Idaho State Police Forensic Services

CERTIFICATE OF ANALYSIS/APPROVAL

The Idaho State Police Forensic Services (ISPFS) hereby certifies and approves Alcohol Simulator Solution **Lot Number 19106** (a product manufactured by RepCo Marketing, Inc.) to be used to conduct performance verification checks within the State of Idaho in accordance with the analytical methods, policies and/or procedures promulgated by the Department governing breath alcohol examinations. ISPFS also approves of the manufacturer of this solution (RepCo Marketing, Inc.) to provide Alcohol Simulator Solution **Lot Number 19106** in the State of Idaho. This lot has a target value of 0.200 with a range of 0.180 to 0.220 grams of ethyl alcohol/210 liters of vapor.

The expiration date for this lot number is on September 29th, 2021 at 11:59 PM.

10-21-19
Date

Volatiles Analysis Discipline Leader

STATE OF IDAHO)
) ss.
County of Kootenai)

On this 21st day of October, in the year 2019, before me, Lynn A. Higdem, a notary public, Jeremy Johnston personally appeared, known to me to be the person whose name is subscribed to the within instrument as a Forensic Scientist for the Idaho State Police Forensic Services, and acknowledged to me that he executed the same as such Scientist.

Lynn A. Higdem Notary Public
My Commission Expires: 09/08/2020

LYNN A HIGDEM
COMMISSION #42862
NOTARY PUBLIC
STATE OF IDAHO

RepCo Marketing Co
3101-188 Stony Brook Drive
Raleigh, NC 27604
888-828-0227

CERTIFICATE OF ANALYSIS

MANUFACTURER AND SUPPLIER: RepCo Marketing Co.
LOT NUMBER: 19106
EXPIRATION DATE: September 29, 2021 at 11:59 p.m.

RepCo Marketing Co. certifies the following:

RepCo Marketing Co. prepared, tested and supplied Lot Number **19106** of Alcohol Certified Solution for simulators. This solution was manufactured and tested by RepCo Marketing Co., with confirmation by ISO 17025 and ISO 17034 accredited institution Alcohol Countermeasure Systems, using NIST standards. Random samples were analyzed by Alcohol Countermeasure Systems utilizing a gas chromatograph and found to contain **.2438** gms/dl +/-.003 gms/dl wt/vol ethanol (95% Confidence).

The alcohol and distilled water used in the solution were found to be free of any interfering substance.

This solution will produce a vapor alcohol value of **.200** +/-3% gms/210L Breath when heated to 34 Degrees Celsius +/-0.2 Degrees Celsius in a simulator (95% Confidence).

The date of manufacture for this lot number is **September 30, 2019** The expiration date for this lot number is **September 29, 2021** at 11:59 p.m.

This document is a true representation of the original Certificate of Analysis.

Alma Palmer

Alma Palmer, Operations Manager
RepCo Marketing Co.

Raw data from analysis: LOT #19106

				Raw	Average	
Analyst: JJ	Bottle #63	sample #1	a	0.2546	0.2542	overall mean: 0.2495
			b	0.2539		
		sample #2	a	0.2449	0.2446	
			b	0.2444		
Analyst: JJ	Bottle #116	sample #1	a	0.2478	0.2482	overall mean: 0.2479
			b	0.2486		
		sample #2	a	0.2476	0.2475	
			b	0.2475		
Analyst: JG	Bottle #73	sample #1	a	0.2457	0.2454	overall mean: 0.2443
			b	0.2452		
		sample #2	a	0.2436	0.2432	
			b	0.2428		
Analyst: JG	Bottle #191	sample #1	a	0.2453	0.2445	overall mean: 0.2447
			b	0.2438		
		sample #2	a	0.2449	0.2448	
			b	0.2448		

average of all raw data: **0.2466**

alcohol content conversion with 1.23: **0.200478**

with 1.21: 0.203791

Target value from provider:

0.2438	+/- 3% range	0.251114
		0.236486
0.2	+/- 3% range	0.206
		0.194

ACS
ALCOHOL COUNTERMEASURE SYSTEMS
Alcohol Countermeasure Systems Corp
60 International Boulevard
Toronto, Ontario M9W 6J2
CANADA
acs-corp.com

STANDARD ALCOHOL SPECIFICATION SHEET

Lot #: 19106 Target Simulator Value: 200 mg/dl (BAC)

Date of Analysis: Oct. 4/2019

Calibration Mix: 170.10 mg/dl NIST: SRM 2895 Expiry Date: 30 April, 2023

ISTD: n-PrOH Source: Fisher Lot 167837

Stock ISTD Concentration: 40.1 mg/mL Stock ISTD Preparation Date: Oct. 3/2019

ISTD Dilution: 10 ---1000 Working ISTD Concentration: 40.1 mg/dl

Pipettor/Diluter: Hamilton 530 B

Liquid Analysis

HP 5890 Series II; FID; 4'*1/8" OD; Carbowax 1500 on Porapak Q 80/100 mesh

Temperatures

Column: 120°C Injector: 150°C Detector: 250°C

0.1 mL calibrator/ sample plus 1.0 mL ISTD
2 µL injections

Sample Results:

Sample Bottle #	Results #1 (mg/dl)	Results #2 (mg/dl)
1	243.41	243.72
2	244.50	243.70
3	243.27	244.00
4	244.06	244.33
5	243.77	243.91
6	243.54	243.76

Average Value: 243.83 mg/dl

Predicted Simulator Value: 201.5 mg/dl (BAC)

There is no contamination shown in the analysis chromatograms.

