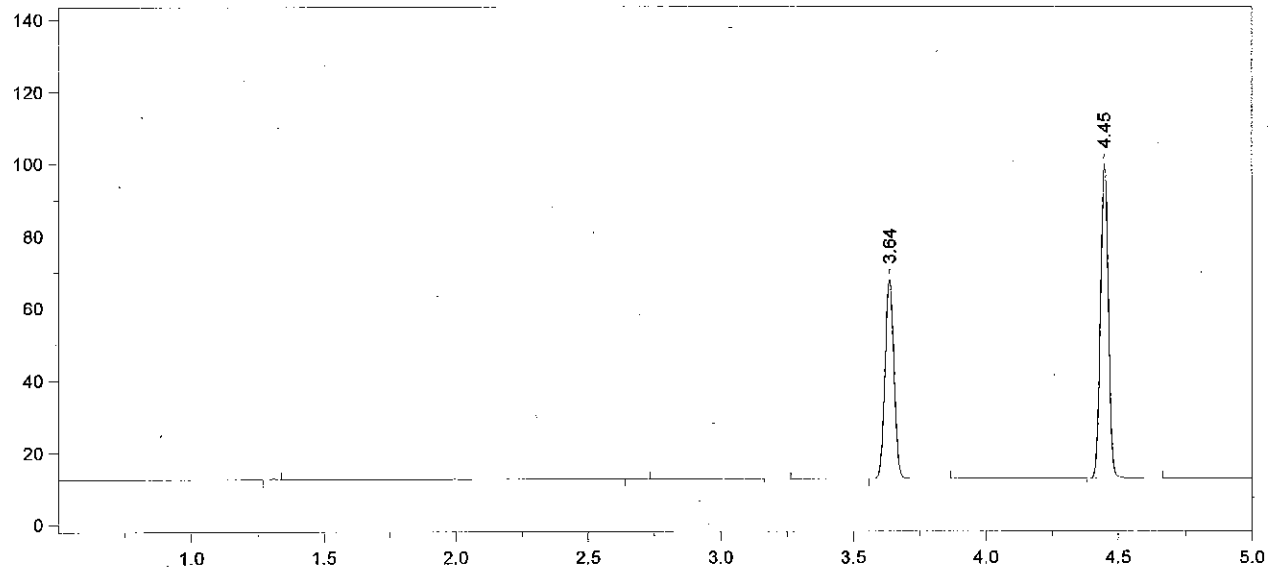
Single peak quantification by area

$Y = 5.355261\ X + 0$

Linear fit with equal weighting, forced to origin

Coefficient of determination:	0.9997209
Average error:	1.156%
Average CF:	5.306862
RSD:	1.115%

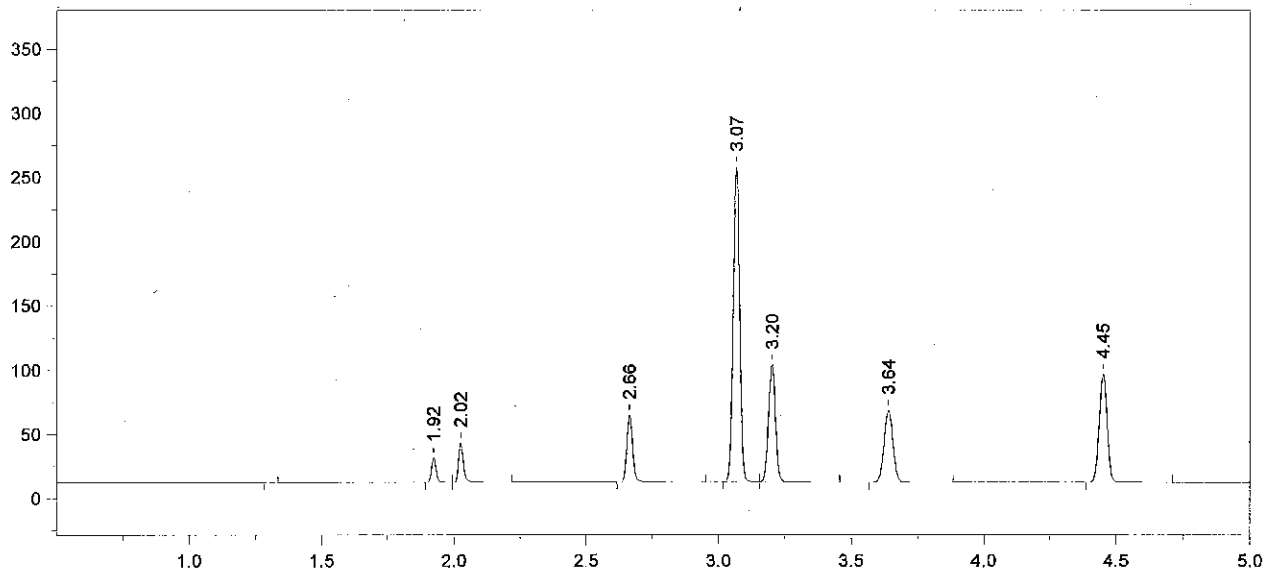
Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source	Date and time
1	(0.088)	(85146)	--	--	0.088	85146	Manual	2/24/2012 1:50:47 PM
2	0.0055	5193.838	944334.2	-1.232	0.0055	0.0290912	C:\Alcohol Data\SIM05012012\SIM05012012.0003.BND	5/1/2012 10:41:13 AM
3	0.022	21169.32	962241.8	-0.655	0.022	0.1170444	C:\Alcohol Data\SIM05012012\SIM05012012.0004.BND	5/1/2012 10:58:51 AM
4	0.082	78640.87	959034.9	-0.824	0.082	0.4355136	C:\Alcohol Data\SIM05012012\SIM05012012.0005.BND	5/1/2012 11:12:01 AM
5	0.202	185707.3	919343	-2.439	0.202	1.055381	C:\Alcohol Data\SIM05012012\SIM05012012.0006.BND	5/1/2012 11:30:18 AM
6	0.409	385469.5	942468.2	0.630	0.409	2.204103	C:\Alcohol Data\SIM05012012\SIM05012012.0007.BND	5/1/2012 11:44:12 AM



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012
Today's Time = 7:12:16 AM
Bound File Name = SIM05012012.0001.RAW
Sample Name = Blank
Date Taken = 5/1/2012 10:09:13 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

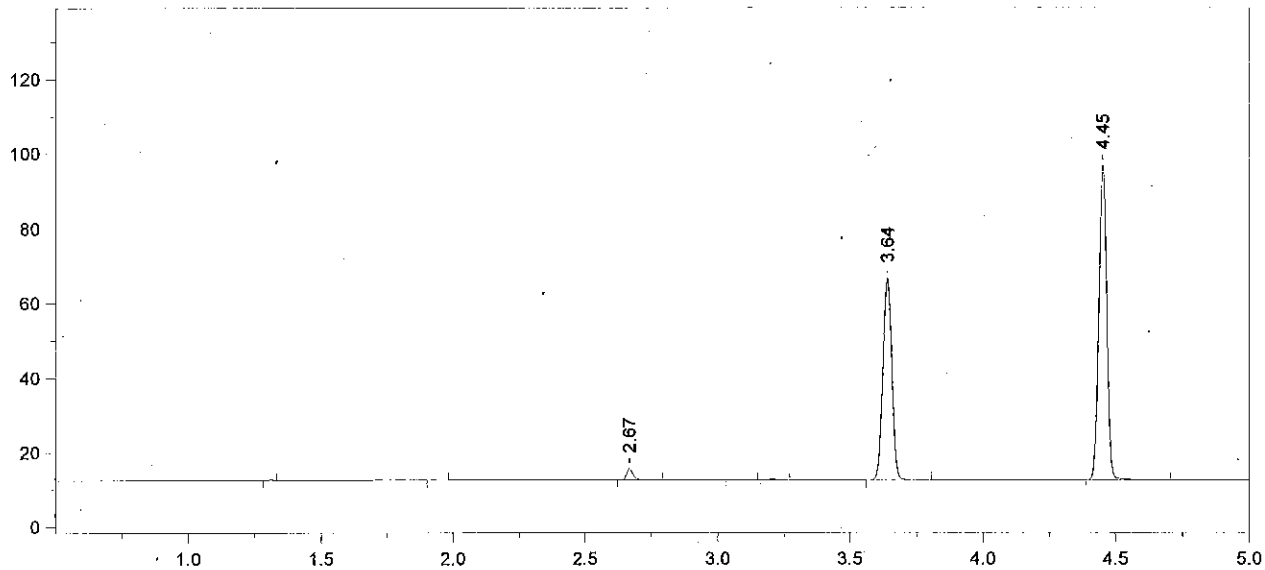
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
4	3.64	t-Butanol	127227	0.9677	0.7898
5	4.45	n-Propanol	184222	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012 Today's Time = 7:12:26 AM
Bound File Name = SIM05012012.0002.RAW
Sample Name = TMX
Date Taken = 5/1/2012 10:27:15 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

