VERMONT FORENSIC LABORATORY

VERIFICATION ~~BLOOD ALCOHOL~~ DATA REVIEW CHECKLIST

RLM 3/14/14

Lot # ~~AGENCY CASE#~~: FN01131401 RLM 3/14/14 **ANALYST:** RLM

LAB #: N/A

TECHNICAL REVIEWER: [signature] **DATE:** 3/17/14 3/17/14

- [x] QC complete?
- [x] Pertinent standard lot numbers listed?
- [x] Data package is complete?
- [x] Transcribed data and calculations verified?
- [x] Calibration and control results all within ± 10% (± 20% for STD A) of the known values?
- [x] Calibration line correlation factor at least 0.99xx?
- [x] Average error for components of the calibration line less than 10%?
- [x] Timing mix chromatogram demonstrates appropriate identification of components and separation from ethanol?
- [x] Surrogate compound concentrations all within 0.900 to 1.100 range?
- [x] Statistical means of the continuing calibration check sample duplicate analysis all within ± 10% of the known value?
- [x] Individual replicates within ± 5% of the statistical mean?
- [x] Reported results are means of two or more analyses?
  1. In the event of QNS for 2 (two) analysis a notation must be made on the worksheet.
  2. In the event that more than 2 (two) results are used to determine the reported result a notation is made on the worksheet.

Comments:

ADMINISTRATIVE REVIEWER: [signature] **DATE:** 3\18\2014

- [N/A] Agency Case # and Lab # match submission form?
- [N/A] Submitting agency, investigator, suspect, CC match submission form?
- [N/A] Chain of Custody is complete and dated appropriately?
- [X] Are all pages numbered and initialed on the Examination Documents?
- [X] Case number written on all pages of the case file (Either agency or lab #)?
- [N/A] Is the exam end date documented in the paper case file consistent with the exam end date in LIMS?

Comments:

DIRECTOR REVIEWER: [signature] **DATE:** 3\18\2014

- [X] Does the report and associated paperwork meet administrative expectations?
- [X] Have the appropriate technical and administrative reviews been completed?

Check Mark or X = pass, NA= Not Applicable

File Name: C:\Methods\VFL03132014.CAL
Version: 7

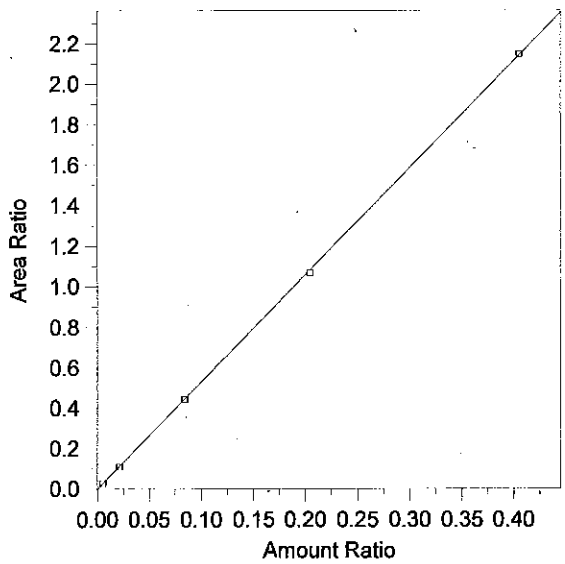
Creator:
Description:
Reason for change:

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:	2.655 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 = 5.289476 X + 0

Linear fit with equal weighting, forced to origin

Coefficient of determination:	0.9999171
Average error:	1.300%
Average CF:	5.261453
RSD:	1.673%

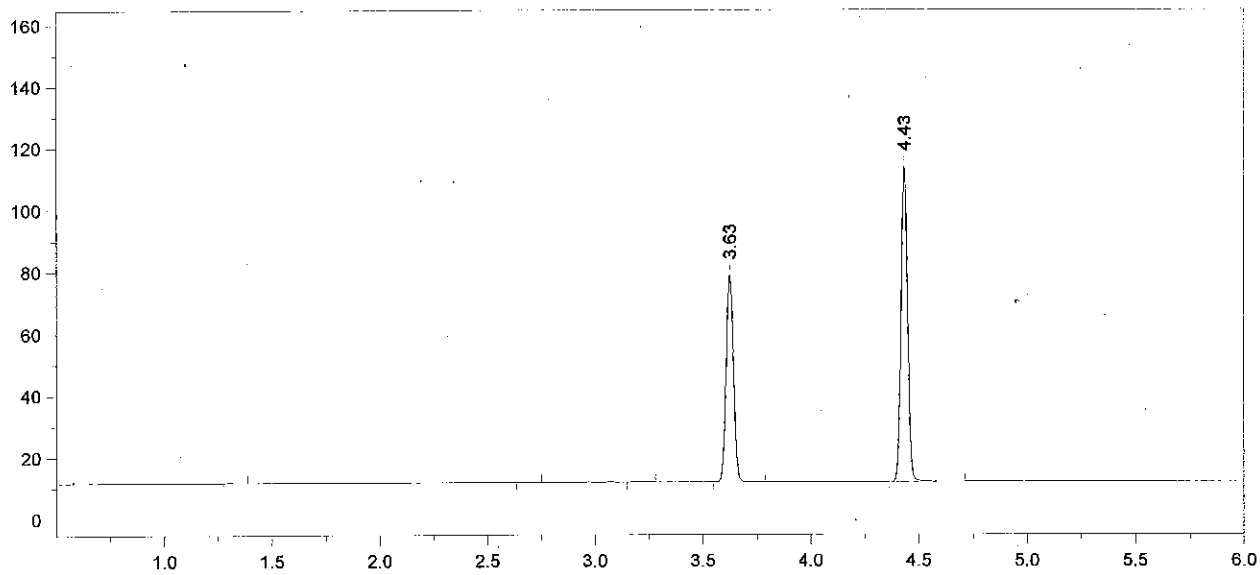
Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source	Date and time
1	(0.091)	(85146)	--	--	0.091	85146	Manual	8/12/2013 4:03:34 PM
2	0.0053	5837.962	1101502	1.576	0.0053	2.847611E-02	C:\Alcohol Data\VFL03132014\VFL03132014.0003.BND	3/13/2014 5:10:41 PM
3	0.0211	22200.67	1052165	-2.839	0.0211	0.1084392	C:\Alcohol Data\VFL03132014\VFL03132014.0004.BND	3/13/2014 5:26:35 PM
4	0.0841	87421.3	1039492	-0.477	0.0841	0.4427242	C:\Alcohol Data\VFL03132014\VFL03132014.0005.BND	3/13/2014 5:41:04 PM
5	0.2043	226229.3	1107339	-1.258	0.2043	1.067046	C:\Alcohol Data\VFL03132014\VFL03132014.0006.BND	3/13/2014 5:57:58 PM
6	0.4047	442280.7	1092861	0.349	0.4047	2.148114	C:\Alcohol Data\VFL03132014\VFL03132014.0007.BND	3/13/2014 6:11:42 PM

