

TO: Eliza Smaltz, Forensic Laboratory Manager

FROM: Allan Kosecki, Blood Alcohol Technical Leader

DATE: 06 May 2020

SUBJECT: Methanol in One Ampoule of Lipomed 0.150 g/dL aqueous control- lot 14082019-C

In blood alcohol run 29Apr20 methanol was detected in headspace vial 31 which contained a Lipomed 0.150 g/dL aqueous control, lot 14082019-C. Methanol was not detected in any of the other vials in the run except the volatile mixture in vial six which is known to contain methanol. The Lipomed controls are purchased in individual one-time use glass snap-top sealed ampoules. There are five ampoules per box. One ampoule of this Lipomed lot had been checked on November 26, 2019 prior to using this lot in casework with no indication of methanol. One vial was also used in each of the seven following blood alcohol runs with no indication of methanol: 05Mar20, 11Mar20, 17Mar20, 24Mar20, 03Apr20, and 15April20.

During run 29Apr20 one ampoule was opened to draw out the one sample that was placed in vial 31. The glass vial was cracked open and a sample pipetted and transferred to a headspace vial which was capped within 30 seconds of opening the ampoule. The ampoule was the only open container in the lab at the time of sample preparation. On April 30, the remaining liquid that was in the cracked open ampoule was transferred directly to a headspace vial using a disposable pipet with no internal standard added. This headspace vial was run on the gas chromatograph and methanol was detected in the chromatograms. This analysis confirms that liquid in the previously sealed ampoule contained methanol. The instrument was not calibrated when analyzing the trouble shooting samples described in this memo since the purpose was detecting methanol, not quantifying ethanol.

There are only two sources of methanol in the toxicology lab: the volatile mixture solution and the bottle of methanol stored in a cabinet that vents into the fume hood. The bottle of methanol is only removed from the storage cabinet when needed to make a new volatiles mixture, typically every few years. The last time the methanol bottle was removed from the cabinet and opened was on July 8, 2019. The bottle of methanol cannot be the source of the methanol in the sample. There is no mechanism for the volatile mixture to contaminate another sample without transfer of each of the mixture's components; therefore, the mixture is not a possible source of the methanol.

Clearly the methanol was inside the one sealed ampoule when received by the laboratory. The lab has fifteen unopened boxes of this lot each containing five ampoules and six ampoules that have been removed from opened boxes. Two of the six ampoules from opened boxes were analyzed on April 30 along with three blank samples. Methanol was not detected in the five samples. One ampoule was randomly selected from each of the previously unopened boxes and analyzed along with two blanks. Methanol was not detected in any of the seventeen samples.

It would be impossible to state that none of the remaining sixty-four ampoules of this lot do not contain methanol without testing each ampoule. In an abundance of caution, the use of Lipomed 0.150 g/dL aqueous control- lot 14082019-C will be discontinued in casework.

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample:	14082019-C	Vial:	31
Description:	0.150	LIMS ID:	
Method:	ethanol quant.M	Sequence:	29Apr20
Instrument:	US14173023 CN14160045	Injection date:	4/29/2020 11:47:47 AM
Data file:	C:\Chem32\1\Data\29Apr20\31.D	Analyst:	Canonico <i>EL</i>

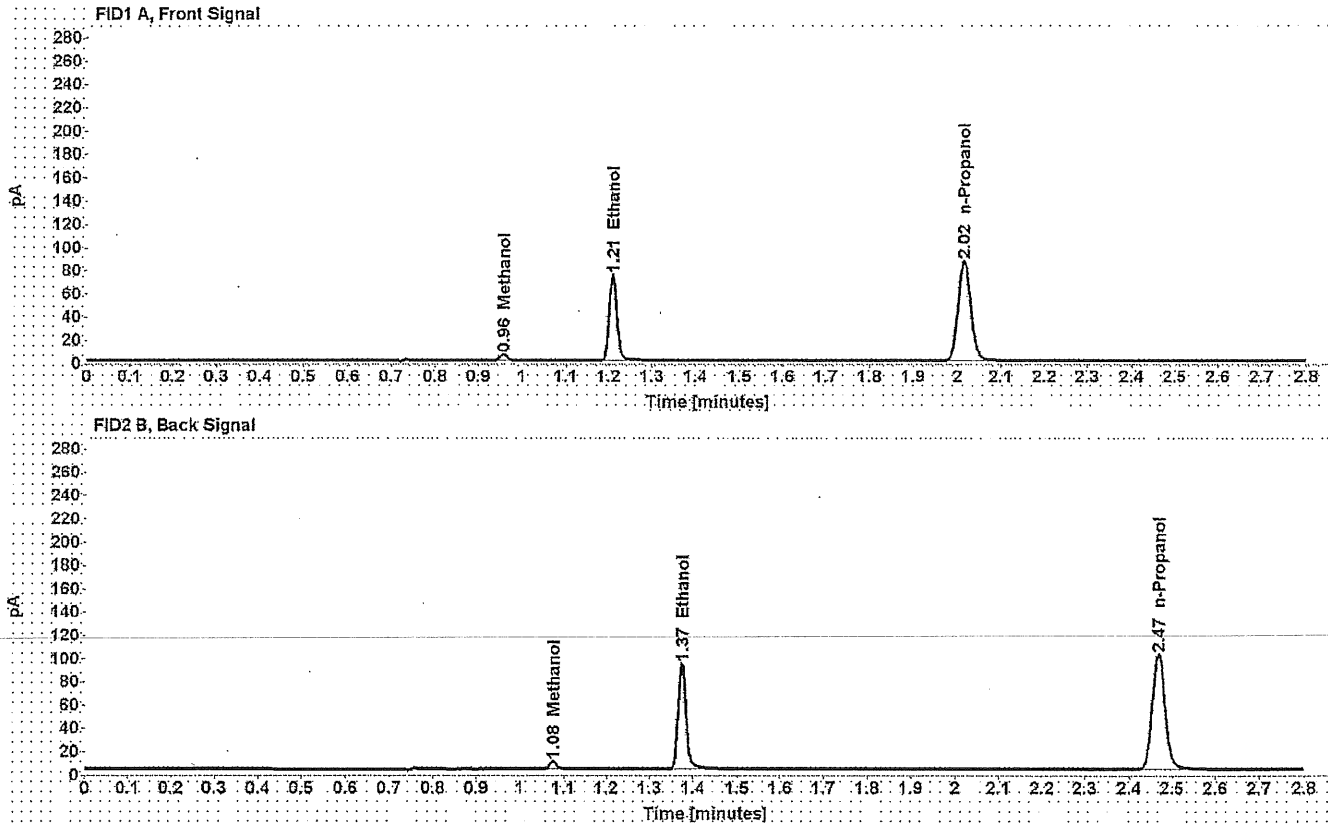


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
Methanol	-----	0.957	5.449
>Ethanol	0.1504	1.209	95.353
n-Propanol	-----	2.015	172.835

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Methanol	1.076	7.066
Ethanol	1.374	116.565
n-Propanol	2.467	206.347

VOID

Chromatogram from vial 31 in run 29Apr20.

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample:	14082019-C	Vial:	1
Description:	0.150 from seq 29Apr20	LIMS ID:	
Method:	ethanol quant.M	Sequence:	30Apr20test
Instrument:	US14173023 CN14160045	Injection date:	4/30/2020 10:41:58 AM
Data file:	C:\Chem32\1\Data\30Apr20test\1.D	Analyst:	Canonico

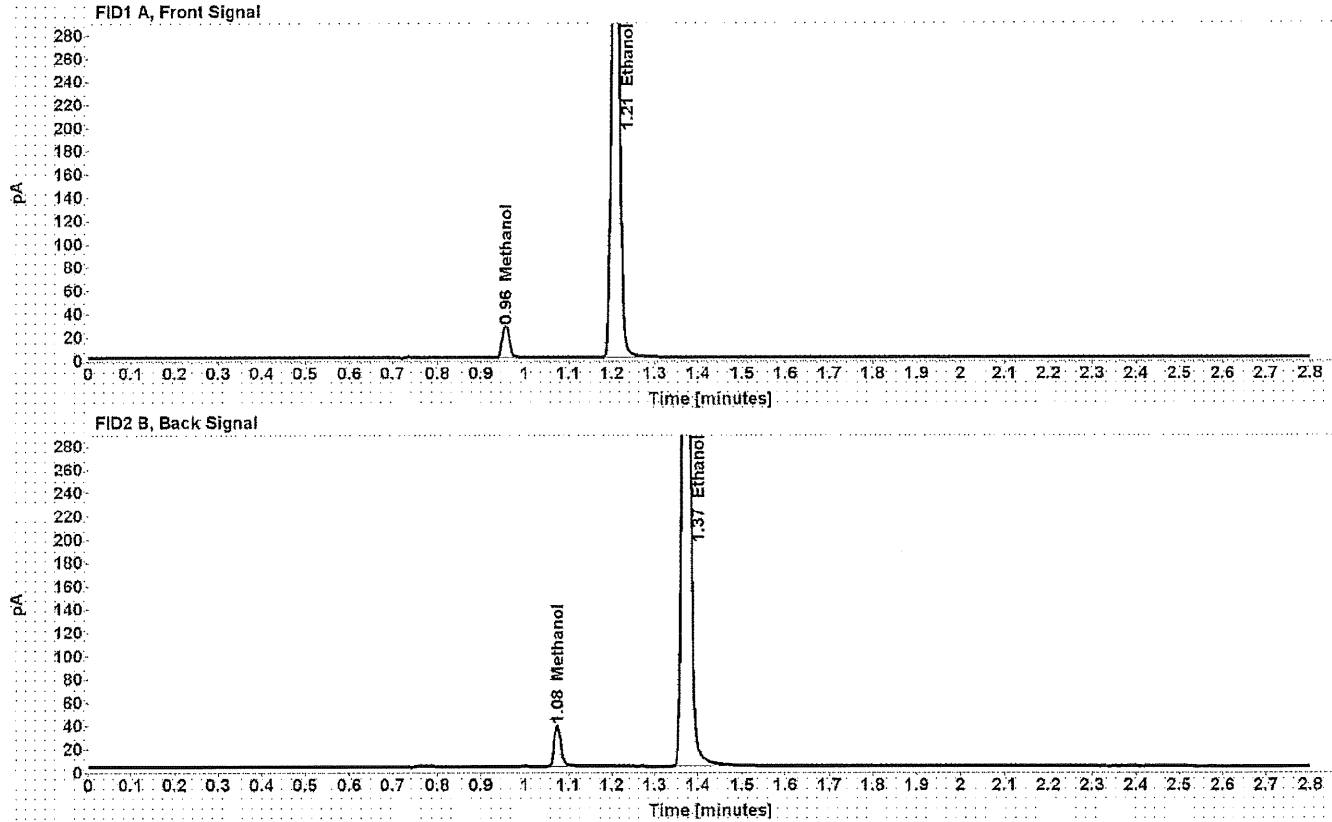


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
Methanol	-----	0.956	30.857
>Ethanol	0.0011	1.208	609.099

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Methanol	1.075	38.807
Ethanol	1.373	754.802

Chromatogram from remaining liquid in Lipomed ampoule

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample:	blank	Vial:	1
Description:	Blank	LIMS ID:	
Method:	ethanol quant.M	Sequence:	30Apr20test_2
Instrument:	US14173023 CN14160045	Injection date:	4/30/2020 11:48:52 AM
Data file:	C:\Chem32\1\Data\30Apr20test_2\1.D	Analyst:	Canonico