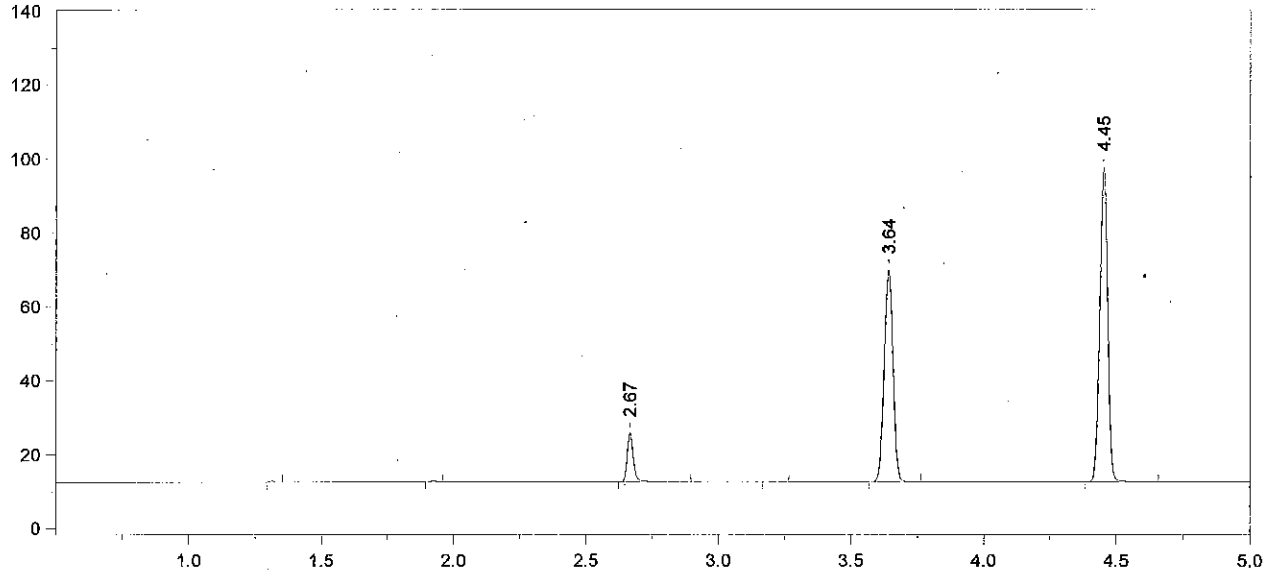
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	1.92	Acetaldehyde	22281	0.0650	0.0531
3	2.02	Methanol	38865	0.0890	0.0726
4	2.66	Ethanol	81290	0.0852	0.0696
5	3.07	Acetone	416768	0.1030	0.0841
6	3.20	Isopropanol	170941	0.0910	0.0743
7	3.64	t-Butanol	128939	1.0143	0.8279
8	4.45	n-Propanol	178112	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012
Today's Time = 7:12:33 AM
Bound File Name = SIM05012012.0003.RAW
Sample Name = STD A
Date Taken = 5/1/2012 10:41:03 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

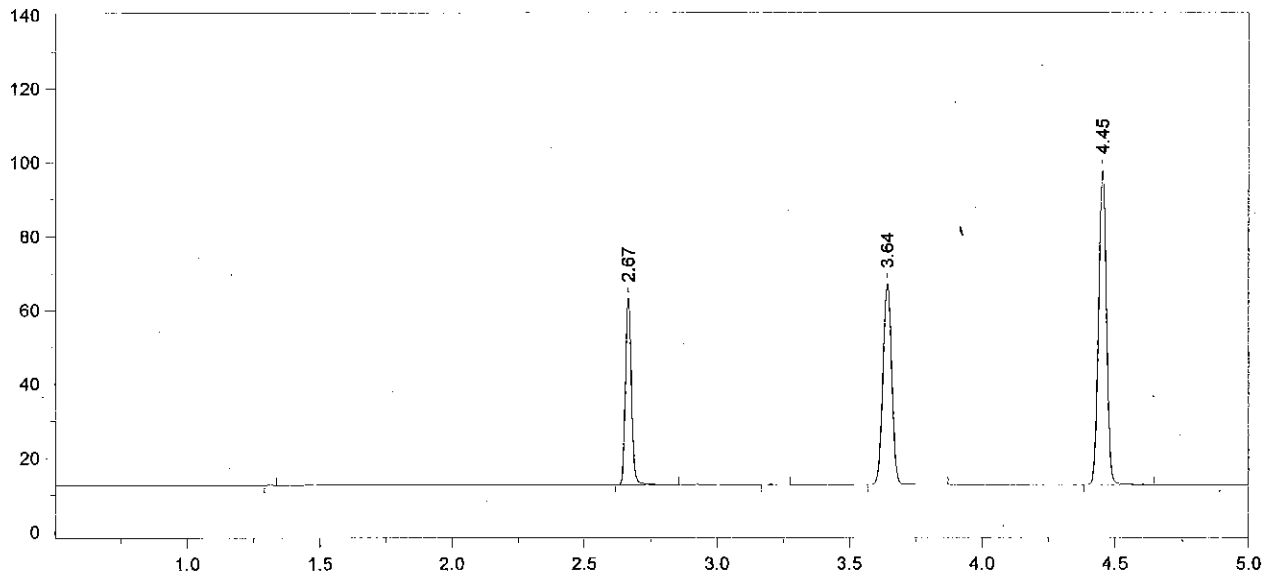
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
3	2.67	Ethanol	05194	0.0054	0.0044
6	3.64	t-Butanol	124791	0.9794	0.7994
7	4.45	n-Propanol	178536	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012 Today's Time = 7:12:43 AM
Bound File Name = SIM05012012.0004.RAW
Sample Name = STD B
Date Taken = 5/1/2012 10:58:42 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

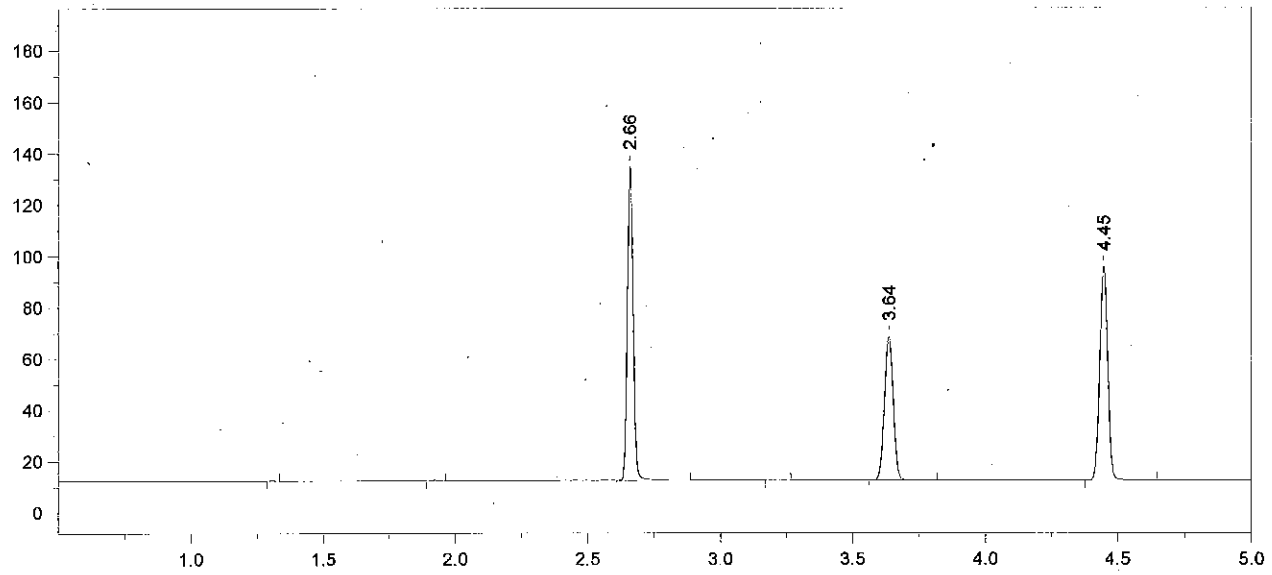
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
3	2.67	Ethanol	21169	0.0219	0.0178
5	3.64	t-Butanol	132410	1.0258	0.8372
6	4.45	n-Propanol	180866	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012 Today's Time = 7:12:52 AM
Bound File Name = SIM05012012.0005.RAW
Sample Name = STD C
Date Taken = 5/1/2012 11:11:52 AM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

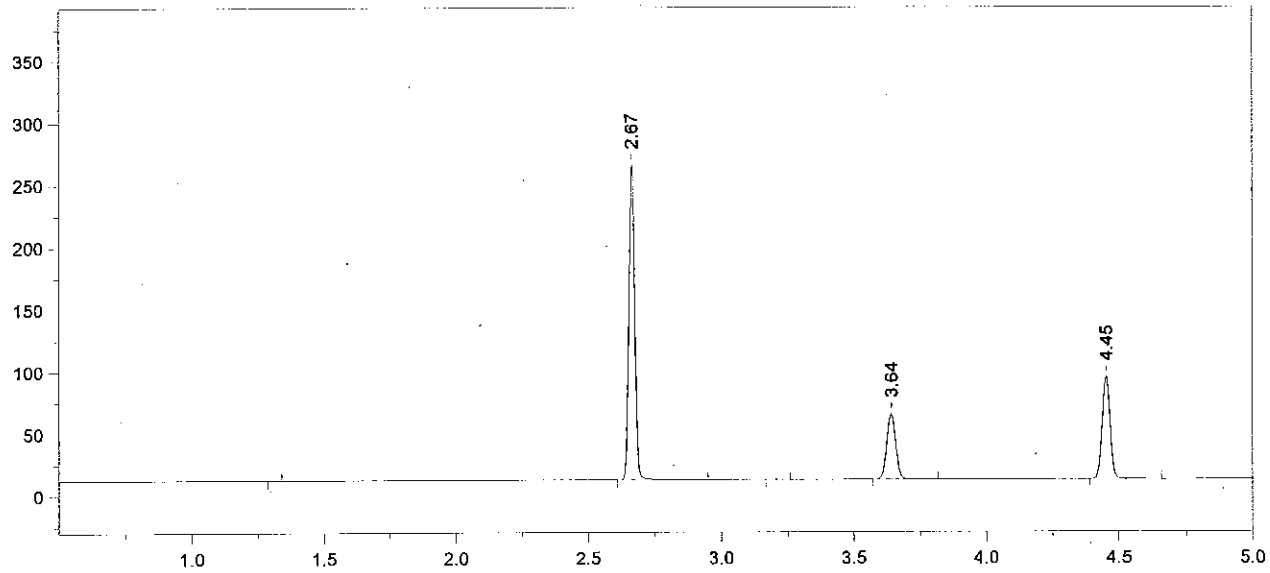
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.67	Ethanol	78641	0.0813	0.0664
4	3.64	t-Butanol	125870	0.9767	0.7972
5	4.45	n-Propanol	180570	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012
Today's Time = 7:13:01 AM
Bound File Name = SIM05012012.0006.RAW
Sample Name = STD D
Date Taken = 5/1/2012 11:30:07 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

