**Worklist: 5598**

| LAB CASE | ITEM | ITEM TYPE | DESCRIPTION | |
|----------|------|-----------|-------------|---|
| P2022-0388 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0391 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0392 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0400 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0416 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0417 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0418 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0419 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0420 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0421 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0422 | 1 | CBUK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0423 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0434 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0458 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0459 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0460 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0461 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |
| P2022-0463 | 1 | BCK | Alcohol Analysis | ‖‖‖‖‖‖‖‖‖‖‖‖ |

Case sample P2022-0265-1 from worklist 5582 was also included with this batch.

Deviation documentation added to end of central
data 02/23/2022

2-16-22 TS

02/23/22  TS

**REVIEWED**
*By Rachel Cutler at 2:01 pm, Feb 23, 2022*

# Quantitative Analysis for Ethanol & Qualitative Analysis for Other Volatiles

*Analytical Method(s):* 1.0

*Device: Hamilton MICROLAB Liquid Processor/Dilutor  Serial Number:* ML600GB9897

**Volatiles Quality Assurance Controls**

Run Date(s):

Calibration Date: (if different) 02/09/2022

Worklist #: 5598

| Control level | Expiration | Lot # | Target Value | Acceptable Range | Overall Results | |
|---|---|---|---|---|---|---|
| Level 1 | Jul-23 | 1907006 | 0.0764 | 0.0688-0.0840 | 0.0737 g/100cc | 0.0794 g/100cc |
| Level 2 | Jul-23 | 1907007 | 0.2170 | 0.1953-0.2387 | 0.2106 g/100cc | g/100cc |

| Multi-Component mixture: | Exp: | 10/24/2022 | Lot # | FN0641902 | |
|---|---|---|---|---|---|
| Curve Fit: | | Column 1 | Column2 | | |
| | | 0.99999 | 0.99998 | | ok |

**Ethanol Calibration Reference Material**

| Calibrator level | Target Value | Acceptable Range | Column 1 | Column 2 | Precision | Mean |
|---|---|---|---|---|---|---|
| 50 | 0.050 | 0.045 - 0.055 | 0.0501 | 0.0507 | 0.0006 | 0.0504 |
| 100 | 0.100 | 0.090 - 0.110 | 0.1001 | 0.0999 | 0.0002 | 0.1 |
| 200 | 0.200 | 0.180 - 0.220 | 0.2000 | 0.1995 | 0.0005 | 0.1997 |
| 300 | 0.300 | 0.270 - 0.330 | 0.2991 | 0.2991 | 0 | 0.2991 |
| 400 | 0.400 | 0.360 - 0.440 | - | - | ####### | #DIV/0! |
| 500 | 0.500 | 0.450 - 0.550 | 0.5004 | 0.5006 | 0.0002 | 0.5005 |
| Internal Standard | Average | (-) 20% | | | (+) 20% | |
| N-Propanol: | 149030.8 | 119224.6 | | | 178836.9 | |

**Aqueous Controls**

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

# Internal Standard Monitoring Worksheet

| Worklist #: | 5598 | Run Date(s): | 02/15/2022 |
|---|---|---|---|

| Internal Standard Solution: 010522 | Prep Date: 01/05/22 | Exp Date: 07/05/22 |
|---|---|---|

| Sample Name | Column 1 Value | Column 2 Value | Average |
|---|---|---|---|
| 0.080 | 142055 | 151610 | 146832.5 |
| 0.080 | 141805 | 151172 | 146488.5 |
| QC1 | 142946 | 152941 | 147943.5 |
| QC1 | 143251 | 153127 | 148189 |
| QC1 | 147098 | 157083 | 152090.5 |
| QC1 | 154682 | 165164 | 159923 |
| QC1 | | | #DIV/0! |
| QC1 | | | #DIV/0! |
| QC1 | | | #DIV/0! |
| QC2 | 141396 | 150534 | 145965 |
| QC2 | 140230 | 149398 | 144814 |
| QC2 | | | #DIV/0! |
| QC2 | | | #DIV/0! |
| QC2 | | | #DIV/0! |
| QC2 | | | #DIV/0! |

| Combined Average | (-)20% | (+)20% |
|---|---|---|
| 149030.8 | 119224.6 | 178836.9 |

=========================================================

# Calibration Table

=========================================================
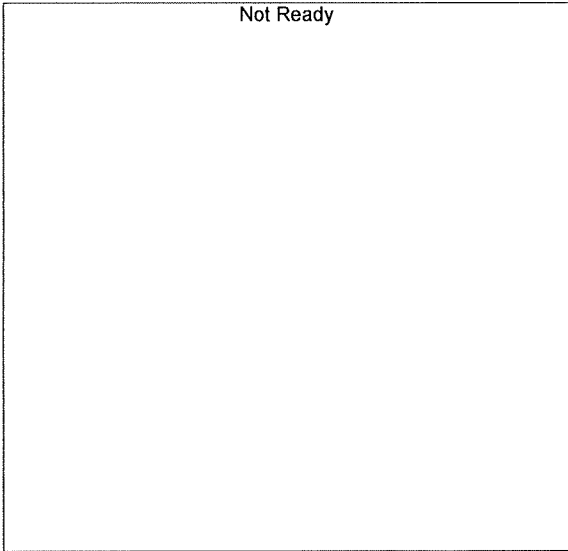
Laboratory: Pocatello
Instrument Name    : GC2030-HS20

<<Method File>>
Method File            :C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm
Date Created          :2/3/2022 1:34:42 PM
Date Modified        :2/10/2022 7:55:18 AM
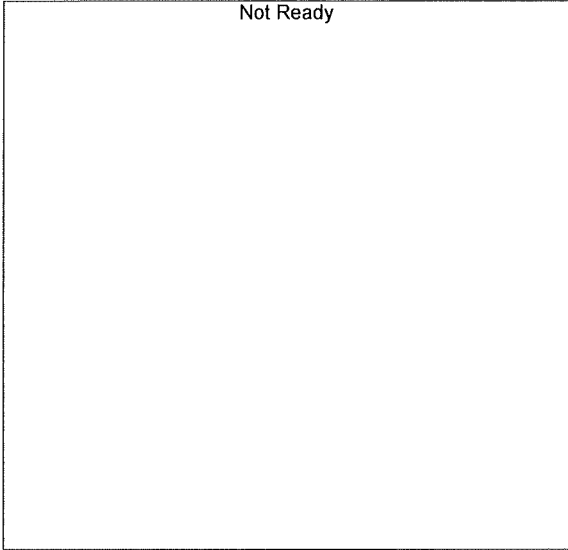
| Not Ready |
|---|

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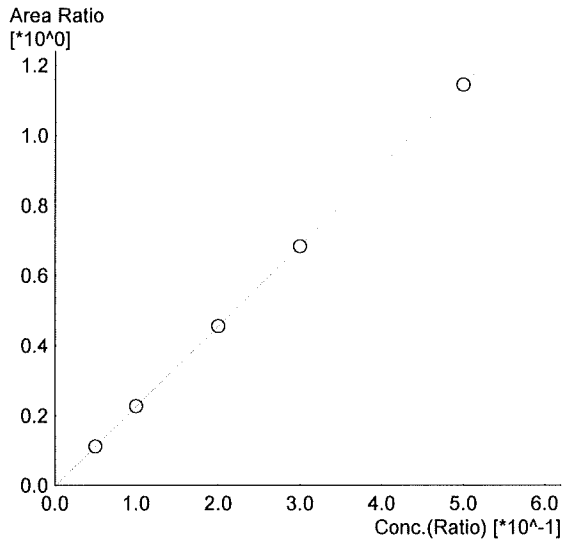Function : f(x)=0*x+0
R^2 value= 0
FitType:   Linear
ZeroThrough:   Not Through

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|---|---|---|---|

| Not Ready |
|---|

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

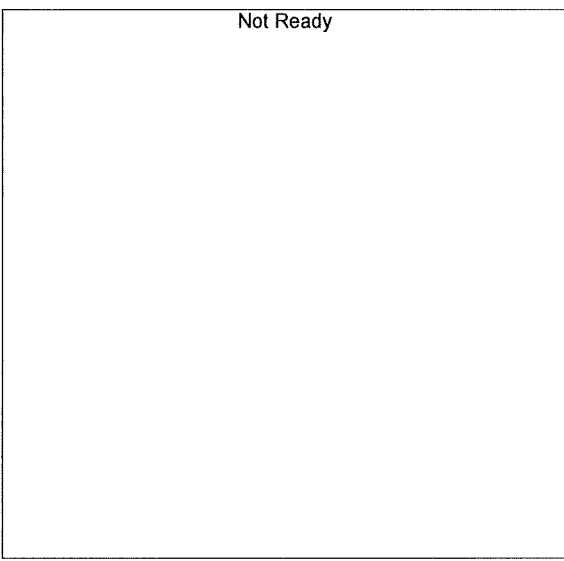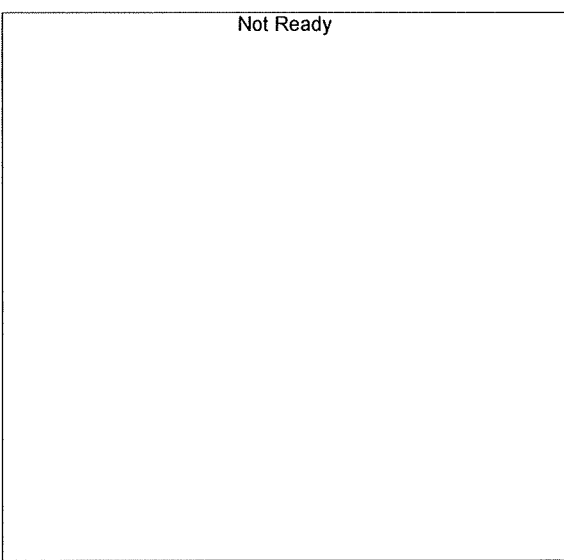| # | Conc. | Area | Std. Conc. | Data File Name |
|---|---|---|---|---|