Date: Oct. 7/2019 Certified: Michelle Zhang

ACS
ALCOHOL COUNTERMEASURE SYSTEMS
Alcohol Countermeasure Systems Corp
60 International Boulevard
Toronto, Ontario M9W 6J2
CANADA
acs-corp.com

Oct. 4, 2019

HP 5890 Series II

STANDARDS

ISTD	N-PrOH	Oct.3, 2019	Fisher Lot 167837	40.1 mg/dl
NIST SRM	2895	Expiry April 30, 2023		
RepCo Marketing Co				
Lot :		#19106		

Standard Sample	GC Value	RF
S1	170.10	14.38209
	170.18	14.37547
S2	169.67	14.39340
	169.63	14.40661
S3	170.01	14.40846
	170.13	14.40801
S4	169.85	14.41157
	170.04	14.41232

Column1	
Mean	**169.95125**
Standard Error	0.074436874
Median	170.025
Mode	#N/A
Standard Deviation	0.210539274
Sample Variance	0.044326786
Kurtosis	-1.17712951
Skewness	-0.70546064
Range	0.55
Minimum	169.63
Maximum	170.18
Sum	1359.61
Count	8
Confidence Level(95.0%)	0.176015238

Cerilliant	E-032	E-033
Lot #:	FN 03301601	FN 06051501
Conc (mg/dl):	198.8	303.5
Conc.Range(mg/dl):	194.8~202.8	297.4~309.6
S1 (mg/dl):	200.38	302.18
S2 (mg/dl):	199.87	301.84
Ave(mg/dl):	200.13	302.01

VOLATILES DETERMINATION CASEFILE WORKSHEET

Laboratory No.: 19106-63-1 **Analysis Date(s): 15 Oct 2019**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Over-all Mean
Sample Results	0.2546	0.2539	0.0007	0.2542	0.2494
(g/100cc)	0.2449	0.2444	0.0005	0.2446	

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information *Instrument method is stored centrally.*

Refer to Instrument Method: Alcohol.m
Hamilton Auto-Dilutor Serial Number: ML600HC11379