File Name = C:\Alcohol Data\VFL03132014\VFL03132014.SEQ
Version = 1
File Date = 3/13/2014 4:03:21 PM

Entry #	Raw File Name	Method File Name	Sample Name	Sample Wt.	Int. Std. Amount
1	VFL03132014.0001.raw	Blood Alc temp VFL.MET	Blank	1.00	1.00
2	VFL03132014.0002.raw	Blood Alc temp VFL.MET	TMX	1.00	1.00
3	VFL03132014.0003.raw	Blood Alc temp VFL.MET	STD A	1.00	1.00
4	VFL03132014.0004.raw	Blood Alc temp VFL.MET	STD B	1.00	1.00
5	VFL03132014.0005.raw	Blood Alc temp VFL.MET	STD C	1.00	1.00
6	VFL03132014.0006.raw	Blood Alc temp VFL.MET	STD D	1.00	1.00
7	VFL03132014.0007.raw	Blood Alc temp VFL.MET	STD E	1.00	1.00
8	VFL03132014.0008.raw	Blood Alc temp VFL.MET	AQ QC	1.00	1.00
9	VFL03132014.0009.raw	Blood Alc temp VFL.MET	AQ QC	1.00	1.00
10	VFL03132014.0010.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
11	VFL03132014.0011.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
12	VFL03132014.0012.raw	Blood Alc temp VFL.MET	FN01131401	1.00	1.00
13	VFL03132014.0013.raw	Blood Alc temp VFL.MET	FN01131401	1.00	1.00
14	VFL03132014.0014.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
15	VFL03132014.0015.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00

Lot #s
TMX: TMX-08122013
AQ QC: FN021111-03
Standards: ES-12202013
IS: IS-10312013
RLM 3/14/14

FN01131401 2 RLM

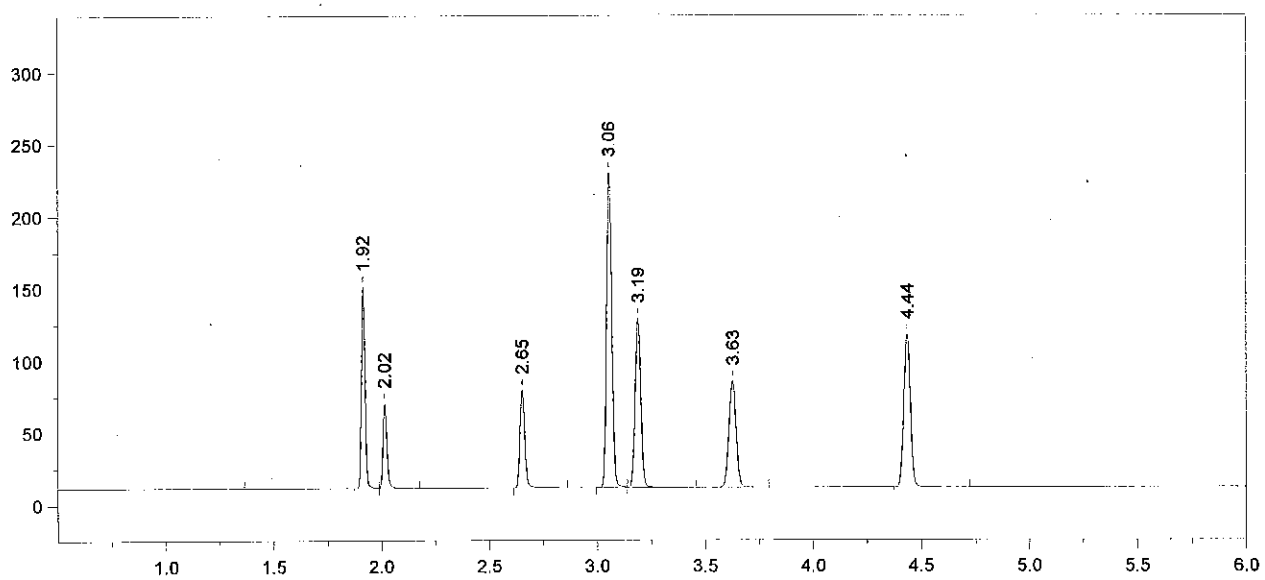


Format File Name = AlcoholVFL.FMT

Today's Date = 3/14/2014
Today's Time = 8:11:35 AM
Bound File Name = VFL03132014.0001.RAW
Sample Name = Blank
Date Taken = 3/13/2014 4:39:08 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
4	3.63	t-Butanol	155792	0.9693
5	4.43	n-Propanol	216290	1.0000