**Name : ETHANOL**
Detector Name:  FID1
Function : f(x)=2.29252*x-0.00304395
R^2 value= 0.9999932
FitType:  Linear
ZeroThrough:  Not Through

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|-------|------|-----------|----------------|
| 1 | 0.050 | 15793 | 0.0501 | 0.050_292022_001.gcd |
| 2 | 0.100 | 32438 | 0.1001 | 0.100_292022_002.gcd |
| 3 | 0.200 | 65534 | 0.2000 | 0.200_292022_003.gcd |
| 4 | 0.300 | 99024 | 0.2991 | 0.300_292022_004.gcd |
| 5 | 0.500 | 165769 | 0.5004 | 0.500_292022_005.gcd |

Not Ready

**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. | Data File Name |
|---|-------|------|-----------|----------------|

Not Ready

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

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|-------|------|-----------|----------------|

| Not Ready |
|---|

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

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|---|---|---|---|

| Not Ready |
|---|

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

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|---|---|---|---|

| Not Ready |
|---|

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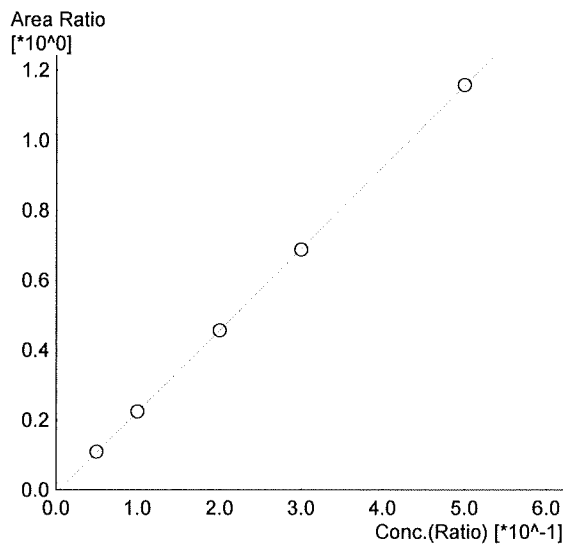R^2 value= 0
FitType:   Linear
ZeroThrough:   Not Through

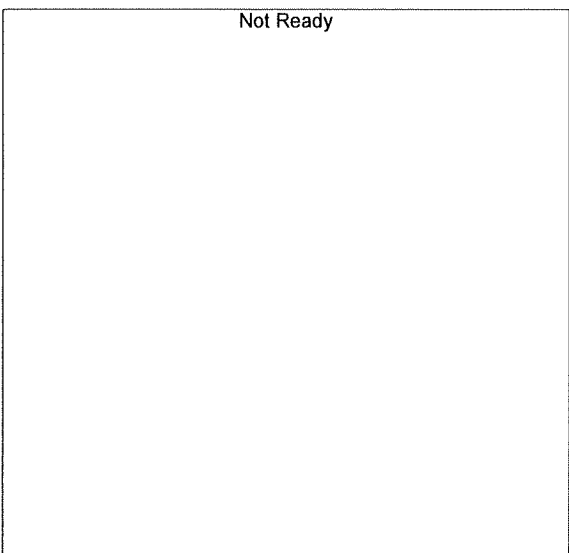| # | Conc. | Area | Std. Conc. | Data File Name |
|---|---|---|---|---|

## METHANOL

**Not Ready**

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

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|-------|------|------------|----------------|
|   |       |      |            |                |

## ETHANOL

Area Ratio
[*10^0]



Conc.(Ratio) [*10^-1]

Name : ETHANOL
Detector Name:  FID2
Function : f(x)=2.33127*x-0.00954826
R^2 value= 0.9999845
FitType:  Linear
ZeroThrough:  Not Through

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|-------|------|------------|----------------|
| 1 | 0.050 | 16116 | 0.0507 | 0.050_292022_001.gcd |
| 2 | 0.100 | 33666 | 0.0999 | 0.100_292022_002.gcd |
| 3 | 0.200 | 68890 | 0.1995 | 0.200_292022_003.gcd |
| 4 | 0.300 | 104861 | 0.2991 | 0.300_292022_004.gcd |
| 5 | 0.500 | 176701 | 0.5006 | 0.500_292022_005.gcd |

## ACETONE

**Not Ready**

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

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|-------|------|------------|----------------|
|   |       |      |            |                |

Not Ready

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. | Data File Name |
|---|-------|------|------------|----------------|

Not Ready

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

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|-------|------|------------|----------------|

Not Ready

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

| # | Conc. | Area | Std. Conc. | Data File Name |
|---|-------|------|------------|----------------|

TS

Sample Name : INT STD BLK 1
Vial # : 1
Data Filename : INT STD BLK 1_2152022_001.gcd
Method Filename : ALCOHOL.gcm
Batch Filename : 02-15-22 TS.gcb
Date Acquired : 2/15/2022 12:21:50 PM
Date Processed : 2/16/2022 7:31:02 AM
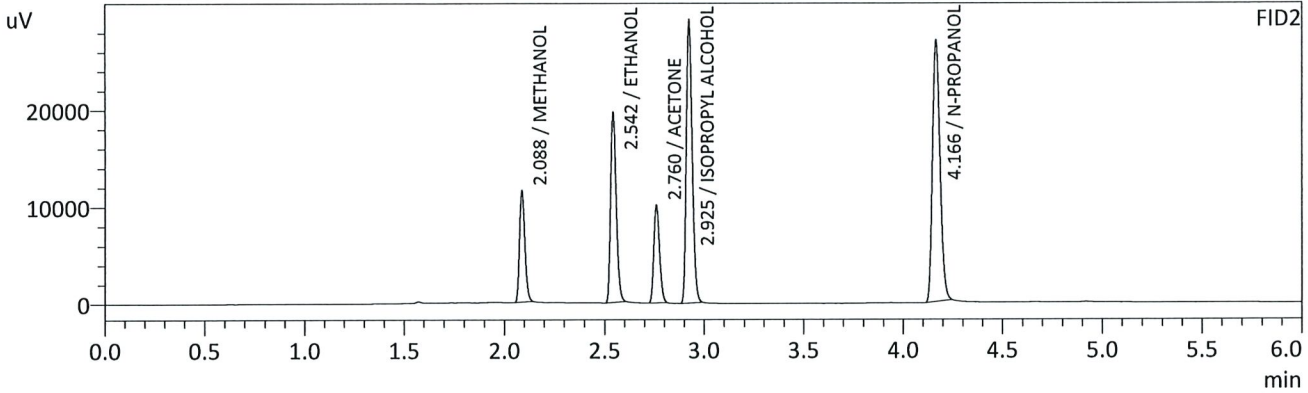C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm
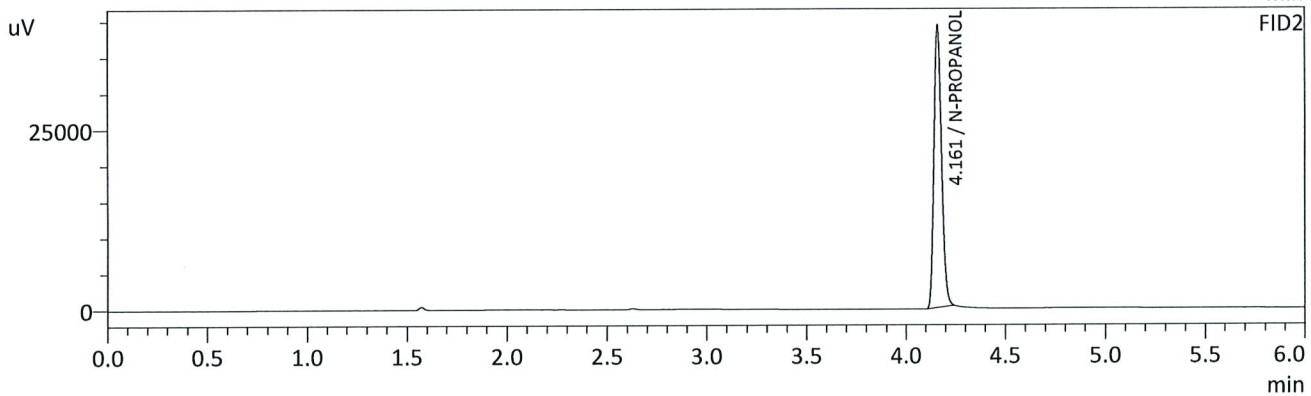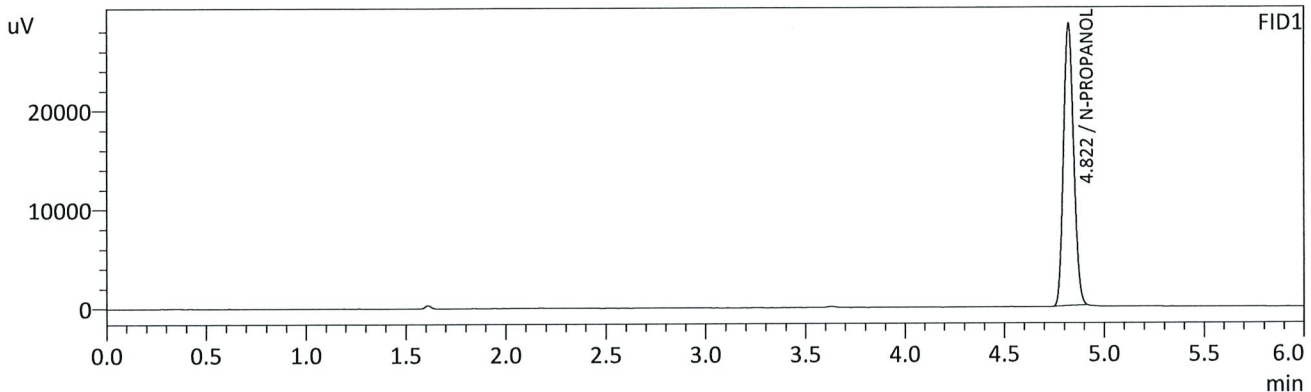


