

# Alaska Scientific Crime Detection Laboratory

## DataMaster Calibration Form

Effective: 1/23/2024

Version: 4.0

Instrument #: 100343 Analyst or Technician Name: C.O. Bryant

DataMaster DMT Calibration Start Date: 10/21/24

### Diagnostic Test

- Perform Diagnostic Test (View Details)
- Internal Standard Value  $\leq$  3.00%

*Calibration Rejected due to  
Linearity slope  $>$  1.00  $\pm$  0.030.  
COB 10/21/24*

### Technician Screen and Calibration Factors

- Adjust Voltages (if needed)
  - Lamp (2.60 V Maximum)
  - Bias
  - Cooler (2.00 V Maximum)
  - Chopper Frequency
  - Detector Voltage (-0.100V to 0.100V)
- Set RFI Sensitivity
- Adjust internal barometer reading to match NIST-traceable barometer  
Barometer/Thermometer/Hygrometer S/N: 230307209  
Calibration Due Date: 5/2/25
- Verify Volume Setting (1.50 L  $\pm$  0.10 L), adjust if needed
- Print Technician Screen
- Print "Cal Factors"

### Minimum Volume Test

- Perform Minimum Volume (Subject) Test: 1.6 liters (1.3 L to 1.7 L)

### As Left Linearity Testing

Barometric Pressure (in Hg) 29.87 Temperature (C) 20.9 Relative Humidity (%) 17%  
Approved Concentrations (g/210L): 0.020, 0.040, 0.080, 0.100, 0.150, 0.300

### Functional Tests

- Incomplete
- Invalid
- Interference (Volatiles) - *Print with View Details*
- Maximum Attempts Exceeded
- Radio Frequency Interference (RFI)

1. Acetone Reagent Lot Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_  
Simulator S/N: \_\_\_\_\_ Thermometer Verification Performed?
2. Isopropanol Reagent Lot Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_  
Simulator S/N: \_\_\_\_\_ Thermometer Verification Performed?
3. Negative (Ethanol Only) Lot Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_  
Simulator S/N: \_\_\_\_\_ Thermometer Verification Performed?

Calibrated External Thermometer S/N: \_\_\_\_\_  
Calibration Due Date: \_\_\_\_\_

### Administrative

- Verify Stylus Calibration
- Reset Options
- Clear Memory
- Verification of Calibration (VOC)
- Perform Non-Drinking Subject Test
- Upload Instrument
- Remove Dry Gas Tank Before Shutdown
- Add Ready for Tech Review Note

### Completion

Lab Work End Date: \_\_\_\_\_  
Data Interpretation Date (Technician): \_\_\_\_\_ (if applicable)  
Data Interpretation Date (Analyst): \_\_\_\_\_

All printed copies are uncontrolled.

Approved by: Chemistry Supervisor

DIAGNOSTIC RECORD

Alaska Department of Public Safety  
DATAMASTER dmt: 100343

Date: 10/21/2024  
Time: 10:15:27

VERSIONS

DMT: 3.02  
PIC: 3.06  
Modem: 2.6  
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.9°C PASSED  
(44.0°C - 52.0°C)  
Breath Tube = 42.7°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.73 V PASSED  
(1.04 V - 2.42 V)  
Cooler Voltage = 1.75 V PASSED  
(1.05 V - 2.45 V)  
Bias Voltage = 80 V PASSED  
(49 V - 113 V)  
Chopper Freq = 526 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.9 in

PUMP INFO

Flow Rate = 4.185 L/M PASSED  
(3.500 L/M - 6.500 L/M)

DETECTOR INFO

PUMP ON PASSED  
(0.001 V <= 0.010 V)  
PUMP OFF PASSED  
(0.001 V <= 0.010 V)

FILTER INFO

Filter 1 PASSED  
Filter 2 PASSED  
Filter 3 PASSED

INTERNAL STANDARD

Xq = 0.092 0.19% (0.00% - 4.00%) PASSED

Technician Screen

-----  
DATAMASTER dmt: 100343  
-----

Date: 10/21/2024  
Time: 10:19 AM

Temperatures (°C)

Sample Cell: 49.1°C  
Breath Tube: 42.7°C

Current Barometer 29.9 in  
Volume (Ltr) 1.54

Settings

Lamp: 1.84 V  
Bias: 80 V  
Cooler: 1.79 V  
Chopper: 526 Hz

Voltages (V)