Reporting of Results **Uncertainty of Measurement (UM%): 5.00%**

Overall Mean (g/100cc)	Low	High	5% of Mean
0.249	**0.236**	**0.262**	**0.013**

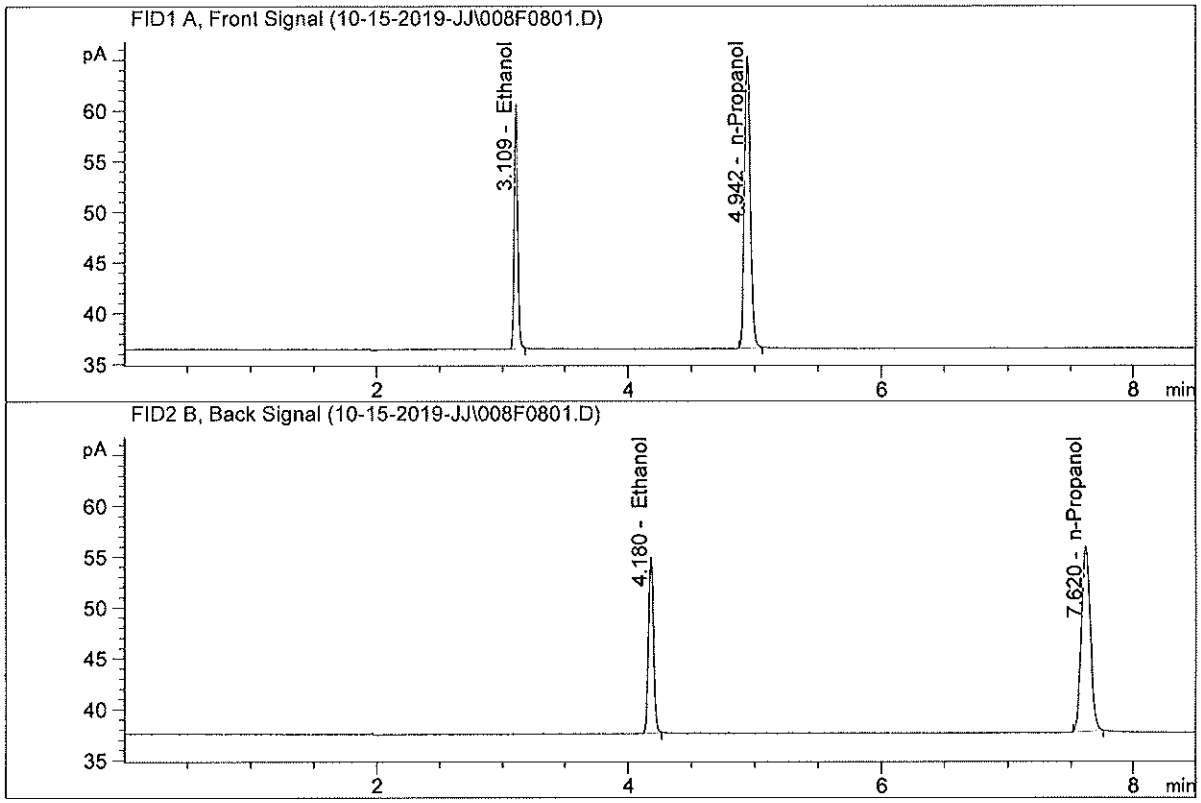
Reported Result
0.249

Calibration and control data are stored centrally.

Revision: 1
Issue Date: 01/04/2019
Issuing Authority: Quality Manager

ISP Forensic Services Blood Alcohol Report

Sample Name : 19106-63-1-A
Laboratory : Coeur d' Alene
Injection Date : Oct 15, 2019
Method : ALCOHOL.M
Acq. Instrument: CN10742044-IT00725005



#	Compound	Column	Area	Amount	Units
1.	Ethanol	Column 1:	47.30022	0.2546	g/100cc
2.	Ethanol	Column 2:	47.39742	0.2539	g/100cc
3.	n-Propanol	Column 1:	94.49934	1.0000	g/100cc
4.	n-Propanol	Column 2:	91.96808	1.0000	g/100cc

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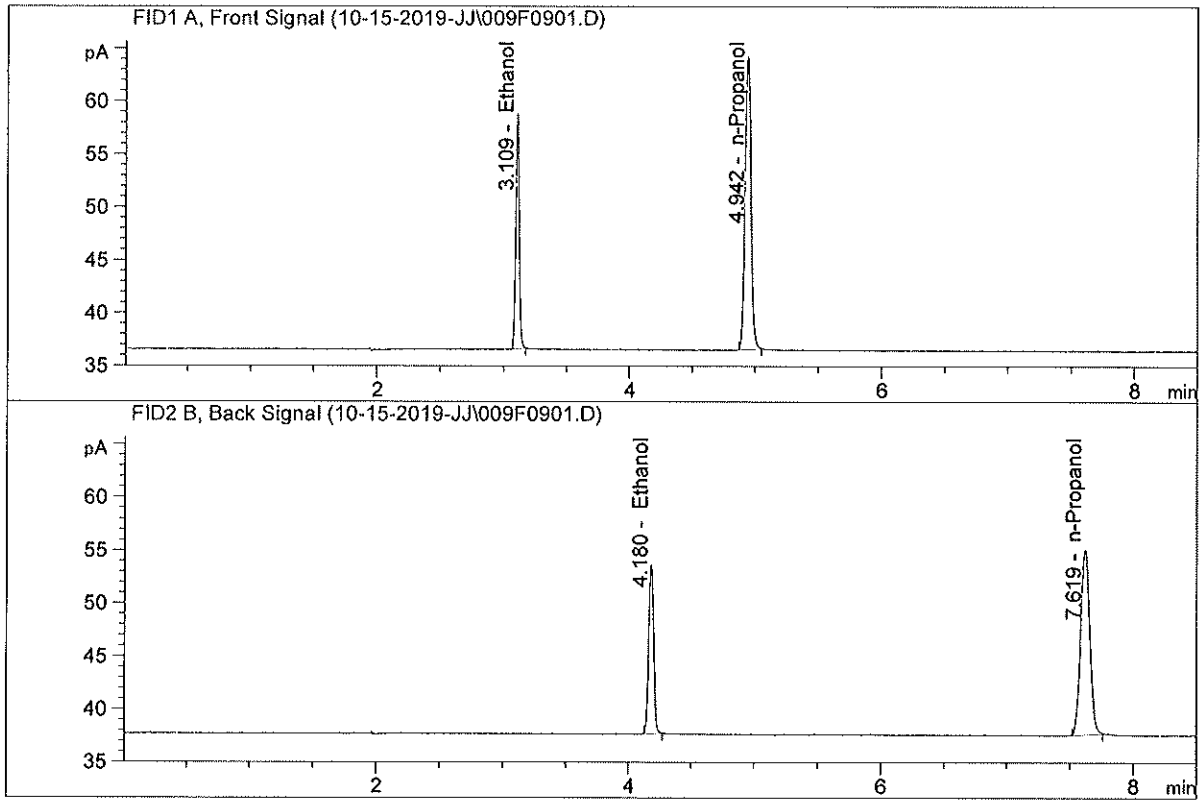
ISP Forensic Services Blood Alcohol Report

Sample Name : 19106-63-1-B
Laboratory : Coeur d' Alene
Injection Date : Oct 15, 2019
Method : ALCOHOL.M
Acq. Instrument: CN10742044-IT00725005