**FID1**

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 100475 | 28490 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

**FID2**

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 104125 | 39151 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

TS

Sample Name : MULTI-COMP MIX
Vial # : 2
Data Filename : MULTI-COMP MIX_2152022_002.gcd
Method Filename : ALCOHOL.gcm
Batch Filename : 02-15-22 TS.gcb
Date Acquired : 2/15/2022 12:31:19 PM
Date Processed : 2/16/2022 7:31:03 AM
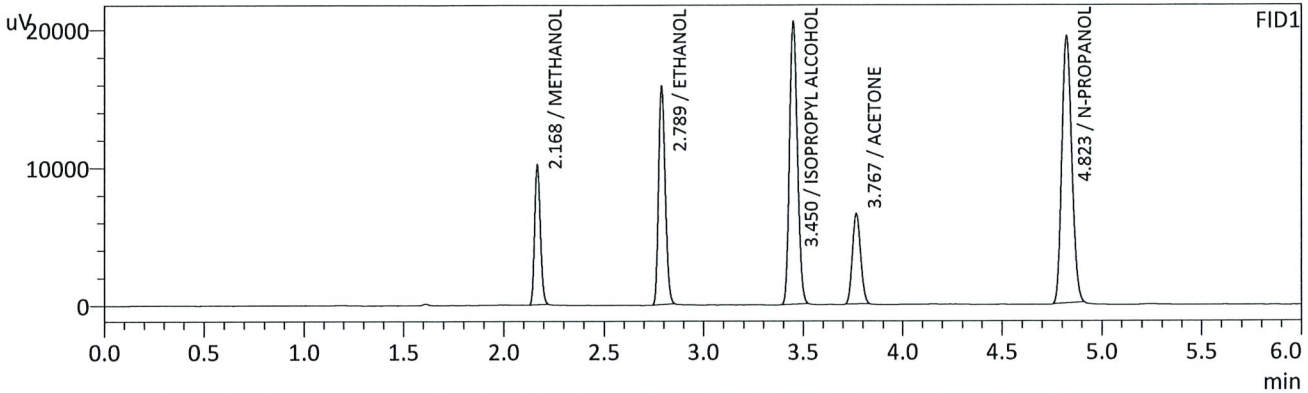C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm



FID1

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| METHANOL | 0.0000 | g/100cc | 20274 | 10111 |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.2364 | g/100cc | 36283 | 15772 |
| ISOPROPYL ALCOHOL | 0.0000 | g/100cc | 56709 | 20389 |
| ACETONE | 0.0000 | g/100cc | 18545 | 6500 |
| N-PROPANOL | 0.0000 | g/100cc | 67299 | 19330 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | 0.0000 | g/100cc | 21258 | 11447 |
| ETHANOL | 0.2369 | g/100cc | 38451 | 19488 |
| ACETONE | 0.0000 | g/100cc | 20041 | 10072 |
| ISOPROPYL ALCOHOL | 0.0000 | g/100cc | 60704 | 29090 |
| N-PROPANOL | 0.0000 | g/100cc | 70825 | 26950 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

Sample Name      : INT STD BLK 2
Vial #           : 3
Data Filename    : INT STD BLK 2_2152022_003.gcd
Method Filename  : ALCOHOL.gcm
Batch Filename   : 02-15-22 TS.gcb
Date Acquired    : 2/15/2022 12:40:39 PM
Date Processed   : 2/16/2022 7:31:04 AM
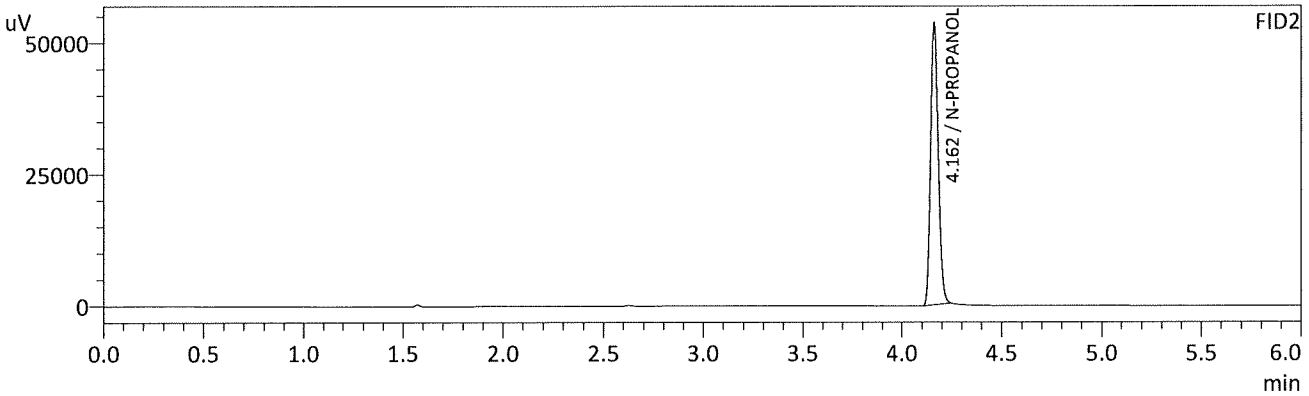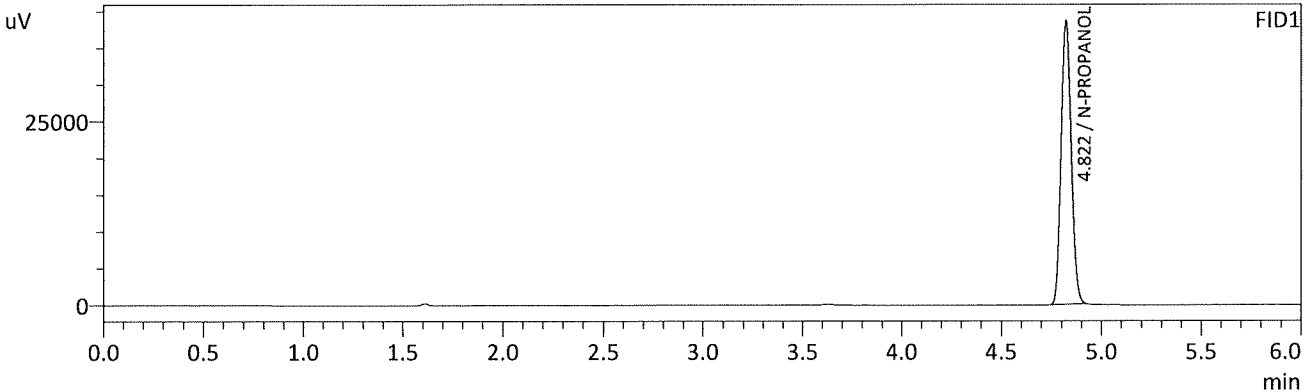C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm



FID1

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 135448 | 38538 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 141719 | 53431 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

# VOLATILES BAC CASEFILE WORKSHEET

**Laboratory No.: QC 1-1**     Item #     **Analysis Date(s): 2/15/2022**

| | Column 1 FID A | Column 2 FID B | Column Precision | Mean Value | Sample A-B Difference | Over-all Mean |
|---|---|---|---|---|---|---|
| Sample Results (g/100cc) | 0.0740 | 0.0735 | 0.0005 | 0.0737 | 0.0001 | 0.0737 |
| | 0.0739 | 0.0734 | 0.0005 | 0.0736 | | |

