VERMONT FORENSIC LABORATORY

VERIFICATION
~~BLOOD ALCOHOL~~ DATA REVIEW CHECKLIST
RLM 9/22/14

LOT #:
~~AGENCY CASE#:~~ Ceilliant FN080612-04 ANALYST: RLM
LAB #: N/A RLM 9/22/14

TECHNICAL REVIEWER: AB DATE: 9/23/14

- [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: 9/23/2014

- [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: 9/23/2014

- [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\VFL09222014.CAL
Version: 7

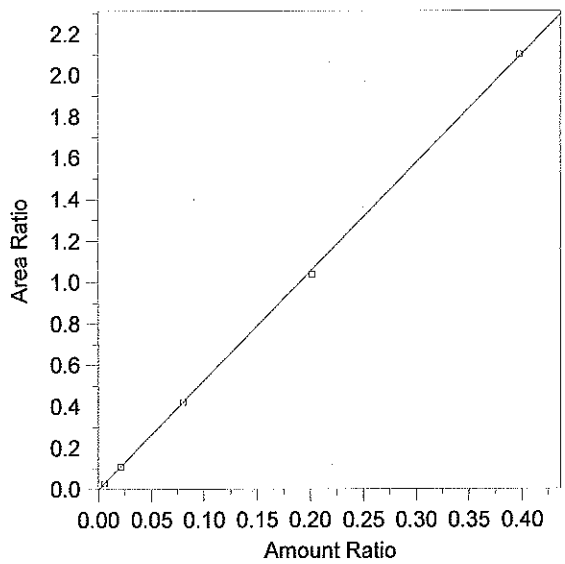
Creator:
Description:
Reason for change:

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: 2.654 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 = 5.261531 X + 0

Linear fit with equal weighting, forced to origin
Coefficient of determination: 0.9998031
Average error: 1.625%
Average CF: 5.254156
RSD: 2.184%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source	Date and time
1	(0.0836)	(85146)	--	--	0.0836	85146	Manual	8/13/2014 9:33:12 AM
2	0.0052	5836.798	1122461	3.183	0.0052	2.823072E-02	C:\Alcohol Data\VFL09222014\VFL09222014.0003.BND	9/22/2014 12:37:24 PM
3	0.021	21143.41	1006829	-2.155	0.021	0.1081112	C:\Alcohol Data\VFL09222014\VFL09222014.0004.BND	9/22/2014 12:53:09 PM
4	0.0803	83622.8	1041380	-0.257	0.0803	0.4214137	C:\Alcohol Data\VFL09222014\VFL09222014.0005.BND	9/22/2014 1:07:58 PM
5	0.2014	218951.8	1087149	-2.002	0.2014	1.038459	C:\Alcohol Data\VFL09222014\VFL09222014.0006.BND	9/22/2014 1:22:52 PM
6	0.3972	414339.3	1043150	0.531	0.3972	2.100971	C:\Alcohol Data\VFL09222014\VFL09222014.0007.BND	9/22/2014 1:38:45 PM

File Name = C:\Alcohol Data\VFL09222014\VFL09222014.SEQ
Version = 1
File Date = 9/22/2014 11:30:08 AM

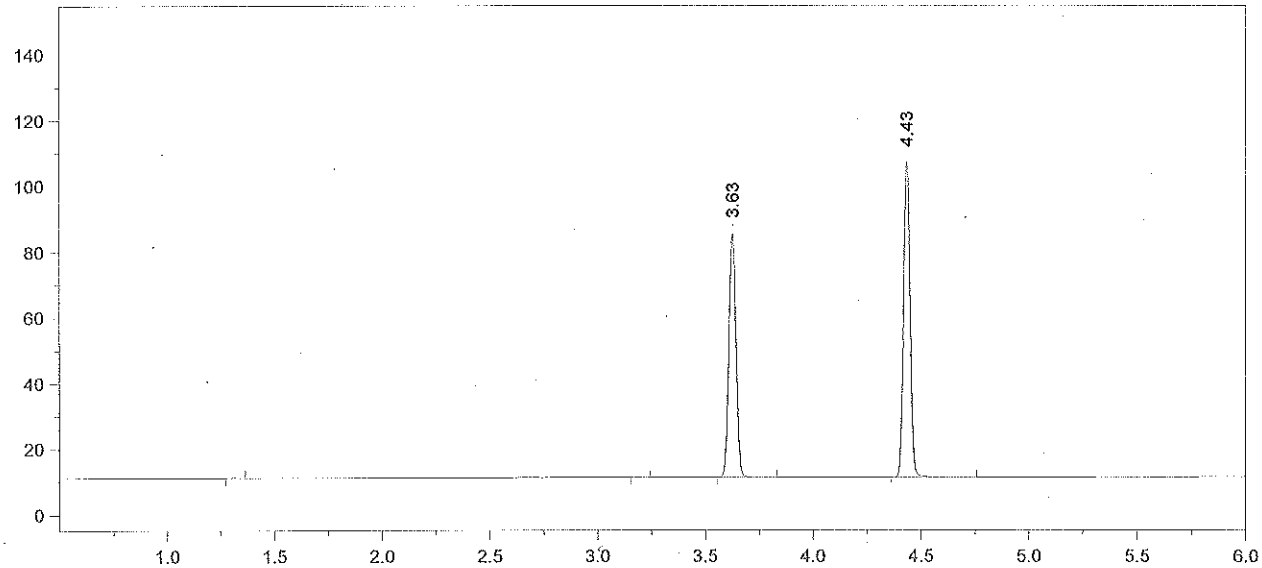
Entry #	Raw File Name	Method File Name	Sample Name	Sample Wt.	Int. Std. Amount
1	VFL09222014.0001.raw	Blood Alc temp VFL.MET	Blank	1.00	1.00
2	VFL09222014.0002.raw	Blood Alc temp VFL.MET	TMX	1.00	1.00
3	VFL09222014.0003.raw	Blood Alc temp VFL.MET	STD A	1.00	1.00
4	VFL09222014.0004.raw	Blood Alc temp VFL.MET	STD B	1.00	1.00
5	VFL09222014.0005.raw	Blood Alc temp VFL.MET	STD C	1.00	1.00
6	VFL09222014.0006.raw	Blood Alc temp VFL.MET	STD D	1.00	1.00
7	VFL09222014.0007.raw	Blood Alc temp VFL.MET	STD E	1.00	1.00
8	VFL09222014.0008.raw	Blood Alc temp VFL.MET	AQ QC	1.00	1.00
9	VFL09222014.0009.raw	Blood Alc temp VFL.MET	AQ QC	1.00	1.00
10	VFL09222014.0010.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
11	VFL09222014.0011.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
12	VFL09222014.0012.raw	Blood Alc temp VFL.MET	FN080612-04	1.00	1.00
13	VFL09222014.0013.raw	Blood Alc temp VFL.MET	FN080612-04	1.00	1.00
14	VFL09222014.0014.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00
15	VFL09222014.0015.raw	Blood Alc temp VFL.MET	CCS	1.00	1.00