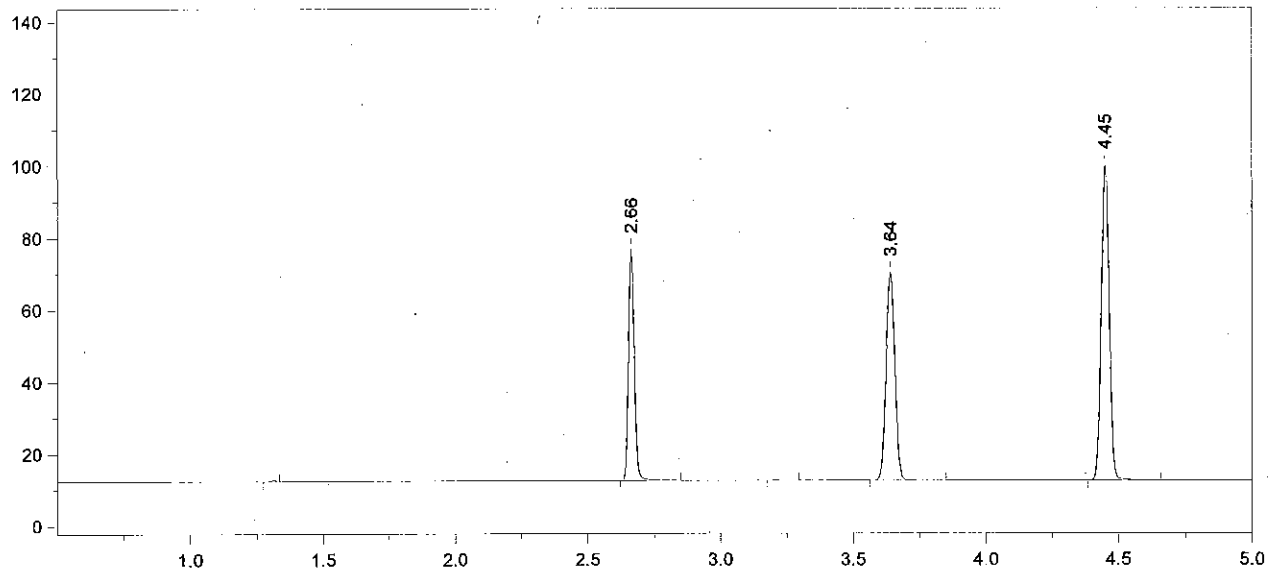
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
3	2.66	Ethanol	185707	0.1971	0.1609
5	3.64	t-Butanol	129034	1.0275	0.8386
6	4.45	n-Propanol	175962	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012
Today's Time = 7:13:10 AM
Bound File Name = SIM05012012.0007.RAW
Sample Name = STD E
Date Taken = 5/1/2012 11:44:00 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

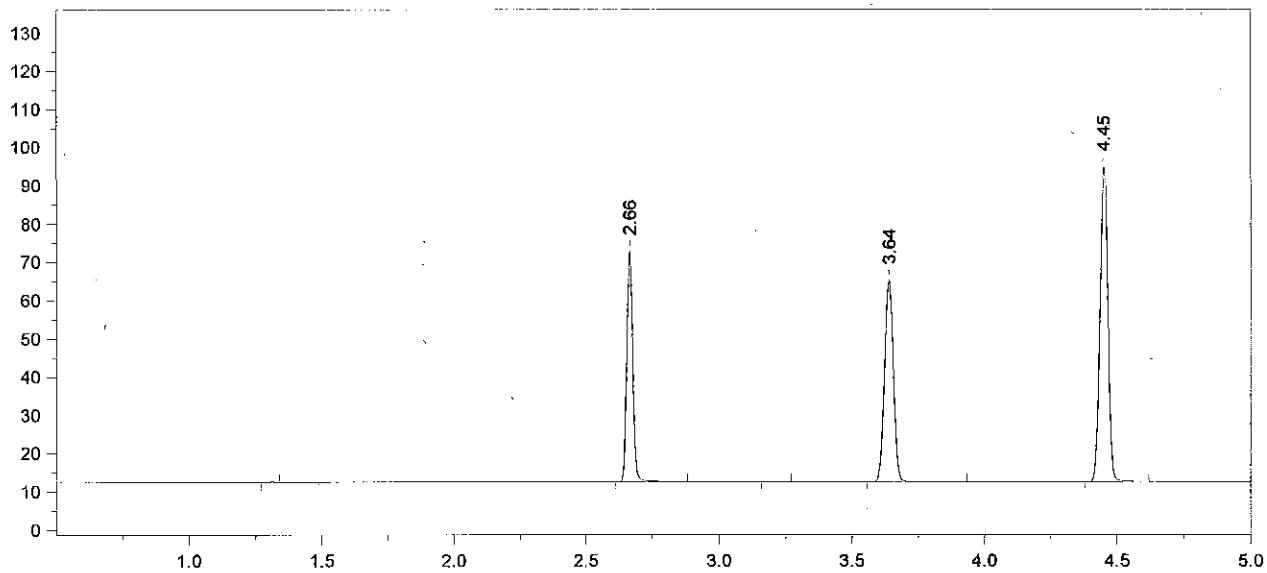
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.67	Ethanol	385470	0.4116	0.3359
4	3.64	t-Butanol	121853	0.9763	0.7968
5	4.45	n-Propanol	174887	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 12:00:01 PM
Bound File Name = SIM05012012.0008.RAW
Sample Name = AQ QC
Date Taken = 5/1/2012 11:59:50 AM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

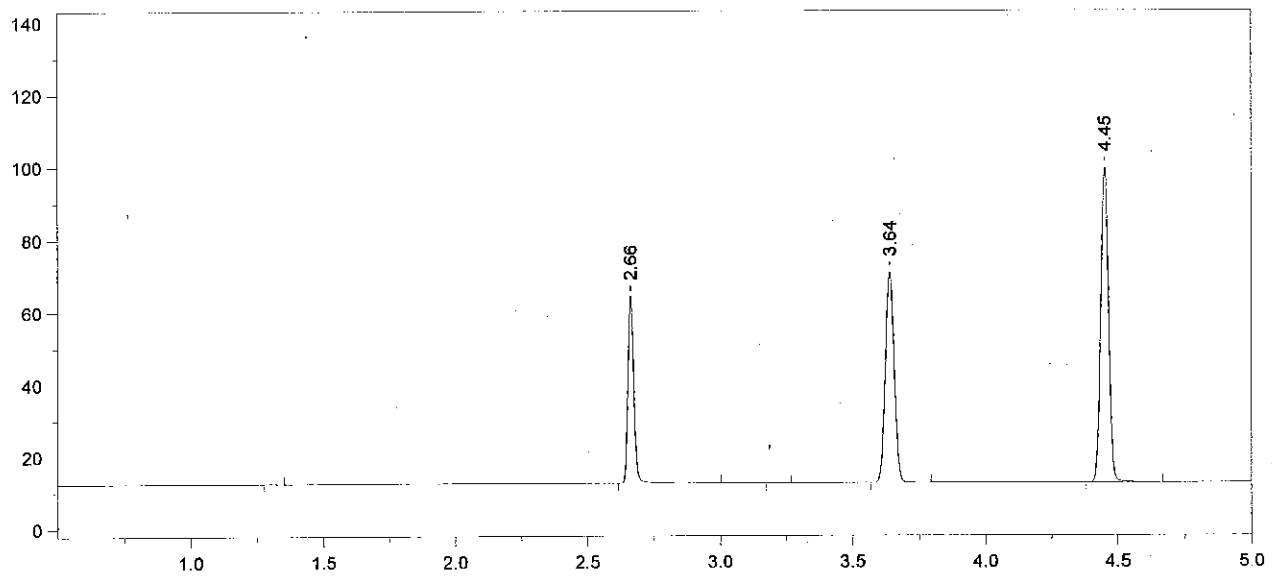
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	98380	0.0997	0.0814
4	3.64	t-Butanol	133339	1.0140	0.8277
5	4.45	n-Propanol	184246	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 12:15:39 PM
Bound File Name = SIM05012012.0009.RAW
Sample Name = AQ QC
Date Taken = 5/1/2012 12:15:31 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

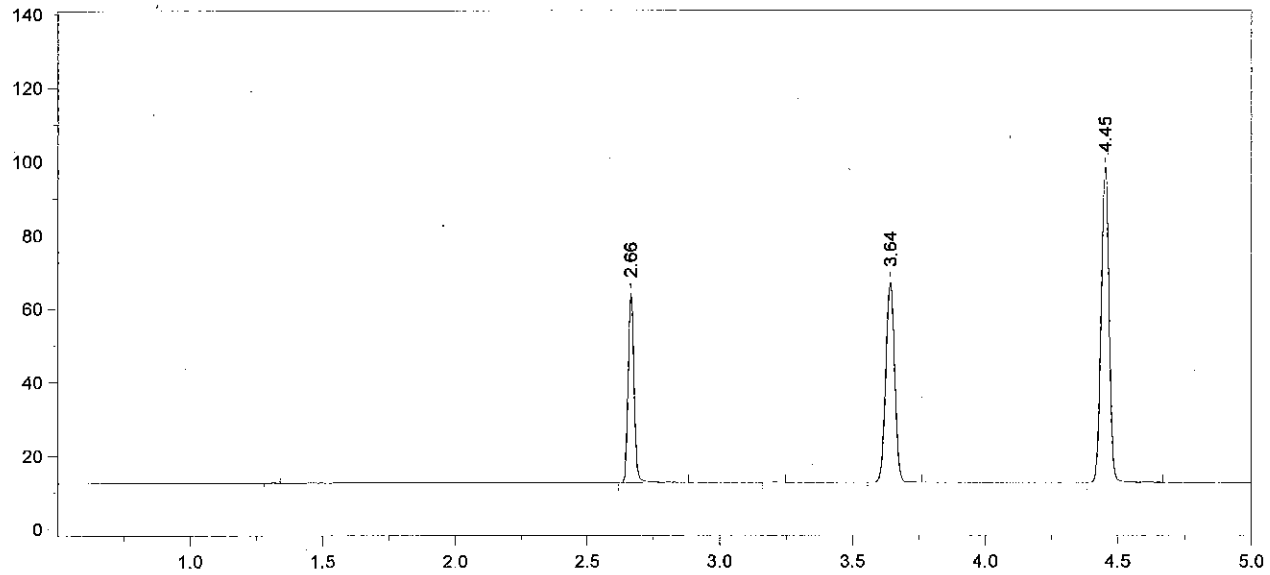
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	92791	0.0991	0.0809
4	3.64	t-Butanol	121994	0.9777	0.7980
5	4.45	n-Propanol	174834	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012
Today's Time = 7:13:19 AM
Bound File Name = SIM05012012.0028.RAW
Sample Name = CCS
Date Taken = 5/1/2012 5:06:32 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

