Quantitative Analysis for Ethanol & Qualitative Analysis for Other Volatiles

Analytical Method(s): 1.0

Device: Hamilton MICROLAB Liquid Processor/Dilutor Serial Number: L600HC11378

Volatiles Quality Assurance Controls **Run Date(s): 4/15/22**

Calibration Date: 4/15/22

Worklist #: 5784

Control level	Expiration	Lot #	Target Value	Acceptable Range	Overall Results
Level 1	Jul-23	1907006	0.0764	0.0688-0.0840	0.0764 g/100cc
					0.0799 g/100cc
					g/100cc
Level 2	Jul-23	1907007	0.2170	0.1953-0.2387	0.2118 g/100cc
					0.2154 g/100cc
					g/100cc

Multi-Component mixture:	**Exp:**	**Jul-22**	**Lot #**	FN07101701		acceptable
Curve Fit:		**Column 1**	0.99953		**Column2**	0.99972

Ethanol Calibration Reference Material

Calibrator level	Target Value	Acceptable Range	Column 1	Column 2	Precision	Mean
50	0.050	0.045 - 0.055	0.0534	0.0525	0.0009	0.0529
100	0.100	0.090 - 0.110	0.1005	0.1005	0	0.1005
200	0.200	0.180 - 0.220	0.1975	0.1983	0.0008	0.1979
300	0.300	0.270 - 0.330	0.2946	0.2957	0.0011	0.2951
400	0.400	0.360 - 0.440			0	#DIV/0!
500	0.500	0.450 - 0.550	0.5036	0.5028	0.0008	0.5032

Internal Standard	Average	(-) 20%	(+) 20%
N-Propanol:	207495.7	165996.6	248994.8

Aqueous Controls

Control level	Target Value	Acceptable Range	Overall Results
80	0.080	0.076 - 0.084	0.079 g/100cc

APPROVED
By John Garner at 2:41 pm, Apr 18, 2022

REVIEWED
By Galina Giso at 7:48 am, Apr 19, 2022

NB

Revision: 4
Issue Date: 01/24/2022
Issuing Authority: Quality Manager

Internal Standard Monitoring Worksheet

Worklist #:	5784	Run Date(s):	4/15/22

Internal Standard Solution:	Prep Date: 2/2/22	Exp Date: 8/2/22

Sample Name	Column 1 Value	Column 2 Value	Average
0.080A	188443	177861	183152
0.080B	187687	177146	182416.5
QC1-1A	192250	181580	186915
QC1-1B	196208	185327	190767.5
QC1-2A	239048	225024	232036
QC1-2B	215024	202728	208876
QC2-1A	212763	200384	206573.5
QC2-1B	216856	204214	210535
QC2-2A	239525	225059	232292
QC2-2B	248888	233899	241393.5
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!

Combined Average	(-)20%	(+)20%
207495.7	165996.6	248994.8

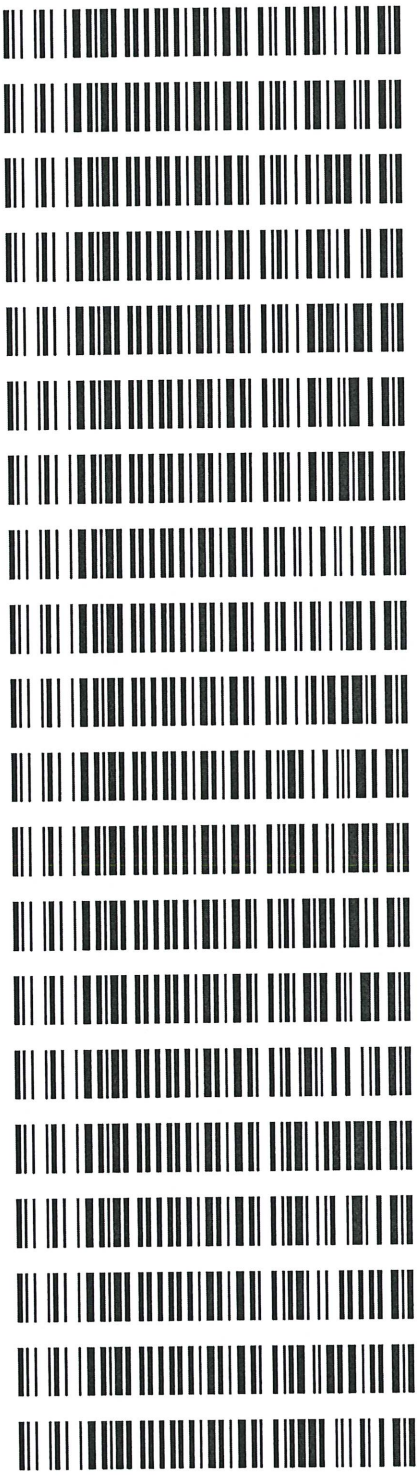
NB

Revision: 4
Issue Date: 01/24/2022
Issuing Authority: Quality Manager

4/15/2022

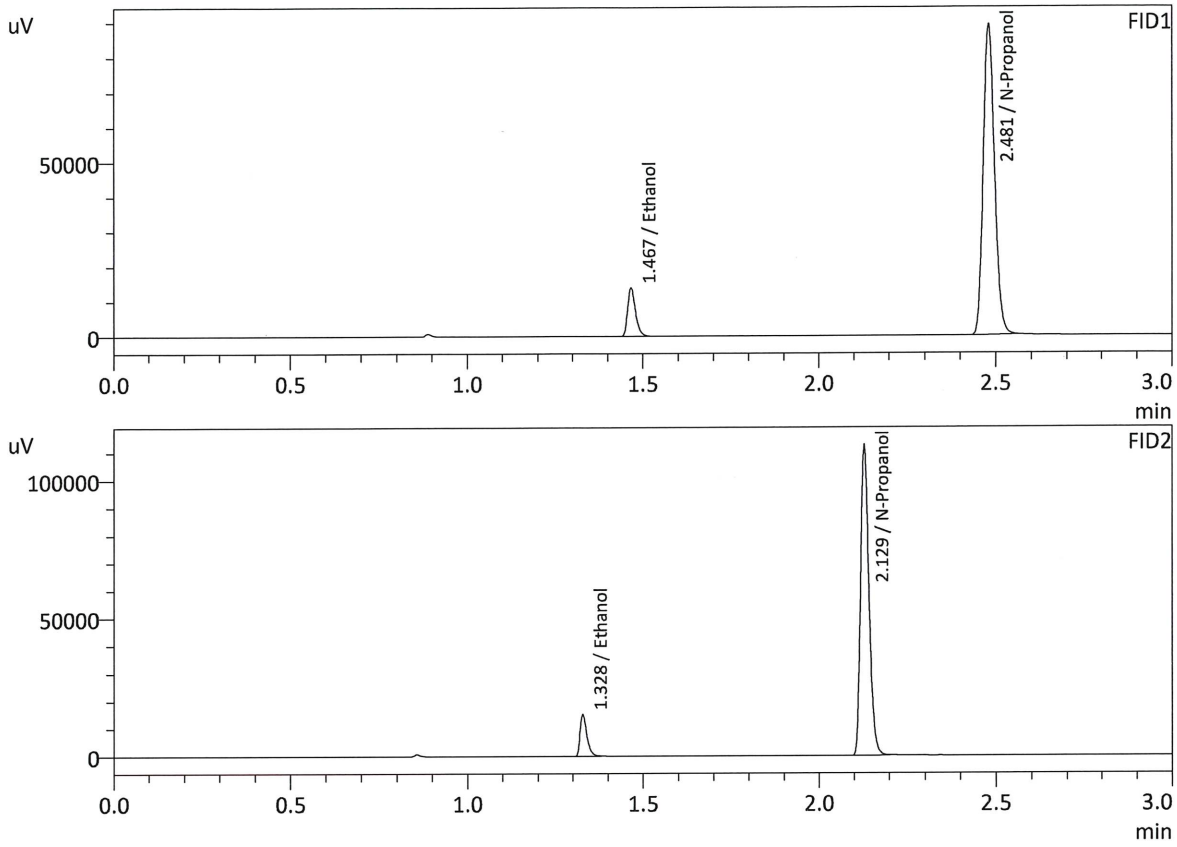
Worklist: 5784

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2022-1373	1	BCK	Alcohol Analysis
M2022-1417	2	BCK	Alcohol Analysis
M2022-1418	1	BCK	Alcohol Analysis
M2022-1419	1	BCK	Alcohol Analysis
M2022-1420	1	BCK	Alcohol Analysis
M2022-1421	1	BCK	Alcohol Analysis
M2022-1422	1	BCK	Alcohol Analysis
M2022-1436	1	BCK	Alcohol Analysis
M2022-1437	1	BCK	Alcohol Analysis
M2022-1447	2	BCK	Alcohol Analysis
M2022-1484	1	BCK	Alcohol Analysis
M2022-1485	1	BCK	Alcohol Analysis
M2022-1534	1	BCK	Alcohol Analysis
M2022-1535	1	BCK	Alcohol Analysis
M2022-1542	1	BCK	Alcohol Analysis
M2022-1547	1	BCK	Alcohol Analysis
M2022-1548	1	BCK	Alcohol Analysis
M2022-1549	1	BCK	Alcohol Analysis
M2022-1561	1	BCK	Alcohol Analysis
M2022-1578	1	BCK	Alcohol Analysis



NB

Sample Name : 0.050
Laboratory : Meridian
Injection Date : 4/15/2022 2:21:43 PM
Vial # : 1
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

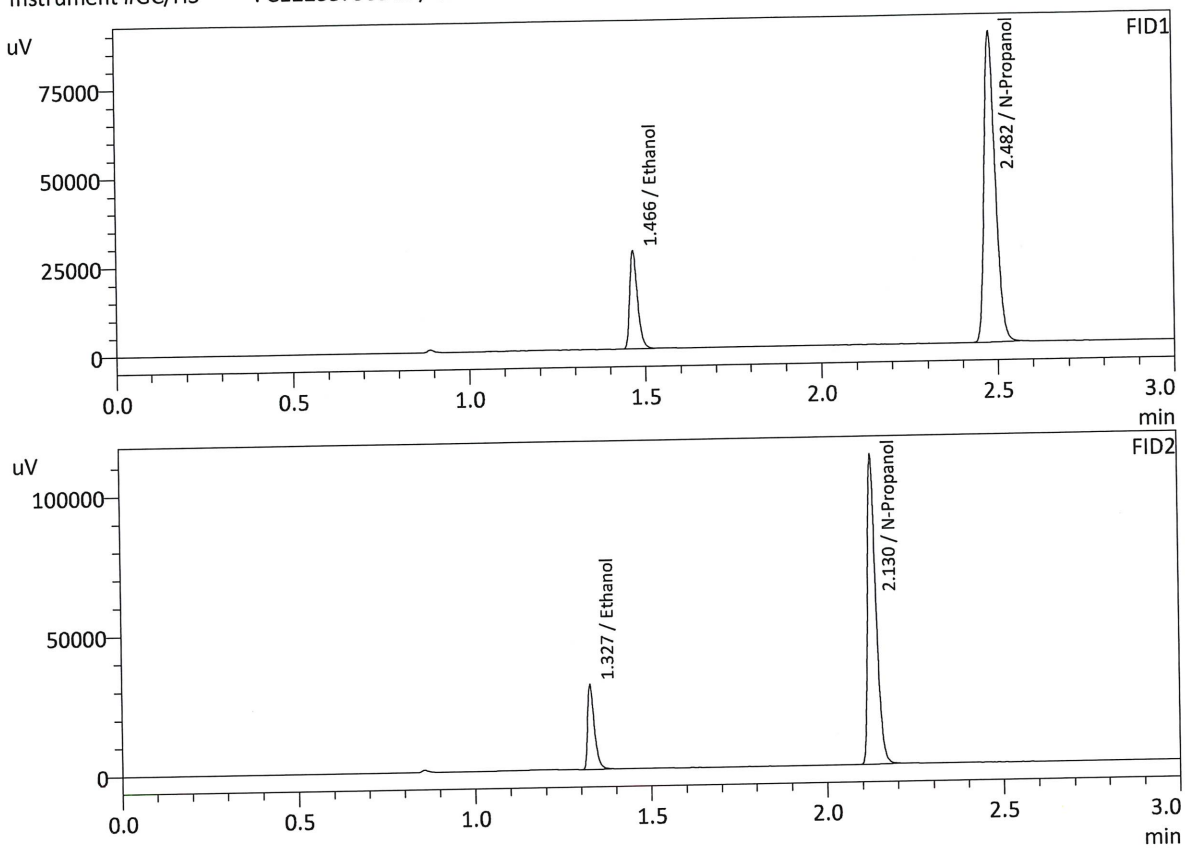
Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0534	21284	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	195922	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0525	20408	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	185254	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Sample Name : 0.100
Laboratory : Meridian
Injection Date : 4/15/2022 2:29:03 PM
Vial # : 2
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