FN0113140I 3 RZM

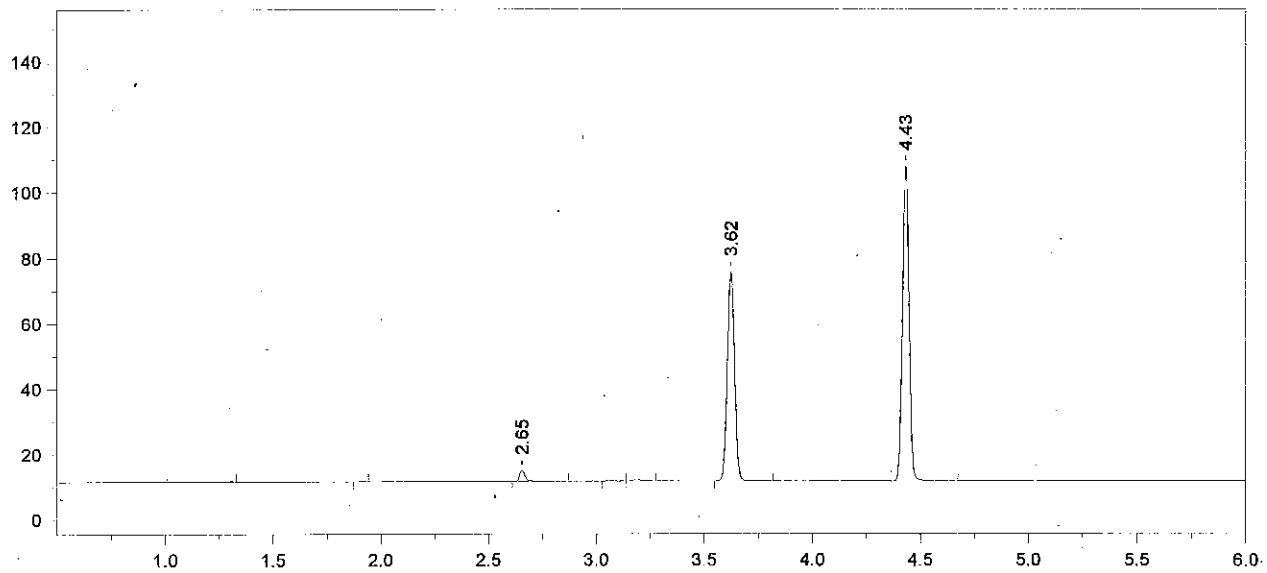


Format File Name = AlcoholVFL.FMT

Today's Date = 3/14/2014
Today's Time = 8:11:40 AM
Bound File Name = VFL03132014.0002.RAW
Sample Name = TMX
Date Taken = 3/13/2014 4:54:52 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	1.92	Acetaldehyde	162120	0.0520
3	2.02	Methanol	74569	0.1370
4	2.65	Ethanol	105703	0.0890
5	3.06	Acetone	373280	0.0940
6	3.19	Isopropanol	219172	0.0850
7	3.63	t-Butanol	170676	1.0233
8	4.44	n-Propanol	224447	1.0000

FN01131401 4 RLM



Format File Name = AlcoholVFL.FMT

Today's Date = 3/14/2014
Bound File Name = VFL03132014.0003.RAW
Sample Name = STD A
Date Taken = 3/13/2014 5:10:35 PM
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL

Today's Time = 8:11:46 AM

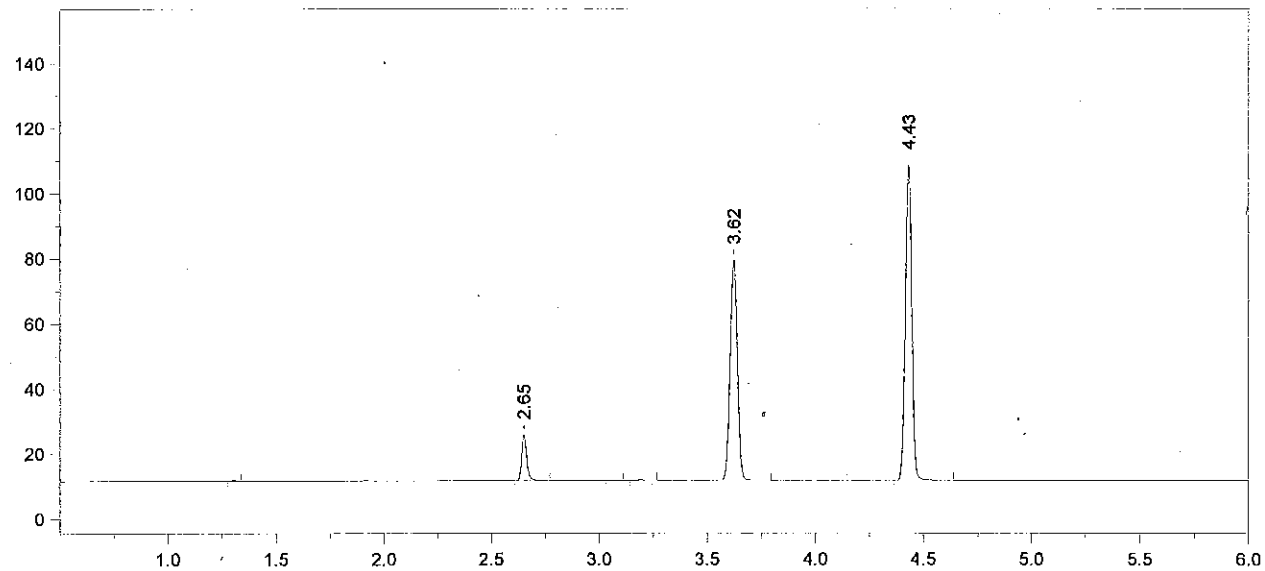
VFL Headspace Alcohol

Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
3	2.65	Ethanol	05838	0.0054
6	3.62	t-Butanol	147738	0.9698
7	4.43	n-Propanol	205013	1.0000

FN01131401

5



Format File Name = AlcoholVFL.FMT

Today's Date = 3/14/2014
Bound File Name = VFL03132014.0004.RAW
Sample Name = STD B
Date Taken = 3/13/2014 5:26:26 PM
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL