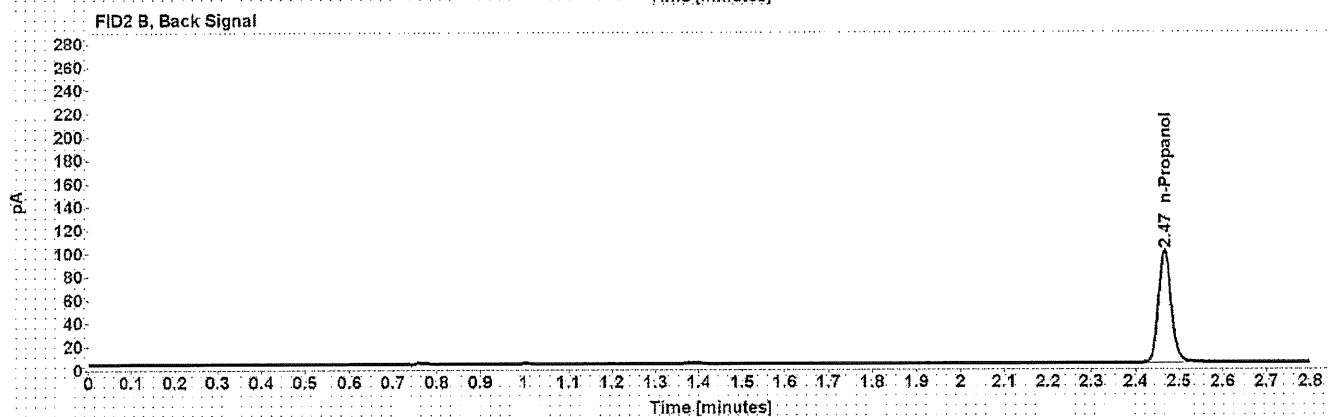
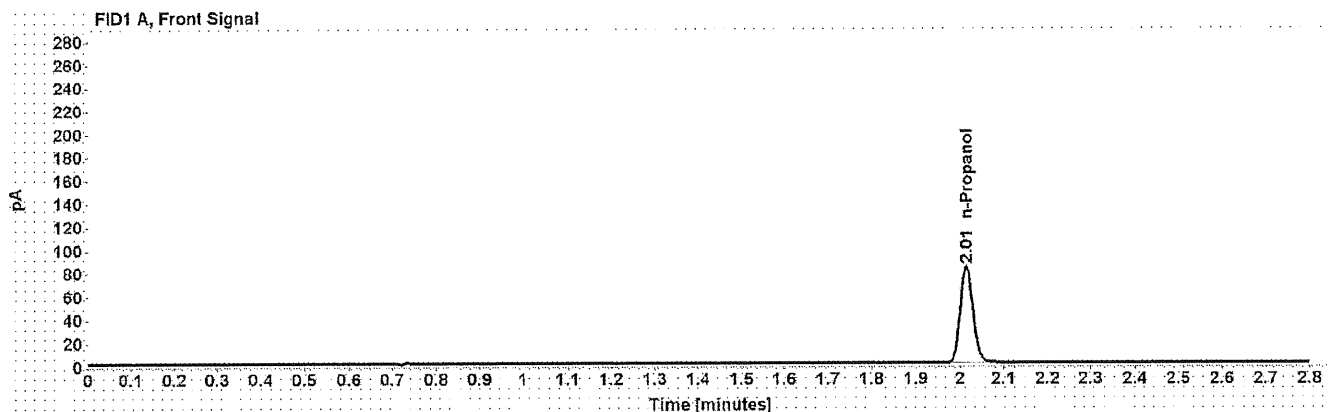


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
n-Propanol	-----	2.015	166.221

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
n-Propanol	2.467	197.816

Chromatograms from blanks and two ampoules tested from opened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 2
Description: 0.150 front row 3	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_2
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 11:52:51 AM
Data file: C:\Chem32\1\Data\30Apr20test_2\002F0201.D	Analyst: Canonico

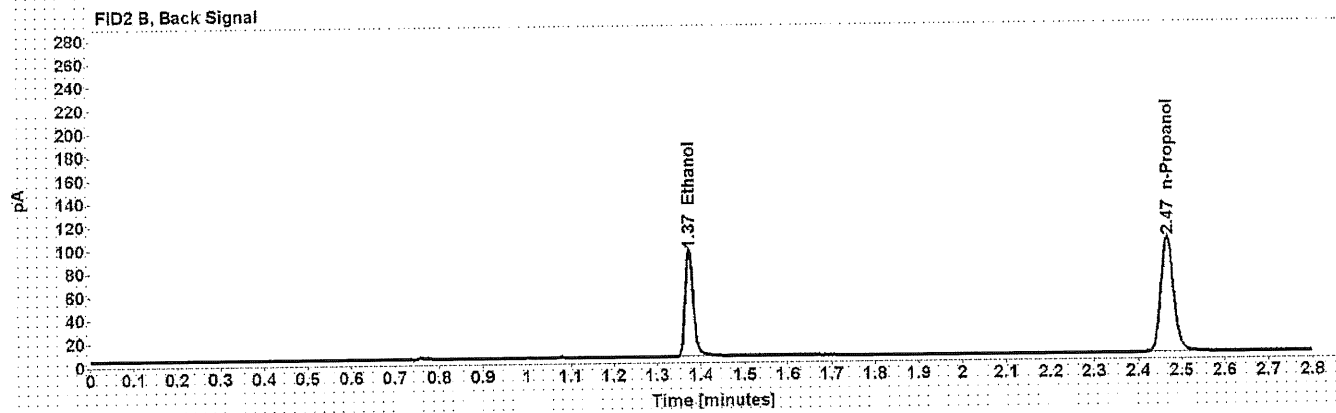
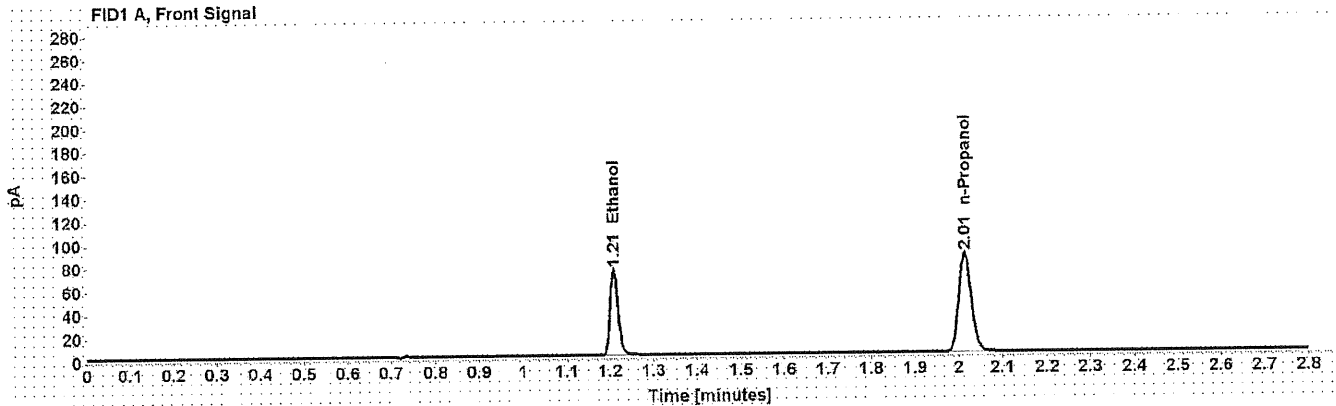


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1602	1.209	94.864
n-Propanol	-----	2.015	170.526

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.373	116.150
n-Propanol	2.467	203.841

Chromatograms from blanks and two ampoules tested from opened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample:	blank	Vial:	3
Description:	Blank	LIMS ID:	
Method:	ethanol quant.M	Sequence:	30Apr20test_2
Instrument:	US14173023 CN14160045	Injection date:	4/30/2020 11:56:52 AM
Data file:	C:\Chem32\1\Data\30Apr20test_2\003F0301.D	Analyst:	Canonico

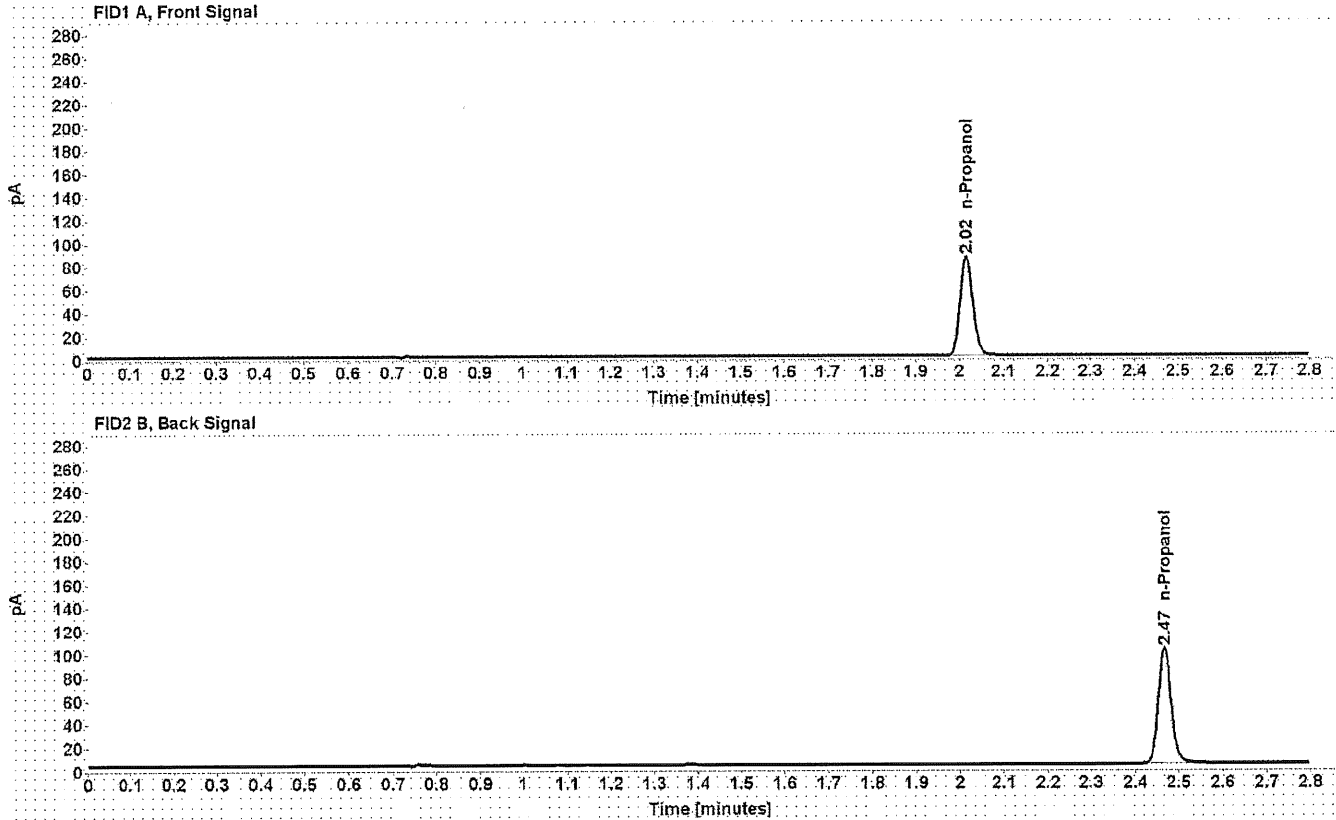


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
n-Propanol	-----	2.015	170.945

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
n-Propanol	2.467	204.450

Chromatograms from blanks and two ampoules tested from opened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 4
Description: 0.150 back row 5	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_2
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 12:00:52 PM
Data file: C:\Chem32\1\Data\30Apr20test_2\004F0401.D	Analyst: Canonico