Lot #s

Aqueous Blank: BL-08112014
Timing Mix: TMX-08112014
Internal Standard: IS-07082014
Ethanol Standards: ES-09122014
Aqueous Control: Cerilliant FN021111-03

RLM 9/22/14

FN080612-04 2 RLM

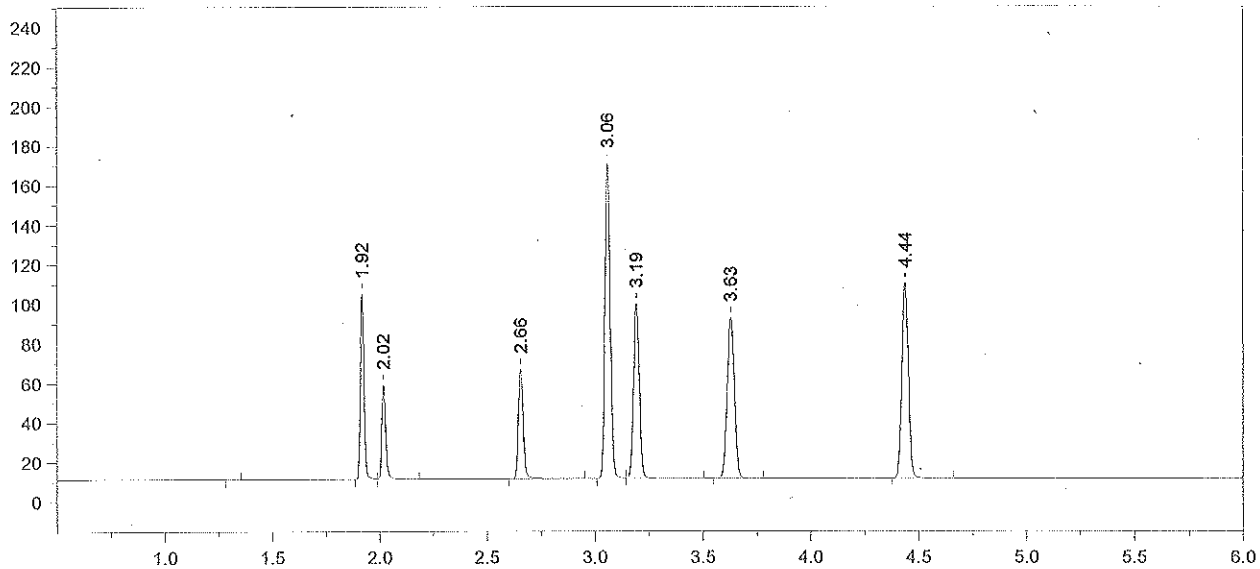


Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 2:31:53 PM
Bound File Name = VFL09222014.0001.RAW
Sample Name = Blank
Date Taken = 9/22/2014 12:05:56 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
3	3.63	t-Butanol	172290	0.9600
4	4.43	n-Propanol	205592	1.0000

FN080612-04 3 RM



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Today's Date = 9/22/2014
Today's Time = 2:31:59 PM
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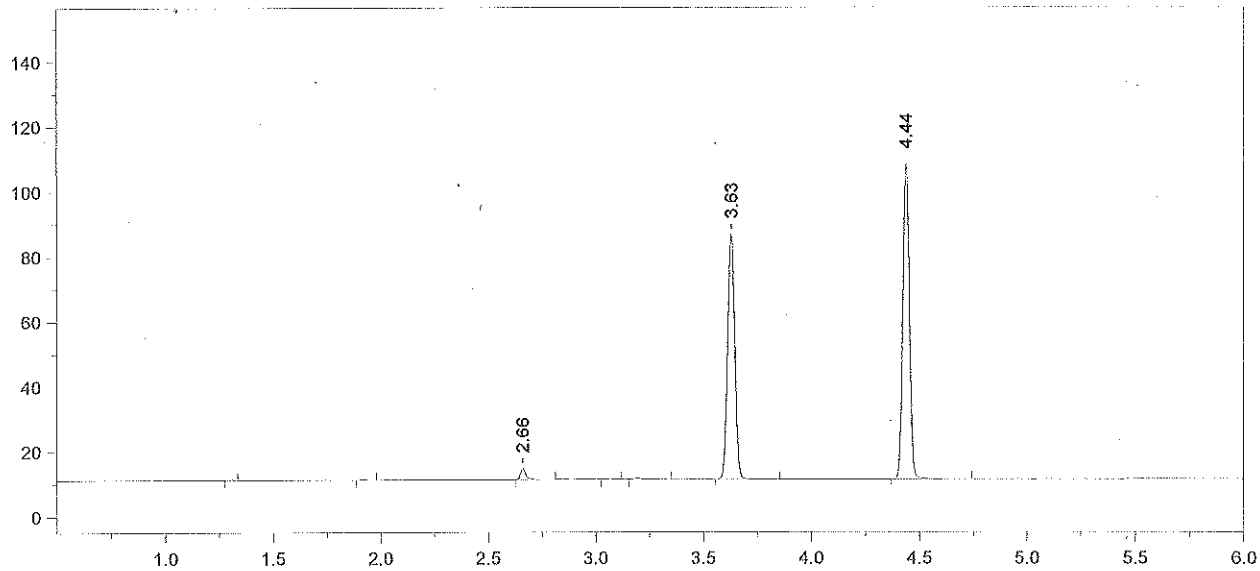
Sample Name = TMX
Date Taken = 9/22/2014 12:21:37 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	1.92	Acetaldehyde	110500	0.0695
3	2.02	Methanol	61239	0.1232
4	2.66	Ethanol	86925	0.0785
5	3.06	Acetone	272080	0.0657
6	3.19	Isopropanol	167095	0.0848
7	3.63	t-Butanol	188493	1.0261
8	4.44	n-Propanol	210442	1.0000