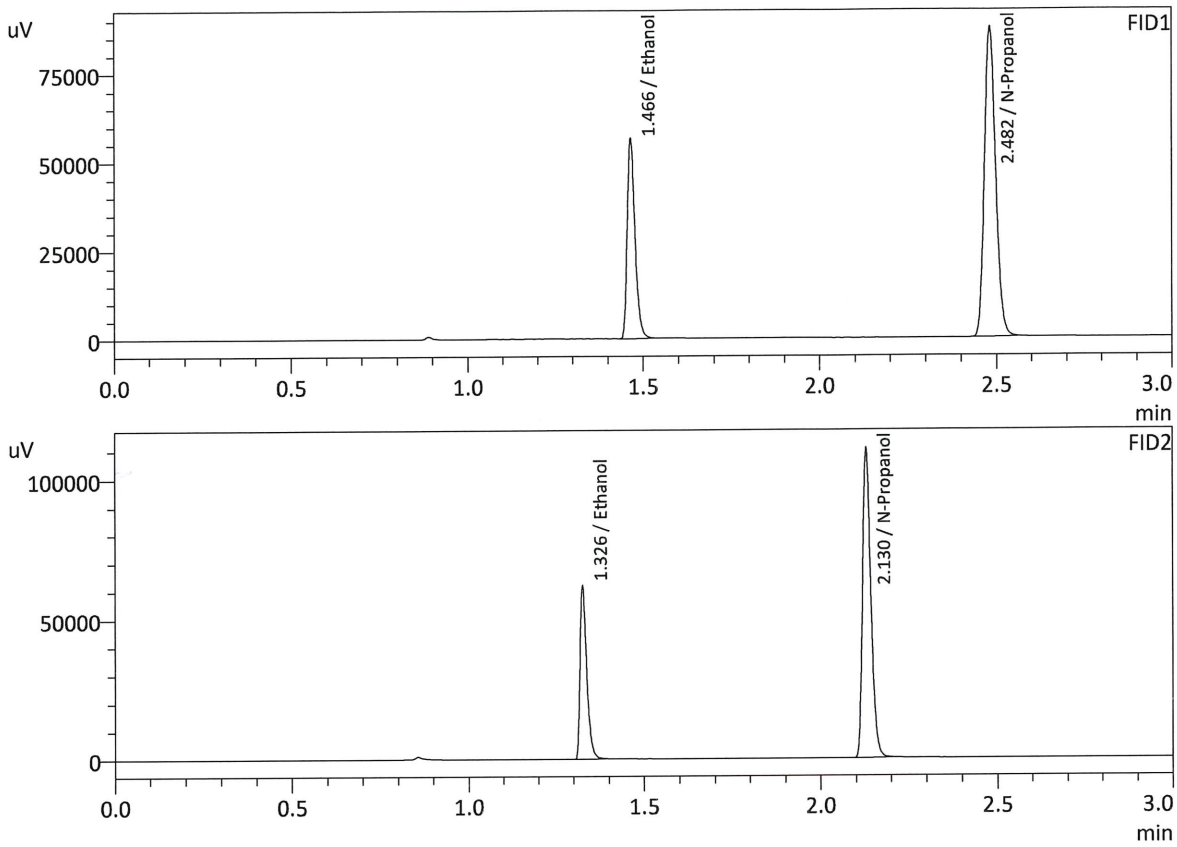
FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.1005	42167	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	192874	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.1005	40280	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	182309	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

Sample Name : 0.200
Laboratory : Meridian
Injection Date : 4/15/2022 2:36:43 PM
Vial # : 3
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

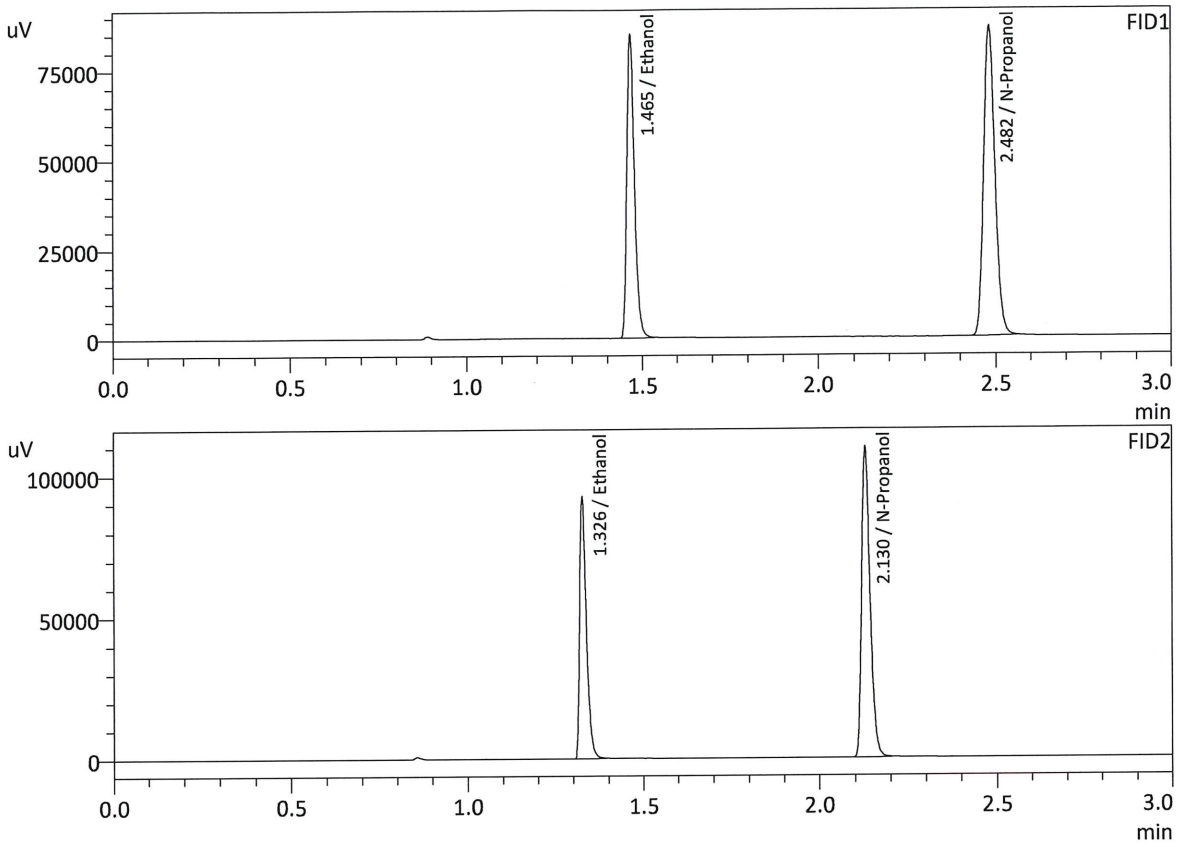
Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.1975	86235	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	193546	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.1983	81616	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	182743	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Sample Name : 0.300
Laboratory : Meridian
Injection Date : 4/15/2022 2:45:23 PM
Vial # : 4
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

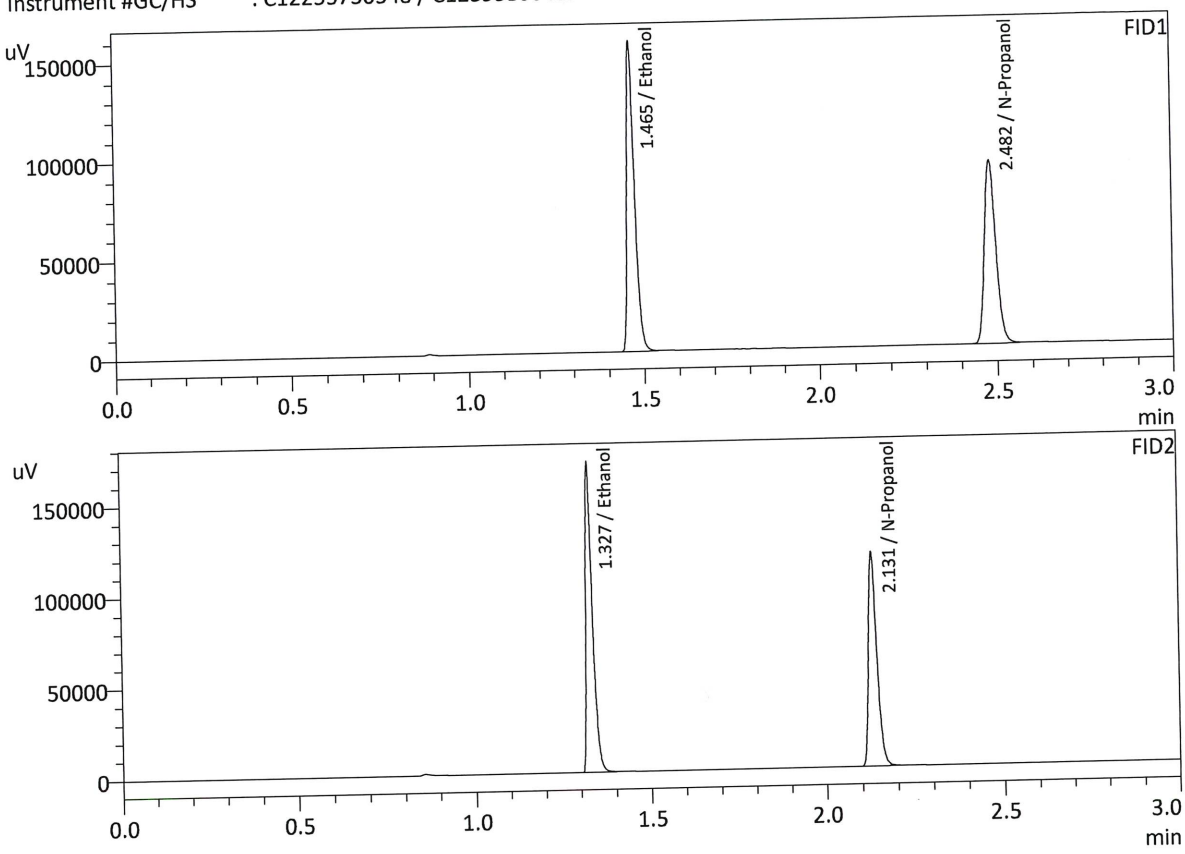
Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2946	129152	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	192021	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2957	121510	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	181021	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Sample Name : 0.500
Laboratory : Meridian
Injection Date : 4/15/2022 2:53:02 PM
Vial # : 5
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