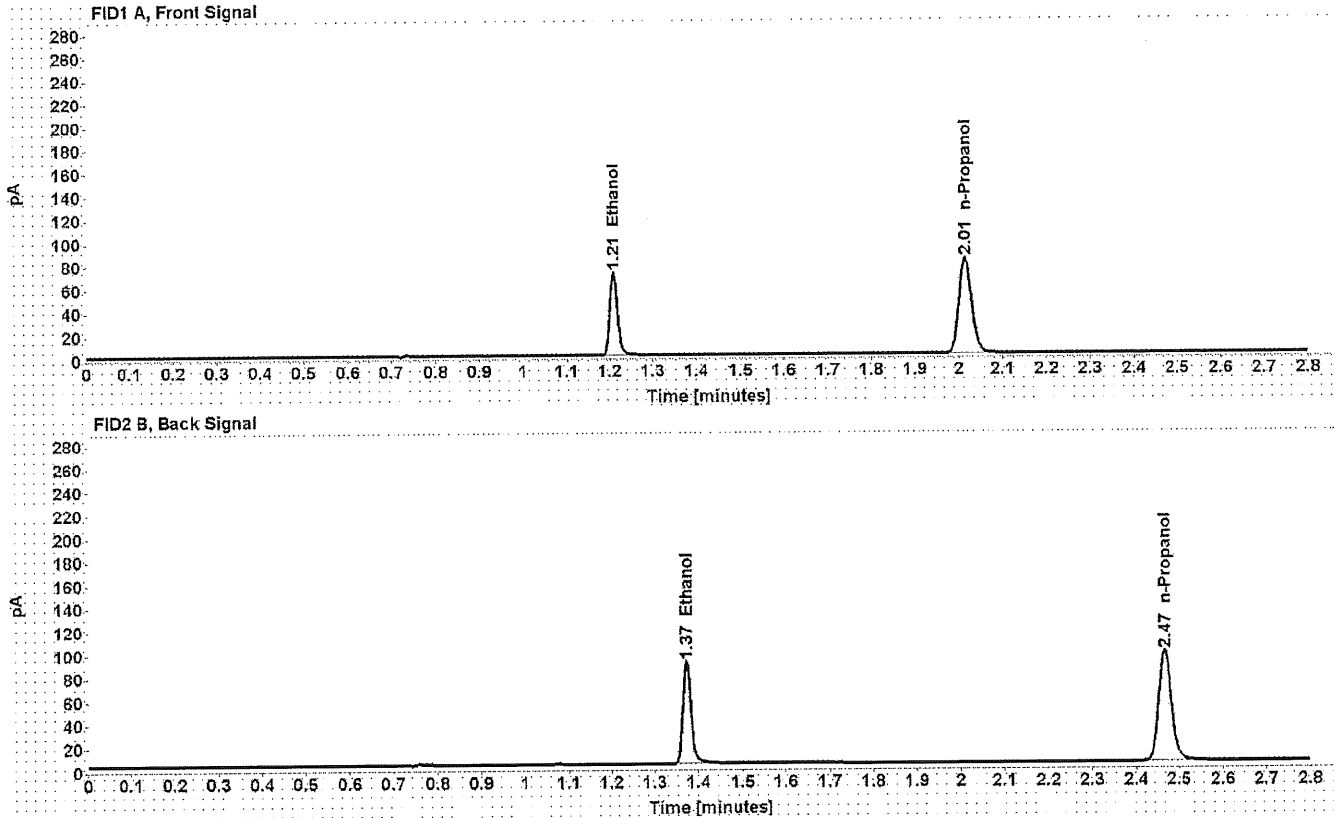


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1607	1.209	91.449
n-Propanol	-----	2.015	163.897

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.373	111.435
n-Propanol	2.467	196.032

Chromatograms from blanks and two ampoules tested from opened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: blank	Vial: 5
Description: Blank	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_2
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 12:04:52 PM
Data file: C:\Chem32\1\Data\30Apr20test_2\005F0501.D	Analyst: Canonico

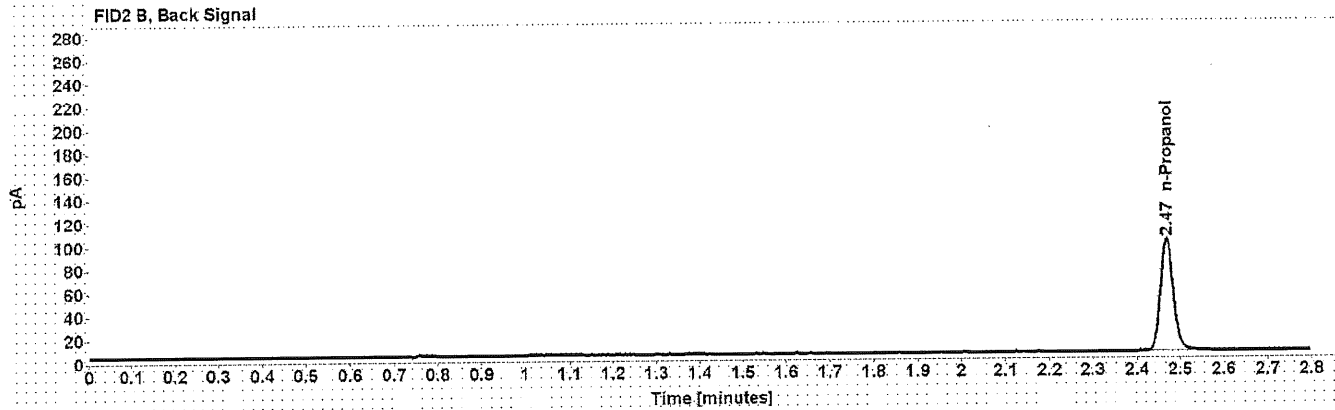
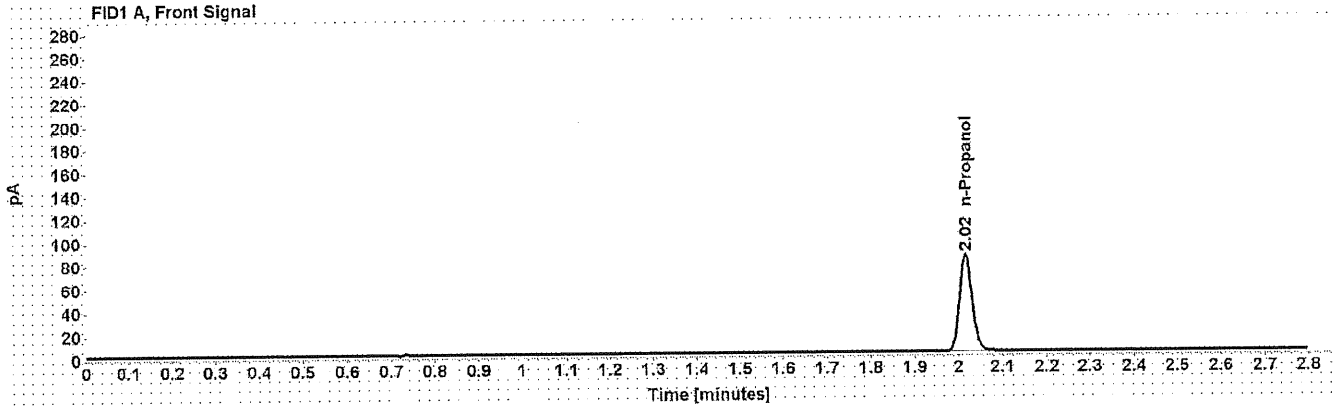


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
n-Propanol	-----	2.016	167.110

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
n-Propanol	2.469	199.523

Chromatograms from blanks and two ampoules tested from opened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: blank	Vial: 1
Description: Blank	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:25:17 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\1.D	Analyst: LAbbott

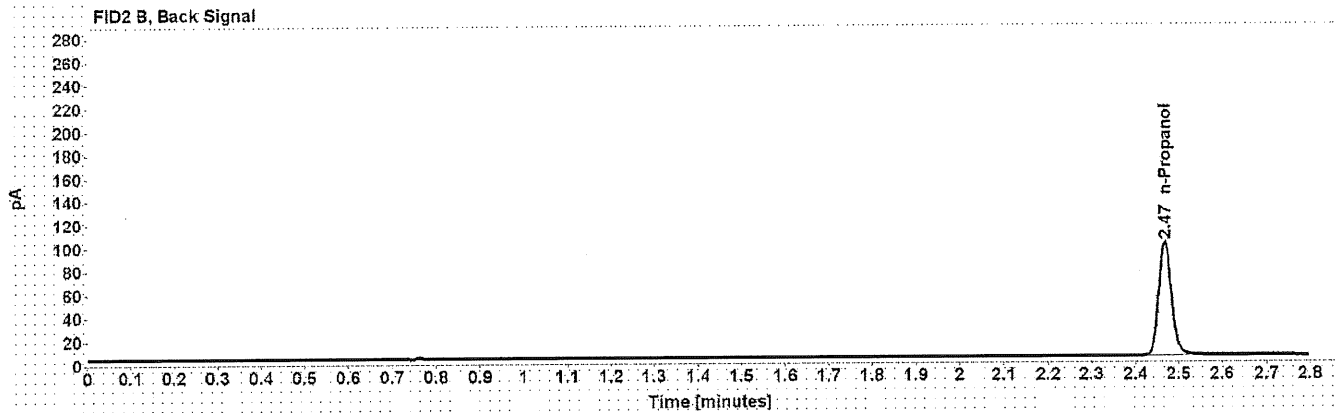
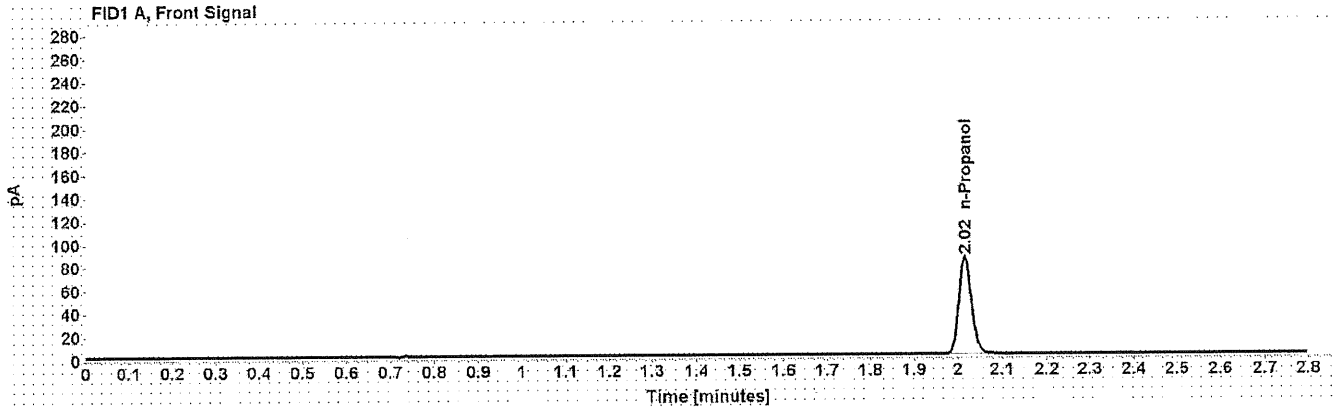


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
n-Propanol	-----	2.016	168.503

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
n-Propanol	2.468	200.336

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 2
Description: 0.150 Box 1	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:29:16 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\002F0201.D	Analyst: LAbbott <i>[Signature]</i>