## 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%
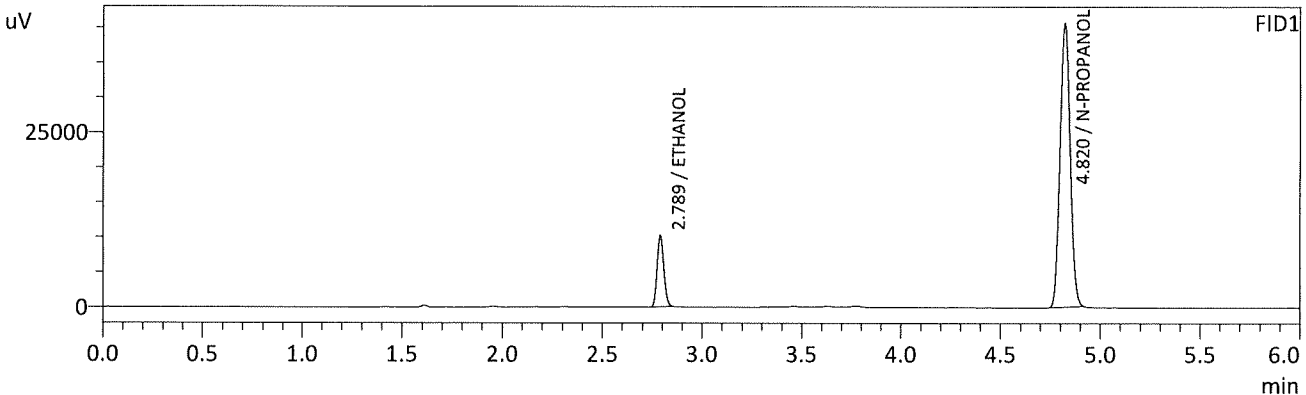
| Overall Mean (g/100cc) | Low | High | 5% of Mean |
|---|---|---|---|
| 0.073 | 0.069 | 0.077 | 0.004 |

| | Reported Result | |
|---|---|---|
| | 0.073 | |

*Calibration and control data are stored centrally.*

Sample Name      : QC-1-1-A
Vial #      : 4
Data Filename      : QC-1-1-A_2152022_004.gcd
Method Filename      : ALCOHOL.gcm
Batch Filename      : 02-15-22 TS.gcb
Date Acquired      : 2/15/2022 12:50:27 PM
Date Processed      : 2/16/2022 7:31:06 AM
C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm
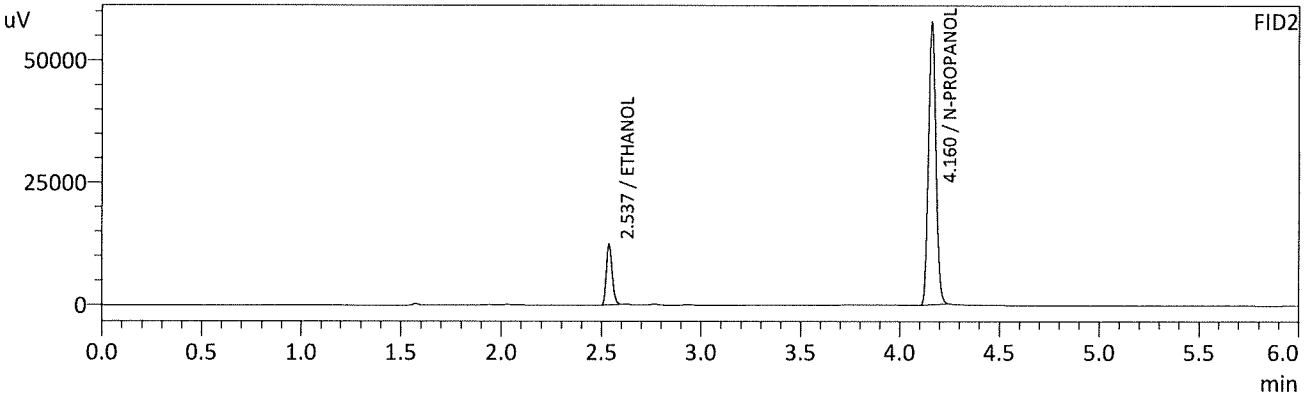


FID1

| Name | Conc. | Unit | Area | Height |
|---|---|---|---|---|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.0740 | g/100cc | 23840 | 10174 |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 142946 | 40489 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|---|---|---|---|---|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | 0.0735 | g/100cc | 24747 | 12374 |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 152941 | 57646 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

Sample Name          : QC-1-1-B
Vial #               : 5
Data Filename        : QC-1-1-B_2152022_005.gcd
Method Filename      : ALCOHOL.gcm
Batch Filename       : 02-15-22 TS.gcb
Date Acquired        : 2/15/2022 12:59:54 PM
Date Processed       : 2/16/2022 7:31:07 AM
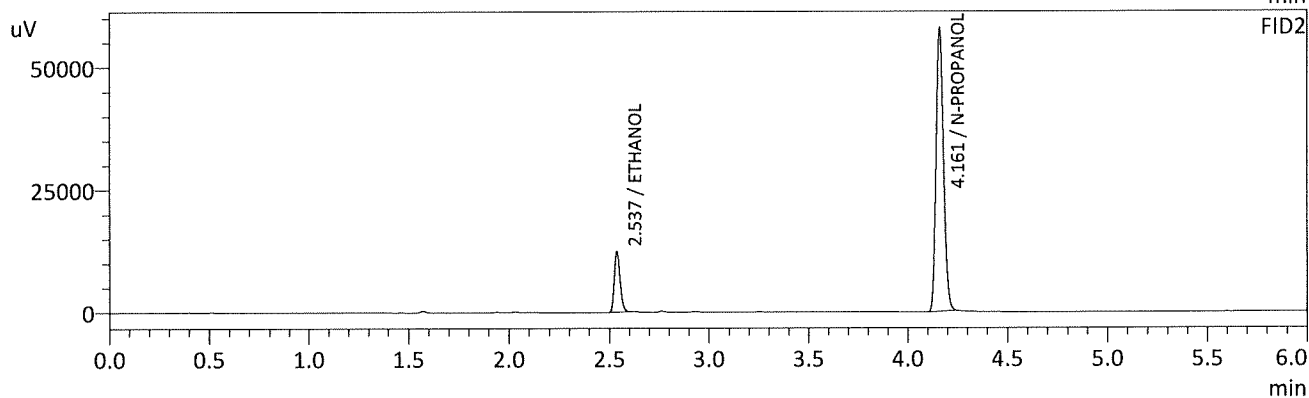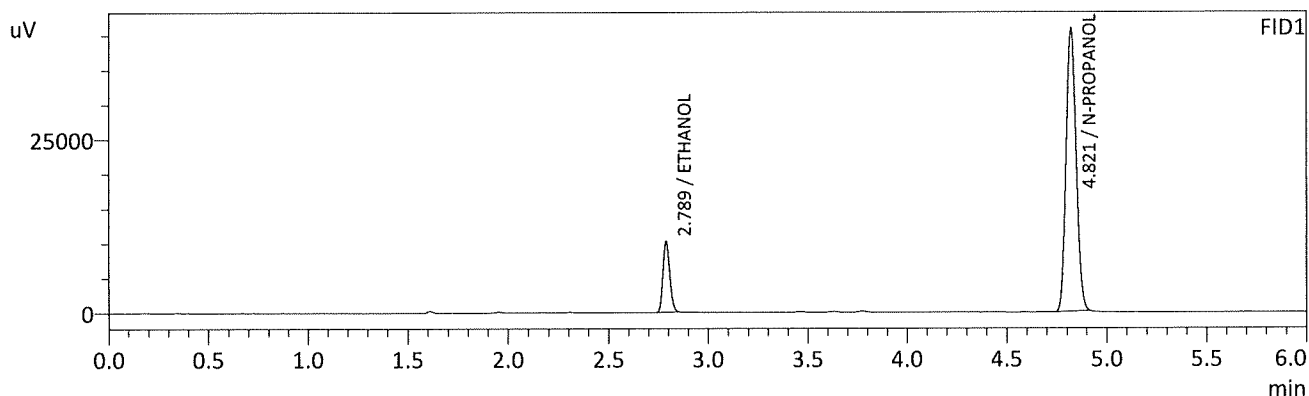C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm

FID1

FID2

FID1

| Name | Conc. | Unit | Area | Height |
|---|---|---|---|---|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.0739 | g/100cc | 23835 | 10176 |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 143251 | 40628 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