Today's Time = 8:11:52 AM

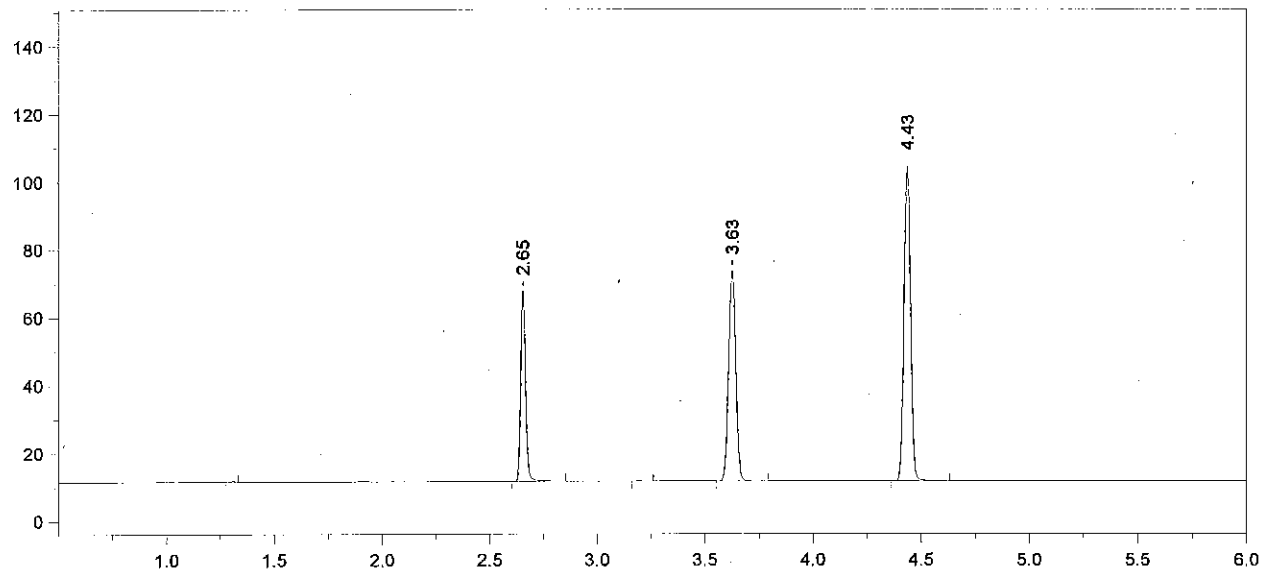
VFL Headspace Alcohol

Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	22201	0.0205
5	3.62	t-Butanol	156732	1.0303
6	4.43	n-Propanol	204729	1.0000

FN01131401

6

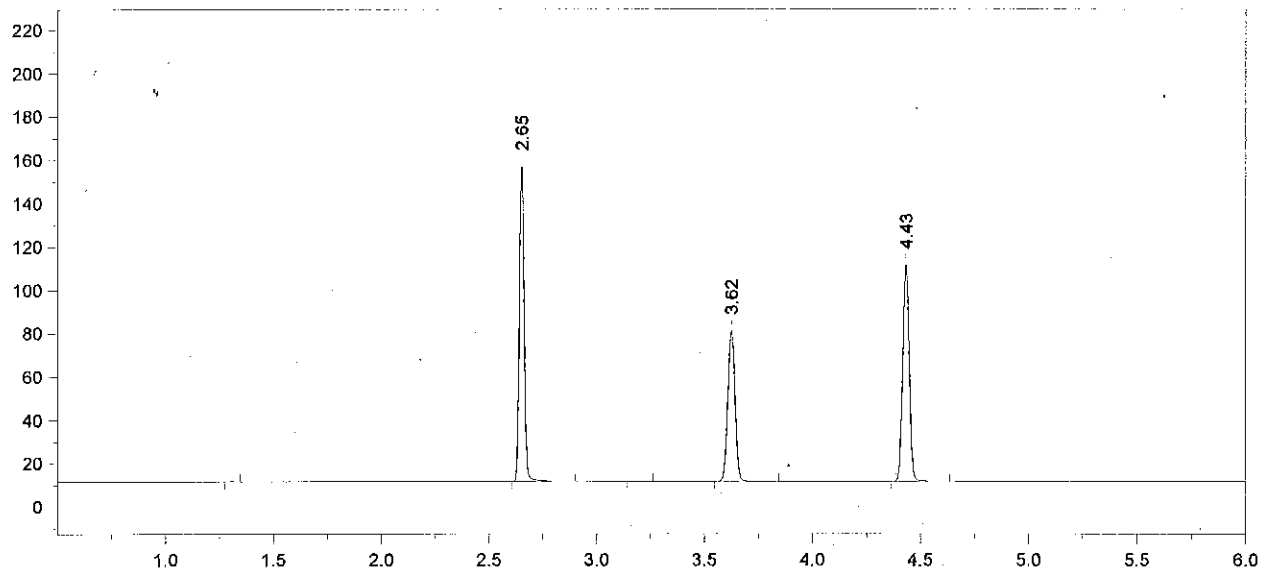


Format File Name = AlcoholVFL.FMT

Today's Date = 3/14/2014
Today's Time = 8:11:58 AM
Bound File Name = VFL03132014.0005.RAW
Sample Name = STD C
Date Taken = 3/13/2014 5:40:57 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	87421	0.0837 *
4	3.63	t-Butanol	143736	0.9796
5	4.43	n-Propanol	197462	1.0000