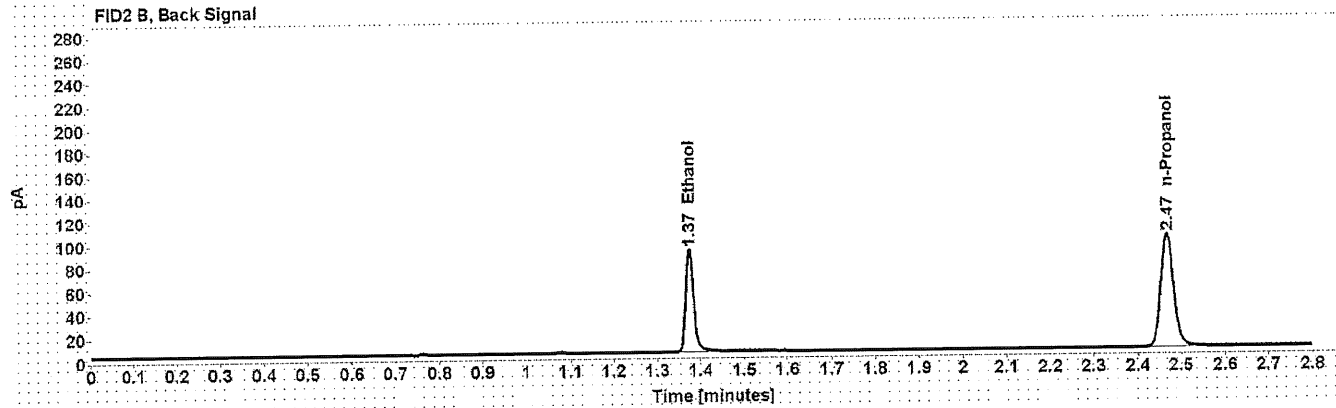
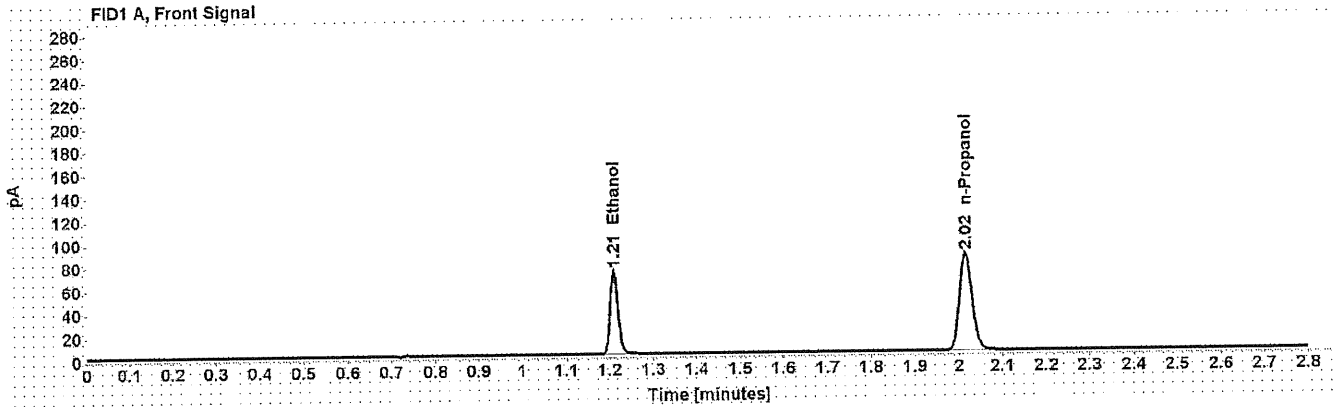


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1577	1.210	92.103
n-Propanol	-----	2.016	168.205

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.375	112.655
n-Propanol	2.468	201.047

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 3
Description: 0.150 Box 2	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:33:17 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\003F0301.D	Analyst: LAbbott <i>JA</i>

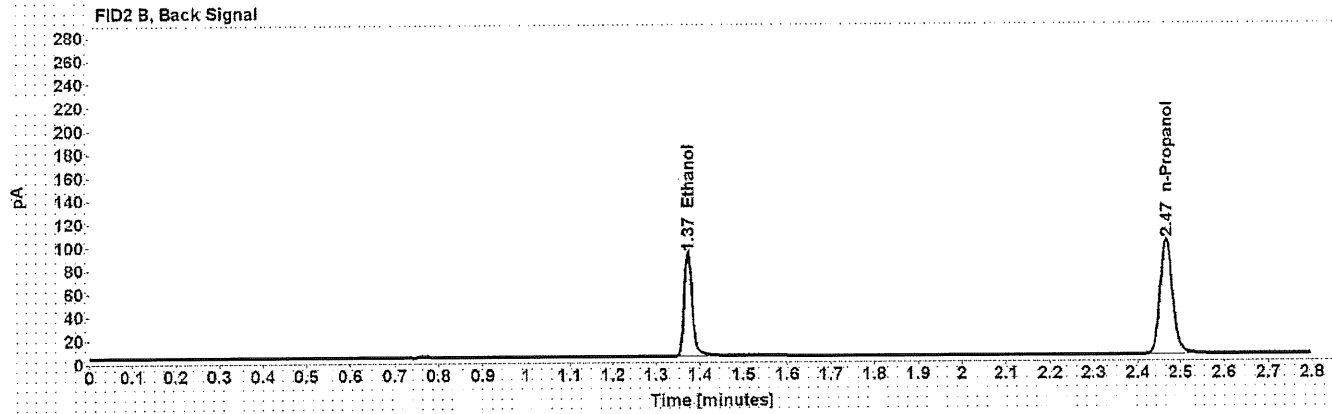
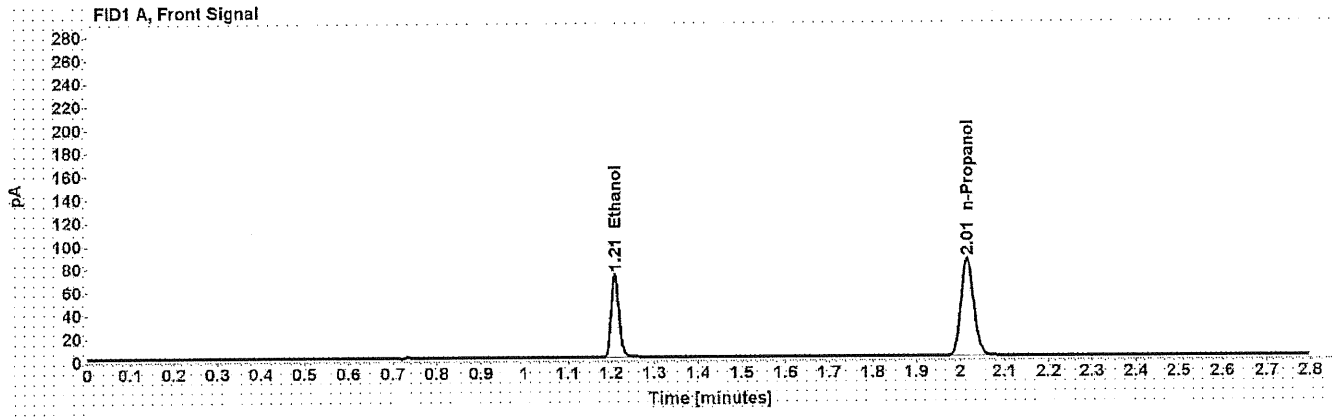


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1566	1.209	92.248
n-Propanol	-----	2.015	169.742

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.373	113.298
n-Propanol	2.467	203.218

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 4
Description: 0.150 Box 3	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:37:17 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\004F0401.D	Analyst: LAbbott

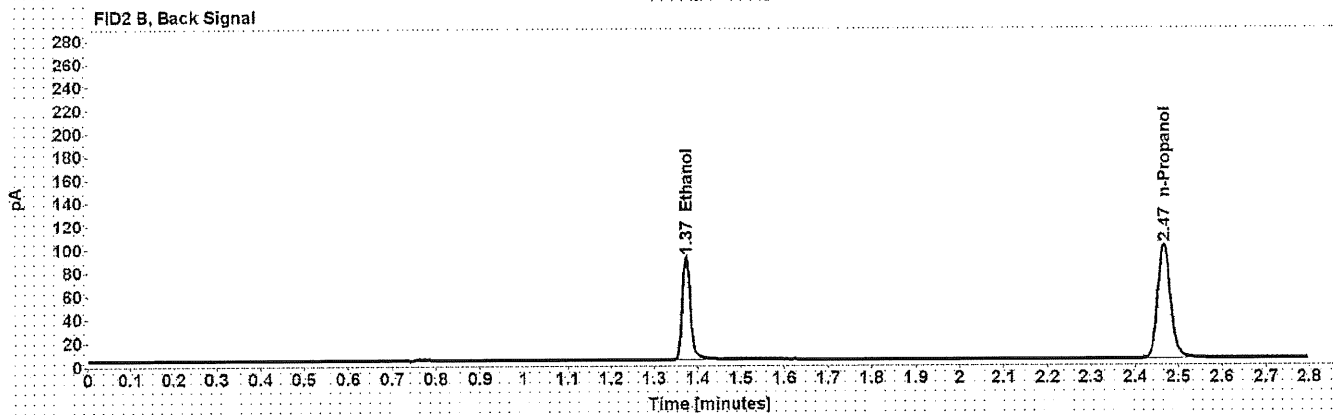
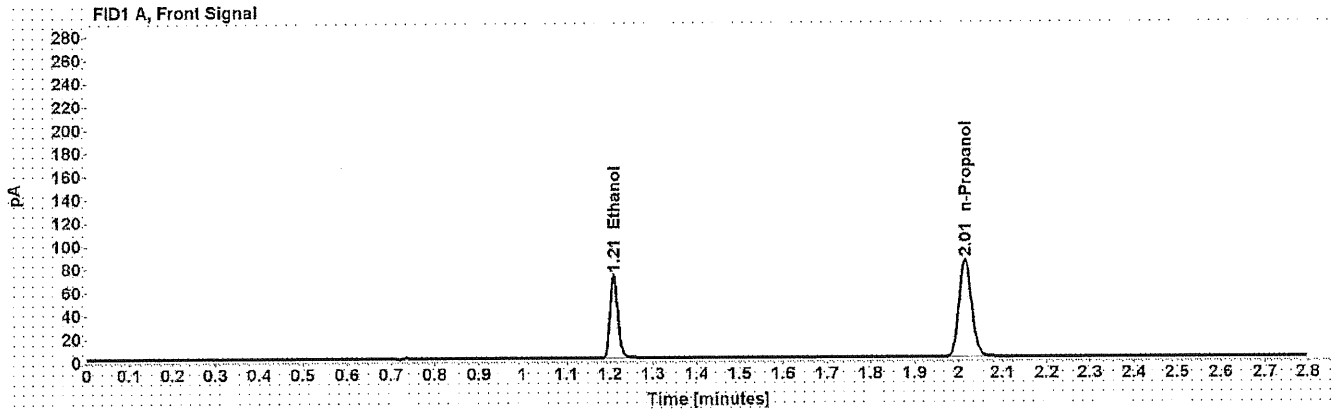


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1565	1.209	91.570
n-Propanol	-----	2.015	168.552

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.373	112.169
n-Propanol	2.467	201.755

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 5
Description: 0.150 Box 4	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:41:16 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\005F0501.D	Analyst: LAbbott <i>LA</i>

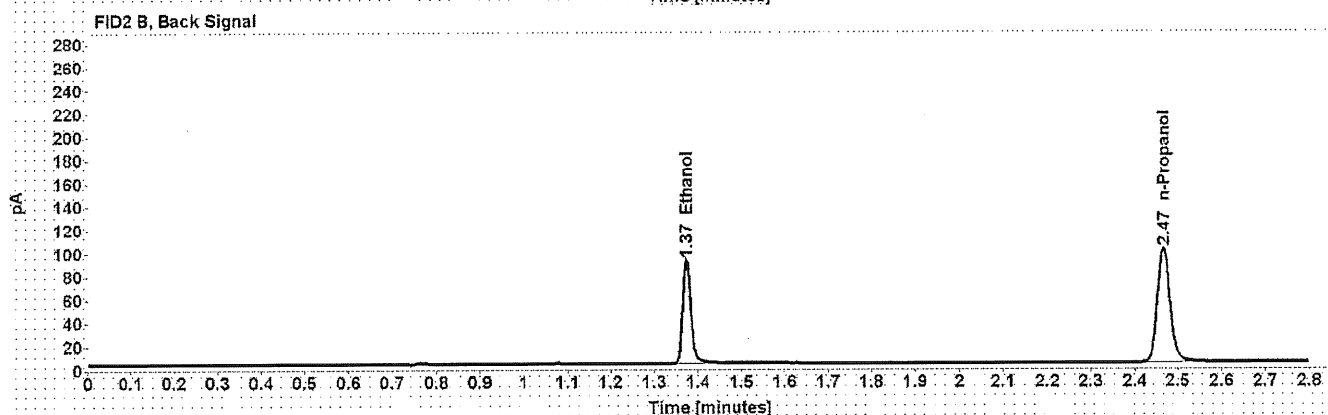
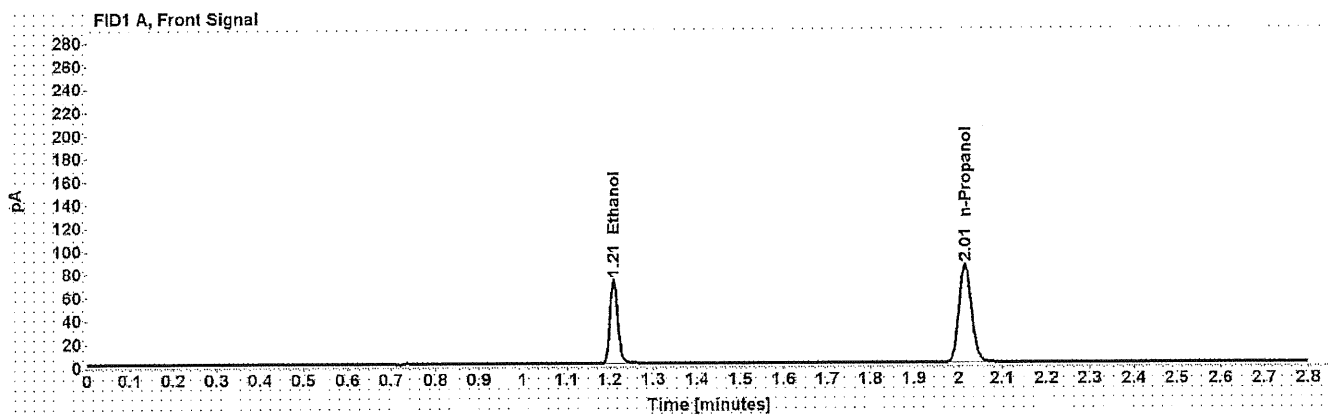