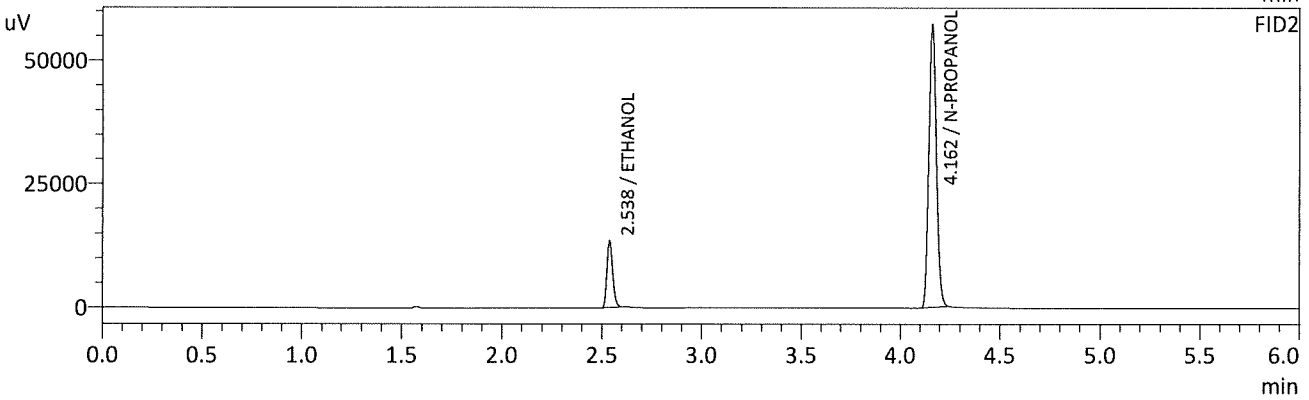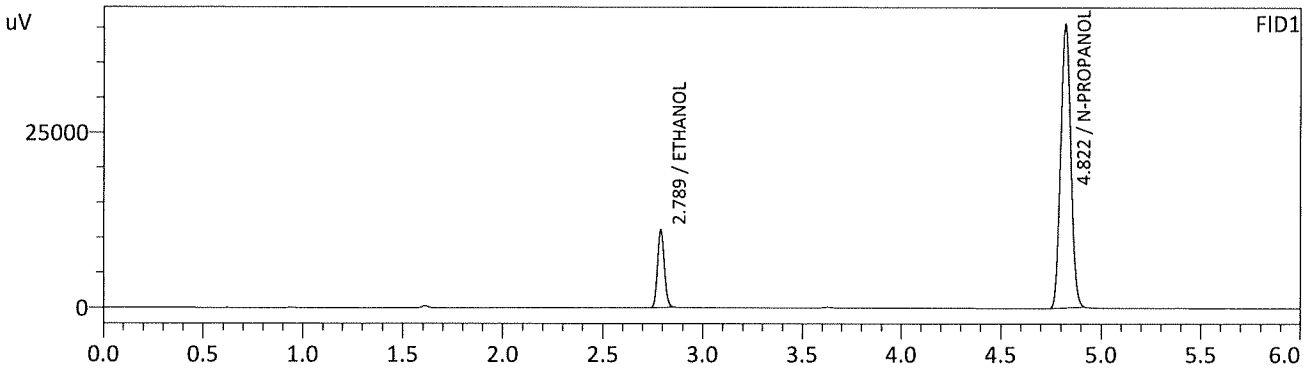| Name | Conc. | Unit | Area | Height |
|---|---|---|---|---|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | 0.0734 | g/100cc | 24759 | 12376 |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 153127 | 57746 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

# VOLATILES BAC CASEFILE WORKSHEET

**Laboratory No.: 0.08 QA**          Item #          **Analysis Date(s): 2/15/2022**

|  | Column 1 FID A | Column 2 FID B | Column Precision | Mean Value | Sample A-B Difference | Over-all Mean |
|---|---|---|---|---|---|---|
| **Sample Results** (g/100cc) | 0.0807 | 0.0803 | 0.0004 | 0.0805 | 0.0001 | 0.0804 |
|  | 0.0806 | 0.0802 | 0.0004 | 0.0804 |  |  |

## 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 |
|---|---|---|---|
| 0.080 | 0.076 | 0.084 | 0.004 |

| | Reported Result | |
|---|---|---|
| | 0.080 | |

*Calibration and control data are stored centrally.*

Sample Name          : 0.08 QA - A
Vial #               : 6
Data Filename        : 0.08 QA - A_2152022_006.gcd
Method Filename      : ALCOHOL.gcm
Batch Filename       : 02-15-22 TS.gcb
Date Acquired        : 2/15/2022 1:09:12 PM
Date Processed       : 2/16/2022 7:31:08 AM
C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm



#### FID1

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.0807 | g/100cc | 25878 | 11045 |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 142055 | 40383 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

#### FID2

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | 0.0803 | g/100cc | 26951 | 13474 |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 151610 | 57143 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

Sample Name : 0.08 QA - B
Vial # : 7
Data Filename : 0.08 QA - B_2152022_007.gcd
Method Filename : ALCOHOL.gcm
Batch Filename : 02-15-22 TS.gcb
Date Acquired : 2/15/2022 1:18:57 PM
Date Processed : 2/16/2022 7:31:10 AM
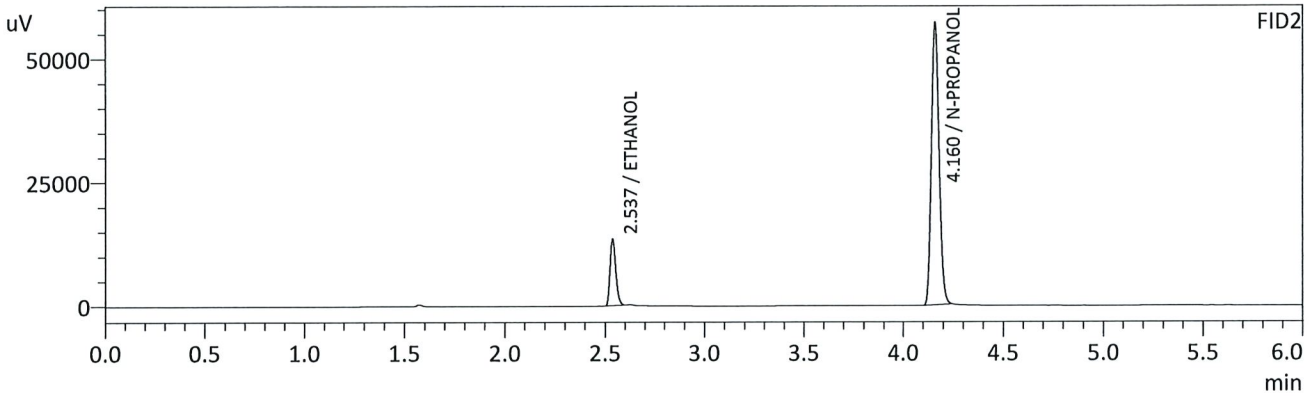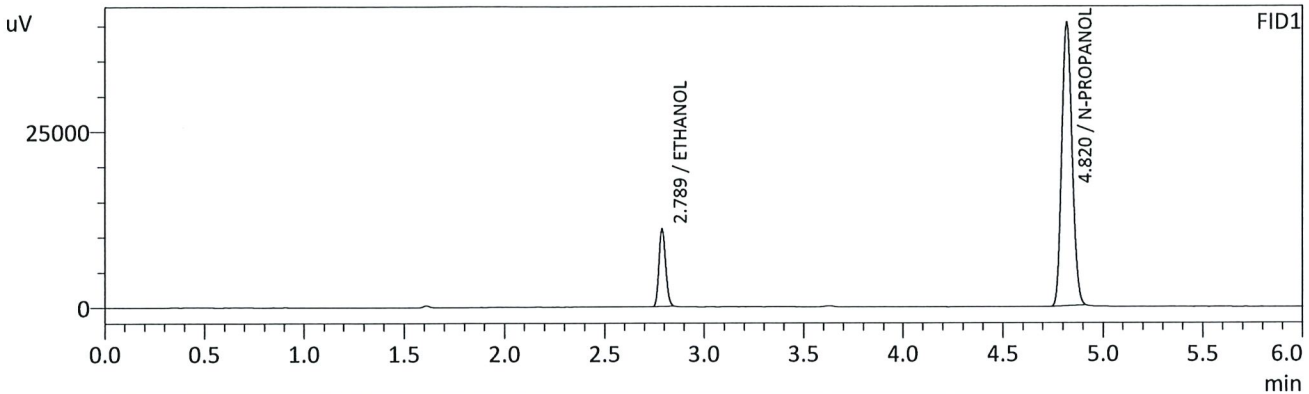C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm



FID1

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.0806 | g/100cc | 25795 | 11028 |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 141805 | 40197 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | 0.0802 | g/100cc | 26834 | 13409 |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 151172 | 56993 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

# VOLATILES BAC CASEFILE WORKSHEET

**Laboratory No.: QC 2-1**          Item #          **Analysis Date(s): 2/15/2022**

| | Column 1 FID A | Column 2 FID B | Column Precision | Mean Value | Sample A-B Difference | Over-all Mean |
|---|---|---|---|---|---|---|
| **Sample Results** (g/100cc) | 0.2111 | 0.2088 | 0.0023 | 0.2099 | 0.0013 | 0.2106 |
| | 0.2122 | 0.2103 | 0.0019 | 0.2112 | | |