FN080612-04 4

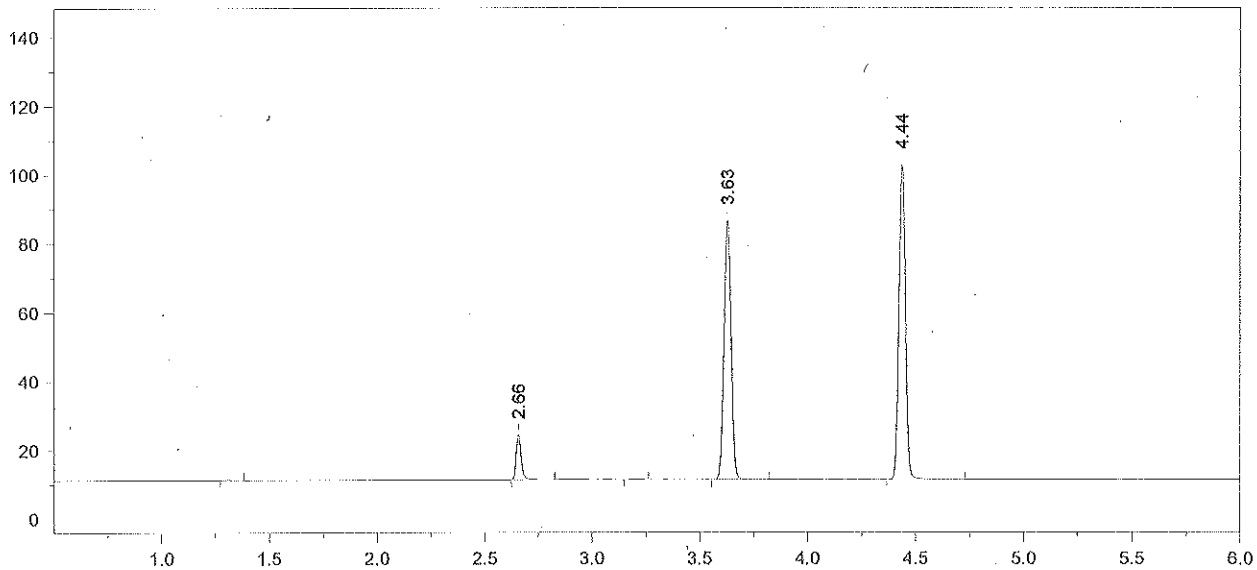


Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 2:32:04 PM
Bound File Name = VFL09222014.0003.RAW
Sample Name = STD A
Date Taken = 9/22/2014 12:37:15 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
3	2.66	Ethanol	05837	0.0054 *
6	3.63	t-Butanol	175107	0.9702
7	4.44	n-Propanol	206753	1.0000

FN080612.04 5 Rem

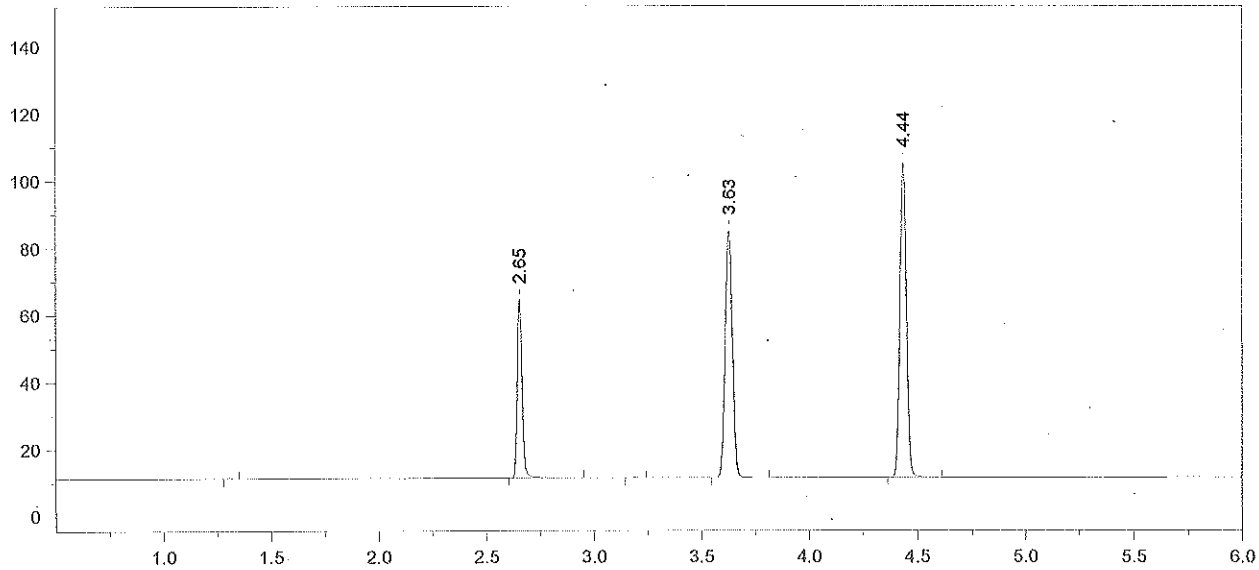


Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 2:32:10 PM
Bound File Name = VFL09222014.0004.RAW
Sample Name = STD B
Date Taken = 9/22/2014 12:53:01 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	21143	0.0205 *
4	3.63	t-Butanol	174272	1.0208
5	4.44	n-Propanol	195571	1.0000