#	Compound	Column	Area	Amount	Units
1.	Ethanol	Column 1:	43.73543	0.2449	g/100cc
2.	Ethanol	Column 2:	43.83156	0.2444	g/100cc
3.	n-Propanol	Column 1:	90.83210	1.0000	g/100cc
4.	n-Propanol	Column 2:	88.33636	1.0000	g/100cc

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VOLATILES DETERMINATION CASEFILE WORKSHEET

Laboratory No.: 19106-116-1 **Analysis Date(s): 15 Oct 2019**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Over-all Mean
Sample Results	0.2478	0.2486	0.0008	0.2482	0.2478
(g/100cc)	0.2476	0.2475	0.0001	0.2475	

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information *Instrument method is stored centrally.*

Refer to Instrument Method: Alcohol.m
Hamilton Auto-Dilutor Serial Number: ML600HC11379

Reporting of Results **Uncertainty of Measurement (UM%): 5.00%**

Overall Mean (g/100cc)	Low	High	5% of Mean
0.247	**0.234**	**0.260**	**0.013**

Reported Result
0.247

Calibration and control data are stored centrally.

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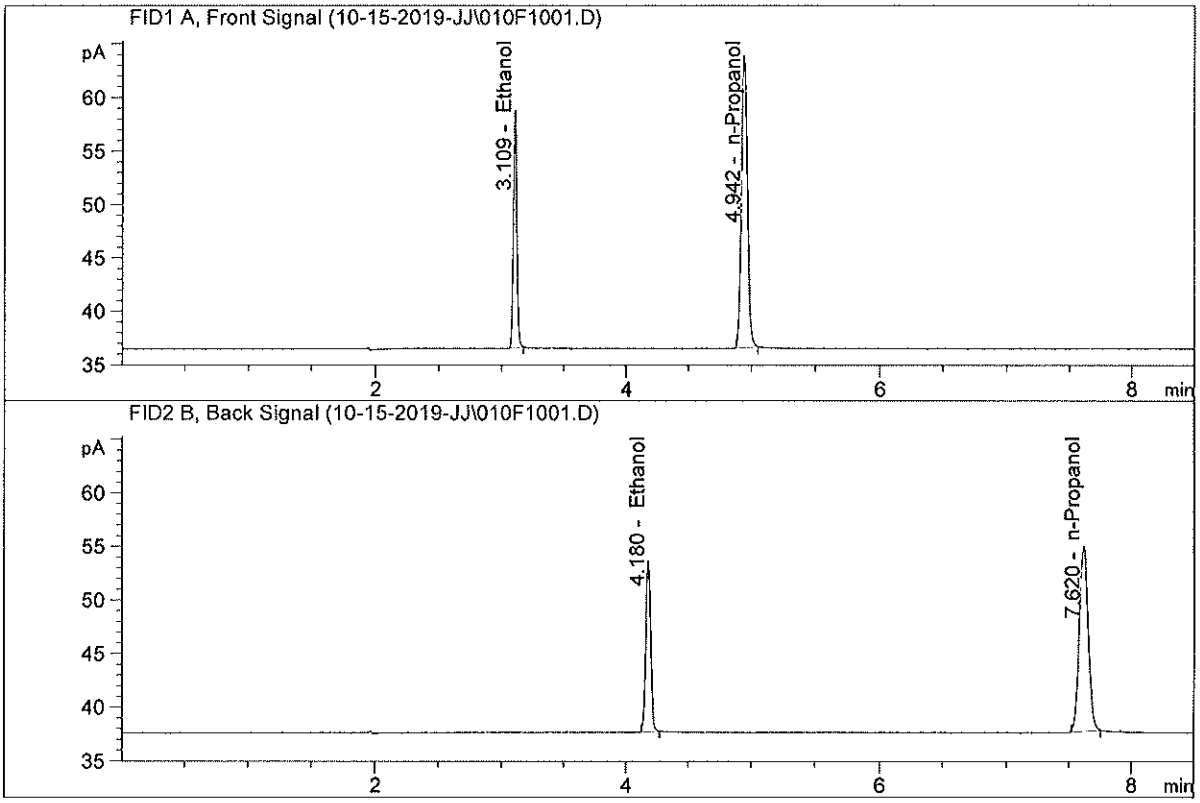
Revision: 1
Issue Date: 01/04/2019
Issuing Authority: Quality Manager