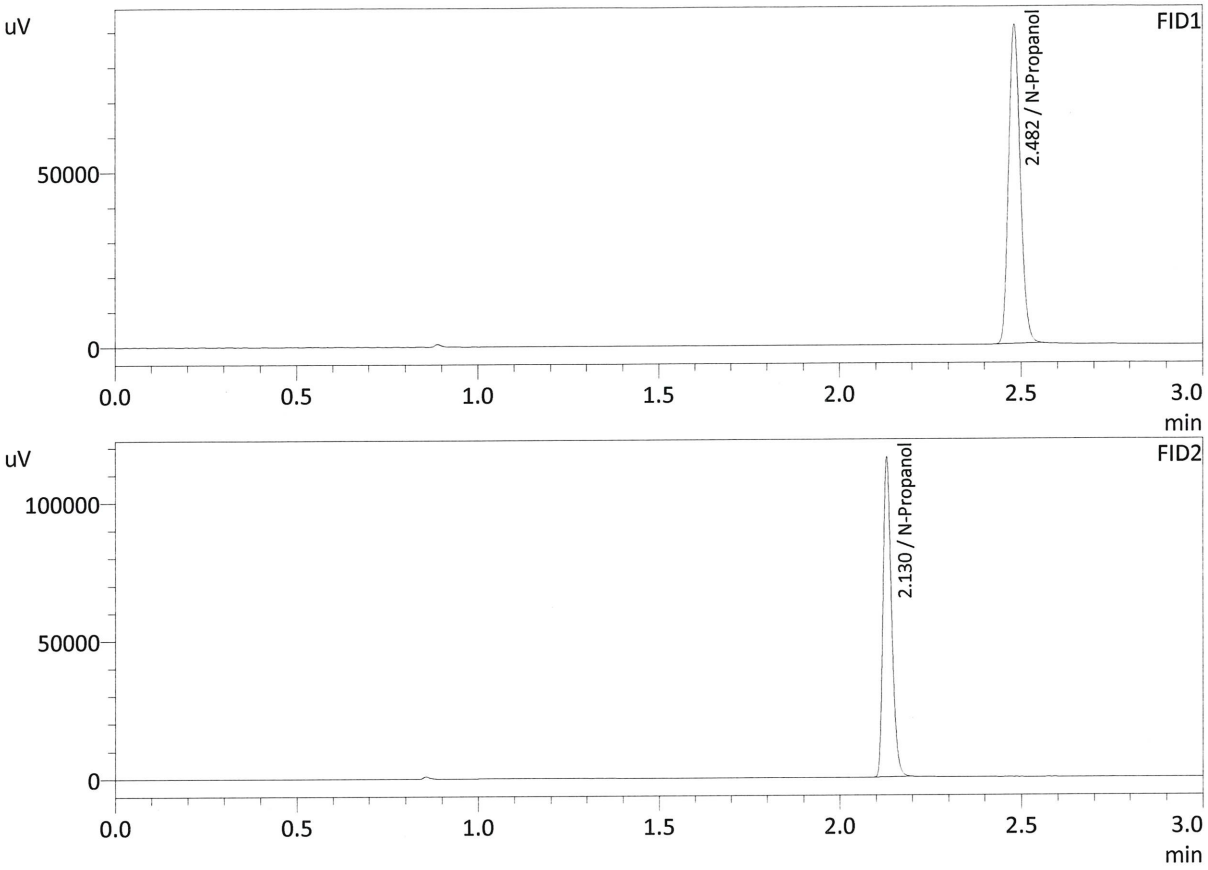
FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.5036	238439	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	205323	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.5028	222339	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	193481	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

Sample Name : INT STD BLNK BLANK NB 4/15/22
Laboratory : Meridian
Injection Date : 4/15/2022 3:01:45 PM
Vial # : 6
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	201265	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	--	--	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	190269	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Meridian Blood Alcohol Analysis Batch Table

Shimadzu GC-2030 Serial #C12255750548
Shimadzu HS-20 Serial #C12595800409
Lab Solutions Software Ver. 5.99

Vial#	Sample Name	Sample Type	Level#	Method File
1	0.050	1:Standard:(I)	1	ALCOHOL.GCM
2	0.100	1:Standard	2	ALCOHOL.GCM
3	0.200	1:Standard	3	ALCOHOL.GCM
4	0.300	1:Standard	4	ALCOHOL.GCM
5	0.500	1:Standard	5	ALCOHOL.GCM
6	INT STD BLNK	0:Unknown	0	ALCOHOL.GCM

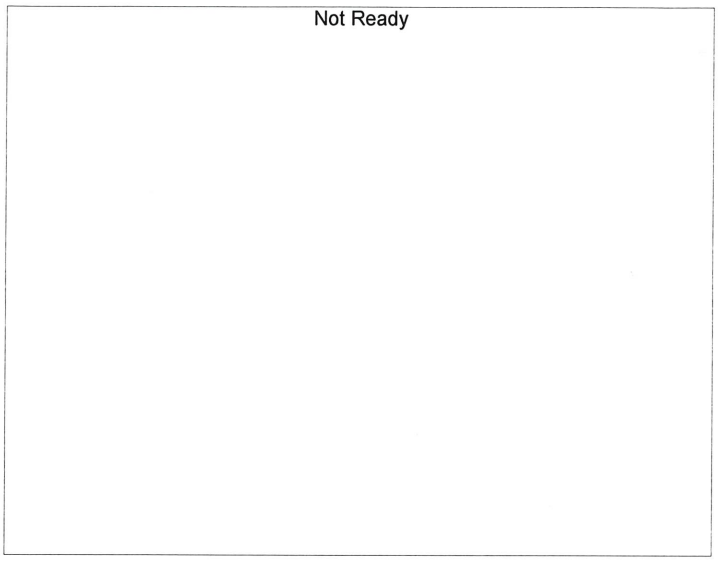
Blank

NB

Calibration Table

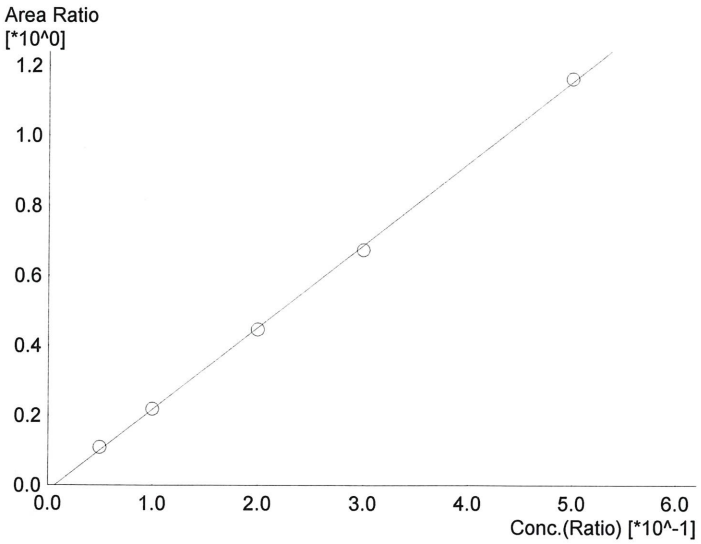
Laboratory : MERIDIAN
Instrument Name : GC-HS
Instrument Serial # : C12595800409 / C12255750548

<<Data File>>
Method File :C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Batch File :C:\LabSolutions\Data\220415\CALIBRATION\CALCURVE_TEMPLATE.gcb
Date Acquired :4/15/2022 2:53:02 PM
Date Created :4/15/2022 2:48:30 PM
Date Modified :4/15/2022 2:56:03 PM



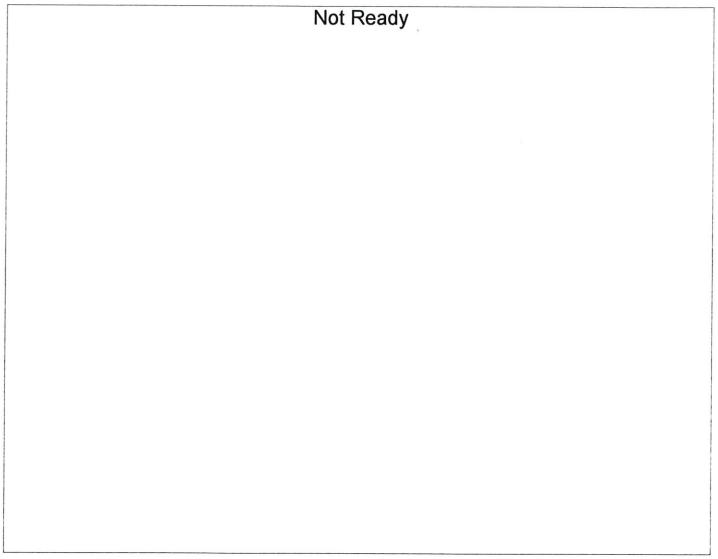
Name : Methanol
Detector Name: FID1
Function : f(x)=0*x+0
R^2 value= 0
FitType: Linear
ZeroThrough: Not Through

#	Conc.	Area	Std. Conc.



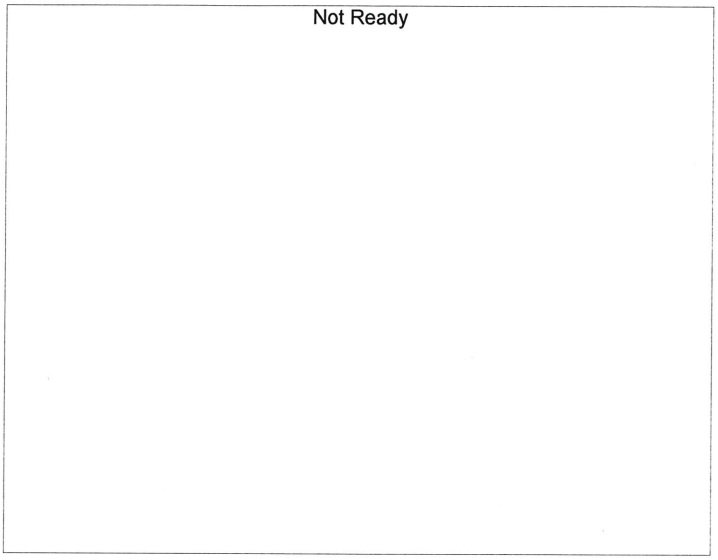
Name : Ethanol
Detector Name: FID1
Function : f(x)=2.33818*x-0.0164445
R^2 value= 0.9995301
FitType: Linear
ZeroThrough: Not Through

#	Conc.	Area	Std. Conc.
1	0.050	21284	0.0534
2	0.100	42167	0.1005
3	0.200	86235	0.1975
4	0.300	129152	0.2946
5	0.500	238439	0.5036



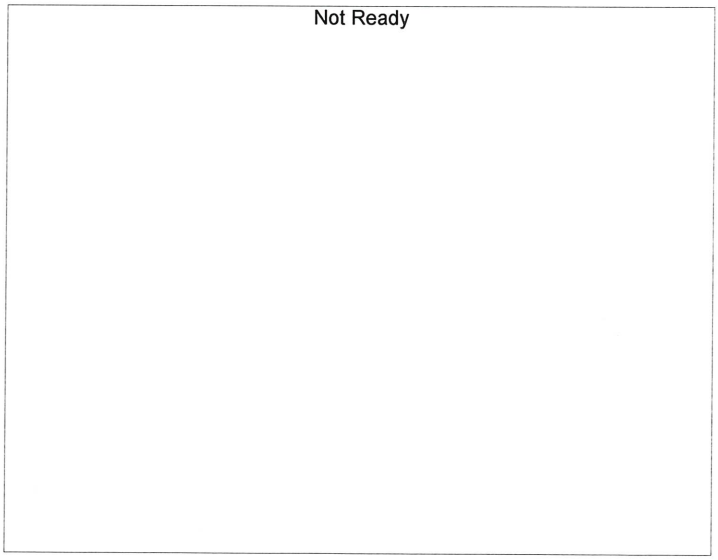
Name : Isopropyl Alcohol
Detector Name: FID1
Function : f(x)=0*x+0
R^2 value= 0
FitType: Linear
ZeroThrough: Not Through

#	Conc.	Area	Std. Conc.



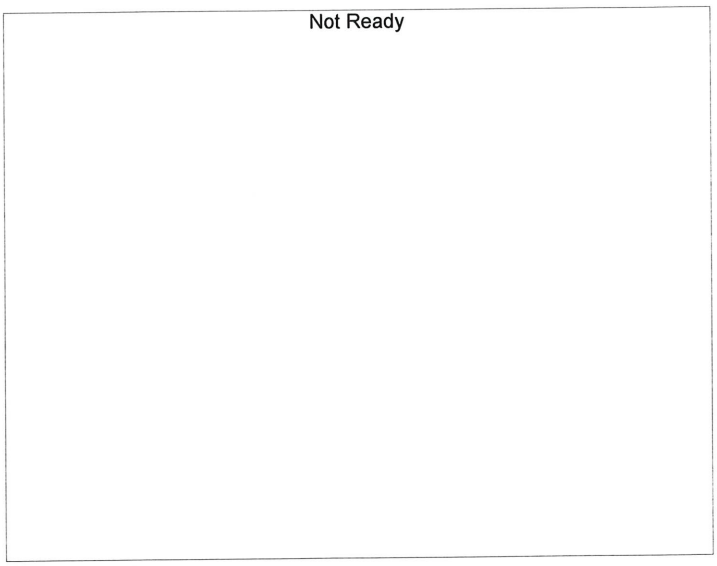
Name : Acetone
Detector Name: FID1
Function : f(x)=0*x+0
R^2 value= 0
FitType: Linear
ZeroThrough: Not Through