FN080612-04 6 RM

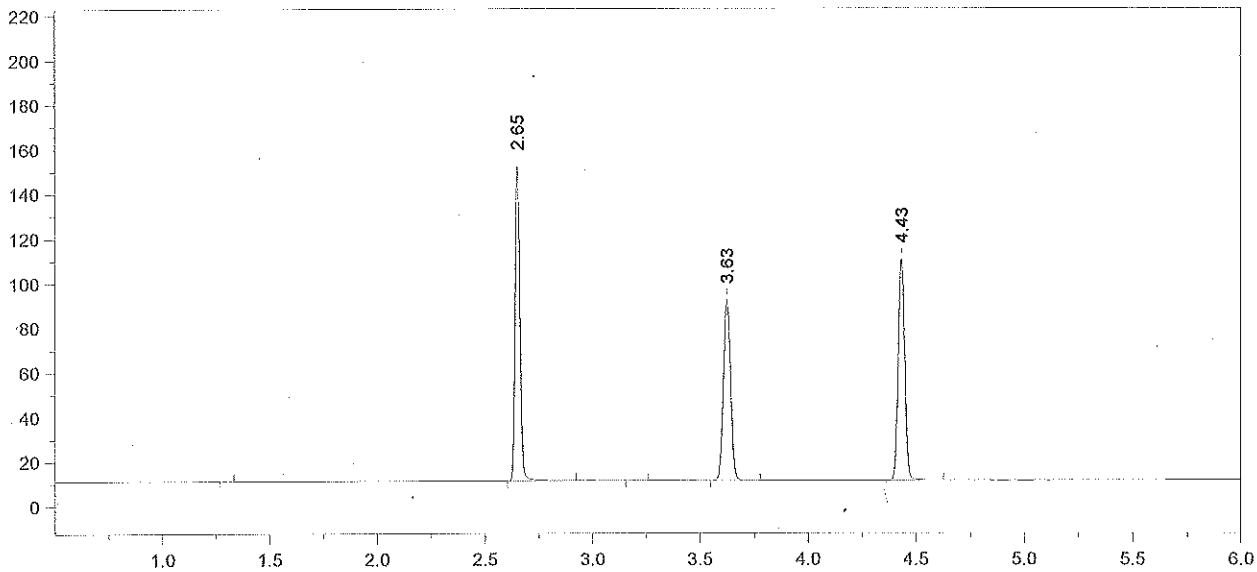


Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 2:32:16 PM
Bound File Name = VFL09222014.0005.RAW
Sample Name = STD C
Date Taken = 9/22/2014 1:07:52 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	83623	0.0801 *
4	3.63	t-Butanol	171090	0.9877
5	4.44	n-Propanol	198434	1.0000

FN080612-04 7 Rem



Format File Name = AlcoholVFL.FMT

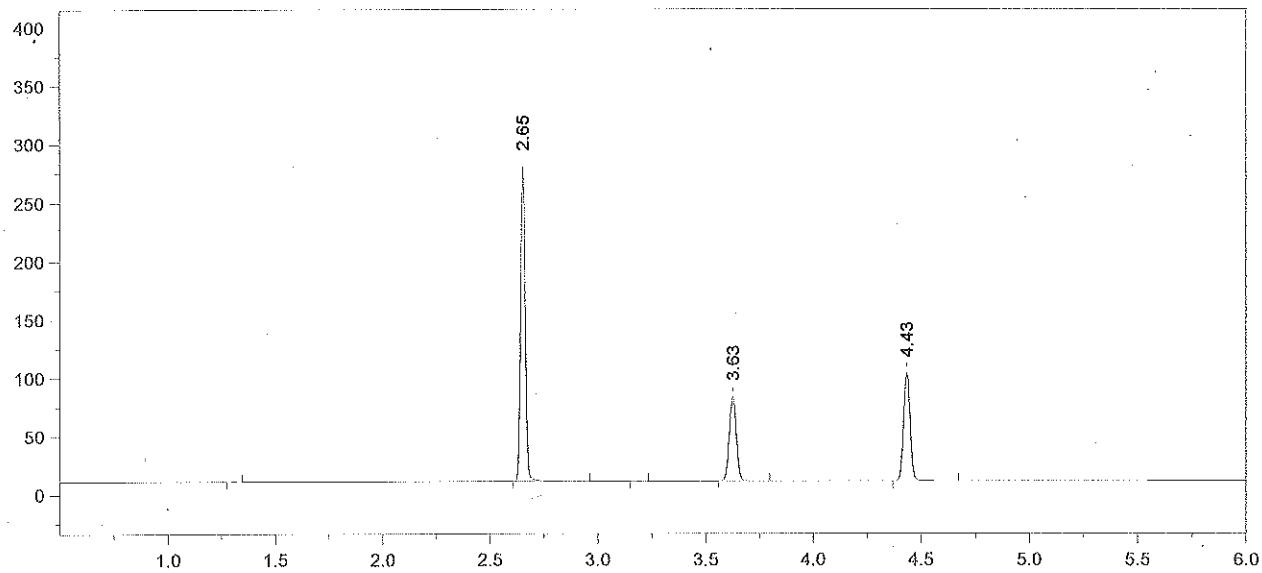
Today's Date = 9/22/2014
Today's Time = 2:32:22 PM
Bound File Name = VFL09222014.0006.RAW
Sample Name = STD D
Date Taken = 9/22/2014 1:22:45 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	218952	0.1974 *
4	3.63	t-Butanol	188847	1.0260
5	4.43	n-Propanol	210843	1.0000