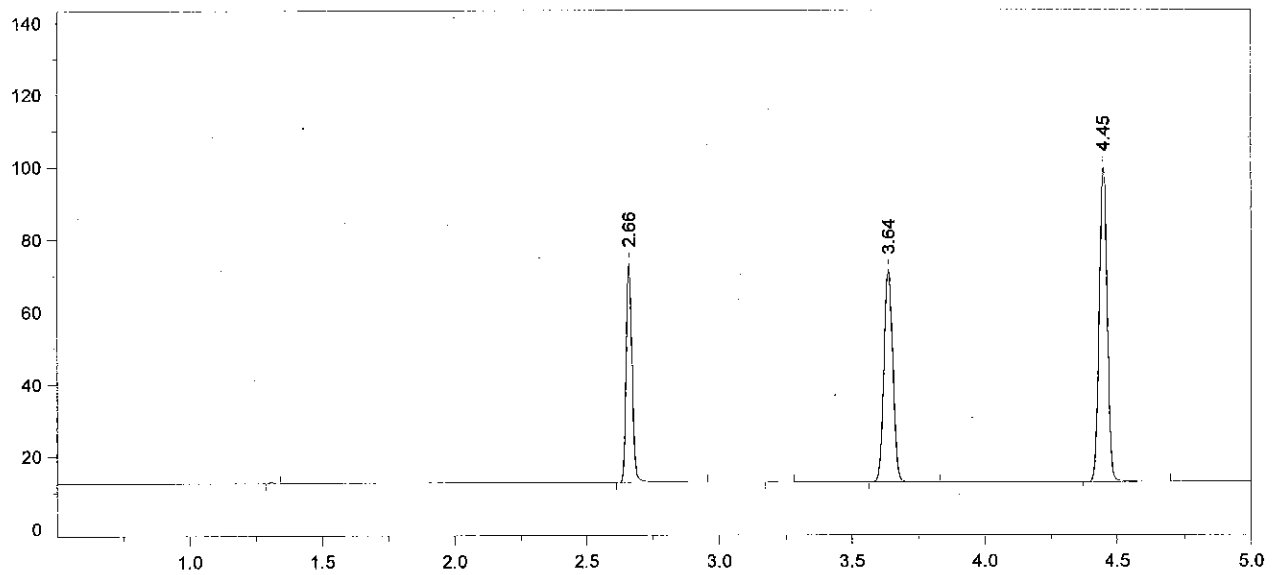
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	79945	0.0810 ✓	0.0661
4	3.64	t-Butanol	134116	1.0198	0.8324
5	4.45	n-Propanol	184273	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/3/2012 Today's Time = 7:13:27 AM
Bound File Name = SIM05012012.0029.RAW
Sample Name = CCS
Date Taken = 5/1/2012 5:20:50 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

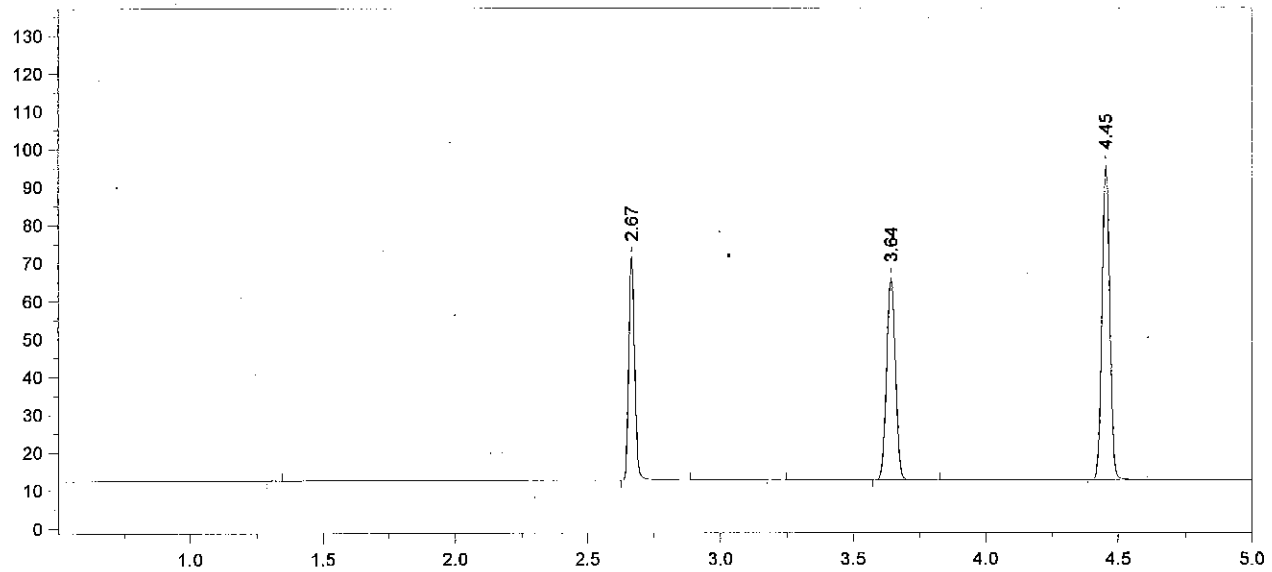
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	80061	0.0824 ✓	0.0673
4	3.64	t-Butanol	125621	0.9702	0.7918
5	4.45	n-Propanol	181430	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 5:38:09 PM
Bound File Name = SIM05012012.0030.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 5:37:59 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

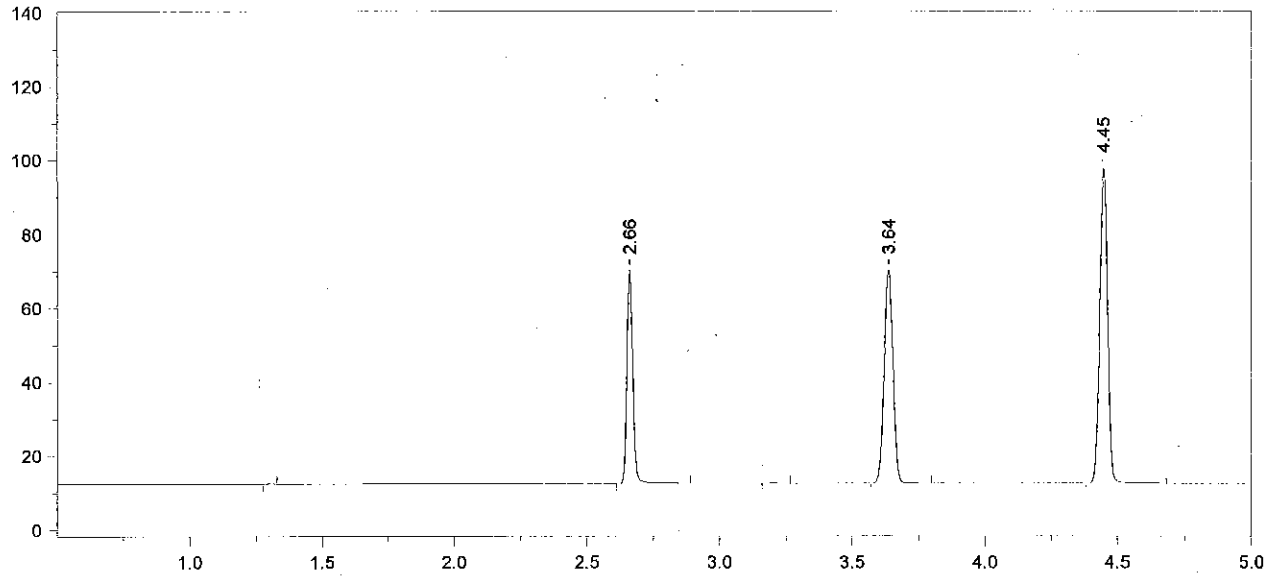
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	93546	0.0949	0.0775
4	3.64	t-Butanol	135706	1.0331	0.8432
5	4.45	n-Propanol	184058	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 5:51:49 PM
Bound File Name = SIM05012012.0031.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 5:51:42 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