#	Conc.	Area	Std. Conc.



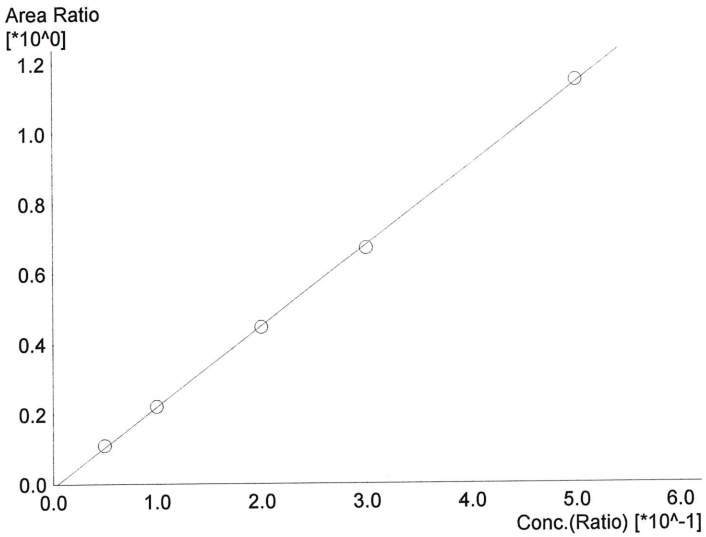
Name : Fluor. Hydrocarbon(s)
Detector Name: FID1
Function : f(x)=0*x+0
R^2 value= 0
FitType: Linear
ZeroThrough: Not Through

#	Conc.	Area	Std. Conc.



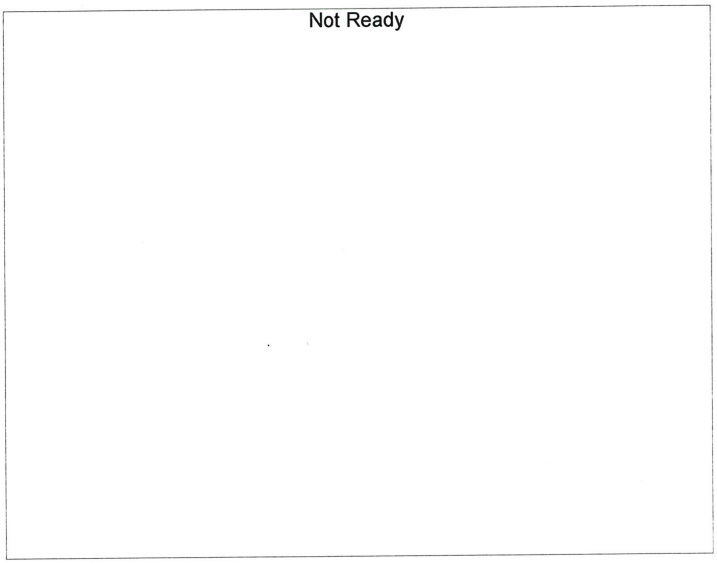
Name : Methanol
Detector Name: FID2
Function : f(x)=0*x+0
R^2 value= 0
FitType: Linear
ZeroThrough: Not Through

#	Conc.	Area	Std. Conc.



Name : Ethanol
Detector Name: FID2
Function : f(x)=2.30709*x-0.0110079
R^2 value= 0.9997200
FitType: Linear
ZeroThrough: Not Through

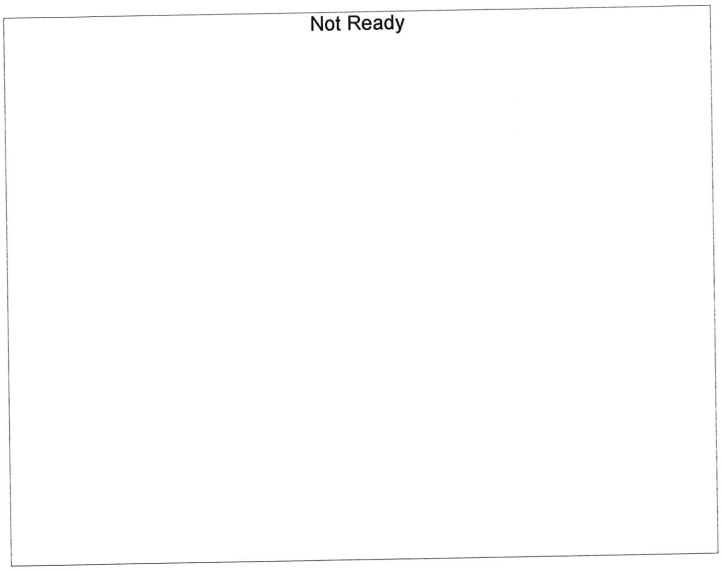
#	Conc.	Area	Std. Conc.
1	0.050	20408	0.0525
2	0.100	40280	0.1005
3	0.200	81616	0.1983
4	0.300	121510	0.2957
5	0.500	222339	0.5028



Name : Acetone
Detector Name: FID2
Function : f(x)=0*x+0
R^2 value= 0
FitType: Linear
ZeroThrough: Not Through

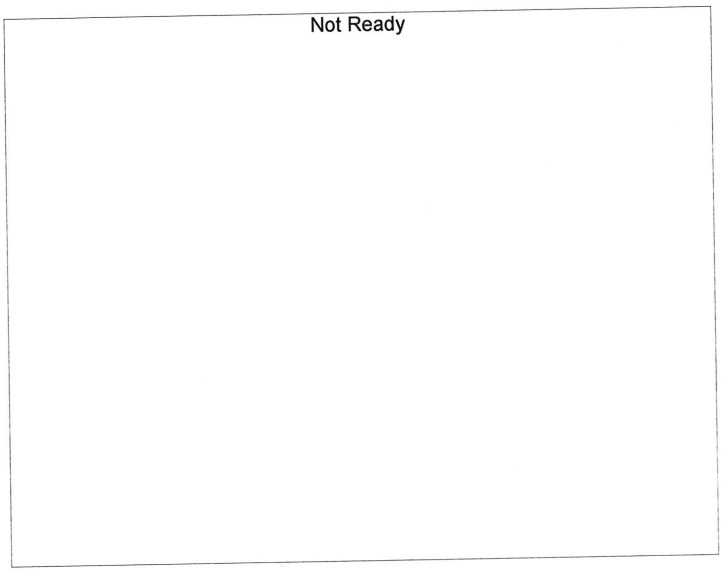
#	Conc.	Area	Std. Conc.

NB



Name : Isopropyl Alcohol
Detector Name: FID2
Function : f(x)=0*x+0
R^2 value= 0
FitType: Linear
ZeroThrough: Not Through

#	Conc.	Area	Std. Conc.

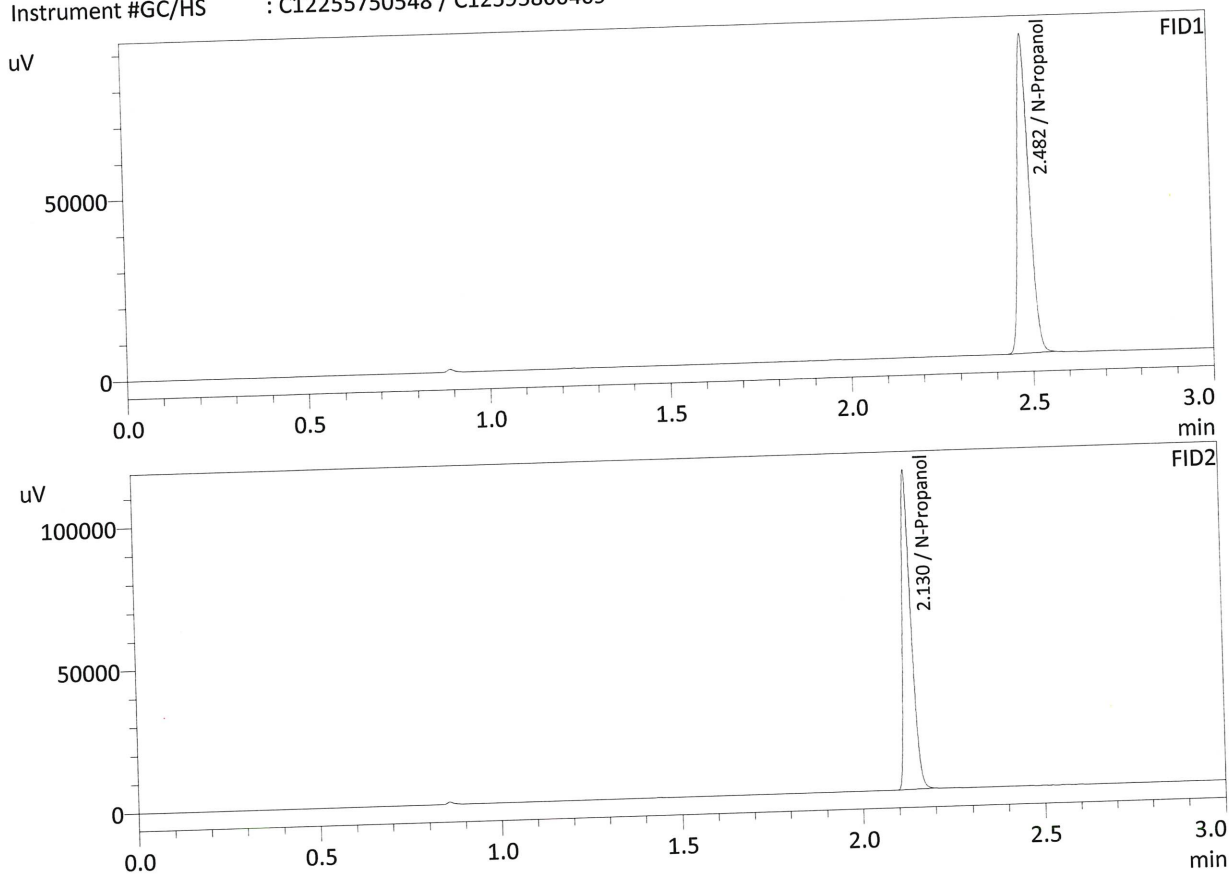


Name : Flour. Hydrocarbon(s)
Detector Name: FID2
Function : f(x)=0*x+0
R^2 value= 0
FitType: Linear
ZeroThrough: Not Through

#	Conc.	Area	Std. Conc.

NB

Sample Name : INT STD BLK 1
Laboratory : Meridian
Injection Date : 4/15/2022 4:09:58 PM
Vial # : 1
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



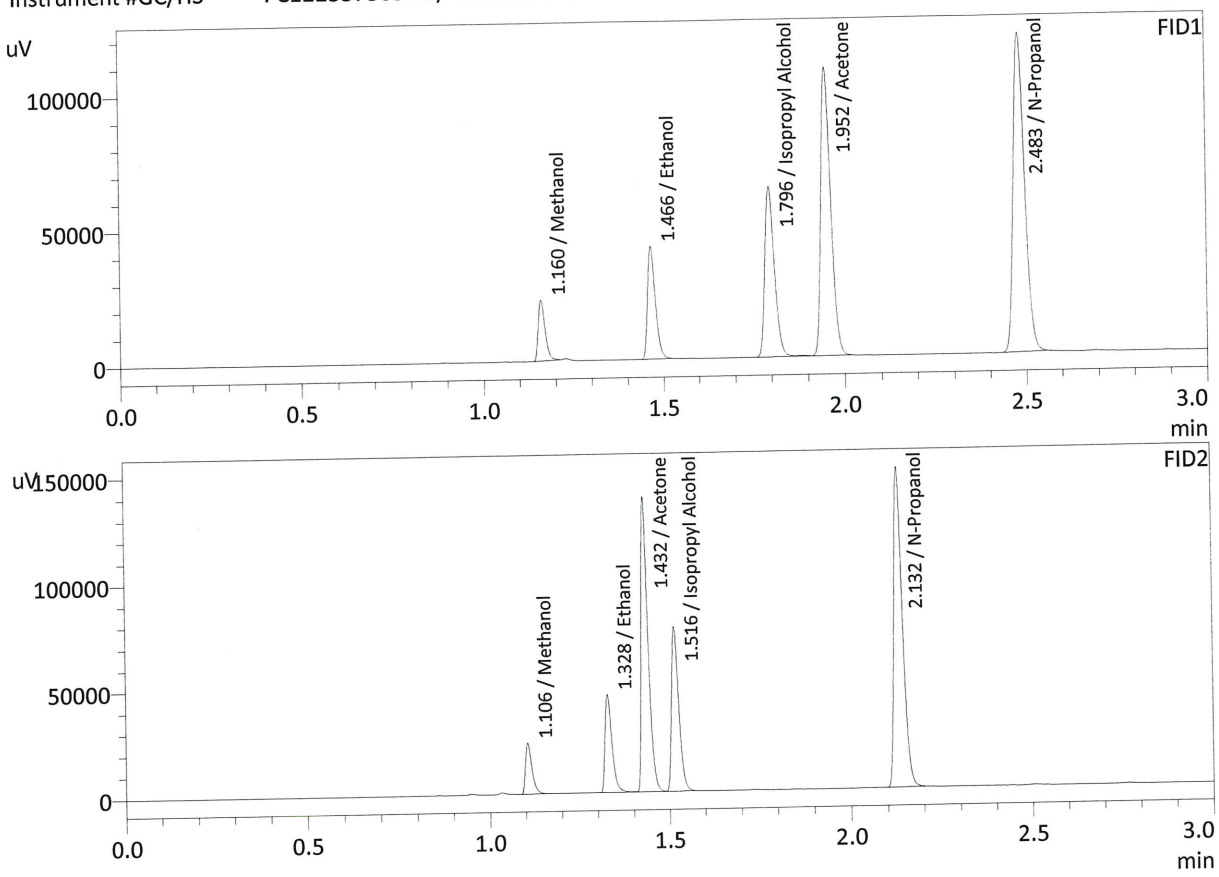
FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	195848	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	--	--	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	185300	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