## 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 |
|---|---|---|---|
| 0.210 | 0.199 | 0.221 | 0.011 |

| | Reported Result | |
|---|---|---|
| | 0.210 | |

*Calibration and control data are stored centrally.*

Revision: 1
Issue Date: 12/29/2021
Issuing Authority: Quality Manager

Sample Name          : QC-2-1-A
Vial #               : 26
Data Filename        : QC-2-1-A_2152022_026.gcd
Method Filename      : ALCOHOL.gcm
Batch Filename       : 02-15-22 TS.gcb
Date Acquired        : 2/15/2022 4:19:47 PM
Date Processed       : 2/16/2022 7:31:32 AM
C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm
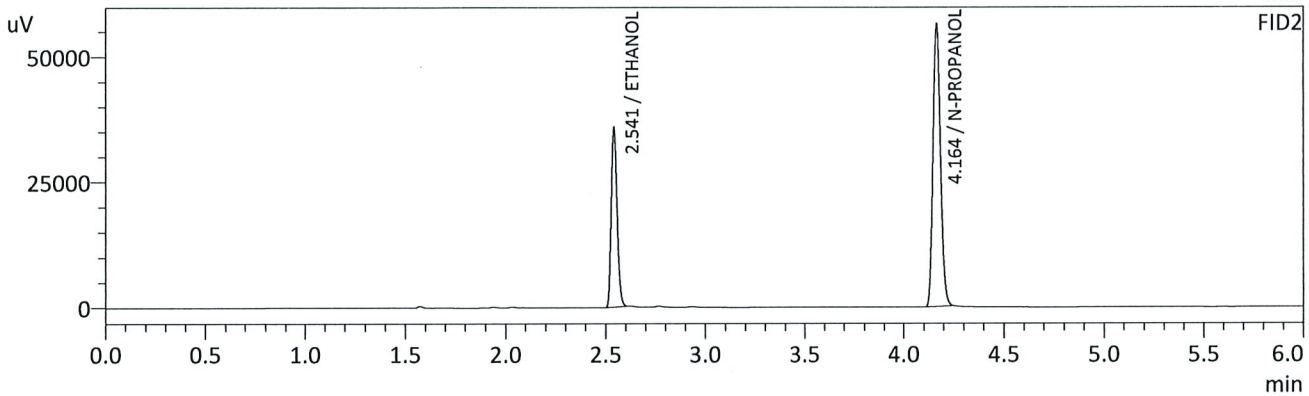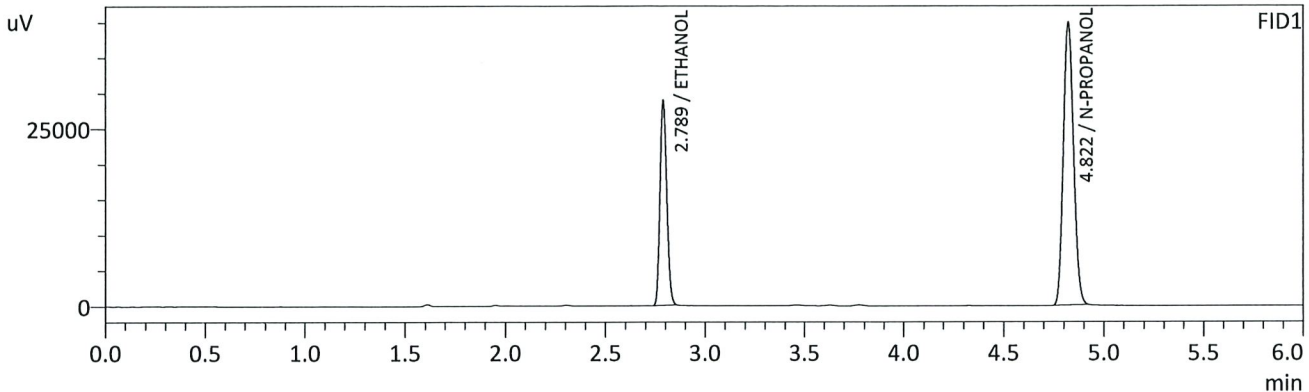


FID1

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.2111 | g/100cc | 67460 | 28802 |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 140230 | 39764 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | 0.2088 | g/100cc | 71305 | 35645 |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 149398 | 56136 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

Sample Name          : QC-2-1-B
Vial #               : 27
Data Filename        : QC-2-1-B_2152022_027.gcd
Method Filename      : ALCOHOL.gcm
Batch Filename       : 02-15-22 TS.gcb
Date Acquired        : 2/15/2022 4:29:03 PM
Date Processed       : 2/16/2022 7:31:33 AM
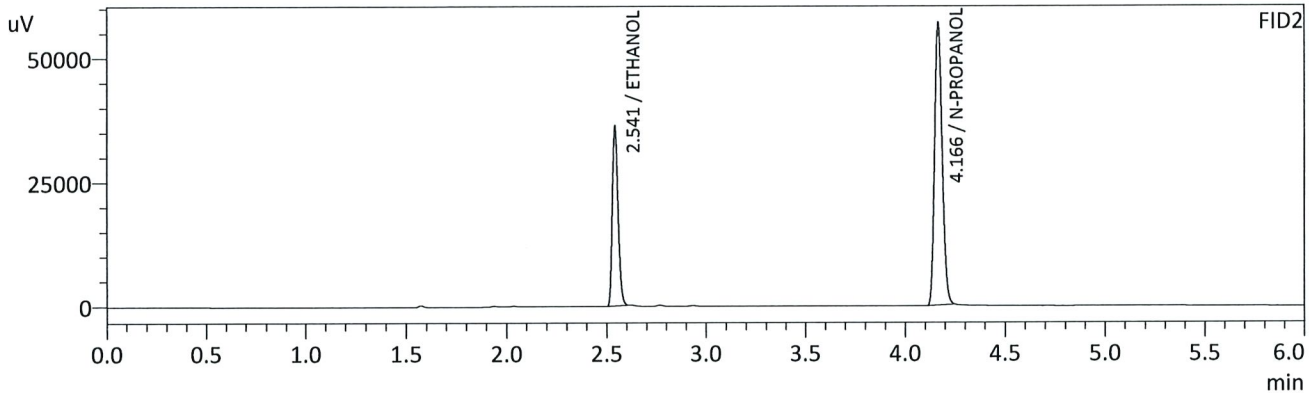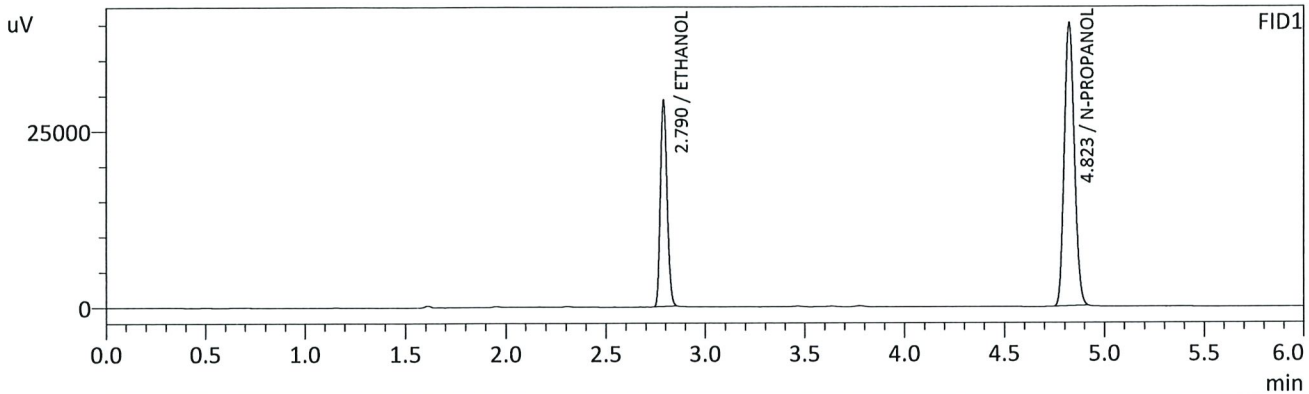C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm



FID1

| Name | Conc. | Unit | Area | Height |
|---|---|---|---|---|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.2122 | g/100cc | 68368 | 29159 |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 141396 | 40136 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|---|---|---|---|---|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | 0.2103 | g/100cc | 72392 | 36207 |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 150534 | 56921 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

# VOLATILES BAC CASEFILE WORKSHEET

**Laboratory No.: QC 1-2**     Item #     **Analysis Date(s): 2/15/2022**

| | Column 1 FID A | Column 2 FID B | Column Precision | Mean Value | Sample A-B Difference | Over-all Mean |
|---|---|---|---|---|---|---|
| **Sample Results** | 0.0786 | 0.0782 | 0.0004 | 0.0784 | | |
| **(g/100cc)** | 0.0807 | 0.0804 | 0.0003 | 0.0805 | 0.0021 | 0.0794 |