FN080612-04

8

RCM



Format File Name = AlcoholVFL.FMT

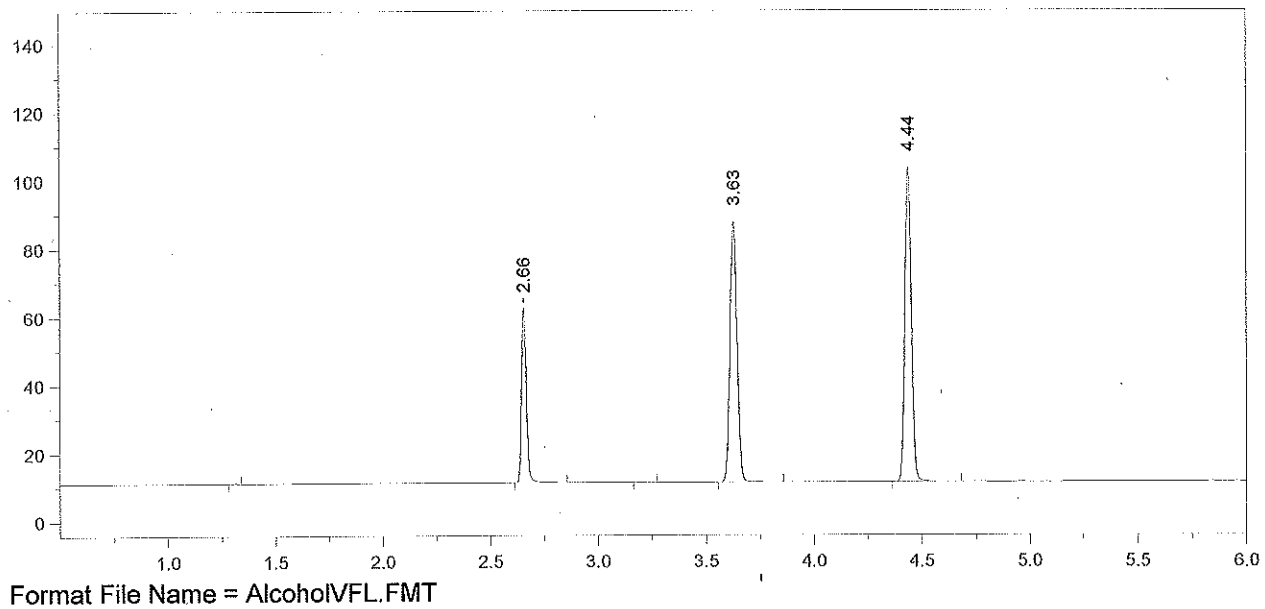
Today's Date = 9/22/2014
Today's Time = 2:32:28 PM
Bound File Name = VFL09222014.0007.RAW
Sample Name = STD E
Date Taken = 9/22/2014 1:38:36 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	414339	0.3993 *
4	3.63	t-Butanol	166859	0.9692
5	4.43	n-Propanol	197213	1.0000

FN080612-04

9

RZm



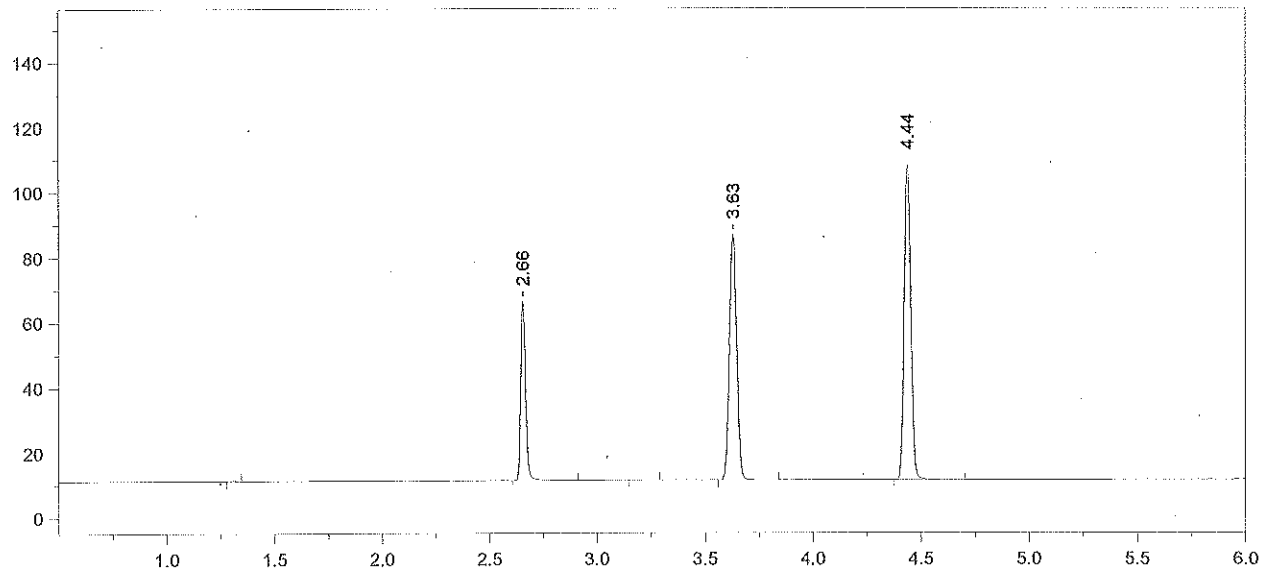
Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 1:54:24 PM
Bound File Name = VFL09222014.0008.RAW
Sample Name = AQ QC
Date Taken = 9/22/2014 1:54:17 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	80116	0.0776 *
4	3.63	t-Butanol	177029	1.0337
5	4.44	n-Propanol	196189	1.0000