Sample Name : MIXED VOLATILES FN 07101701
Laboratory : Meridian
Injection Date : 4/15/2022 4:17:18 PM
Vial # : 2
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

Name	Conc.	Area	Unit
Methanol	0.0000	30140	g/100cc
Ethanol	0.1107	63799	g/100cc
Isopropyl Alcohol	0.0000	115879	g/100cc
Acetone	0.0000	198716	g/100cc
N-Propanol	0.0000	262974	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	0.0000	29618	g/100cc
Ethanol	0.1123	61110	g/100cc
Acetone	0.0000	185108	g/100cc
Isopropyl Alcohol	0.0000	108451	g/100cc
N-Propanol	0.0000	246200	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

VOLATILES BAC CASEFILE WORKSHEET

Laboratory No.: 0.080 QA **Item #** **Analysis Date(s): 4/15/2022**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Sample A-B Difference	Over-all Mean
Sample Results	0.0788	0.0785	0.0003	0.0786	0.0025	0.0799
(g/100cc)	0.0813	0.0810	0.0003	0.0811		

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information *Instrument information is stored centrally.*

Refer to Instrument Method: Alcohol.m/.gcm, Volatiles.m/.gcm

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

Overall Mean (g/100cc)	Low	High	5% of Mean
0.079	0.075	0.083	0.004

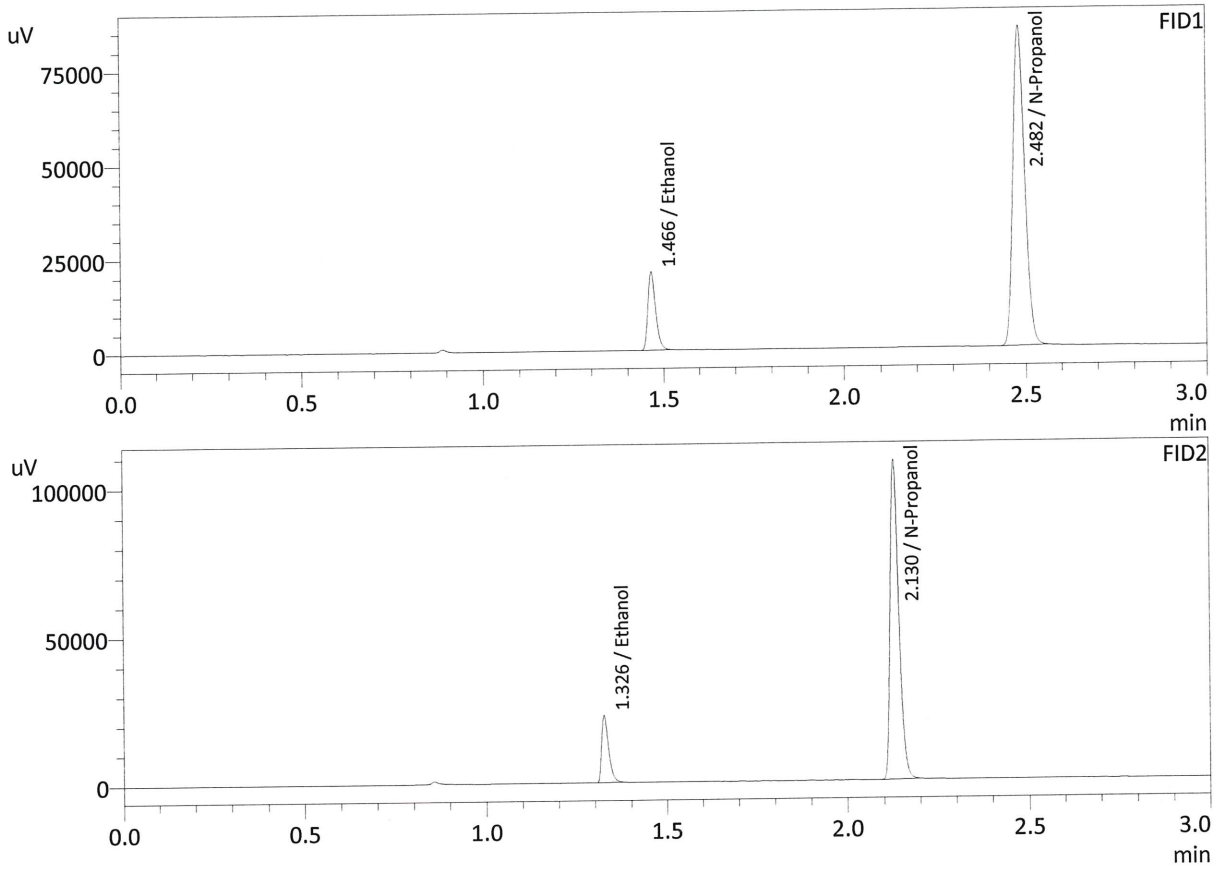
Reported Result

0.079

Calibration and control data are stored centrally.

NB

Sample Name : 0.08 QA-A
Laboratory : Meridian
Injection Date : 4/15/2022 4:41:15 PM
Vial # : 5
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

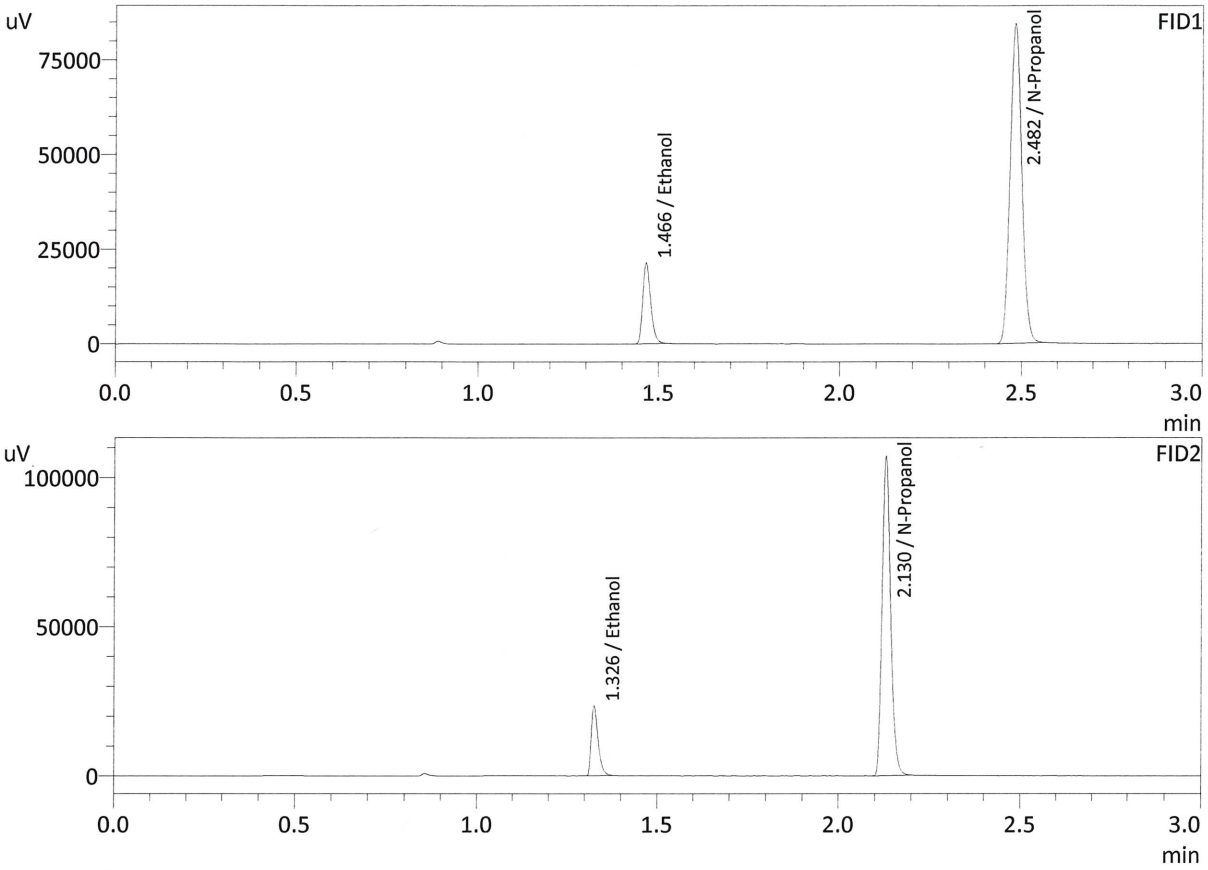
Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0788	31634	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	188443	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0785	30271	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	177861	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Sample Name : 0.08 QA-B
Laboratory : Meridian
Injection Date : 4/15/2022 4:49:18 PM
Vial # : 6
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0813	32620	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	187687	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0810	31171	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	177146	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

VOLATILES BAC CASEFILE WORKSHEET

Laboratory No.: QC1-1 **Item #** **Analysis Date(s): 4/15/2022**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Sample A-B Difference	Over-all Mean
Sample Results	0.0764	0.0761	0.0003	0.0762	0.0004	0.0764
(g/100cc)	0.0768	0.0764	0.0004	0.0766		

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information *Instrument information is stored centrally.*

Refer to Instrument Method: Alcohol.m/.gcm, Volatiles.m/.gcm

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

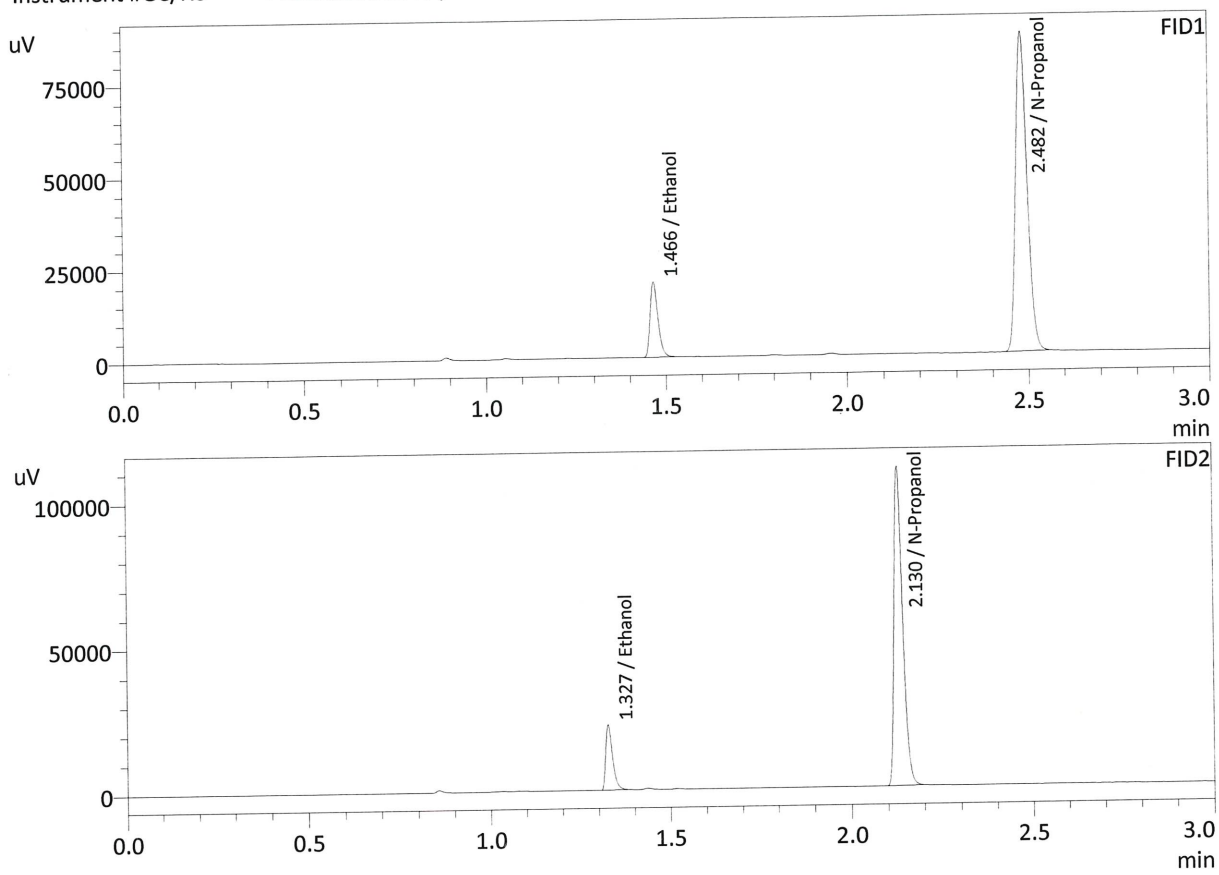
Overall Mean (g/100cc)	Low	High	5% of Mean
0.076	0.072	0.080	0.004

	Reported Result	
	0.076	

Calibration and control data are stored centrally.