ISP Forensic Services Blood Alcohol Report

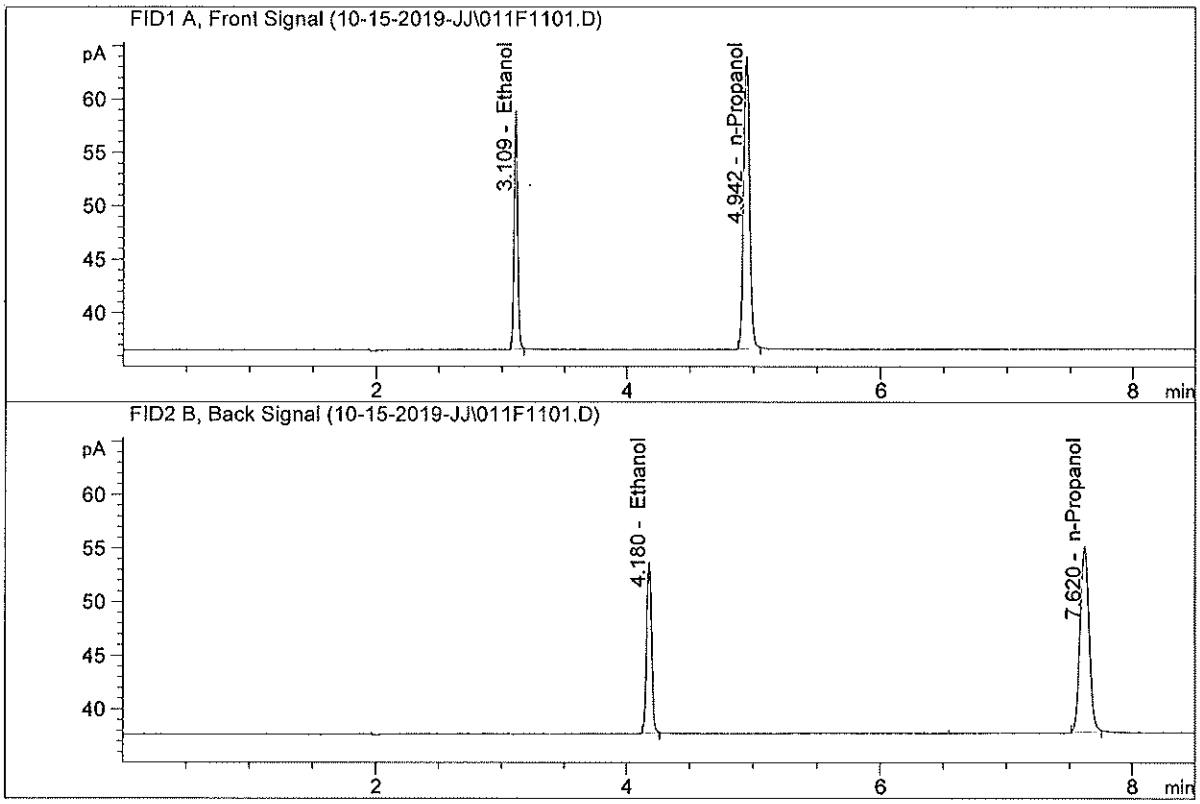
Sample Name : 19106-116-1-A
Laboratory : Coeur d' Alene
Injection Date : Oct 15, 2019
Method : ALCOHOL.M
Acq. Instrument: CN10742044-IT00725005



#	Compound	Column	Area	Amount	Units
1.	Ethanol	Column 1:	43.61520	0.2478	g/100cc
2.	Ethanol	Column 2:	43.82695	0.2486	g/100cc
3.	n-Propanol	Column 1:	89.51444	1.0000	g/100cc
4.	n-Propanol	Column 2:	86.84202	1.0000	g/100cc

ISP Forensic Services Blood Alcohol Report

Sample Name : 19106-116-1-B
Laboratory : Coeur d' Alene
Injection Date : Oct 15, 2019
Method : ALCOHOL.M
Acq. Instrument: CN10742044-IT00725005



#	Compound	Column	Area	Amount	Units
1.	Ethanol	Column 1:	43.61291	0.2476	g/100cc
2.	Ethanol	Column 2:	43.71122	0.2475	g/100cc
3.	n-Propanol	Column 1:	89.59076	1.0000	g/100cc
4.	n-Propanol	Column 2:	87.01318	1.0000	g/100cc

VOLATILES DETERMINATION CASEFILE WORKSHEET

Laboratory No.: LOT19106BOT0073-1 **Analysis Date(s): 16 Oct 2019**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Over-all Mean
Sample Results	0.2457	0.2452	0.0005	0.2454	0.2443
(g/100cc)	0.2436	0.2428	0.0008	0.2432	

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information

Instrument method is stored centrally.

Refer to Instrument Method: Alcohol.m
Hamilton Auto-Dilutor Serial Number: ML600HC11378