FN 080612-04

10



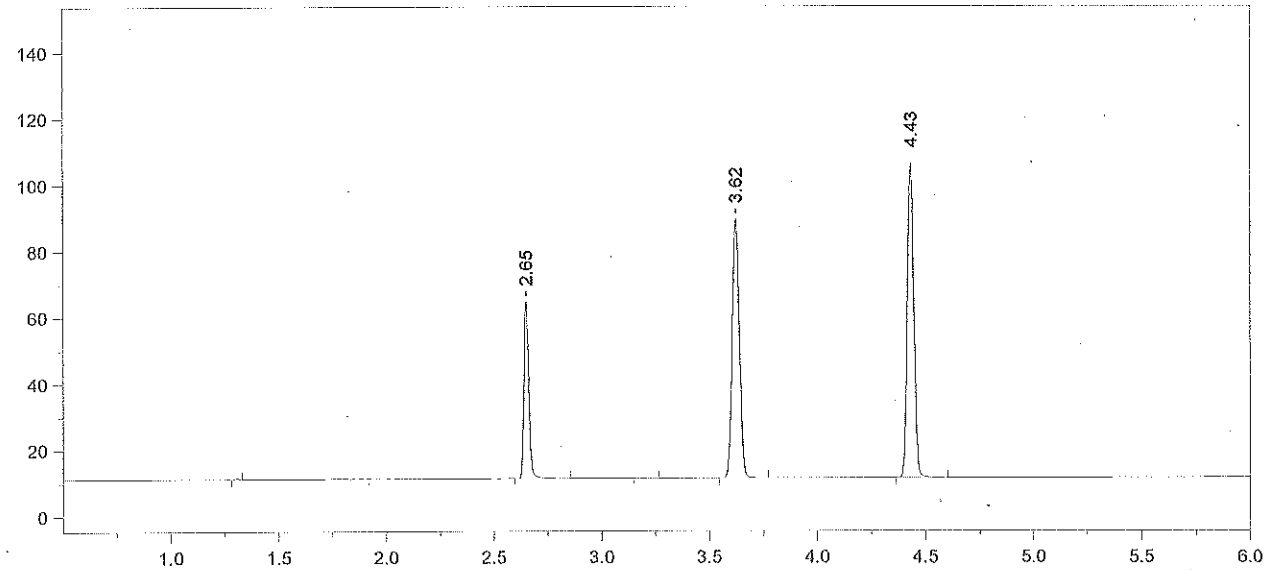
Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 2:09:07 PM
Bound File Name = VFL09222014.0009.RAW
Sample Name = AQ QC
Date Taken = 9/22/2014 2:09:00 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	85899	0.0795 *
4	3.63	t-Butanol	174849	0.9748
5	4.44	n-Propanol	205476	1.0000

Avg #8 + #9 = 0.078
Target value: 0.080
% recovery = 97%
RZM 9/22/14

FN080612-04 11 RZM

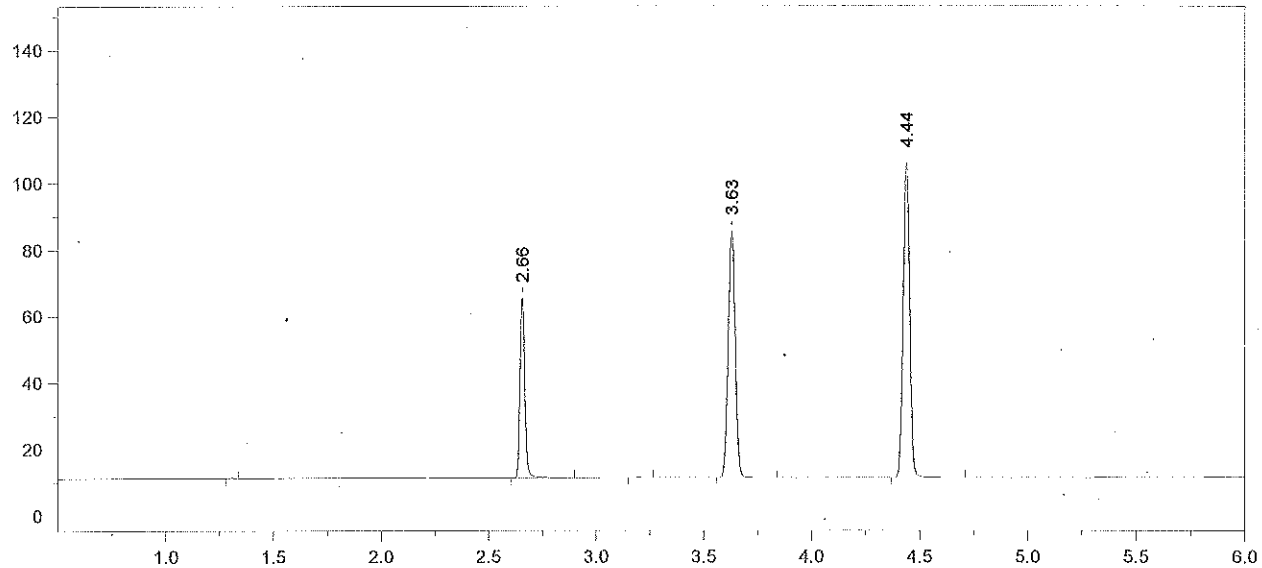


Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 2:25:48 PM
Bound File Name = VFL09222014.0010.RAW
Sample Name = CCS
Date Taken = 9/22/2014 2:25:41 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	83156	0.0784 *
4	3.62	t-Butanol	181455	1.0315
5	4.43	n-Propanol	201516	1.0000