FN0131401 7 RM

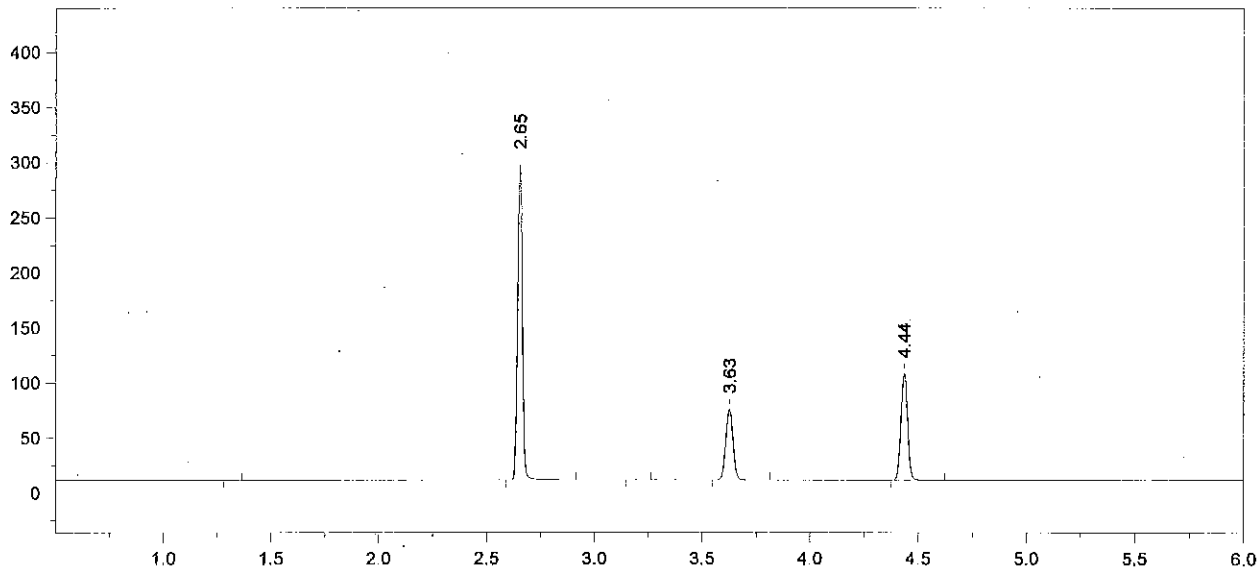


Format File Name = AlcoholVFL.FMT

Today's Date = 3/14/2014
Today's Time = 8:12:04 AM
Bound File Name = VFL03132014.0006.RAW
Sample Name = STD D
Date Taken = 3/13/2014 5:57:51 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	226229	0.2017 *
4	3.62	t-Butanol	161661	1.0261
5	4.43	n-Propanol	212015	1.0000

FN0113/401 8 RM

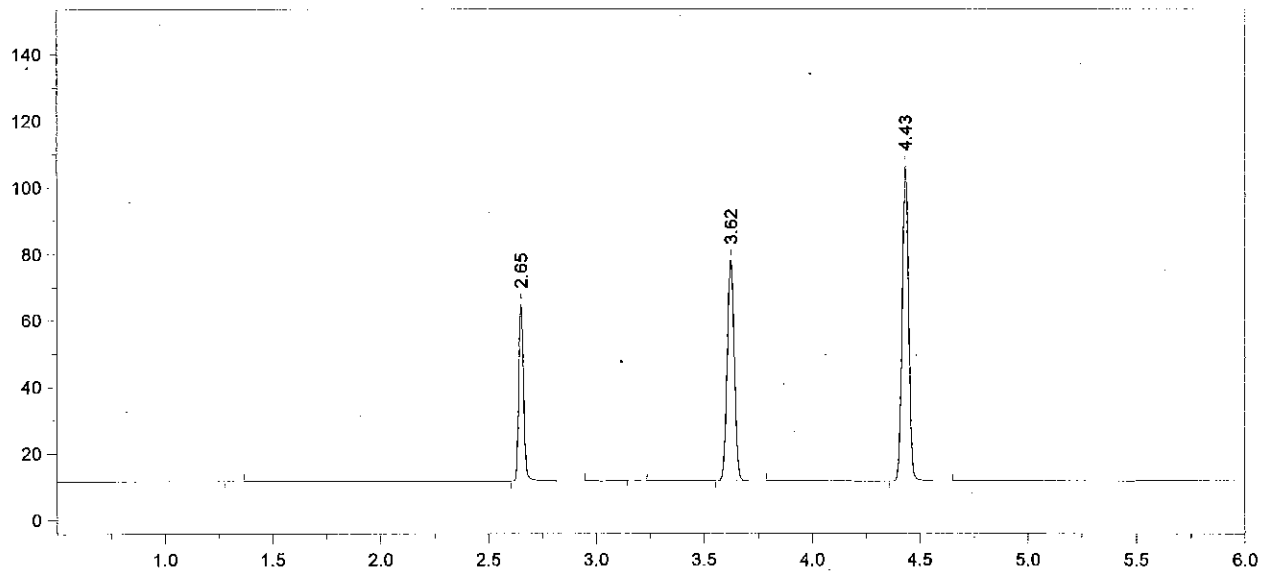


Format File Name = AlcoholVFL.FMT

Today's Date = 3/14/2014
Today's Time = 8:12:10 AM
Bound File Name = VFL03132014.0007.RAW
Sample Name = STD E
Date Taken = 3/13/2014 6:11:36 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	442281	0.4061 *
4	3.63	t-Butanol	148537	0.9709
5	4.44	n-Propanol	205893	1.0000

FN0113/401 9 RZM



Format File Name = AlcoholVFL.FMT

Today's Date = 3/13/2014
Bound File Name = VFL03132014.0008.RAW
Sample Name = AQ QC
Date Taken = 3/13/2014 6:29:15 PM
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL

Today's Time = 6:29:23 PM

VFL Headspace Alcohol

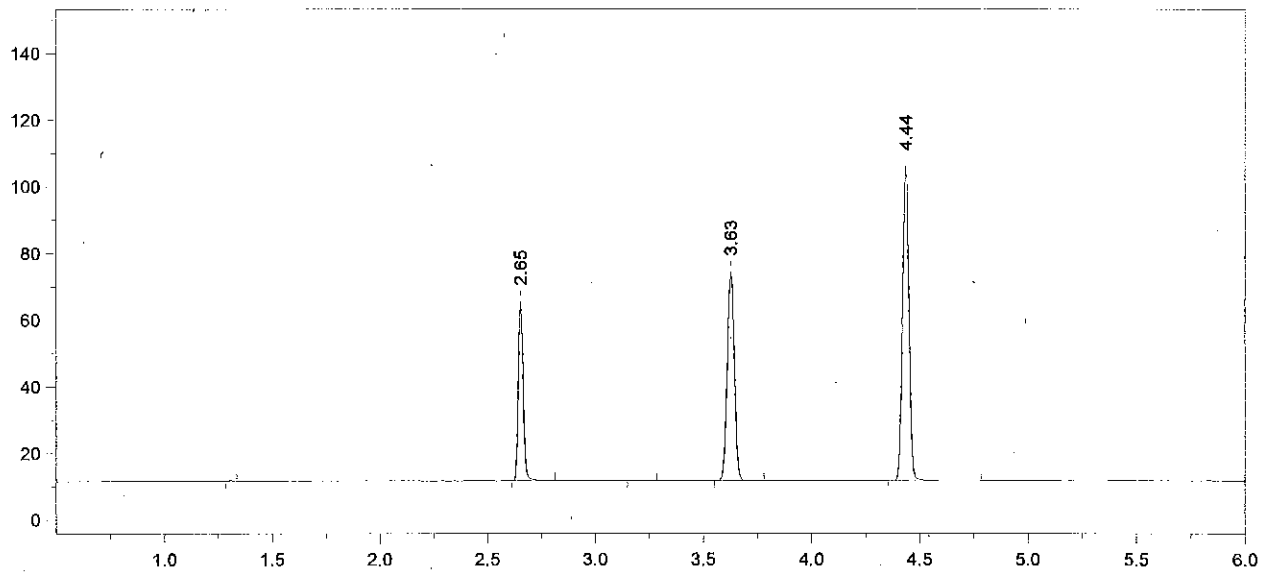
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	83844	0.0792 *
4	3.62	t-Butanol	153993	1.0349
5	4.43	n-Propanol	200247	1.0000