Reporting of Results

Uncertainty of Measurement (UM%): 5.00%

Overall Mean (g/100cc)	Low	High	5% of Mean
0.244	0.231	0.257	0.013

Reported Result
0.244

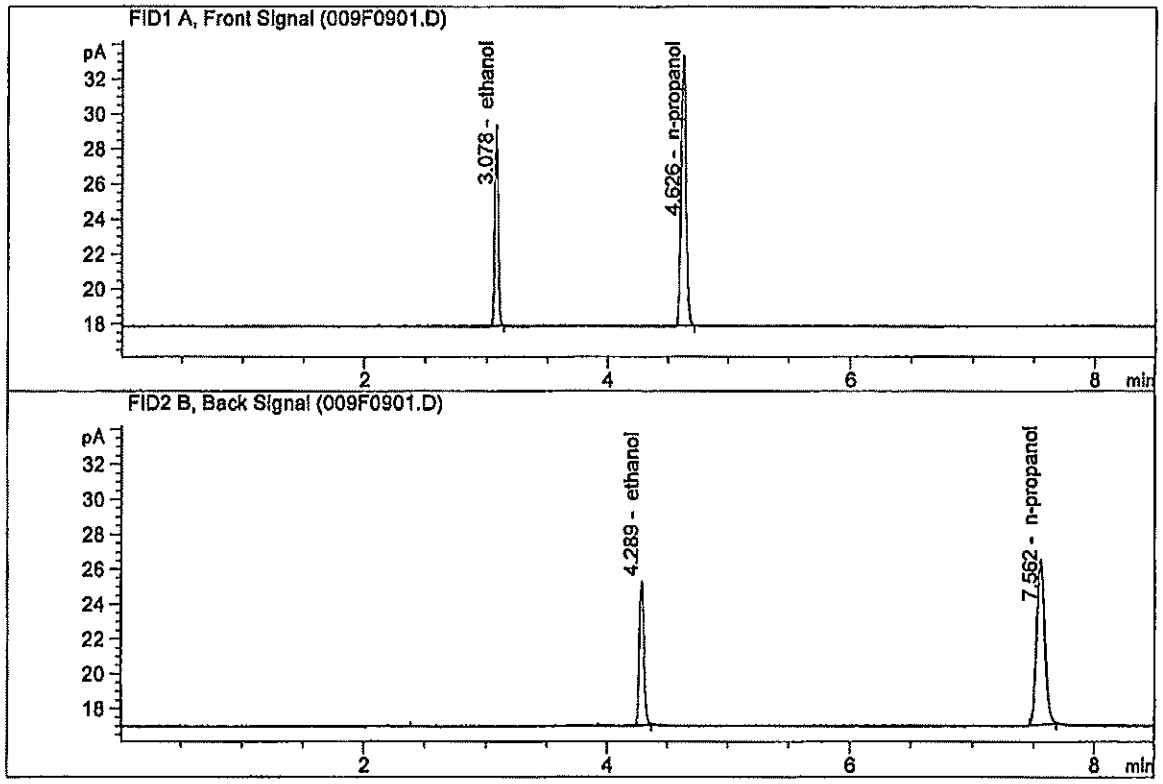
Calibration and control data are stored centrally.

JC

Revision: 1
Issue Date: 01/04/2019
Issuing Authority: Quality Manager

ISP Forensic Services Blood Alcohol Report

Sample Name : LOT19106BOT0073-1-A
Laboratory : Meridian
Injection Date : Oct 16, 2019
Method : ALCOHOL.M
Acq. Instrument: CN11180014-CN11041167