FN080612-04 12 TRM



Format File Name = AlcoholVFL.FMT

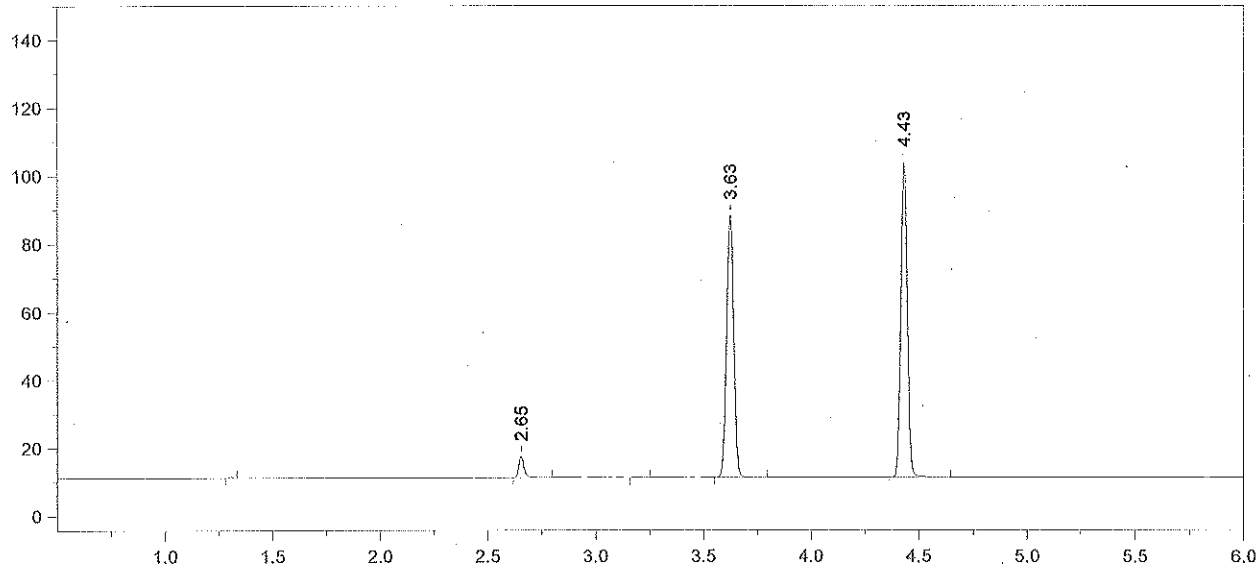
Today's Date = 9/22/2014
Today's Time = 2:39:03 PM
Bound File Name = VFL09222014.0011.RAW
Sample Name = CCS
Date Taken = 9/22/2014 2:38:56 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	84824	0.0799 *
4	3.63	t-Butanol	172038	0.9767
5	4.44	n-Propanol	201782	1.0000

Avg #10 + #11 = 0.079
RZM 9/22/14

FN080612-04 13 RZM

Chrom Perfect Chromatogram Report

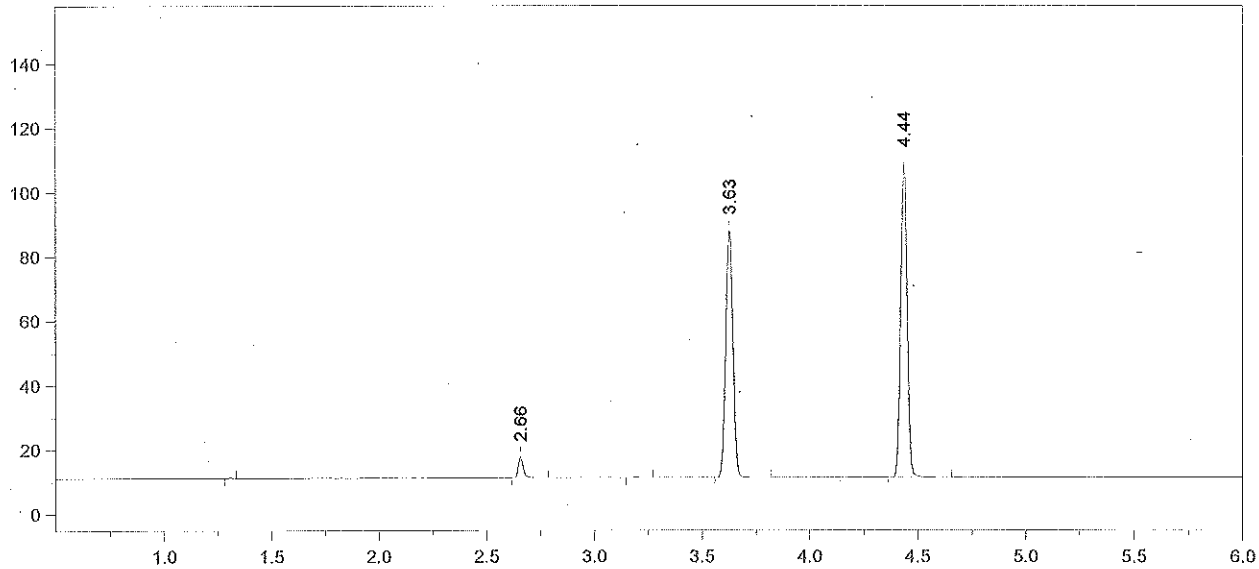


Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 2:57:12 PM
Bound File Name = VFL09222014.0012.RAW
Sample Name = FN080612-04
Date Taken = 9/22/2014 2:57:06 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	10107	0.0098 *
4	3.63	t-Butanol	179024	1.0432
5	4.43	n-Propanol	196596	1.0000