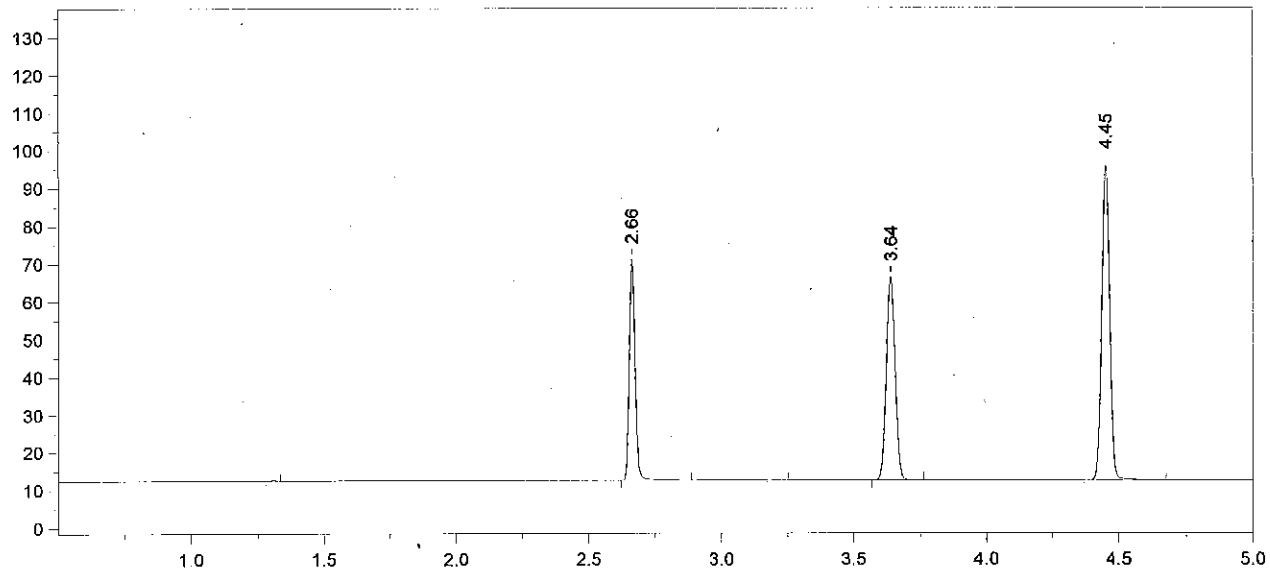
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.67	Ethanol	90685	0.0964	0.0787
4	3.64	t-Butanol	122666	0.9788	0.7989
5	4.45	n-Propanol	175595	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 6:09:36 PM
Bound File Name = SIM05012012.0032.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 6:09:26 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

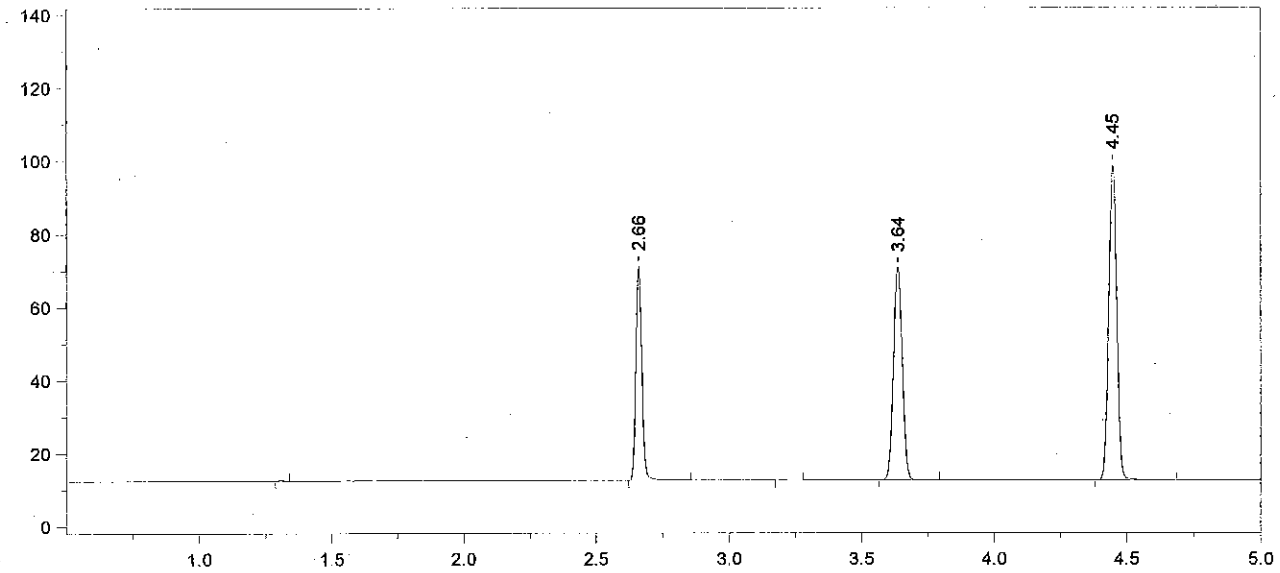
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	88628	0.0917	0.0748
4	3.64	t-Butanol	132996	1.0322	0.8425
5	4.45	n-Propanol	180543	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 6:23:17 PM
Bound File Name = SIM05012012.0033.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 6:23:09 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

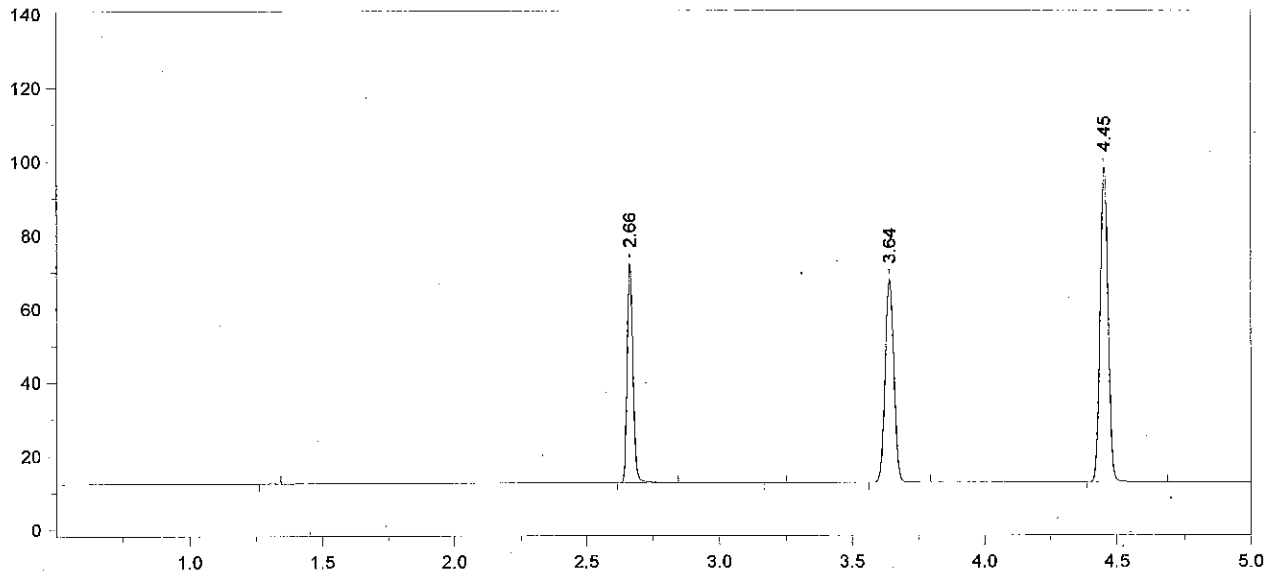
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	89887	0.0955	0.0780
4	3.64	t-Butanol	123587	0.9855	0.8044
5	4.45	n-Propanol	175714	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 6:41:03 PM
Bound File Name = SIM05012012.0034.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 6:40:53 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

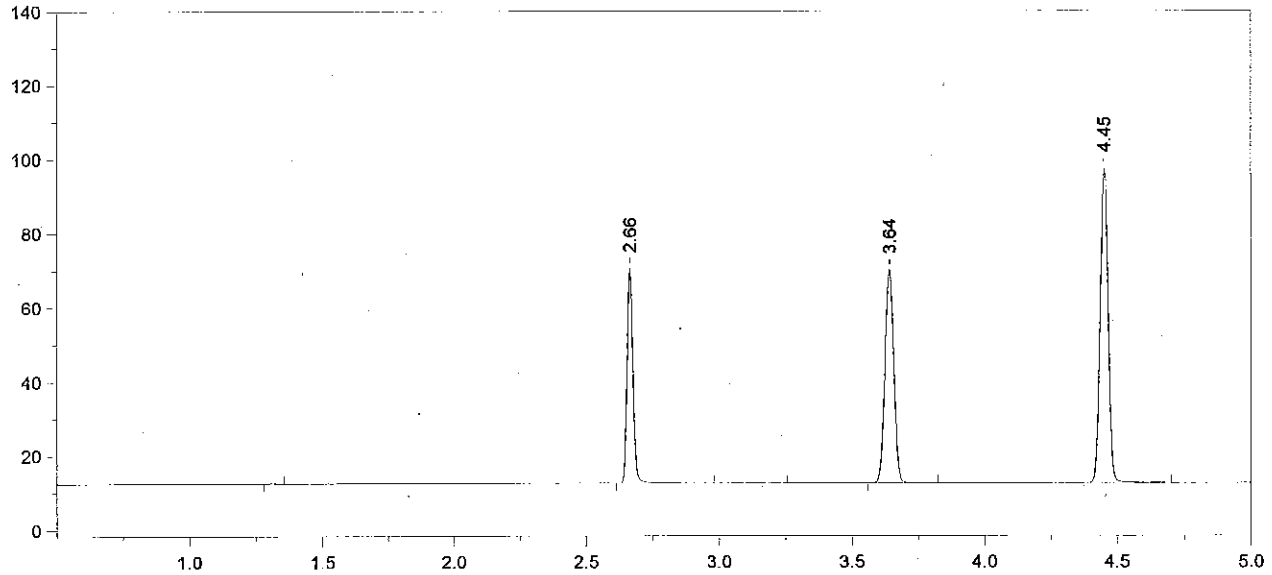
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	89699	0.0921	0.0752
4	3.64	t-Butanol	133762	1.0310	0.8415
5	4.45	n-Propanol	181790	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 6:54:53 PM
Bound File Name = SIM05012012.0035.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 6:54:43 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