## 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%

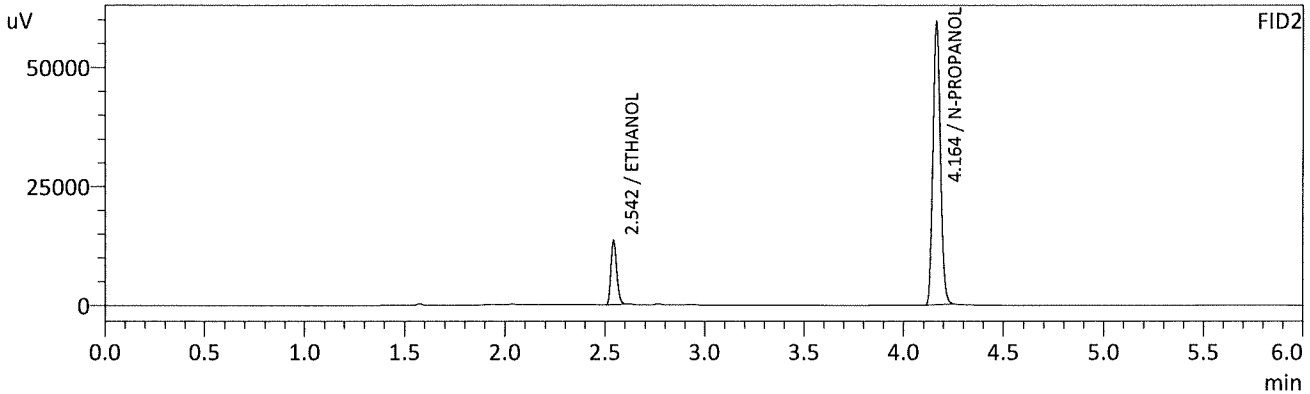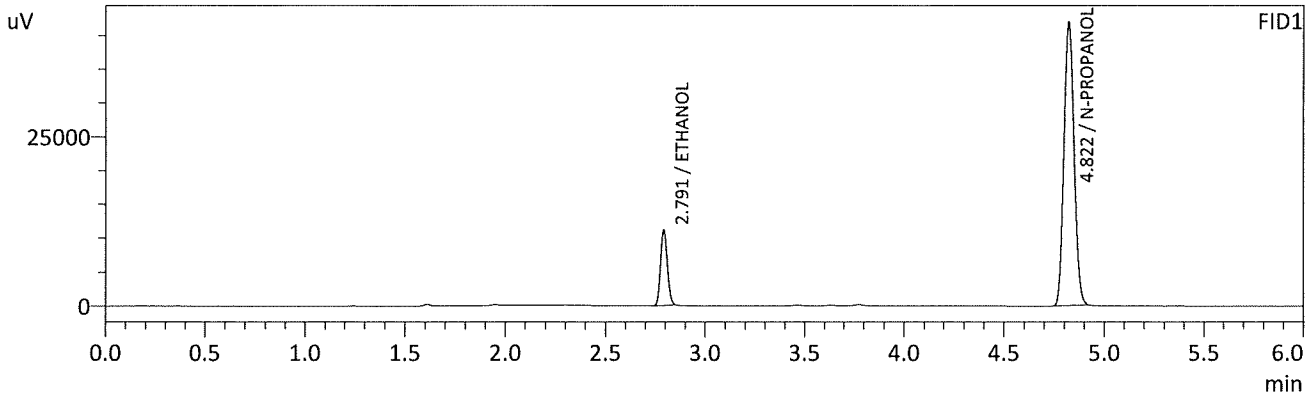| Overall Mean (g/100cc) | Low | High | 5% of Mean |
|---|---|---|---|
| 0.079 | 0.075 | 0.083 | 0.004 |

| | Reported Result | |
|---|---|---|
| | 0.079 | |

*Calibration and control data are stored centrally.*

Sample Name      : QC1-2-A
Vial #            : 48
Data Filename     : QC1-2-A_2152022_048.gcd
Method Filename   : ALCOHOL.gcm
Batch Filename    : 02-15-22 TS.gcb
Date Acquired     : 2/15/2022 7:48:56 PM
Date Processed   : 2/16/2022 7:31:56 AM
C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm



FID1

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.0786 | g/100cc | 26070 | 11005 |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 147098 | 41809 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | 0.0782 | g/100cc | 27166 | 13487 |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 157083 | 59265 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

Sample Name        : QC1-2-B
Vial #             : 49
Data Filename      : QC1-2-B_2152022_049.gcd
Method Filename    : ALCOHOL.gcm
Batch Filename     : 02-15-22 TS.gcb
Date Acquired      : 2/15/2022 7:58:45 PM
Date Processed     : 2/16/2022 7:31:57 AM
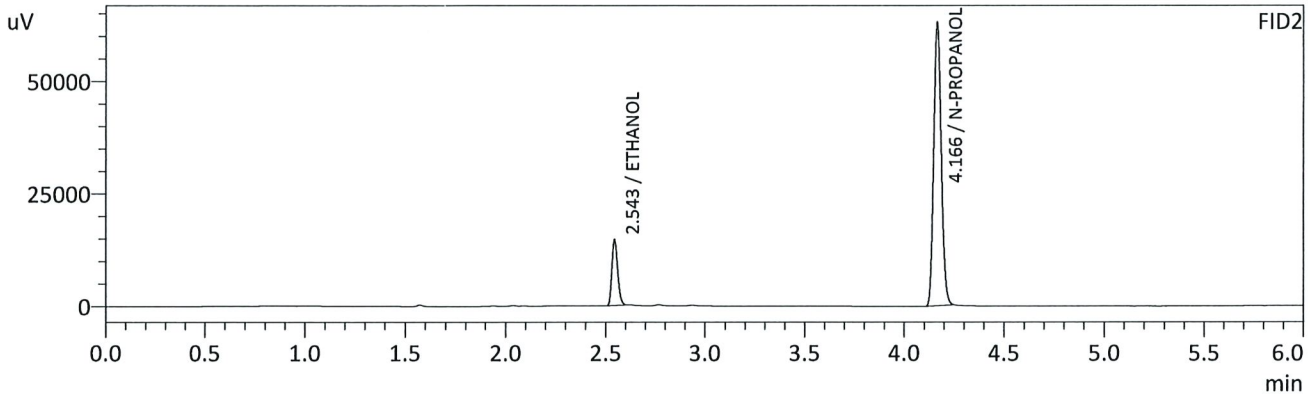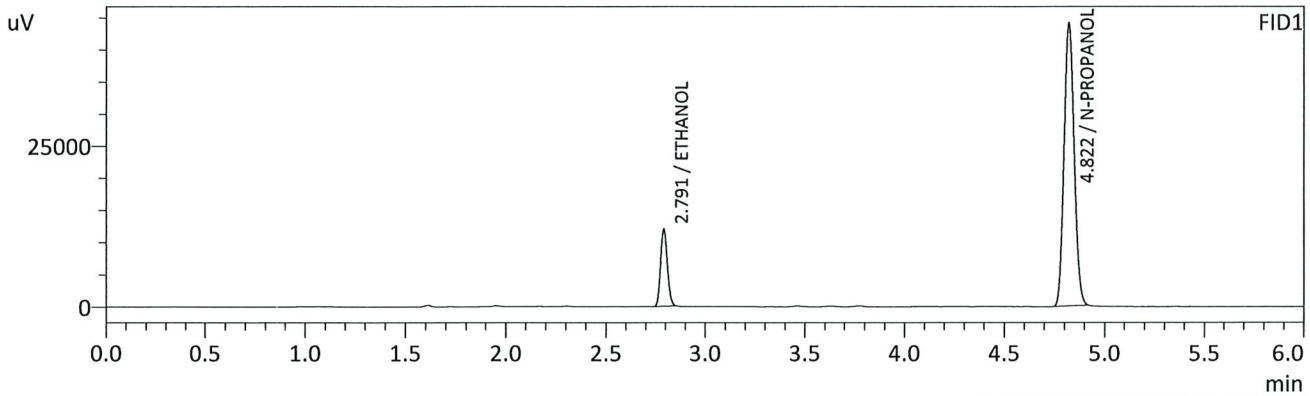C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm



FID1

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | 0.0807 | g/100cc | 28148 | 11887 |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 154682 | 43979 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|------|-------|------|------|--------|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | 0.0804 | g/100cc | 29386 | 14472 |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 165164 | 62903 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