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1577	1.209	92.750
n-Propanol	-----	2.015	169.385

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.373	113.346
n-Propanol	2.467	202.739

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 6
Description: 0.150 Box 5	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:45:17 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\006F0601.D	Analyst: LAbbott

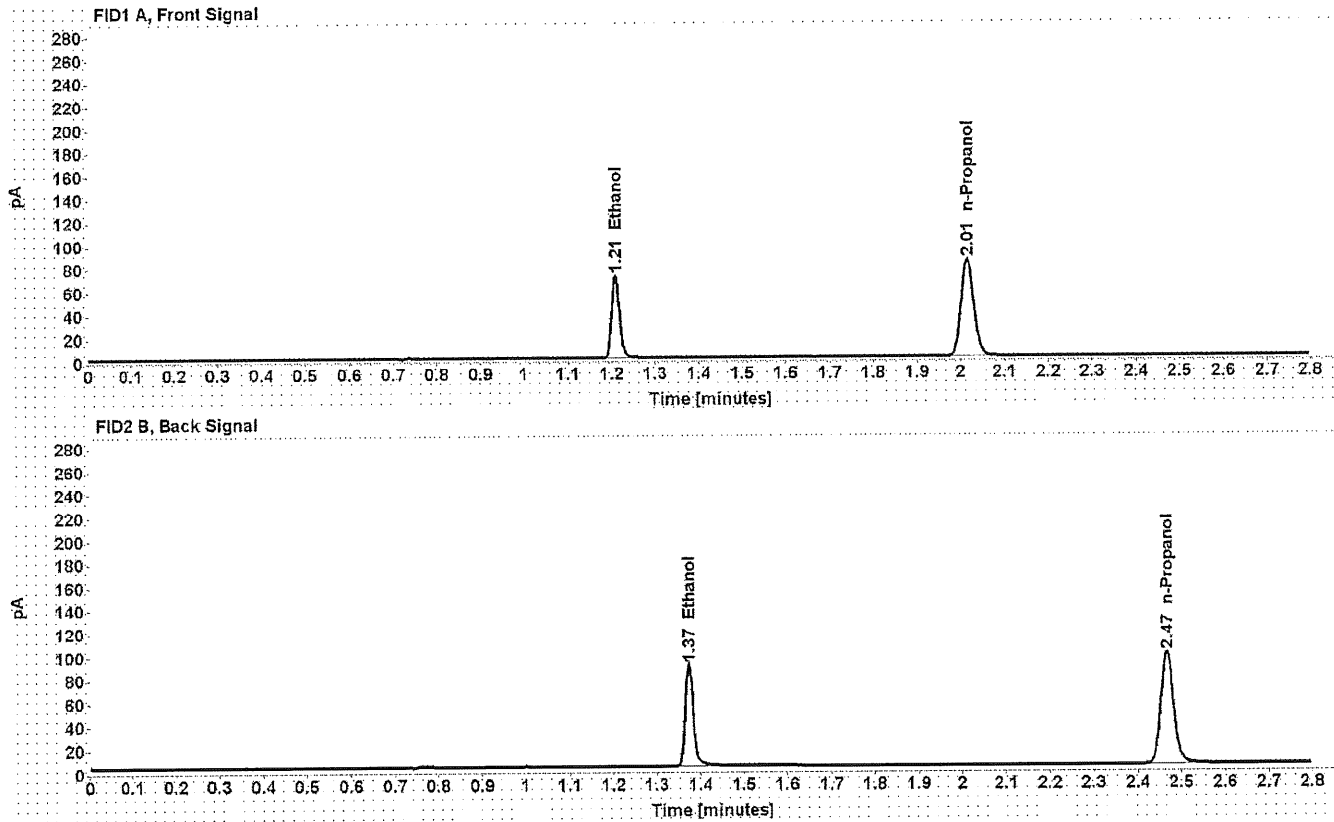


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1569	1.209	91.263
n-Propanol	-----	2.015	167.554

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.373	111.743
n-Propanol	2.467	200.272

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 7
Description: 0.150 Box 6	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:49:32 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\007F0701.D	Analyst: LAbbott

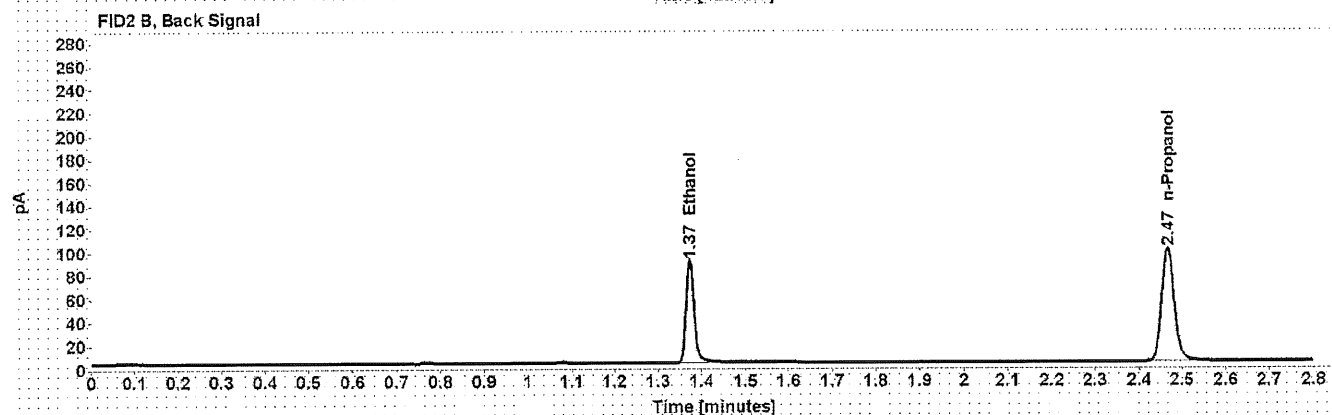
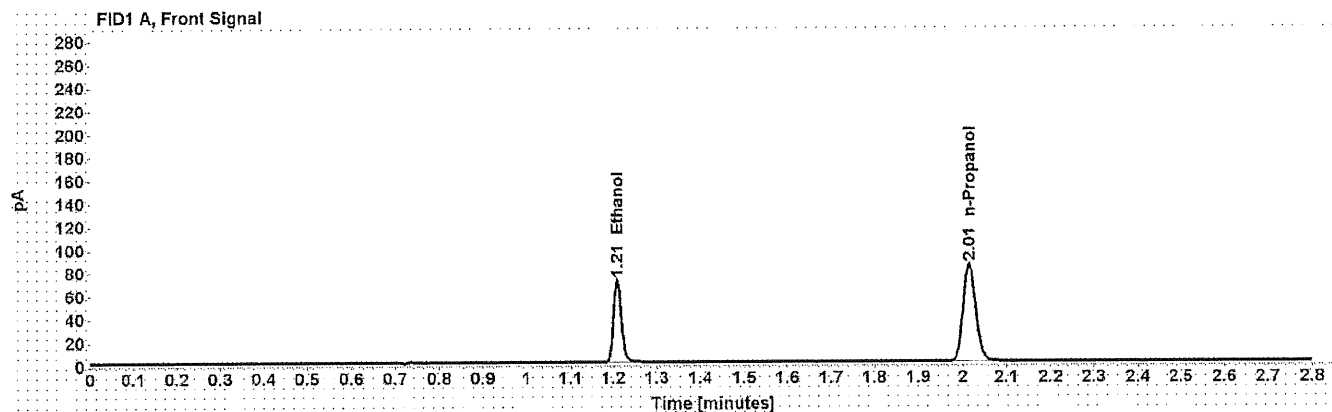


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1568	1.209	91.554
n-Propanol	-----	2.015	168.212

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.373	111.970
n-Propanol	2.467	201.110

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 8
Description: 0.150 Box 7	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:53:32 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\008F0801.D	Analyst: LAbbott

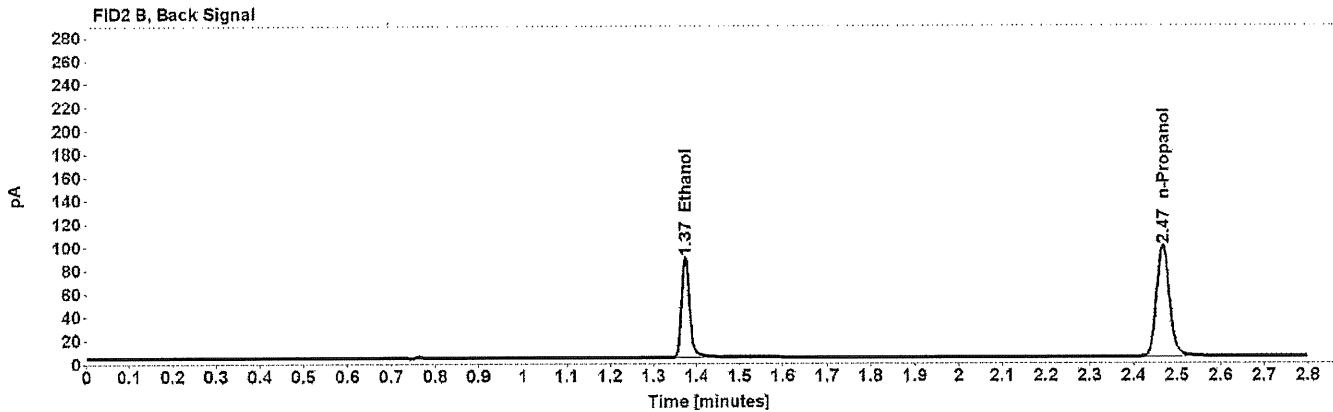
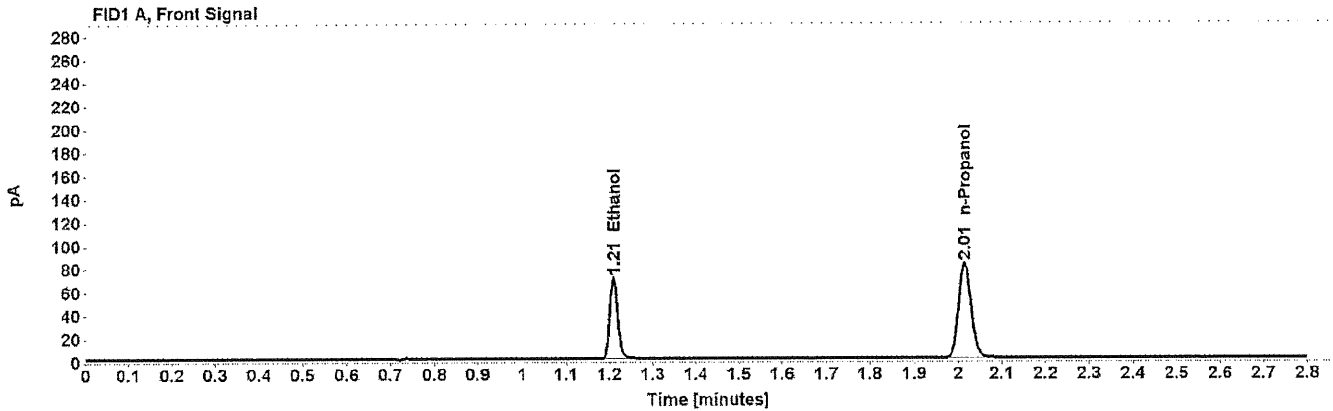