FN01131401

10

RLM



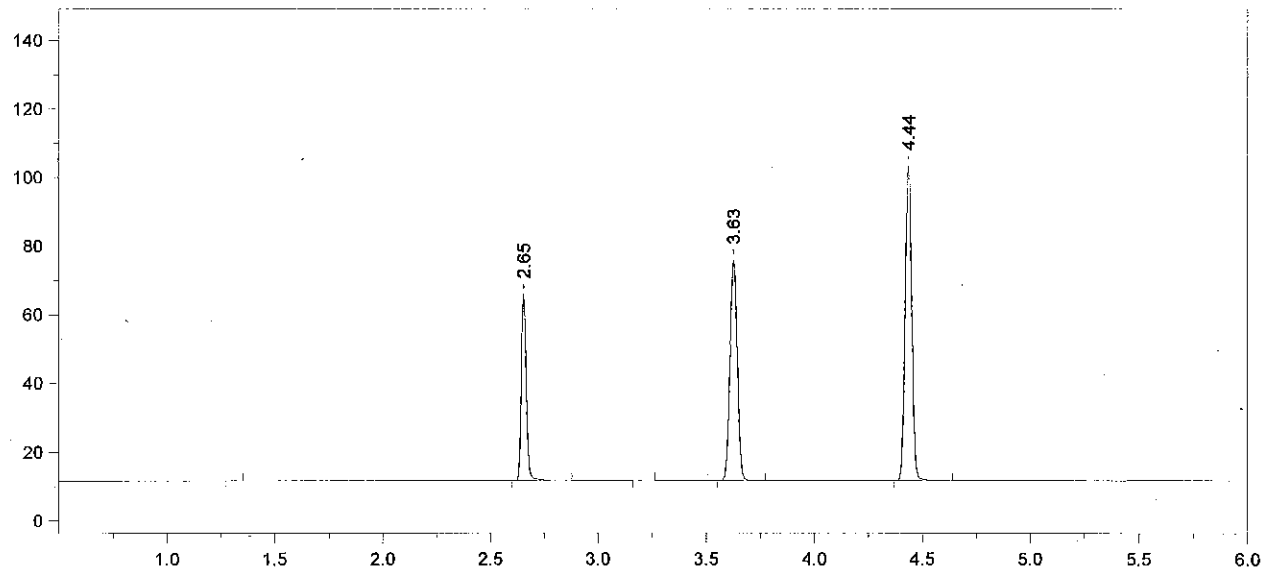
Format File Name = AlcoholVFL.FMT

Today's Date = 3/13/2014
Today's Time = 6:42:40 PM
Bound File Name = VFL03132014.0009.RAW
Sample Name = AQ QC
Date Taken = 3/13/2014 6:42:33 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	83943	0.0788 *
4	3.63	t-Butanol	145100	0.9699
5	4.44	n-Propanol	201333	1.0000

Avg #8 + #9 = 0.079
Target value: 0.080
% recovery = 99 %
RZM 3/14/14

FN 01131401 11 RZM



Format File Name = AlcoholVFL.FMT

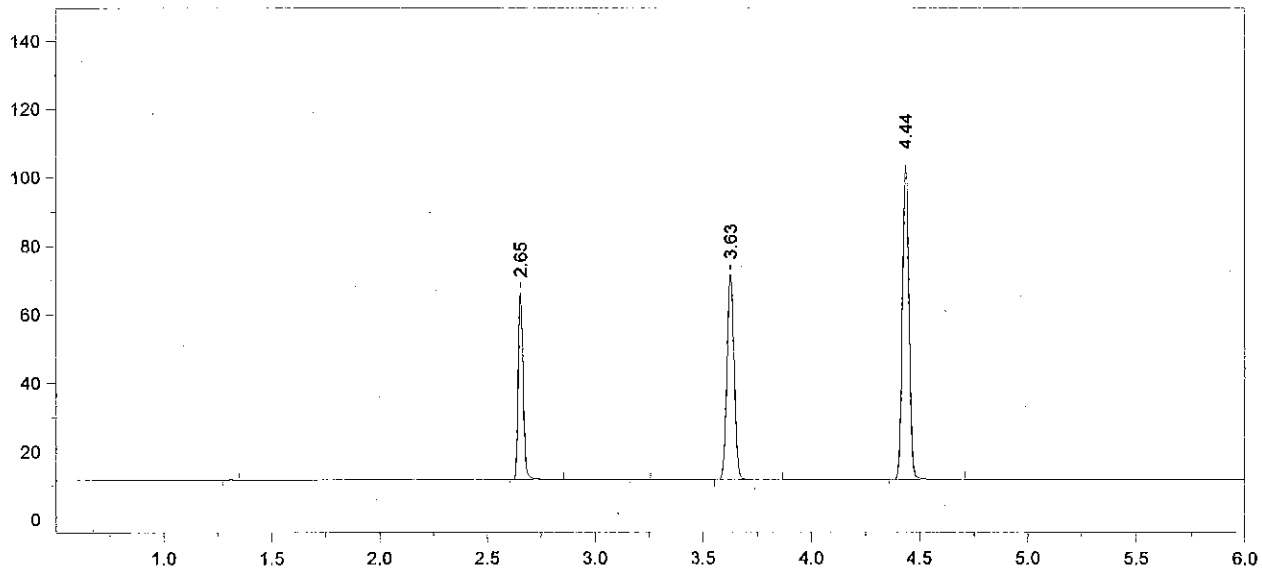
Today's Date = 3/13/2014
Today's Time = 7:00:46 PM
Bound File Name = VFL03132014.0010.RAW
Sample Name = CCS
Date Taken = 3/13/2014 7:00:39 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	84815	0.0821
4	3.63	t-Butanol	148919	1.0264
5	4.44	n-Propanol	195251	1.0000