Sample Name          : INT STD BLK 3
Vial #               : 50
Data Filename        : INT STD BLK 3_2152022_050.gcd
Method Filename      : ALCOHOL.gcm
Batch Filename       : 02-15-22 TS.gcb
Date Acquired        : 2/15/2022 8:08:11 PM
Date Processed       : 2/16/2022 7:31:59 AM
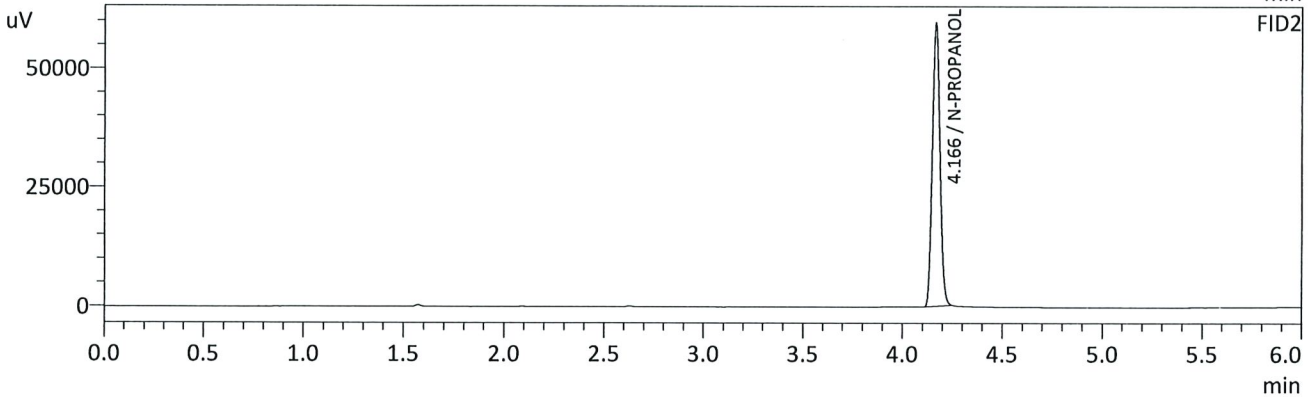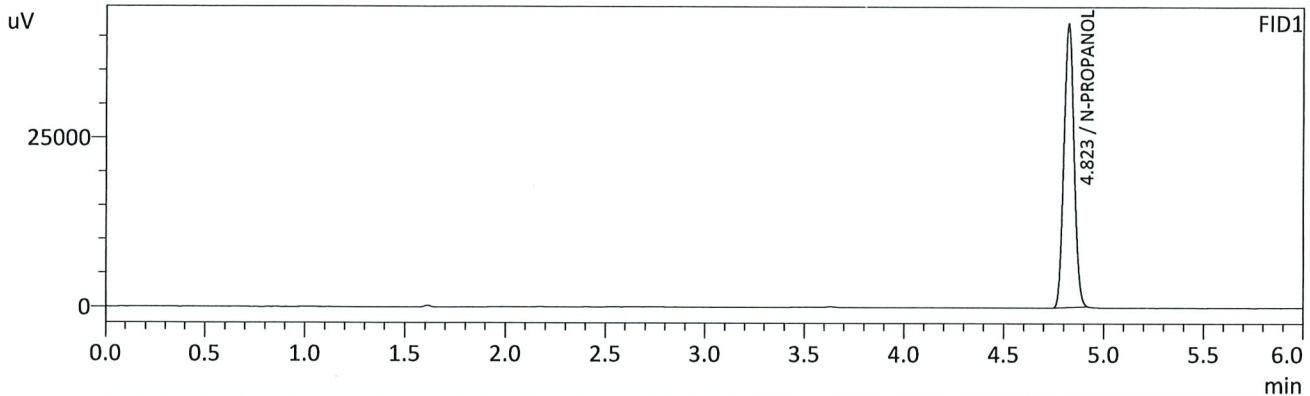C:\LabSolutions\Data\2022\2-15-22 TS\ALCOHOL.gcm



FID1

| Name | Conc. | Unit | Area | Height |
|---|---|---|---|---|
| METHANOL | -- | g/100cc | -- | -- |
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| ETHANOL | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 146948 | 41890 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

FID2

| Name | Conc. | Unit | Area | Height |
|---|---|---|---|---|
| ACETALDEHYDE | -- | g/100cc | -- | -- |
| METHANOL | -- | g/100cc | -- | -- |
| ETHANOL | -- | g/100cc | -- | -- |
| ACETONE | -- | g/100cc | -- | -- |
| ISOPROPYL ALCOHOL | -- | g/100cc | -- | -- |
| N-PROPANOL | 0.0000 | g/100cc | 157094 | 59501 |
| DFE | -- | g/100cc | -- | -- |
| TFE | -- | g/100cc | -- | -- |

# Region 5 Pocatello Blood Alcohol Analysis Batch Table

Shimadzu Nexis GC-2030 Serial Number: C12255850662
Shimadzu HS-20 Serial Number: C12595700014
LabSolutions Version 5.98
Copyright (C) 2008-2019 Shimadzu Corporation. All rights reserved.

| Vial# | Sample Name | Sample Type | Method File | Data File | Level# |
|---|---|---|---|---|---|
| 1 | INT STD BLK 1 | 0:Unknown | ALCOHOL.gcm | INT STD BLK 1_2152022_001.gcd | 0 |
| 2 | MULTI-COMP MIX | 0:Unknown | ALCOHOL.gcm | MULTI-COMP MIX_2152022_002.gcd | 1 |
| 3 | INT STD BLK 2 | 0:Unknown | ALCOHOL.gcm | INT STD BLK 2_2152022_003.gcd | 0 |
| 4 | QC-1-1-A | 0:Unknown | ALCOHOL.gcm | QC-1-1-A_2152022_004.gcd | 0 |
| 5 | QC-1-1-B | 0:Unknown | ALCOHOL.gcm | QC-1-1-B_2152022_005.gcd | 0 |
| 6 | 0.08 QA - A | 0:Unknown | ALCOHOL.gcm | 0.08 QA - A_2152022_006.gcd | 0 |
| 7 | 0.08 QA - B | 0:Unknown | ALCOHOL.gcm | 0.08 QA - B_2152022_007.gcd | 0 |
| 8 | P2022-0265-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0265-1-A_2152022_008.gcd | 0 |
| 9 | P2022-0265-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0265-1-B_2152022_009.gcd | 0 |
| 10 | P2022-0388-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0388-1-A_2152022_010.gcd | 0 |
| 11 | P2022-0388-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0388-1-B_2152022_011.gcd | 0 |
| 12 | P2022-0391-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0391-1-A_2152022_012.gcd | 0 |
| 13 | P2022-0391-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0391-1-B_2152022_013.gcd | 0 |
| 14 | P2022-0392-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0392-1-A_2152022_014.gcd | 0 |
| 15 | P2022-0392-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0392-1-B_2152022_015.gcd | 0 |
| 16 | P2022-0400-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0400-1-A_2152022_016.gcd | 0 |
| 17 | P2022-0400-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0400-1-B_2152022_017.gcd | 0 |
| 18 | P2022-0416-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0416-1-A_2152022_018.gcd | 0 |
| 19 | P2022-0416-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0416-1-B_2152022_019.gcd | 0 |
| 20 | P2022-0417-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0417-1-A_2152022_020.gcd | 0 |
| 21 | P2022-0417-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0417-1-B_2152022_021.gcd | 0 |
| 22 | P2022-0418-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0418-1-A_2152022_022.gcd | 0 |
| 23 | P2022-0418-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0418-1-B_2152022_023.gcd | 0 |
| 24 | P2022-0419-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0419-1-A_2152022_024.gcd | 0 |
| 25 | P2022-0419-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0419-1-B_2152022_025.gcd | 0 |
| 26 | QC-2-1-A | 0:Unknown | ALCOHOL.gcm | QC-2-1-A_2152022_026.gcd | 0 |
| 27 | QC-2-1-B | 0:Unknown | ALCOHOL.gcm | QC-2-1-B_2152022_027.gcd | 0 |
| 28 | P2022-0420-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0420-1-A_2152022_028.gcd | 0 |
| 29 | P2022-0420-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0420-1-B_2152022_029.gcd | 0 |
| 30 | P2022-0421-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0421-1-A_2152022_030.gcd | 0 |
| 31 | P2022-0421-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0421-1-B_2152022_031.gcd | 0 |
| 32 | P2022-0422-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0422-1-A_2152022_032.gcd | 0 |
| 33 | P2022-0422-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0422-1-B_2152022_033.gcd | 0 |
| 34 | P2022-0423-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0423-1-A_2152022_034.gcd | 0 |
| 35 | P2022-0423-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0423-1-B_2152022_035.gcd | 0 |
| 36 | P2022-0434-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0434-1-A_2152022_036.gcd | 0 |
| 37 | P2022-0434-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0434-1-B_2152022_037.gcd | 0 |
| 38 | P2022-0458-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0458-1-A_2152022_038.gcd | 0 |
| 39 | P2022-0458-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0458-1-B_2152022_039.gcd | 0 |
| 40 | P2022-0459-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0459-1-A_2152022_040.gcd | 0 |
| 41 | P2022-0459-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0459-1-B_2152022_041.gcd | 0 |
| 42 | P2022-0460-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0460-1-A_2152022_042.gcd | 0 |
| 43 | P2022-0460-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0460-1-B_2152022_043.gcd | 0 |
| 44 | P2022-0461-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0461-1-A_2152022_044.gcd | 0 |
| 45 | P2022-0461-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0461-1-B_2152022_045.gcd | 0 |
| 46 | P2022-0463-1-A | 0:Unknown | ALCOHOL.gcm | P2022-0463-1-A_2152022_046.gcd | 0 |
| 47 | P2022-0463-1-B | 0:Unknown | ALCOHOL.gcm | P2022-0463-1-B_2152022_047.gcd | 0 |
| 48 | QC1-2-A | 0:Unknown | ALCOHOL.gcm | QC1-2-A_2152022_048.gcd | 0 |
| 49 | QC1-2-B | 0:Unknown | ALCOHOL.gcm | QC1-2-B_2152022_049.gcd | 0 |
| 50 | INT STD BLK 3 | 0:Unknown | ALCOHOL.gcm | INT STD BLK 3_2152022_050.gcd | 0 |

**Idaho State Police**
**Forensic Services**

## Request for Departure from an Analytical Method or Quality Standard

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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

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**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 and 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

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 1$^{st}$, 2022.

## Technical Review

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

☐ Departure Not Approved
Comments:

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

## Quality Review

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