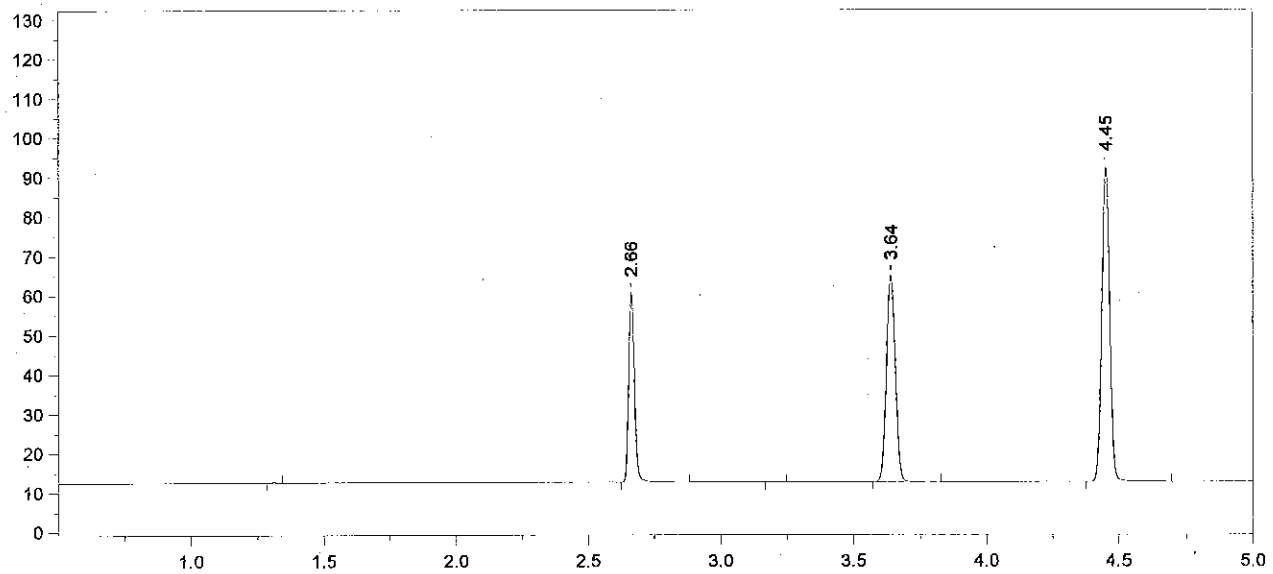
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	91919	0.0949	0.0774
4	3.64	t-Butanol	127327	0.9860	0.8047
5	4.45	n-Propanol	180950	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:12:26 PM
Bound File Name = SIM05012012.0036.RAW
Sample Name = 0.08 Cert TLC
Date Taken = 5/1/2012 7:12:20 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

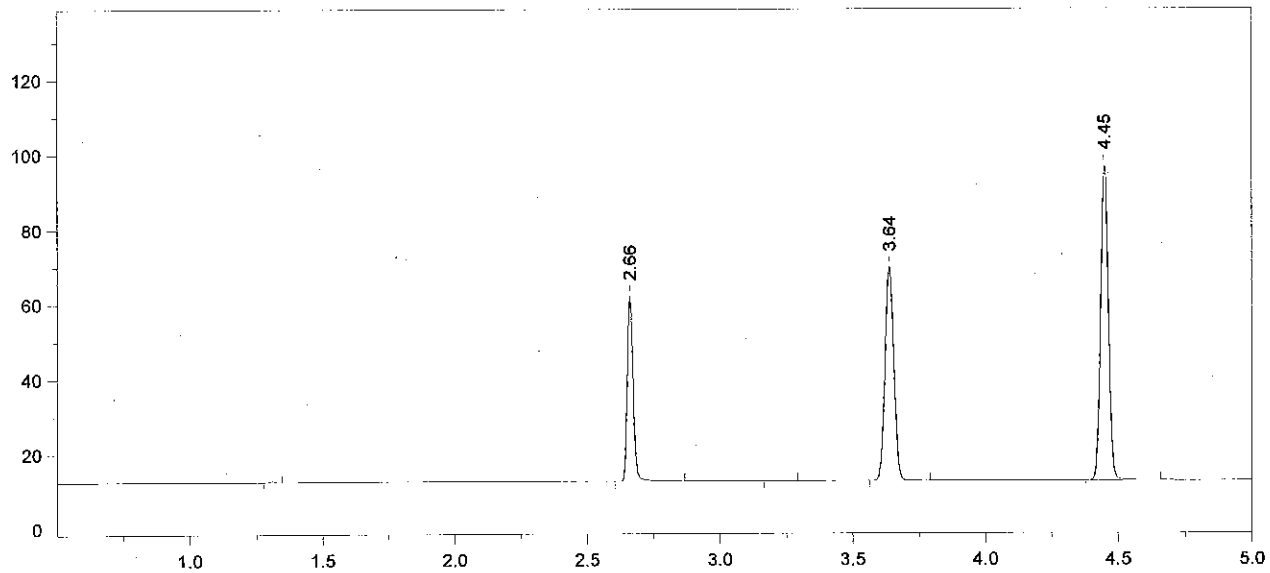
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	89383	0.0928	0.0757
4	3.64	t-Butanol	132481	1.0321	0.8424
5	4.45	n-Propanol	179861	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 7:26:13 PM
Bound File Name = SIM05012012.0037.RAW
Sample Name = CCS
Date Taken = 5/1/2012 7:26:00 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

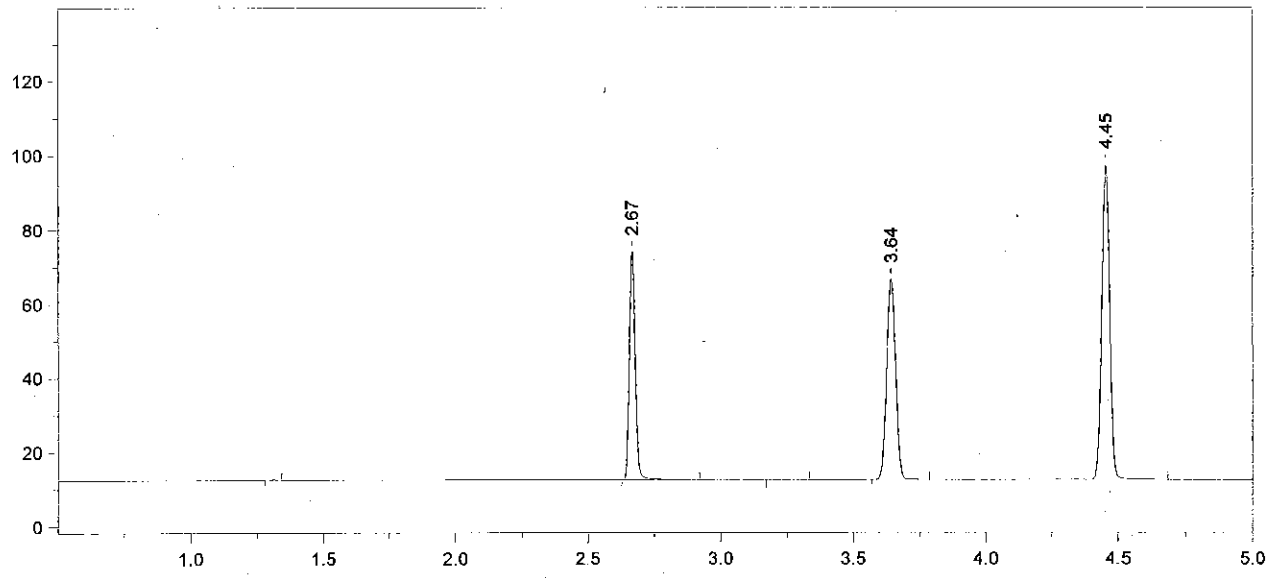
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	74100	0.0815	0.0665
4	3.64	t-Butanol	120576	0.9953	0.8124
5	4.45	n-Propanol	169740	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:43:57 PM
Bound File Name = SIM05012012.0038.RAW
Sample Name = CCS
Date Taken = 5/1/2012 7:43:47 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

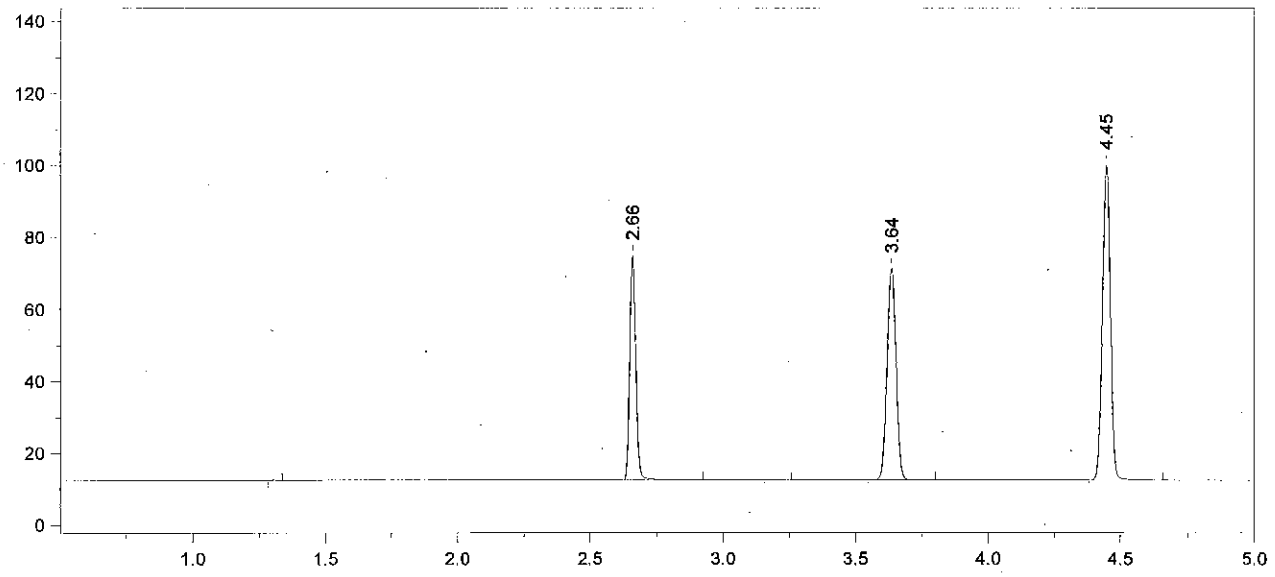
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	76283	0.0798	0.0651
4	3.64	t-Butanol	131597	1.0328	0.8430
5	4.45	n-Propanol	178527	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 7:57:44 PM
Bound File Name = SIM05012012.0039.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 7:57:32 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