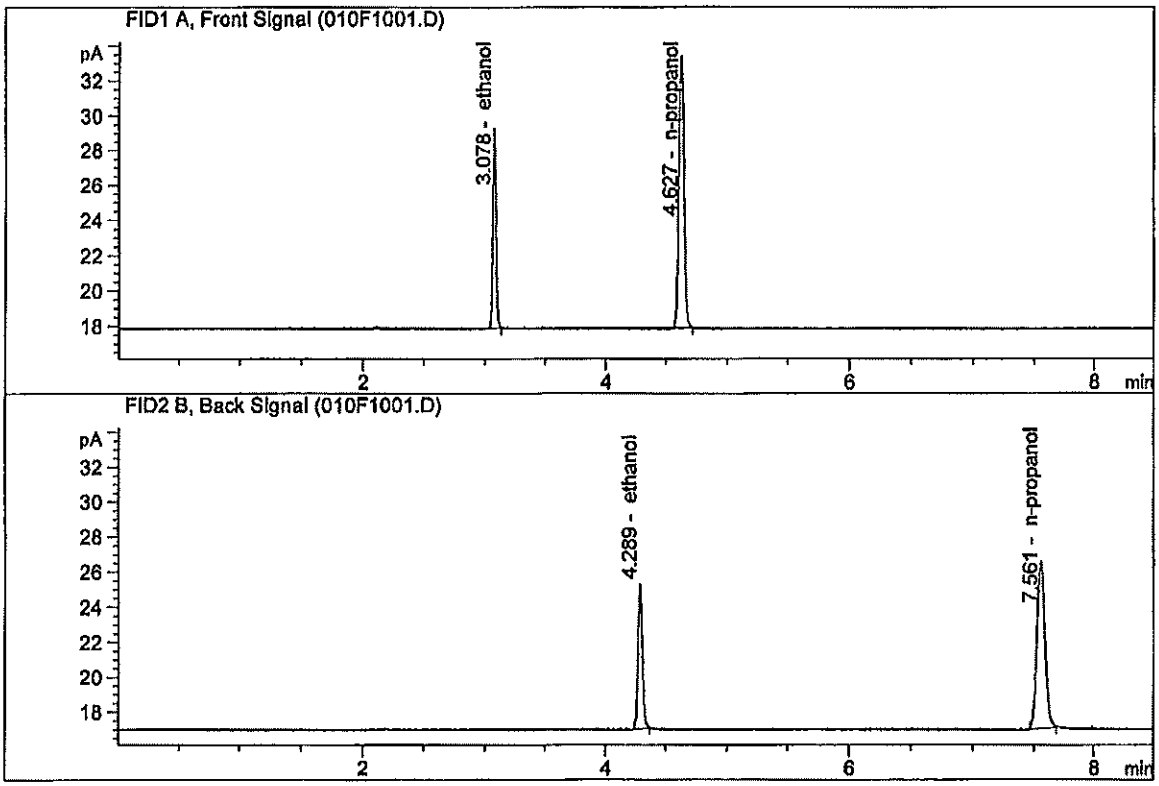


#	Compound	Column	Area	Amount	Units
1.	Ethanol	Column 1:	21.00013	0.2457	g/100cc
2.	Ethanol	Column 2:	21.96629	0.2452	g/100cc
3.	n-Propanol	Column 1:	44.02095	1.0000	g/100cc
4.	n-Propanol	Column 2:	45.42141	1.0000	g/100cc

JC

ISP Forensic Services Blood Alcohol Report

Sample Name : LOT19106BOT0073-1-B
Laboratory : Meridian
Injection Date : Oct 16, 2019
Method : ALCOHOL.M
Acq. Instrument: CN11180014-CN11041167



#	Compound	Column	Area	Amount	Units
1.	Ethanol	Column 1:	20.87467	0.2436	g/100cc
2.	Ethanol	Column 2:	21.81302	0.2428	g/100cc
3.	n-Propanol	Column 1:	44.15261	1.0000	g/100cc
4.	n-Propanol	Column 2:	45.56334	1.0000	g/100cc

JG

VOLATILES DETERMINATION CASEFILE WORKSHEET

Laboratory No.: LOT19106BOT0191-1 **Analysis Date(s): 16 Oct 2019**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Over-all Mean
Sample Results	0.2453	0.2438	0.0015	0.2445	0.2447
(g/100cc)	0.2449	0.2448	0.0001	0.2448	

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information *Instrument method is stored centrally.*

Refer to Instrument Method: Alcohol.m
Hamilton Auto-Dilutor Serial Number: ML600HC11378

Reporting of Results **Uncertainty of Measurement (UM%): 5.00%**

Overall Mean (g/100cc)	Low	High	5% of Mean
0.244	0.231	0.257	0.013

Reported Result
0.244

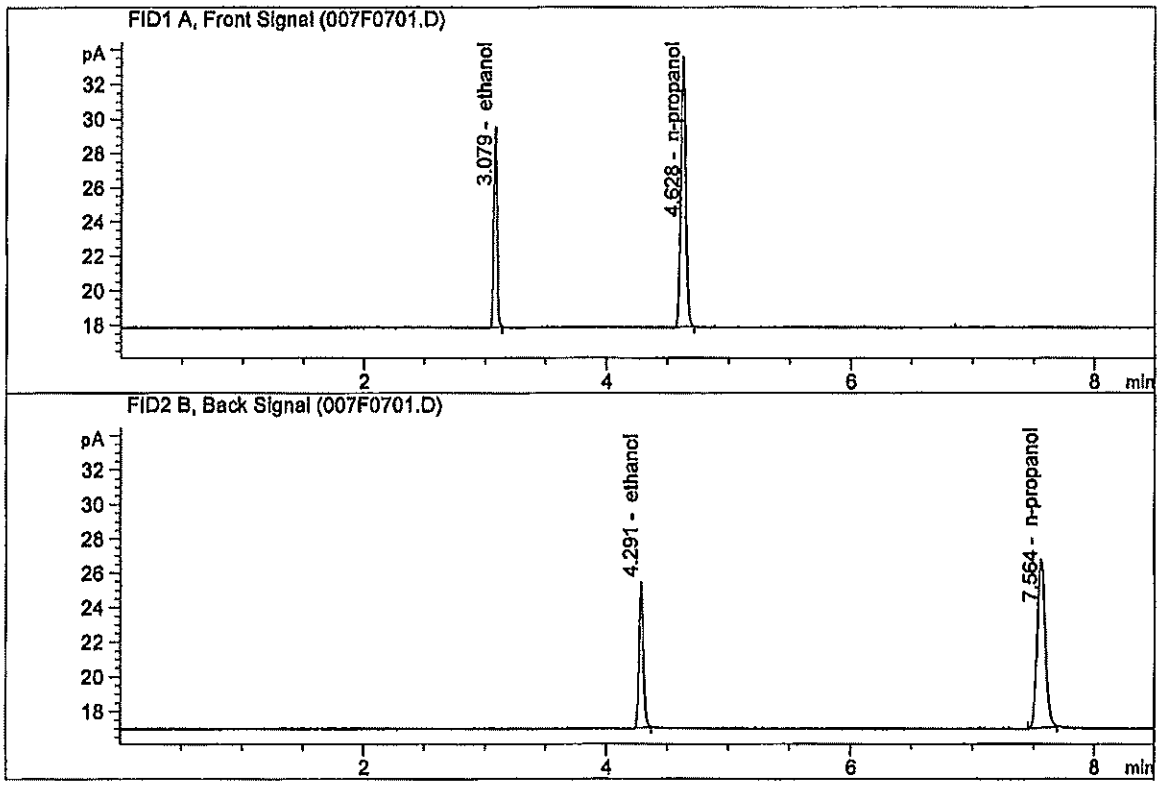
Calibration and control data are stored centrally.