NB

Sample Name : QC-1-1-A
Laboratory : Meridian
Injection Date : 4/15/2022 4:24:39 PM
Vial # : 3
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

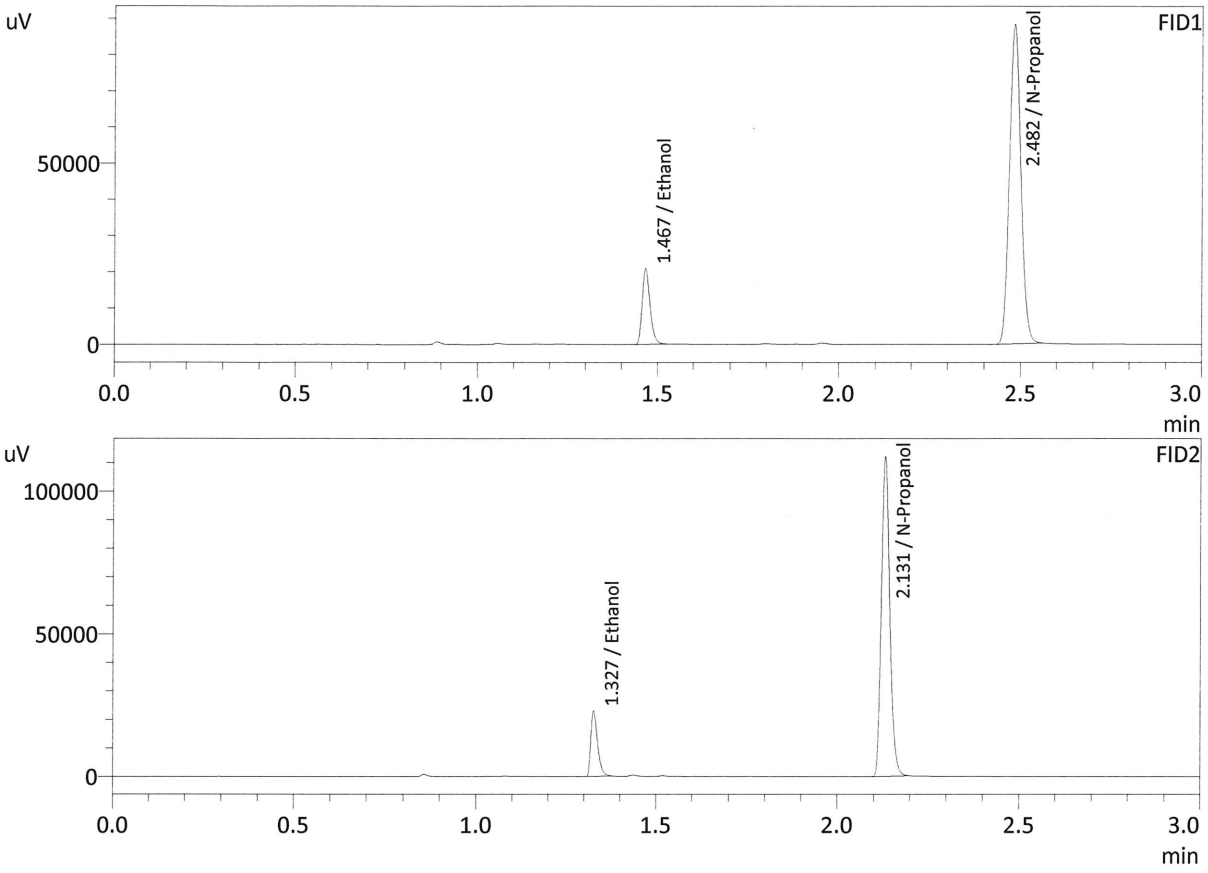
Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0764	31219	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	192250	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0761	29898	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	181580	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Sample Name : QC-1-1-B
Laboratory : Meridian
Injection Date : 4/15/2022 4:33:34 PM
Vial # : 4
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0768	32049	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	196208	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0764	30655	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	185327	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

VOLATILES BAC CASEFILE WORKSHEET

Laboratory No.: QC1-2 **Item #** **Analysis Date(s): 4/15/2022**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Sample A-B Difference	Over-all Mean
Sample Results	0.0803	0.0804	0.0001	0.0803	0.0007	0.0799
(g/100cc)	0.0795	0.0797	0.0002	0.0796		

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information *Instrument information is stored centrally.*

Refer to Instrument Method: Alcohol.m/.gcm, Volatiles.m/.gcm

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

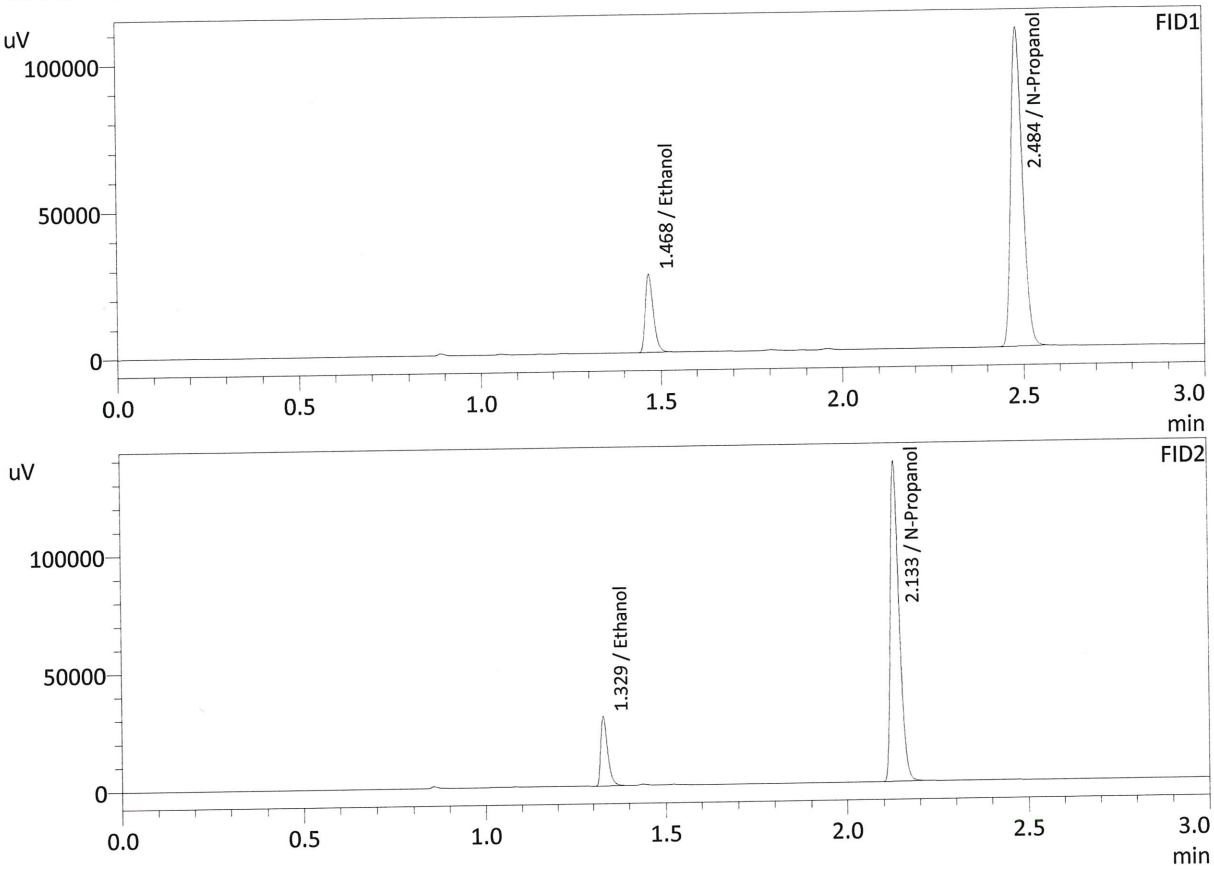
Overall Mean (g/100cc)	Low	High	5% of Mean
0.079	0.075	0.083	0.004

	Reported Result	
	0.079	

Calibration and control data are stored centrally.

NB

Sample Name : QC1-2-A
Laboratory : Meridian
Injection Date : 4/15/2022 10:23:03 PM
Vial # : 47
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

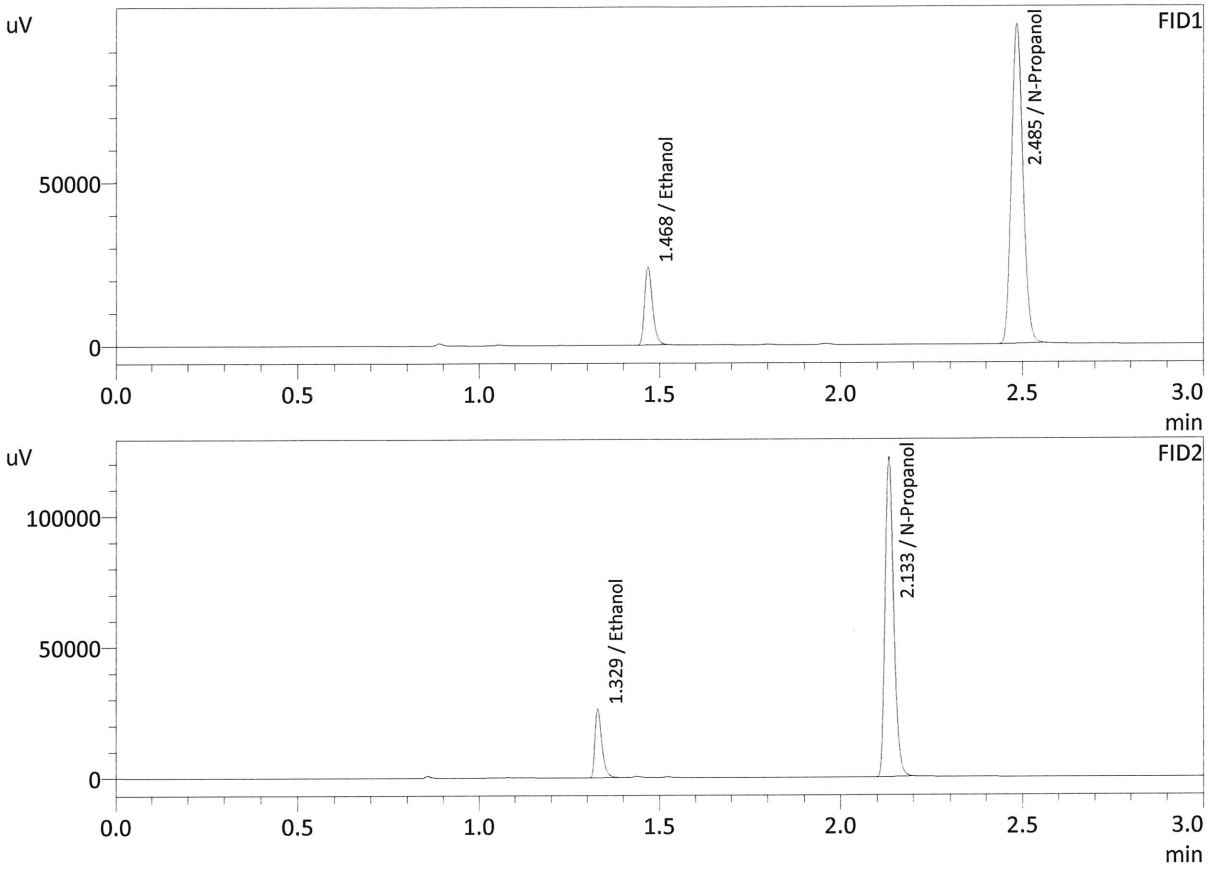
Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0803	40961	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	239048	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0804	39277	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	225024	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Sample Name : QC1-2-B
Laboratory : Meridian
Injection Date : 4/15/2022 10:31:38 PM
Vial # : 48
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0795	36440	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	215024	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.0797	35075	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	202728	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NR