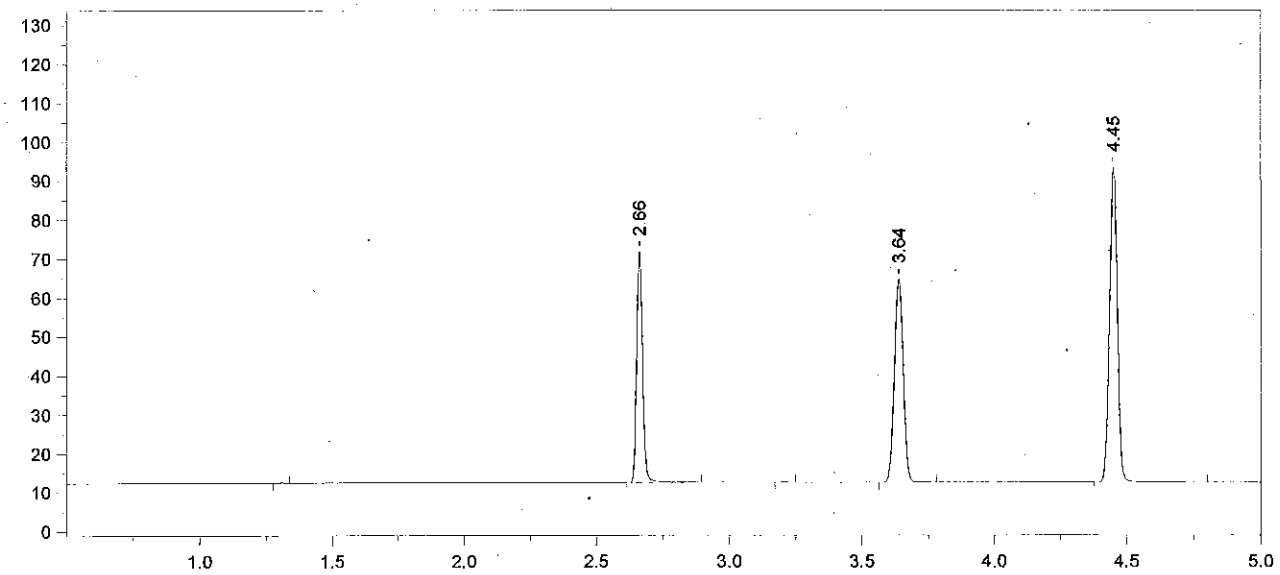
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.67	Ethanol	95271	0.0994	0.0811
4	3.64	t-Butanol	125471	0.9819	0.8014
5	4.45	n-Propanol	179051	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 8:13:41 PM
Bound File Name = SIM05012012.0040.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 8:13:34 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

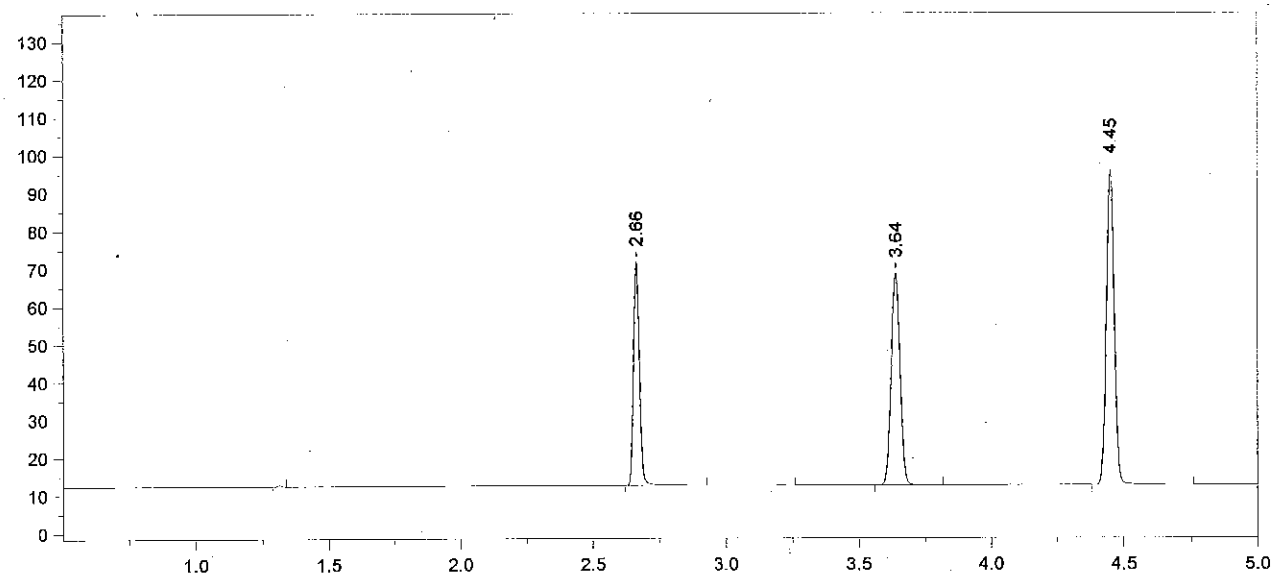
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	96233	0.0973	0.0794
4	3.64	t-Butanol	135489	1.0276	0.8387
5	4.45	n-Propanol	184752	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012 Today's Time = 8:29:14 PM
Bound File Name = SIM05012012.0041.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 8:29:02 PM VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal Calibration Version = 7

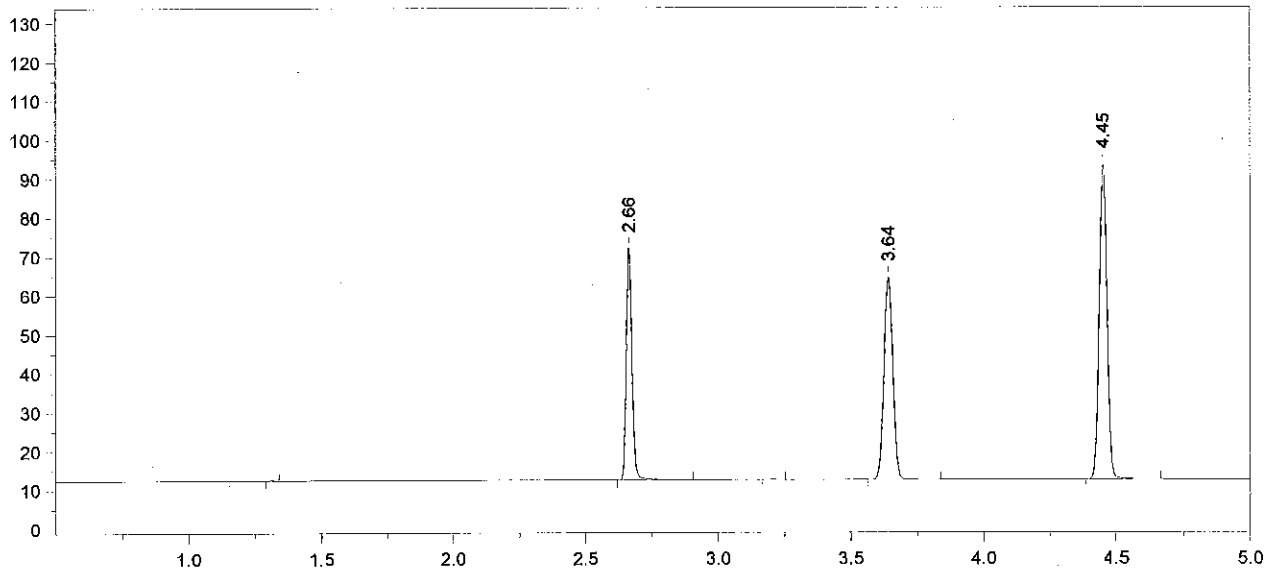
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	91884	0.1003	0.0818
4	3.64	t-Butanol	120295	0.9849	0.8038
5	4.45	n-Propanol	171145	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 8:45:13 PM
Bound File Name = SIM05012012.0042.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 8:45:05 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

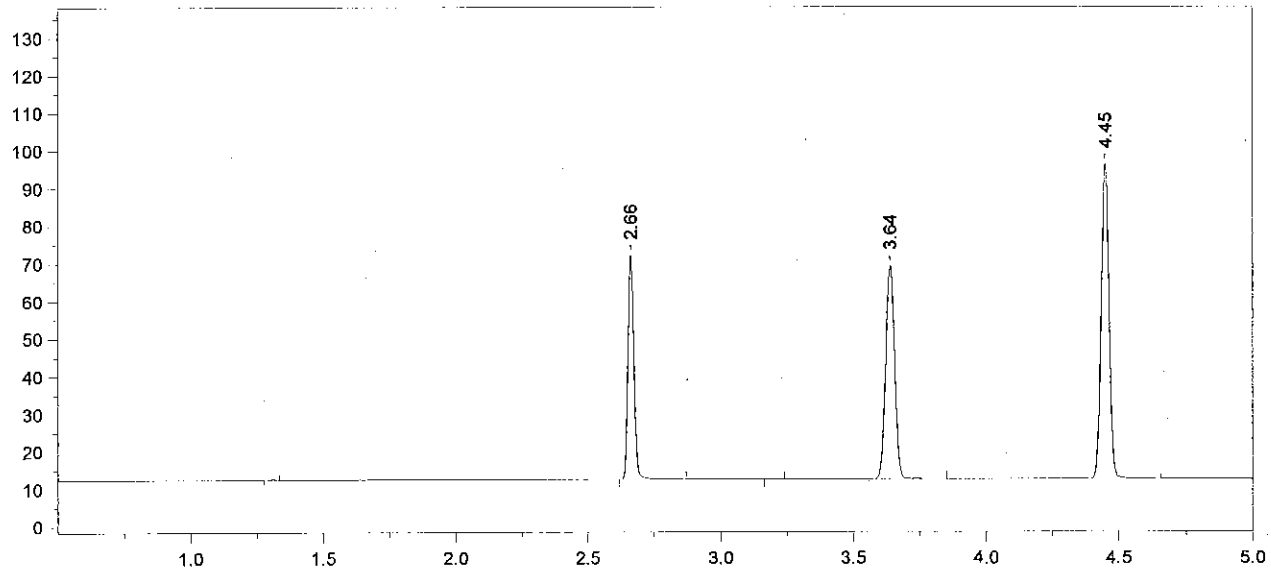
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	91472	0.0974	0.0795
4	3.64	t-Butanol	129138	1.0322	0.8425
5	4.45	n-Propanol	175296	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 8:59:17 PM
Bound File Name = SIM05012012.0043.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 8:59:08 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