JC

Revision: 1
Issue Date: 01/04/2019
Issuing Authority: Quality Manager

ISP Forensic Services Blood Alcohol Report

Sample Name : LOT19106BOT0191-1-A
Laboratory : Meridian
Injection Date : Oct 16, 2019
Method : ALCOHOL.M
Acq. Instrument: CN11180014-CN11041167

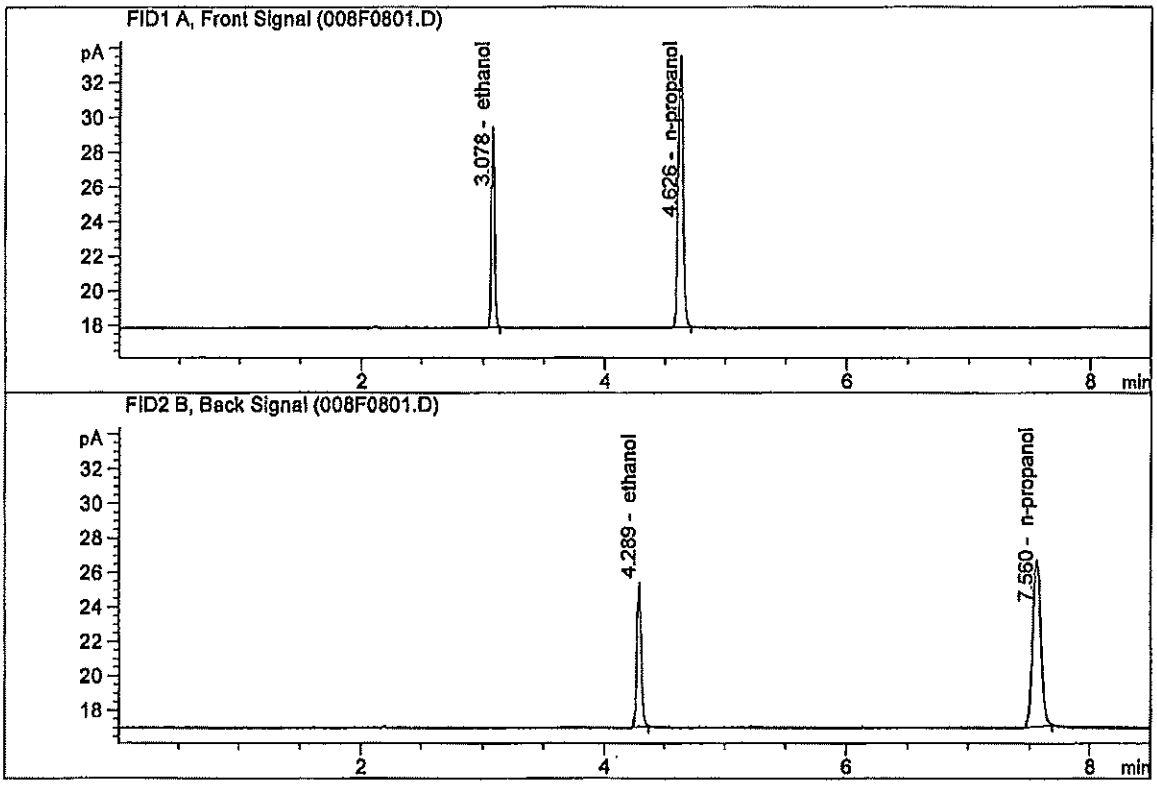


#	Compound	Column	Area	Amount	Units
1.	Ethanol	Column 1:	21.26273	0.2453	g/100cc
2.	Ethanol	Column 2:	22.24269	0.2438	g/100cc
3.	n-Propanol	Column 1:	44.65670	1.0000	g/100cc
4.	n-Propanol	Column 2:	46.25587	1.0000	g/100cc

JC

ISP Forensic Services Blood Alcohol Report

Sample Name : LOT19106BOT0191-1-B
Laboratory : Meridian
Injection Date : Oct 16, 2019
Method : ALCOHOL.M
Acq. Instrument: CN11180014-CN11041167



#	Compound	Column	Area	Amount	Units
1.	Ethanol	Column 1:	21.20215	0.2449	g/100cc
2.	Ethanol	Column 2:	22.19811	0.2448	g/100cc
3.	n-Propanol	Column 1:	44.59055	1.0000	g/100cc
4.	n-Propanol	Column 2:	45.97743	1.0000	g/100cc

JCa