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1570	1.209	89.636
n-Propanol	-----	2.015	164.460

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.373	109.665
n-Propanol	2.467	196.715

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 9
Description: 0.150 Box 8	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 2:57:31 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\009F0901.D	Analyst: LAbbott <i>LA</i>

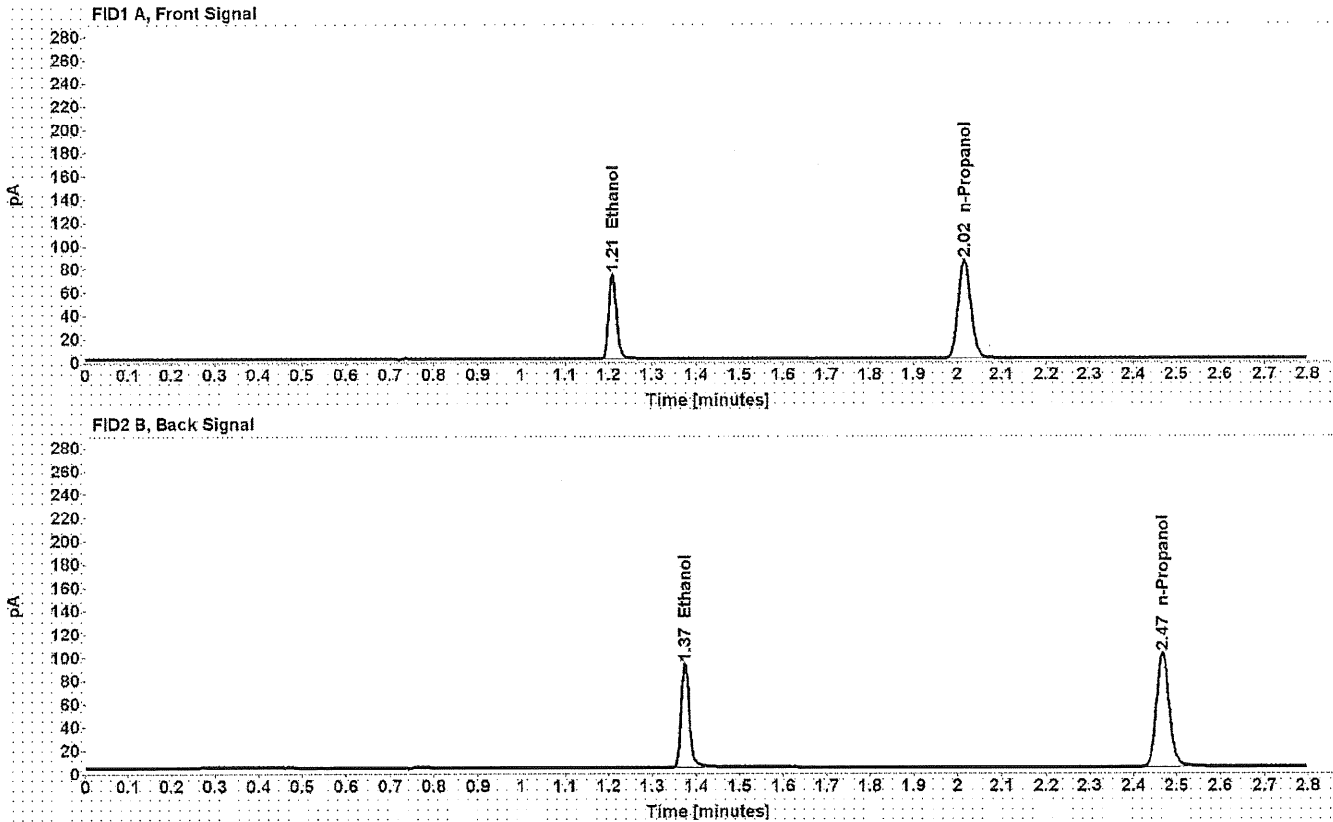


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1591	1.209	93.653
n-Propanol	-----	2.015	169.595

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.374	114.478
n-Propanol	2.468	202.904

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 10
Description: 0.150 Box 9	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 3:01:32 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\010F1001.D	Analyst: LAbbott

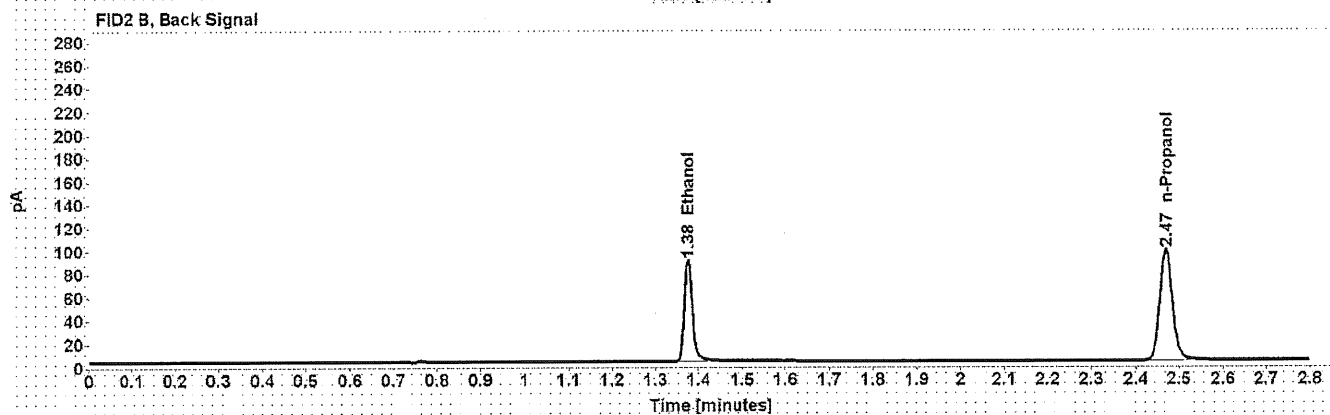
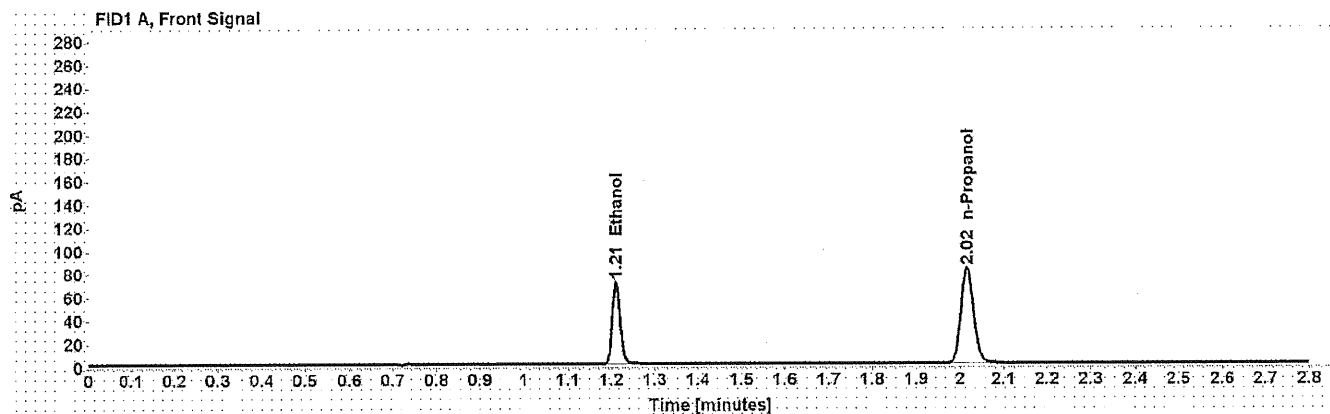


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1588	1.210	91.177
n-Propanol	-----	2.016	165.412

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.376	111.705
n-Propanol	2.469	197.704

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 11
Description: 0.150 Box 10	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 3:05:31 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\011F1101.D	Analyst: LAbbott

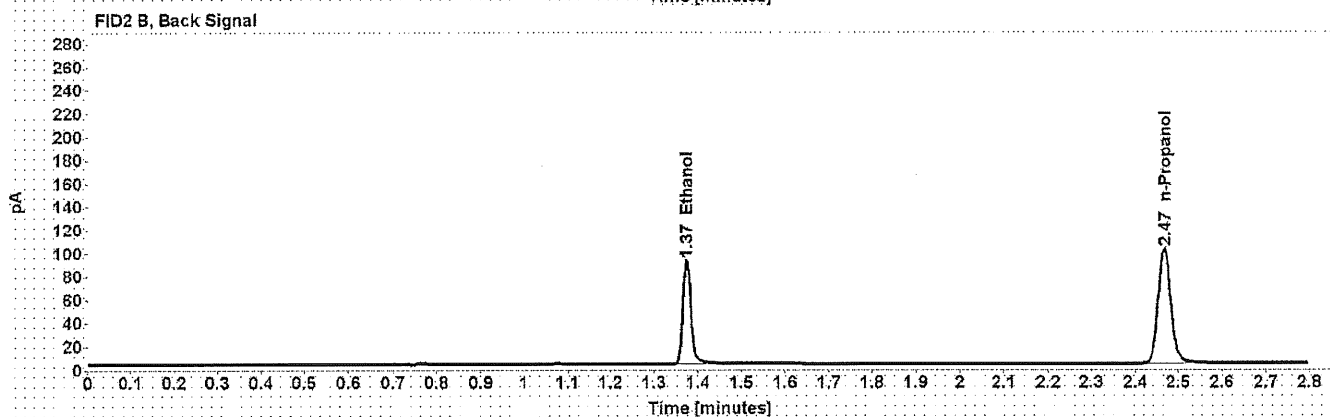
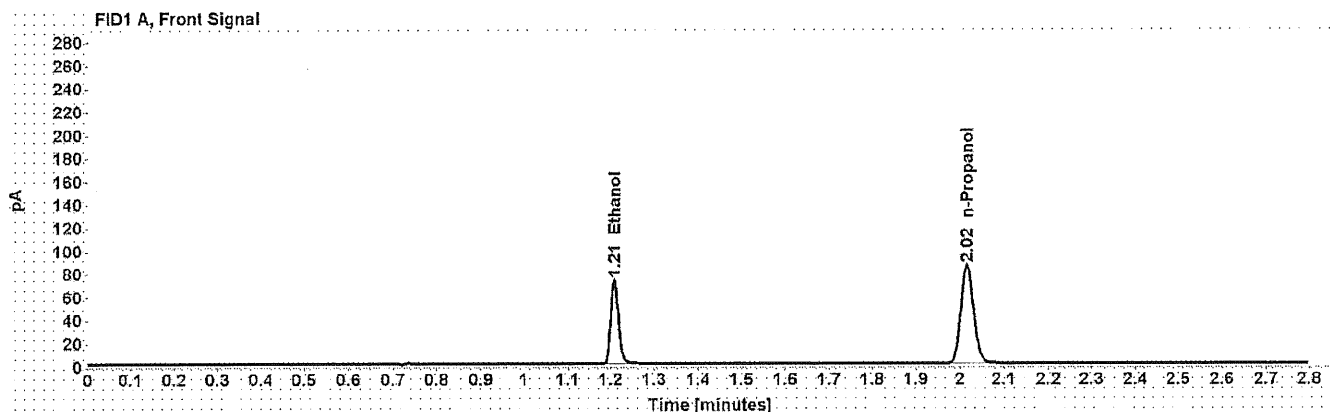