FN080612-04 14 KEM



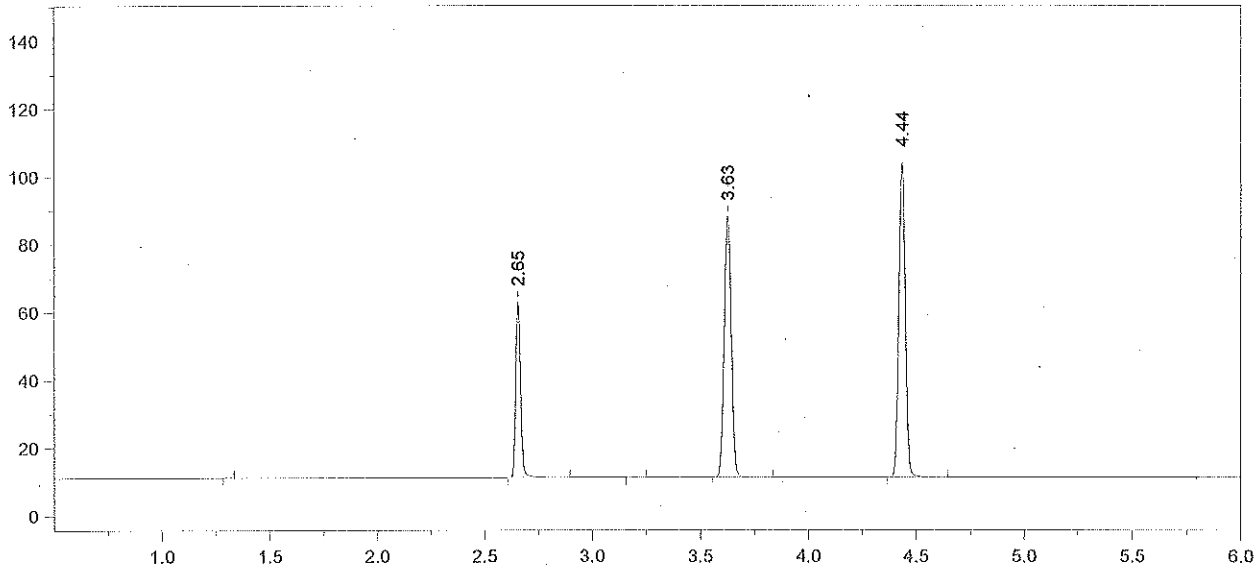
Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 3:11:01 PM
Bound File Name = VFL09222014.0013.RAW
Sample Name = FN080612-04
Date Taken = 9/22/2014 3:10:51 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	10545	0.0096 *
4	3.63	t-Butanol	178202	0.9824
5	4.44	n-Propanol	207785	1.0000

Avg #12+#13 = 0.010
Target value: 0.010
% recovery = 100%
RLM 9/22/14

FN080612-04 15 RLM

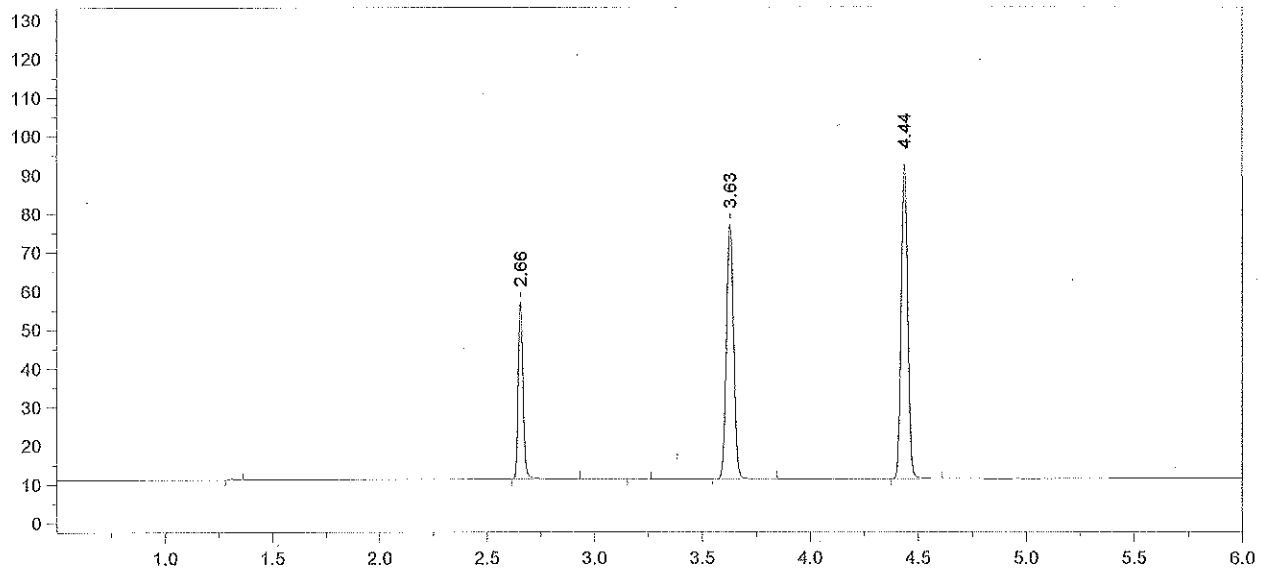


Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 3:28:43 PM
Bound File Name = VFL09222014.0014.RAW
Sample Name = CCS
Date Taken = 9/22/2014 3:28:33 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.65	Ethanol	80780	0.0779 *
4	3.63	t-Butanol	178997	1.0402
5	4.44	n-Propanol	197123	1.0000

FN080612-04 16 RCM



Format File Name = AlcoholVFL.FMT

Today's Date = 9/22/2014
Today's Time = 3:41:54 PM
Bound File Name = VFL09222014.0015.RAW
Sample Name = CCS
Date Taken = 9/22/2014 3:41:45 PM
VFL Headspace Alcohol
Method file = Blood Alc temp VFL.MET
Calibration file = VFL09222014.CAL
Calibration Version = 7

Peak Number	Ret Time (min)	Peak Name	Area	Amount % WT/VOL
2	2.66	Ethanol	72294	0.0797 ✗
4	3.63	t-Butanol	152820	1.0156
5	4.44	n-Propanol	172367	1.0000

Avg # 14 + #15 = 0.079
Kem 9/22/14

FN080612-04 17 Kem