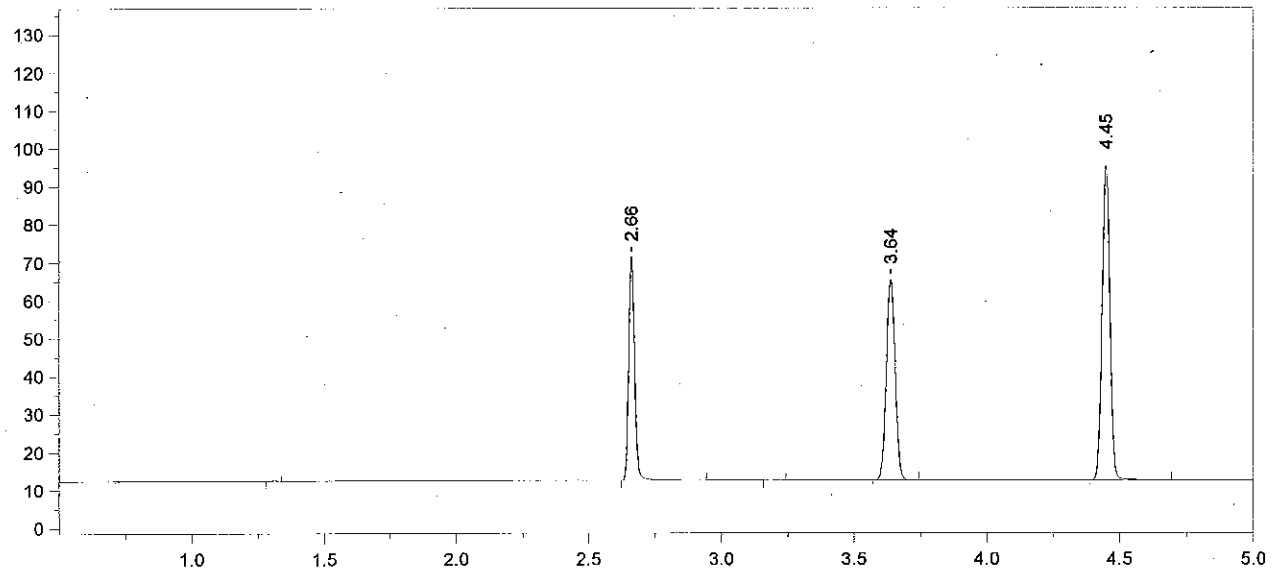
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	91679	0.1004	0.0820
4	3.64	t-Butanol	120003	0.9865	0.8052
5	4.45	n-Propanol	170446	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 9:16:38 PM
Bound File Name = SIM05012012.0044.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 9:16:32 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

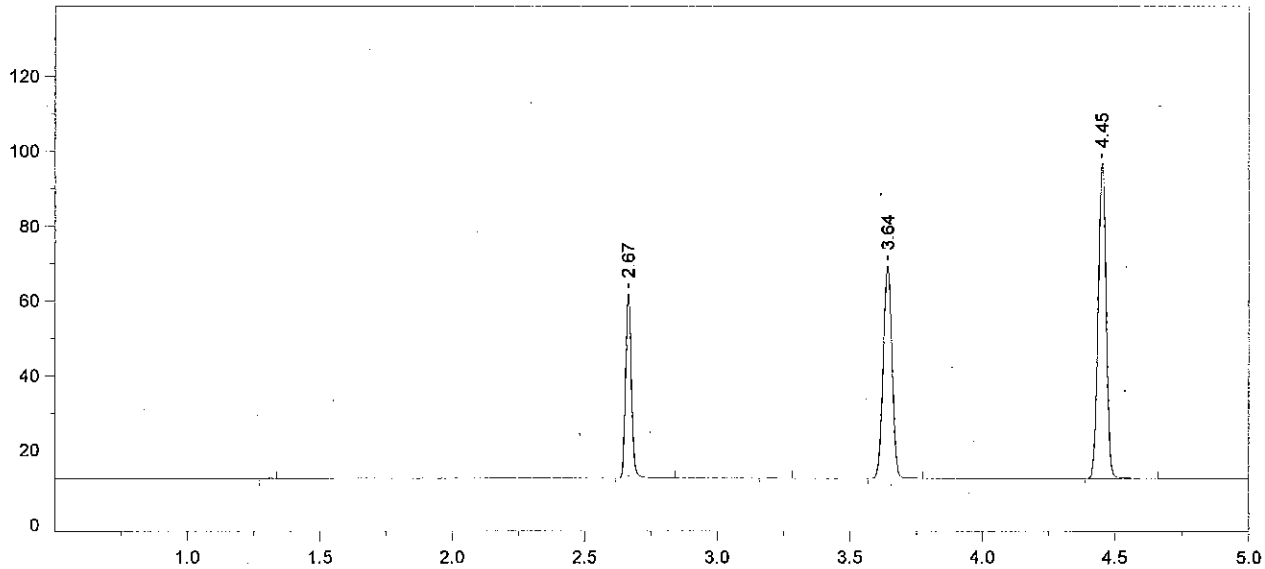
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	91994	0.0968	0.0790
4	3.64	t-Butanol	130937	1.0335	0.8436
5	4.45	n-Propanol	177511	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 9:30:28 PM
Bound File Name = SIM05012012.0045.RAW
Sample Name = 0.08 Cert ALB
Date Taken = 5/1/2012 9:30:17 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

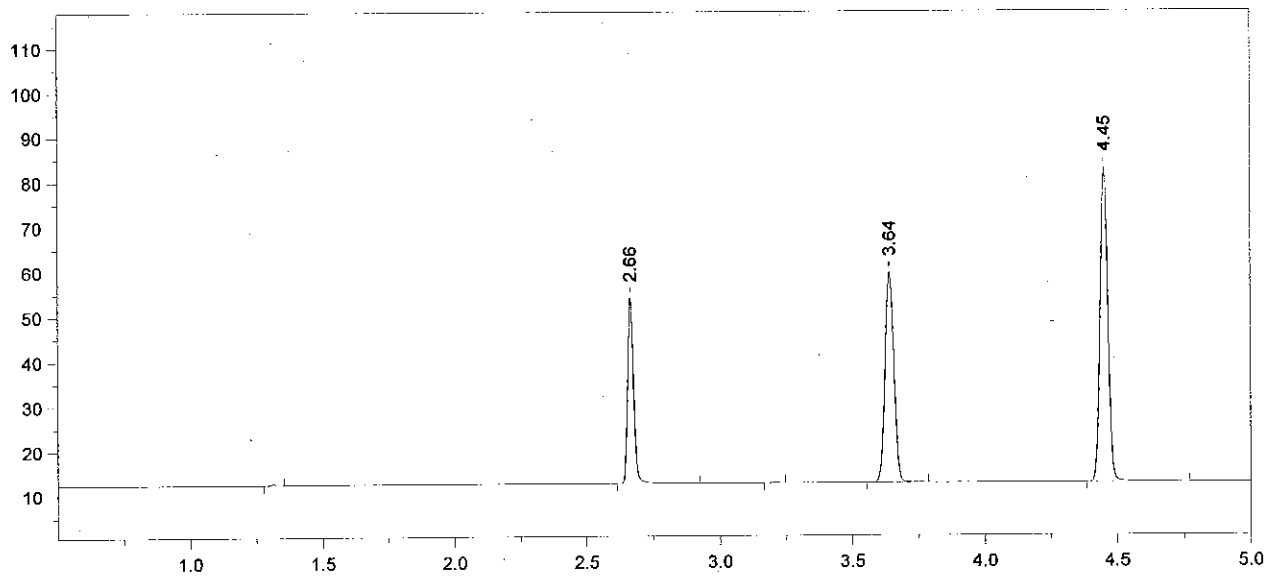
Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	91596	0.0973	0.0794
4	3.64	t-Butanol	122449	0.9763	0.7969
5	4.45	n-Propanol	175739	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 9:48:06 PM
Bound File Name = SIM05012012.0046.RAW
Sample Name = CCS
Date Taken = 5/1/2012 9:47:59 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.67	Ethanol	76460	0.0799	0.0652
4	3.64	t-Butanol	131472	1.0307	0.8413
5	4.45	n-Propanol	178724	1.0000	0.8162



Format File Name = simsoln-JFH.met.FMT

Today's Date = 5/1/2012
Today's Time = 10:01:55 PM
Bound File Name = SIM05012012.0047.RAW
Sample Name = CCS
Date Taken = 5/1/2012 10:01:44 PM
VDH Headspace Alcohol
Method file = simsoln.met
Calibration file = SimCal 05012012.cal
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL	Headspace Conversion
2	2.66	Ethanol	64813	0.0811	0.0662
4	3.64	t-Butanol	108317	1.0170	0.8301
5	4.45	n-Propanol	149231	1.0000	0.8162