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1577	1.209	93.116
n-Propanol	-----	2.015	170.085

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.374	113.744
n-Propanol	2.468	203.831

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 12
Description: 0.150 Box 11	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 3:09:31 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\012F1201.D	Analyst: LAbbott <i>la</i>

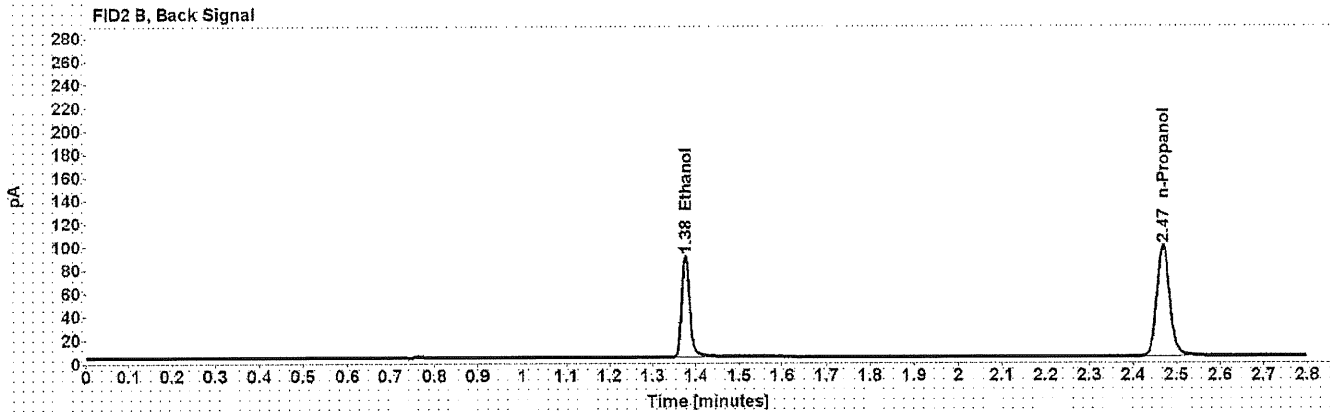
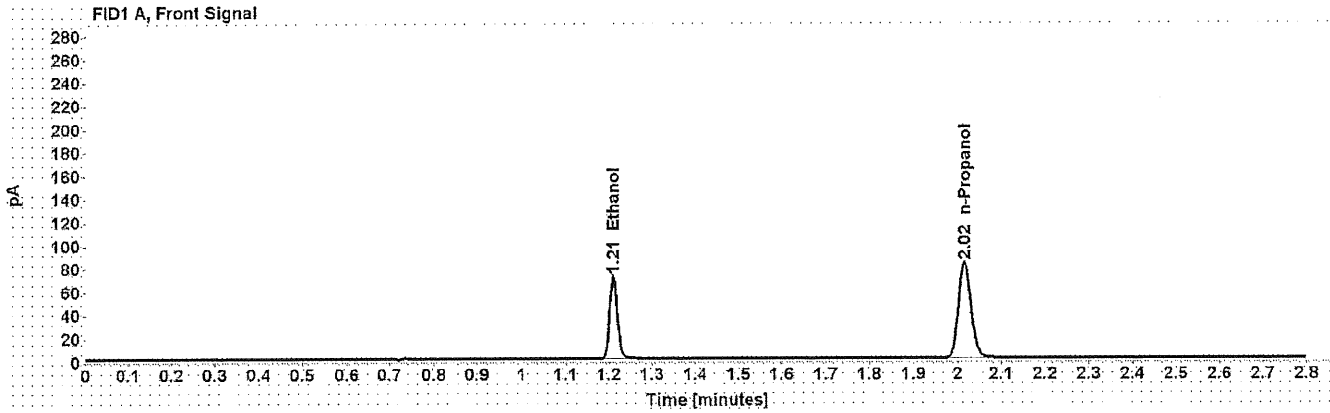


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1584	1.210	90.810
n-Propanol	-----	2.016	165.194

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.375	110.932
n-Propanol	2.469	197.446

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 13
Description: 0.150 Box 12	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 3:13:46 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\013F1301.D	Analyst: LAbbott

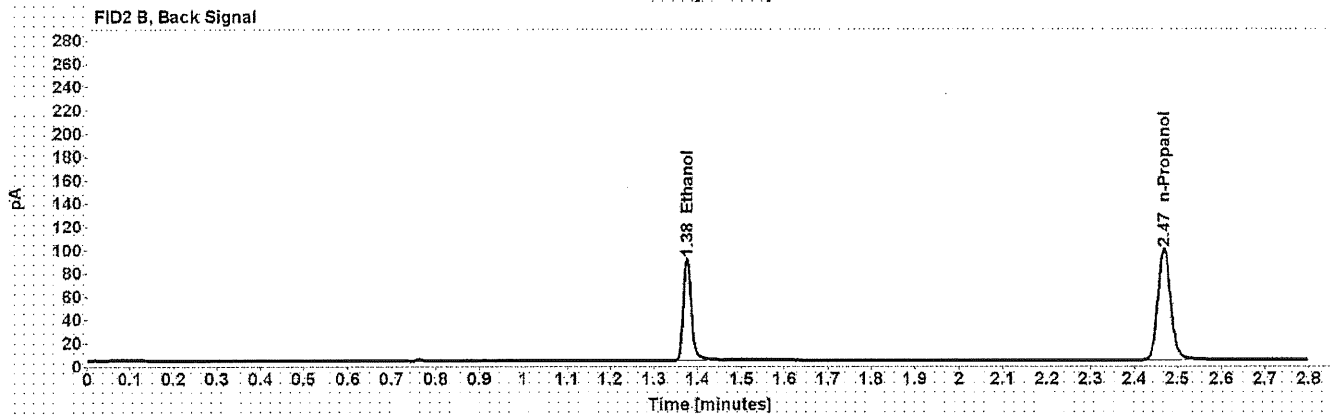
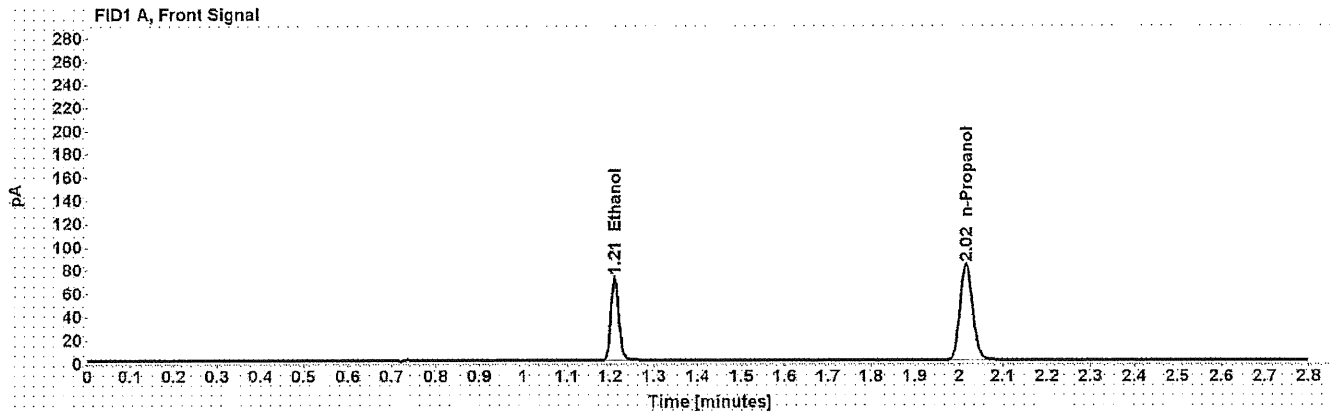


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1590	1.210	91.650
n-Propanol	-----	2.016	166.035

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.376	112.005
n-Propanol	2.469	198.156

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 14
Description: 0.150 Box 13	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 3:17:46 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\014F1401.D	Analyst: LAbbott

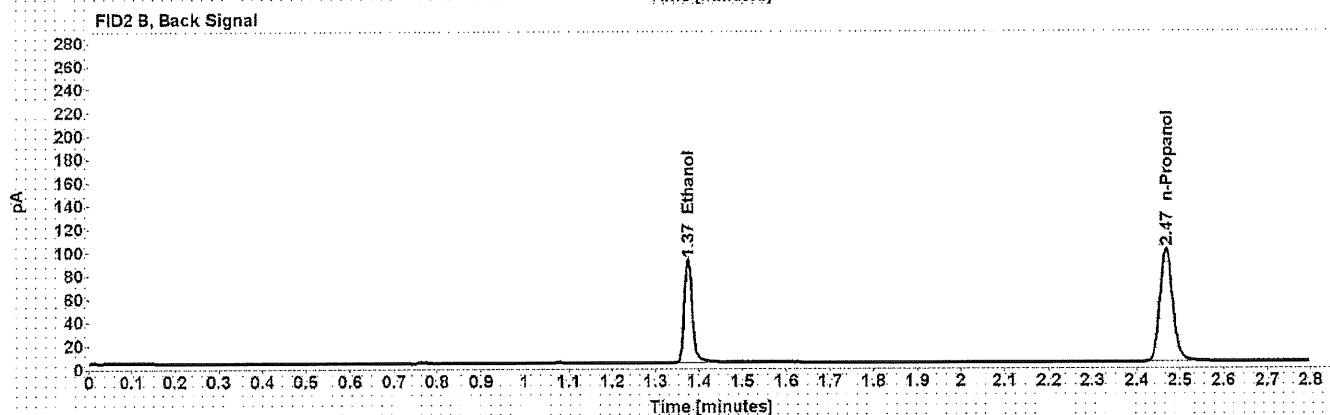
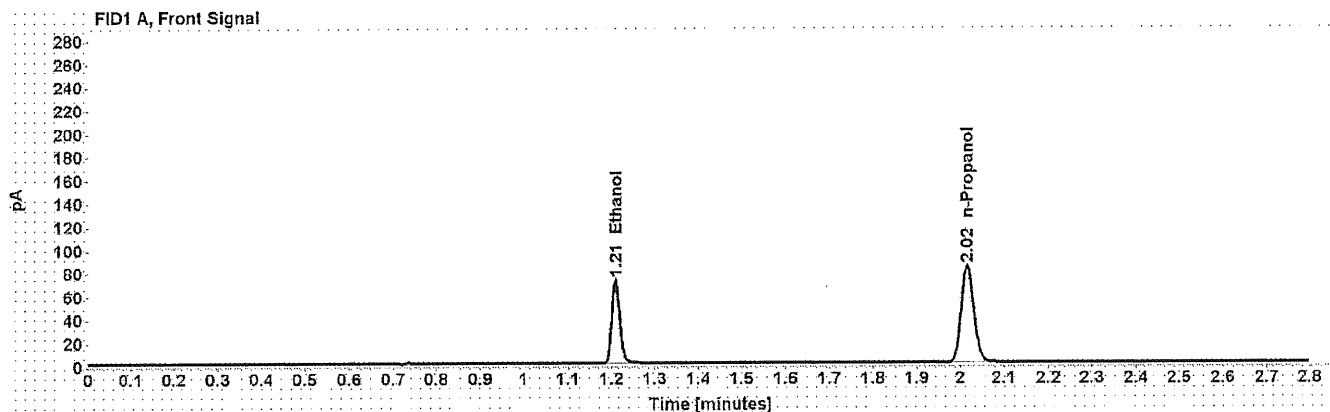


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1586	1.210	92.332
n-Propanol	-----	2.016	167.708

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.375	112.820
n-Propanol	2.468	200.503