VOLATILES BAC CASEFILE WORKSHEET

Laboratory No.: QC2-1 **Item #** **Analysis Date(s): 4/15/2022**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Sample A-B Difference	Over-all Mean
Sample Results	0.2105	0.2119	0.0014	0.2112	0.0012	0.2118
(g/100cc)	0.2118	0.2131	0.0013	0.2124		

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information *Instrument information is stored centrally.*

Refer to Instrument Method: Alcohol.m/.gcm, Volatiles.m/.gcm

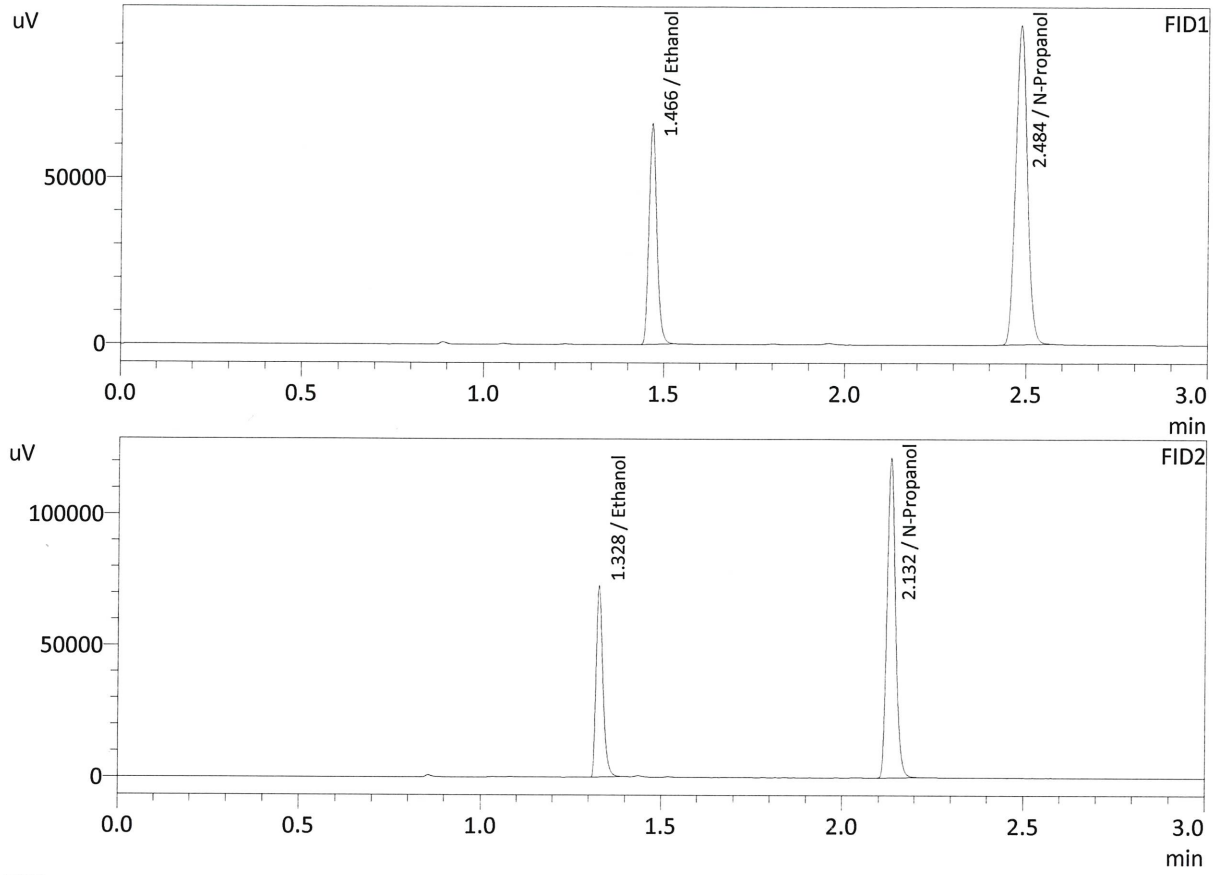
Reporting of Results **Uncertainty of Measurement (UM%): 5.00%**

Overall Mean (g/100cc)	Low	High	5% of Mean
0.211	0.200	0.222	0.011

	Reported Result	
	0.211	

Calibration and control data are stored centrally.

Sample Name : QC-2-1-A
Laboratory : Meridian
Injection Date : 4/15/2022 7:23:37 PM
Vial # : 25
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

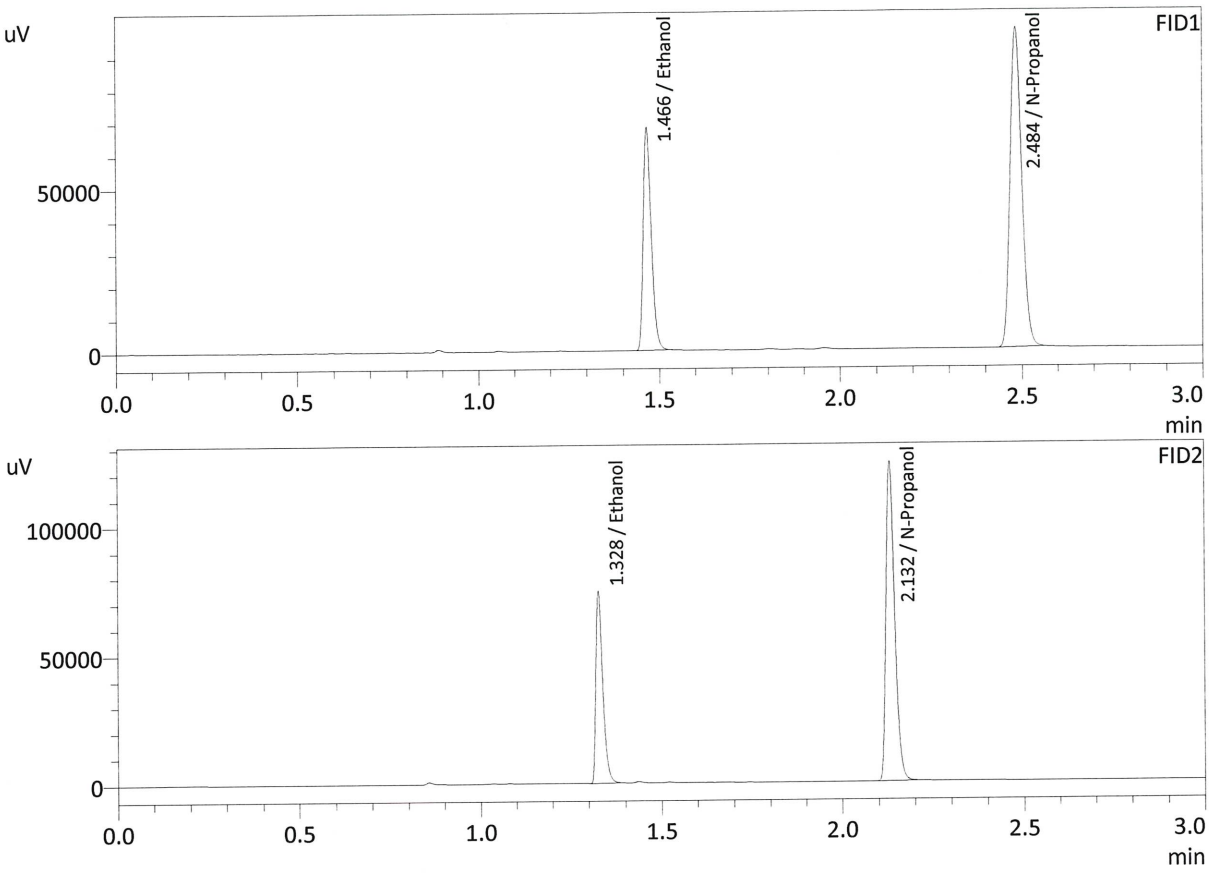
Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2105	101237	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	212763	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2119	95785	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	200384	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Sample Name : QC-2-1-B
Laboratory : Meridian
Injection Date : 4/15/2022 7:31:59 PM
Vial # : 26
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2118	103856	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	216856	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2131	98185	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	204214	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

VOLATILES BAC CASEFILE WORKSHEET

Laboratory No.: QC2-2 **Item #** **Analysis Date(s): 4/15/2022**

	Column 1 FID A	Column 2 FID B	Column Precision	Mean Value	Sample A-B Difference	Over-all Mean
Sample Results	0.2144	0.2161	0.0017	0.2152	0.0004	0.2154
(g/100cc)	0.2147	0.2165	0.0018	0.2156		

Analysis Method

Refer to Blood Alcohol Method #1

Instrument Information *Instrument information is stored centrally.*

Refer to Instrument Method: Alcohol.m/.gcm, Volatiles.m/.gcm

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

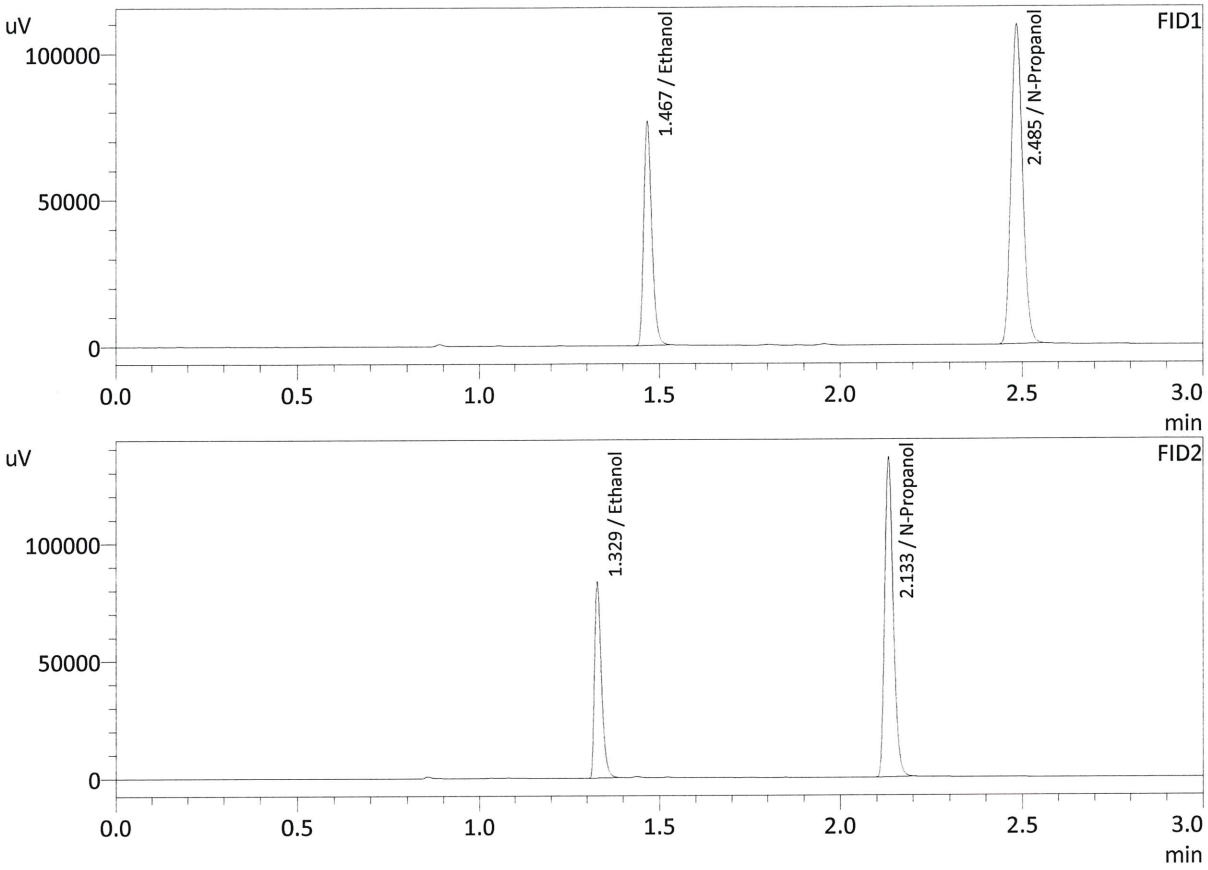
Overall Mean (g/100cc)	Low	High	5% of Mean
0.215	0.204	0.226	0.011

Reported Result

0.215

Calibration and control data are stored centrally.