FN0113 1401

12

RZM



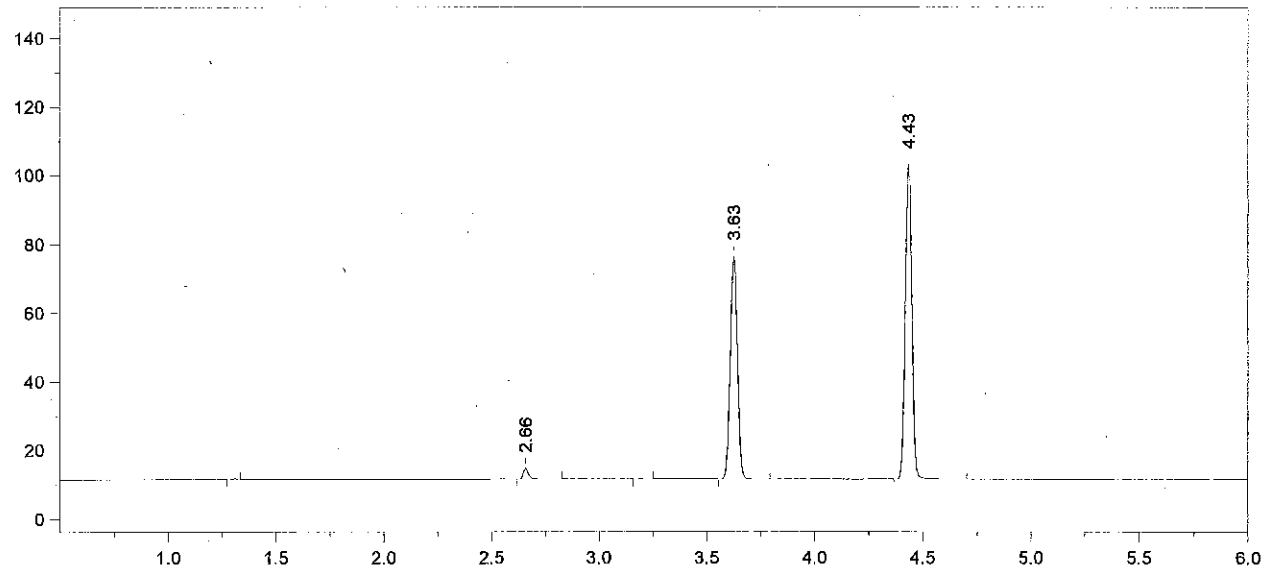
Format File Name = AlcoholVFL.FMT

Today's Date = 3/13/2014
Today's Time = 7:14:31 PM
Bound File Name = VFL03132014.0011.RAW
Sample Name = CCS
Date Taken = 3/13/2014 7:14:22 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	85663	0.0832 ✓
4	3.63	t-Butanol	138903	0.9600
5	4.44	n-Propanol	194719	1.0000

Avg # 10 + # 11 = 0.082
RLM 3/14/14

FN01131401
13
RLM

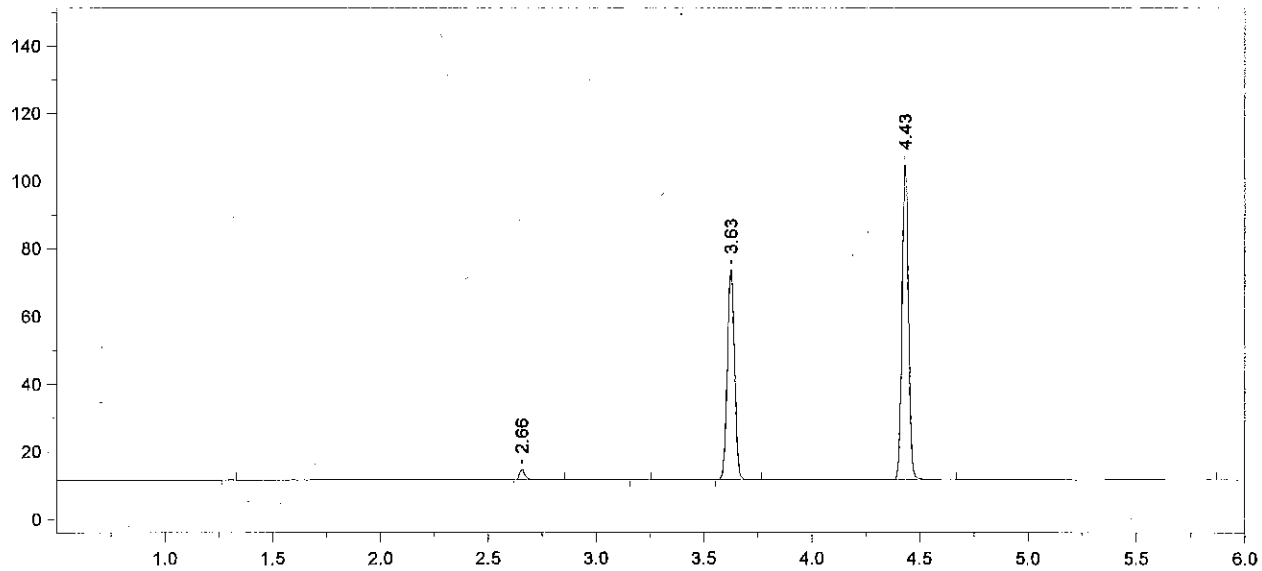


Format File Name = AlcoholVFL.FMT

Today's Date = 3/13/2014
Today's Time = 7:32:13 PM
Bound File Name = VFL03132014.0012.RAW
Sample Name = FN01131401
Date Taken = 3/13/2014 7:32:04 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	05402	0.0052*
4	3.63	t-Butanol	150028	1.0354
5	4.43	n-Propanol	195006	1.0000