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 15
Description: 0.150 Box 14	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 3:21:46 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\015F1501.D	Analyst: LAbbott

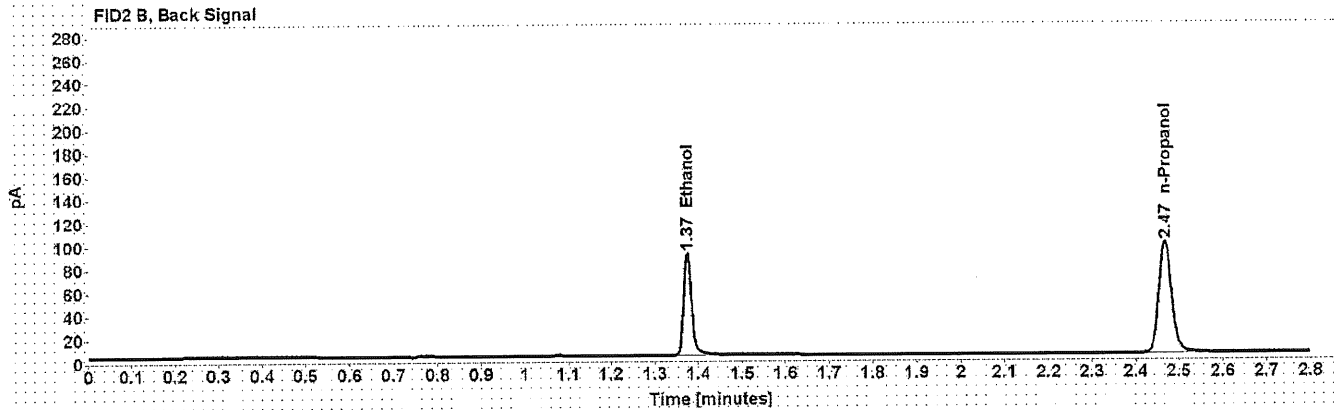
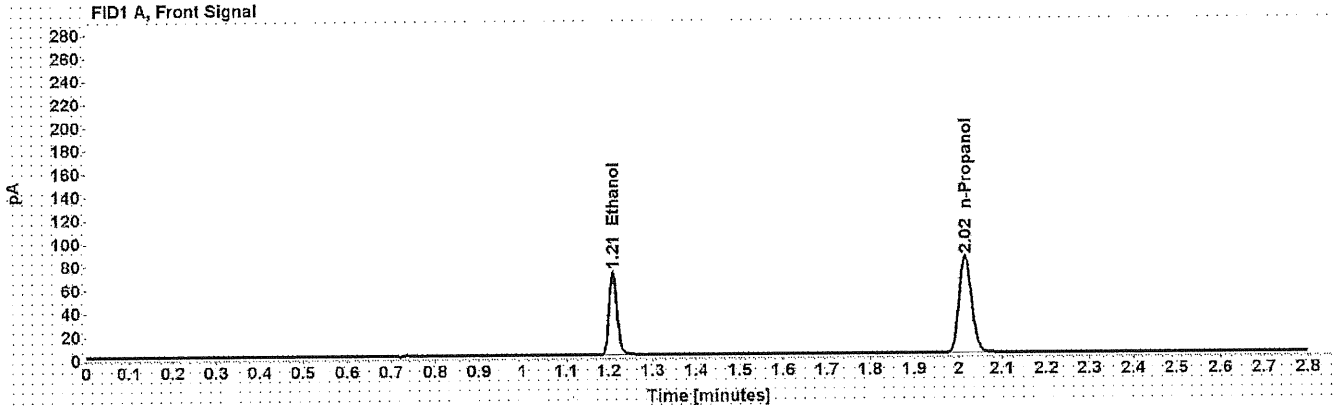


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1588	1.210	91.754
n-Propanol	-----	2.016	166.409

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.375	112.347
n-Propanol	2.468	199.129

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample: 14082019-C	Vial: 16
Description: 0.150 Box 15	LIMS ID:
Method: ethanol quant.M	Sequence: 30Apr20test_3
Instrument: US14173023 CN14160045	Injection date: 4/30/2020 3:25:46 PM
Data file: C:\Chem32\1\Data\30Apr20test_3\016F1601.D	Analyst: LAbbott

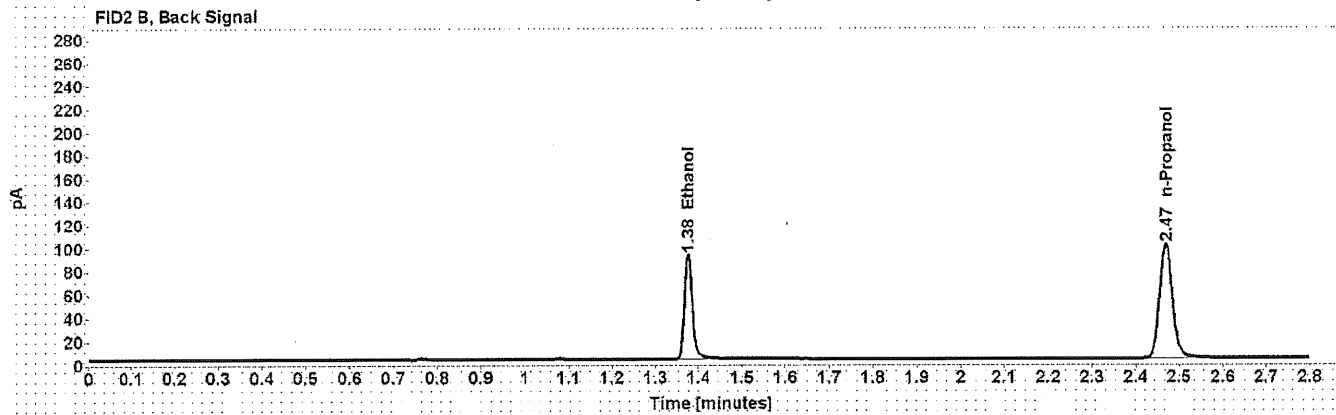
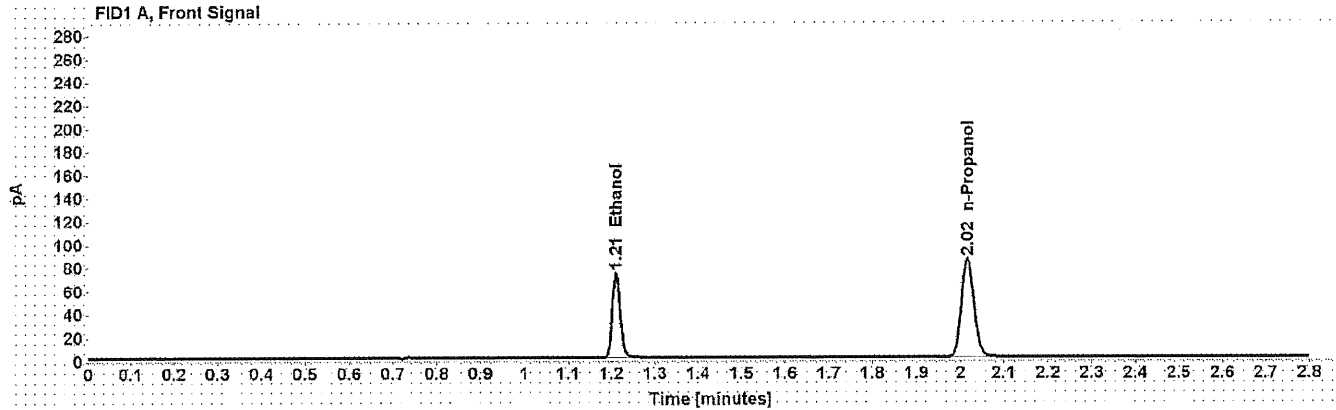


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1596	1.210	94.102
n-Propanol	-----	2.016	169.845

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.376	114.846
n-Propanol	2.469	203.122

Chromatograms from blanks and fifteen ampoules tested from unopened boxes

Scottsdale Police Department Crime Lab Volatiles Analysis

Sample:	blank	Vial:	17
Description:	Blank	LIMS ID:	
Method:	ethanol quant.M	Sequence:	30Apr20test_3
Instrument:	US14173023 CN14160045	Injection date:	4/30/2020 3:29:46 PM
Data file:	C:\Chem32\1\Data\30Apr20test_3\017F1701.D	Analyst:	LAbbott

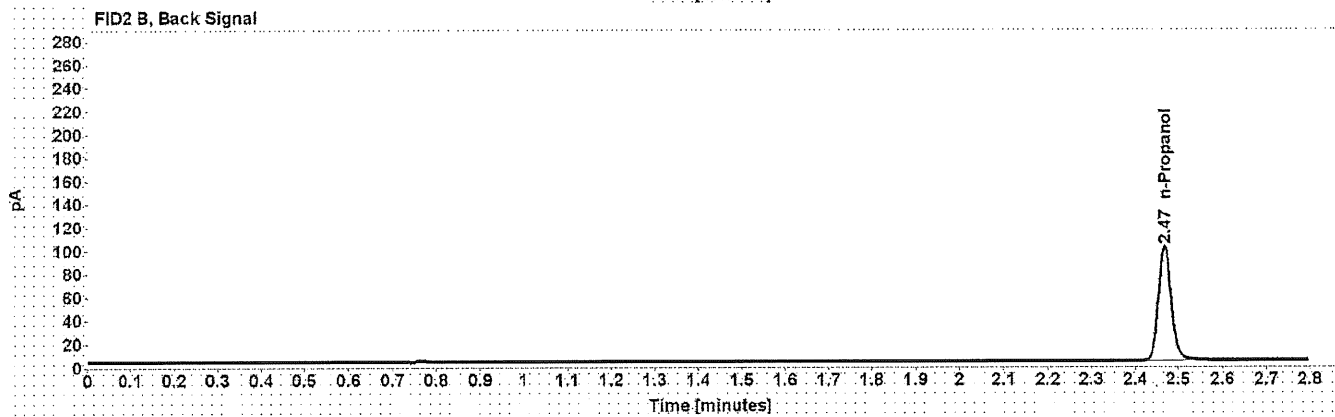
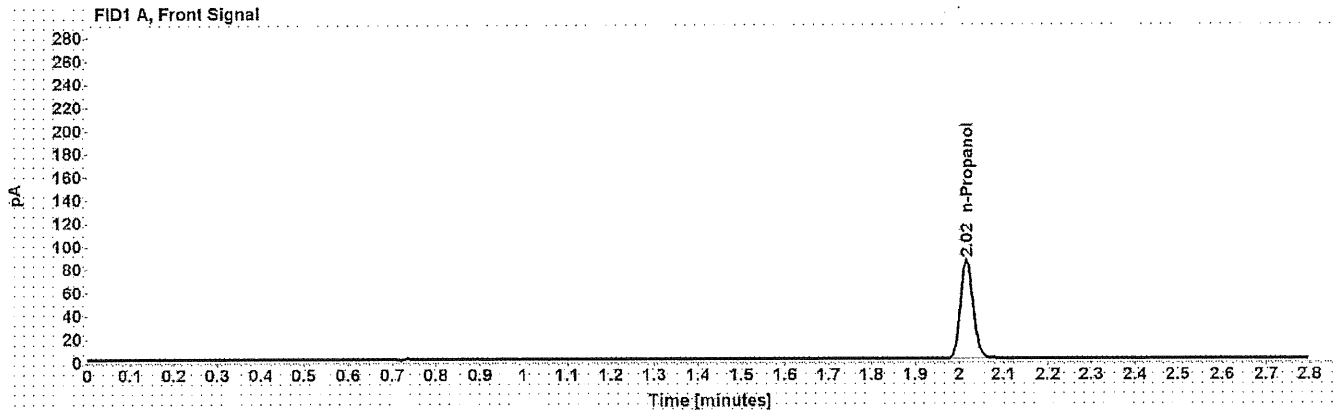


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
n-Propanol	-----	2.016	170.615

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
n-Propanol	2.469	203.906

Chromatograms from blanks and fifteen ampoules tested from unopened boxes