Sample Name : QC2-2-A
Laboratory : Meridian
Injection Date : 4/15/2022 10:56:25 PM
Vial # : 51
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



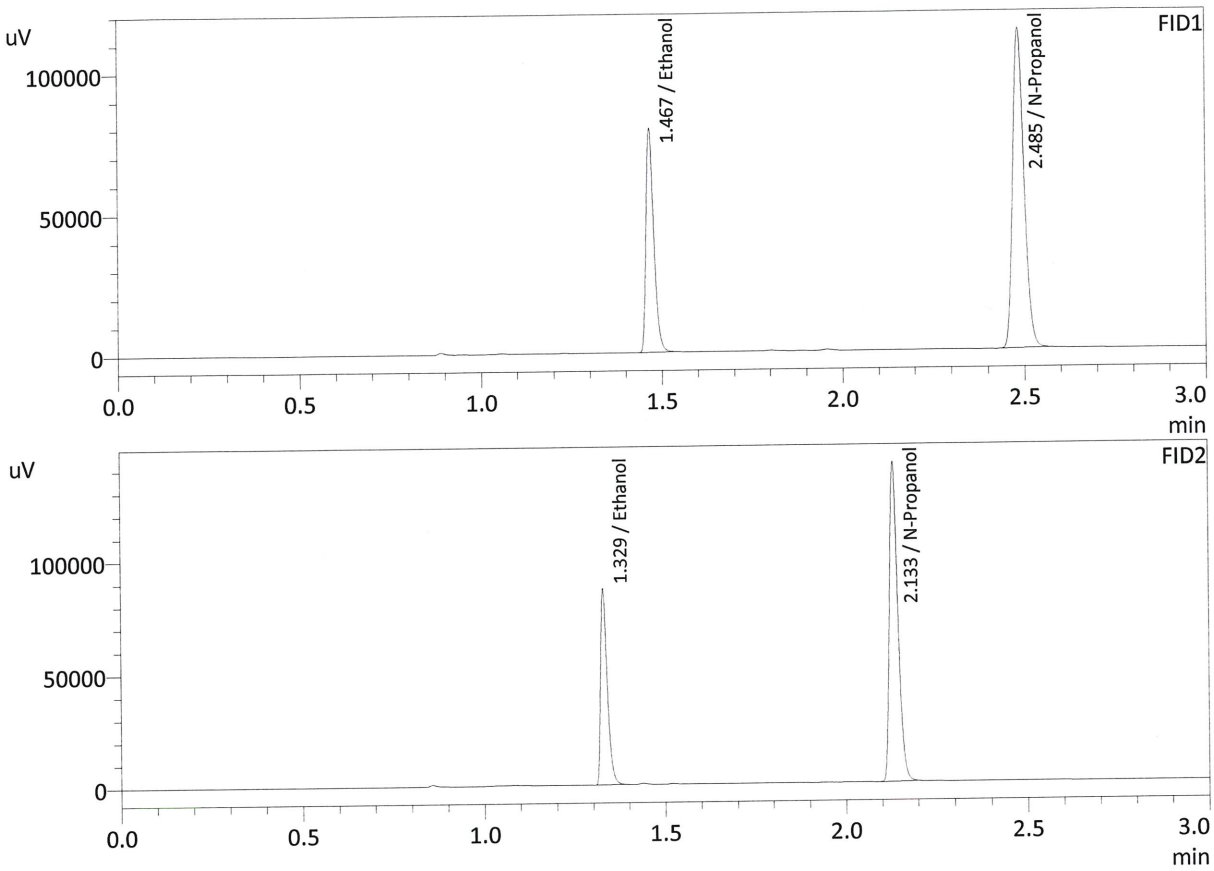
FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2144	116149	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	239525	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2161	109767	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	225059	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

Sample Name : QC2-2-B
Laboratory : Meridian
Injection Date : 4/15/2022 11:03:52 PM
Vial # : 52
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409



FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2147	120865	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	248888	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

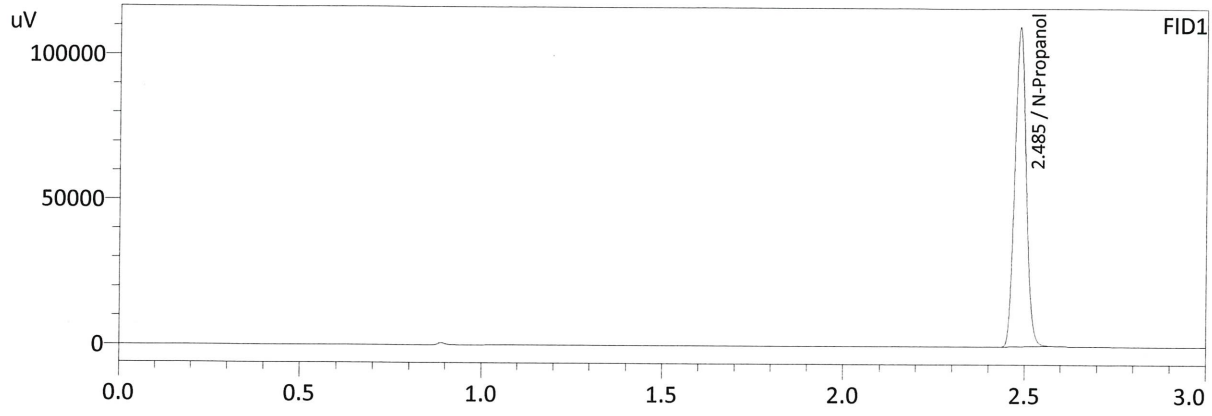
FID2

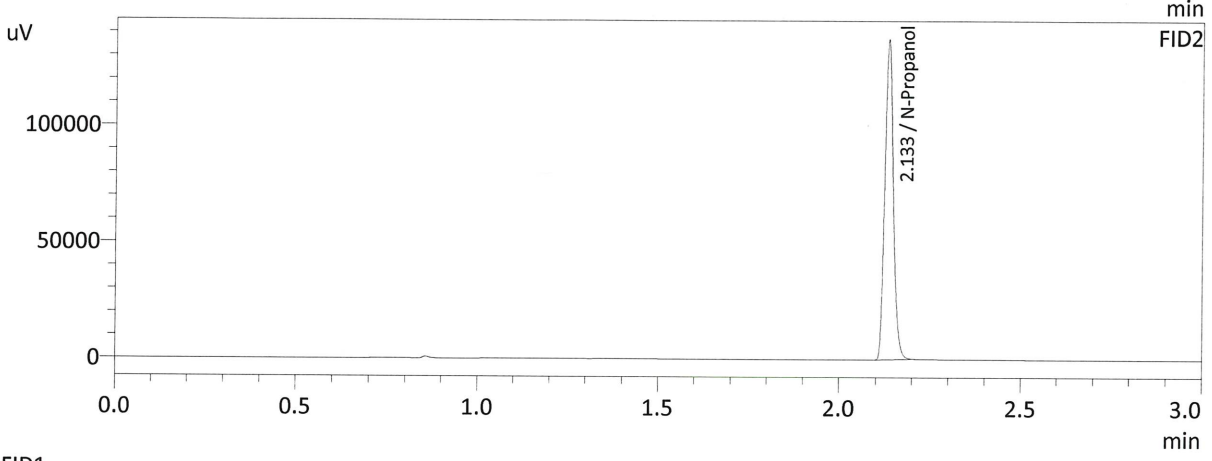
Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	0.2165	114278	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	233899	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

BLANK

Sample Name : INT STD BLNK
Laboratory : Meridian
Injection Date : 4/15/2022 11:11:39 PM
Vial # : 53
Method Filename : C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
Instrument #GC/HS : C12255750548 / C12595800409





FID1

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
Acetone	--	--	g/100cc
N-Propanol	0.0000	241586	g/100cc
Fluor. Hydrocarbon(s)	--	--	g/100cc

FID2

Name	Conc.	Area	Unit
Methanol	--	--	g/100cc
Ethanol	--	--	g/100cc
Acetone	--	--	g/100cc
Isopropyl Alcohol	--	--	g/100cc
N-Propanol	0.0000	227676	g/100cc
Flour. Hydrocarbon(s)	--	--	g/100cc

NB

Meridian Blood Alcohol Analysis Batch Table

Shimadzu GC-2030 Serial #C12255750548
Shimadzu HS-20 Serial #C12595800409
Lab Solutions Software Ver. 5.99

Vial#	Sample Name	Method File
1	INT STD BLK 1	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
2	ED VOLATILES FN 0710	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
3	QC-1-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
4	QC-1-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
5	0.08 QA-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
6	0.08 QA-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
7	M2022-1373-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
8	M2022-1373-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
9	M2022-1417-2-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
10	M2022-1417-2-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
11	M2022-1418-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
12	M2022-1418-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
13	M2022-1419-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
14	M2022-1419-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
15	M2022-1420-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
16	M2022-1420-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
17	M2022-1421-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
18	M2022-1421-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
19	M2022-1422-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
20	M2022-1422-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
21	M2022-1436-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
22	M2022-1436-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
23	M2022-1437-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
24	M2022-1437-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
25	QC-2-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
26	QC-2-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
27	M2022-1447-2-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
28	M2022-1447-2-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
29	M2022-1484-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
30	M2022-1484-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
31	M2022-1485-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
32	M2022-1485-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
33	M2022-1534-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
34	M2022-1534-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
35	M2022-1535-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
36	M2022-1535-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
37	M2022-1542-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
38	M2022-1542-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
39	M2022-1547-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
40	M2022-1547-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
41	M2022-1548-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
42	M2022-1548-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
43	M2022-1549-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
44	M2022-1549-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
45	M2022-1561-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
46	M2022-1561-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
47	QC1-2-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
48	QC1-2-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
49	M2022-1578-1-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
50	M2022-1578-1-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
51	QC2-2-A	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
52	QC2-2-B	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM
53	INT STD BLNK	C:\LabSolutions\Data\220415\CALIBRATION\ALCOHOL.GCM

Idaho State Police
Forensic Services

Request for Departure from an Analytical Method or Quality Standard

Deviation Number (assigned by QM): **BLA-22-01**

Date of Request: **1/21/2022**

Requestor/Discipline: Melissa (Nikka) Bradley/Blood Alcohol

Analytical Method/Quality Standard, Revision #: AM#1 Analysis for Volatiles by Headspace GC/ 4.3.9

Temporary or Permanent Deviation: Permanent

Scope of Deviation There is a noticeable increased drift of internal standard (n-propanol signals) from the calibrators, beginning of the run and towards the end of the sample run that is consistent in multiple batches of blood alcohol runs. Because all the samples that are analyzed are being compared to calibrators that are performed at the beginning of the run, the n-propanol signal of end samples tend to be outside or close to being outside of the +/- 20% of the mean value from the calibration curve used Despite this drift the values of known control samples are within acceptable limits.

Deviation Request

4.3.9.1.1 The average values for the internal standard will be established by averaging the IS counts throughout the calibration curve samples.

Requesting that the internal standard monitoring average be changed to average the aqueous and matrix controls within the run.

> 4.3.9.1.1 The average values for the internal standard will be established by averaging the IS counts from the aqueous control and all matrix blood control samples.

Technical Justification for Analytical Method Deviations:

The designed purpose of the internal standard monitoring is to evaluate the quality of injection of each sample. There is a gradual increase of internal standard response from the beginning of the batch (calibrators and early samples) to the end that is inherent to the current instrument set up as shown in trends from previous batches in multiple laboratories. Attempts to pre-condition/warm up the instrument using by running a pre-batch sequence utilizing old calibrator/blank samples prior to running a new calibration curve did not appear to minimize this occurrence. Furthermore, it can be seen that the drifting trend is not due to the extraction procedure because some of the later batch samples were extracted prior to the samples that are injected during the run. It is worth noting that despite this

NB

trend, the values of the known control samples are still within the specified acceptable range. By utilizing known control n-propanol signals throughout the batch, any potential drift will be taken into account while still being able to monitor a possible mis-injection or partial injection throughout the batch/sequence.

This deviation will have an expiration date of July 1st, 2022.

Technical Review

☒ Departure approved
Comments: Forms will be updated to reflect the new process concurrent with the deviation.

☐ Departure Not Approved
Comments:

Approver: Date: 1/21/22
Title: Discipline Lead

Quality Review

Quality Approver: Jason Crowe
Title: Quality Manager
Date: 01/24/2022