FN01131401 14 RM



Format File Name = AlcoholVFL.FMT

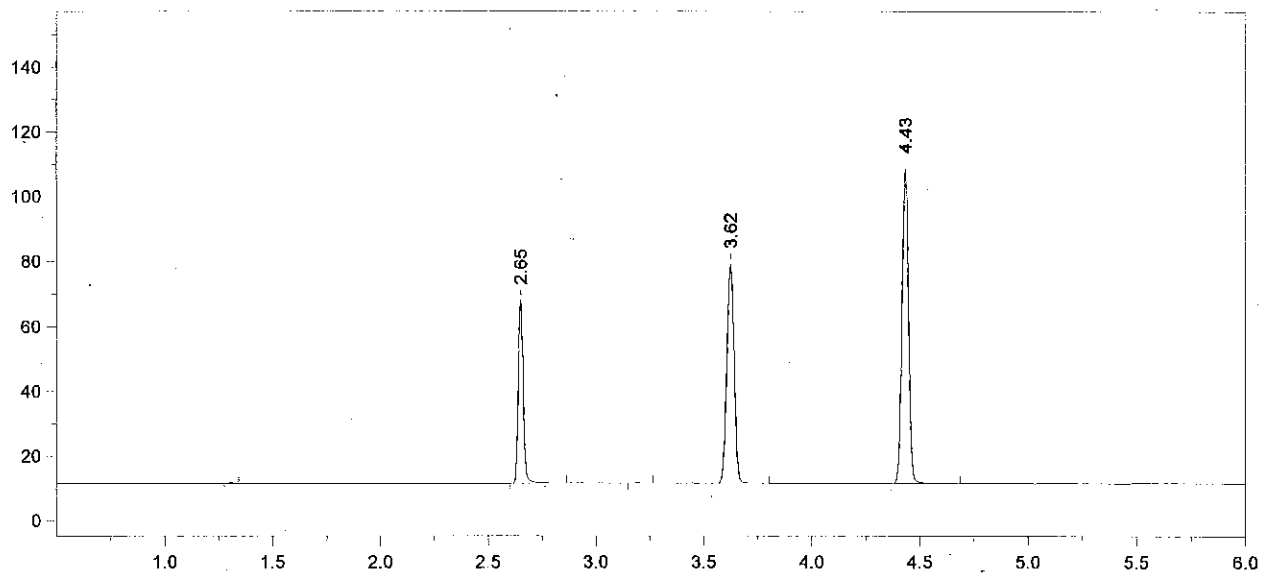
Today's Date = 3/13/2014
Today's Time = 7:45:52 PM
Bound File Name = VFL03132014.0013.RAW
Sample Name = FN01131401
Date Taken = 3/13/2014 7:45:47 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	05250	0.0050*
4	3.63	t-Butanol	143632	0.9757
5	4.43	n-Propanol	198107	1.0000

Avg #12 + #13 = 0.005
RLM 3/14/14

Target value: 0.005
Acceptable range = ~~±~~ ±5% or ±0.001
RLM 3/18/14
= 0.004 - 0.006
RLM 3/18/14

FN01131401 15 RLM



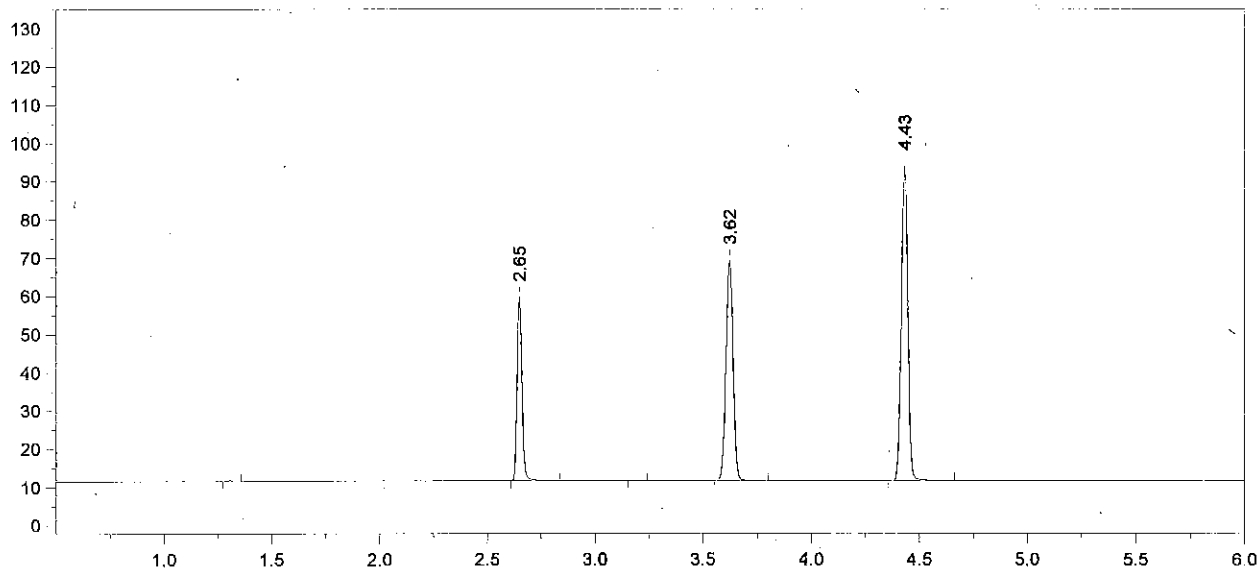
Format File Name = AlcoholVFL.FMT

Today's Date = 3/13/2014
Today's Time = 8:03:38 PM
Bound File Name = VFL03132014.0014.RAW
Sample Name = CCS
Date Taken = 3/13/2014 8:03:28 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	87947	0.0807
4	3.62	t-Butanol	156572	1.0227
5	4.43	n-Propanol	206023	1.0000

FN0113140l

16



Format File Name = AlcoholVFL.FMT

Today's Date = 3/13/2014
Today's Time = 8:17:23 PM
Bound File Name = VFL03132014.0015.RAW
Sample Name = CCS
Date Taken = 3/13/2014 8:17:16 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL03132014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	74979	0.0809
4	3.62	t-Butanol	133217	1.0231
5	4.43	n-Propanol	175225	1.0000

Avg #14 + #15 = 0.081
RZN 3/14/14

FN01131401

17

RZN