Flow: 1.05 V  
Detector: 0.048 V

REJECTED

CALIBRATION FACTORS

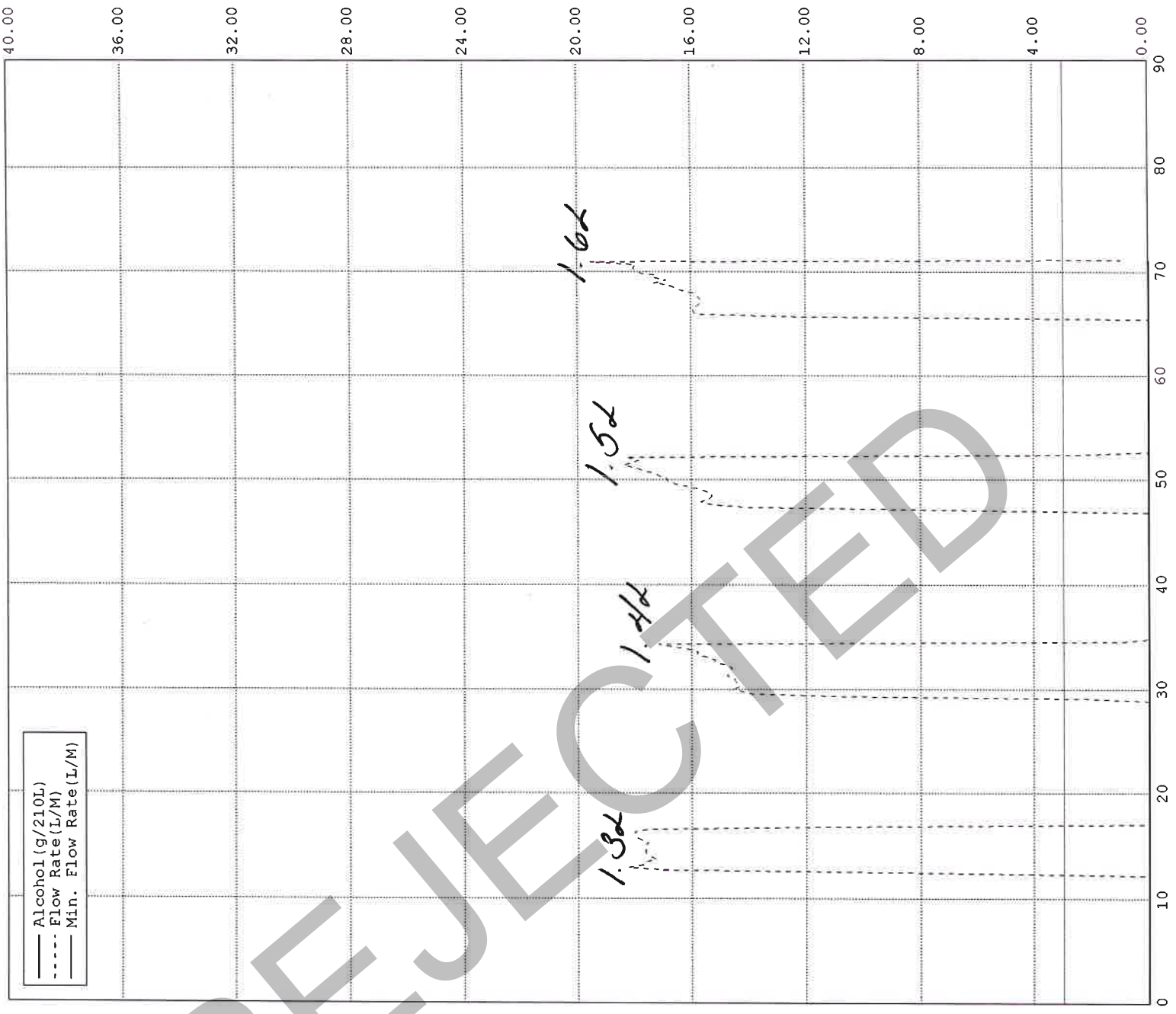
-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100343  
-----

Date: 06/18/2024  
Time: 11:29:26

OPERATOR NAME:  
MEGAN CARLOCK  
CERTIFICATE #: 10747

Ca = 0.1000  
CAL = 0.985616    0.800 <= CAL < 1.200  
b1 = 0.0005    0.0000 <= b1 < 0.0040  
b2 = 0.0044    0.0010 <= b2 < 0.0100  
b3 = 0.0010    0.0000 <= b3 < 0.0040  
Xq = 0.0914    0.0500 <= Xq < 0.2000  
a21 = 1.156687    1.050 <= a21 < 1.300  
a31 = 0.506827    0.300 <= a31 < 0.800

REJECTED



**SUBJECT TEST**

Alaska Department of Public Safety  
 DATAMASTER dmt: 100343

Date: 10/21/2024  
 Time: 10:20:55

**SUBJECT NAME:**  
**TEST TEST**  
**LICENSE #:** VOLUME TEST

**OPERATOR NAME:**  
 COLLEEN S O'BRYAN  
 OPERATOR'S #: 6237

**DEPT/AGENCY:**  
 AAAA

**CASE/REPORT:** 24-1234  
**TEST TYPE:** TEST

**EXTERNAL STANDARD INFORMATION**  
 NOMINAL: 0.080  
 TARGET AT 29.87: 0.080  
 LOT #: AG335202  
 EXPIRATION: 12/18/2025

TEST TYPE	RESULT	TIME
DIAGNOSTIC CHECK	PASSED	10:22
BLANK TEST	0.000	10:22
INTERNAL STANDARD	VERIFIED	10:22
EXTERNAL STANDARD	0.082	10:22
BLANK TEST	0.000	10:23
SUBJECT SAMPLE (Vol=1.52L)	0.000	10:24
BLANK TEST	0.000	10:26
EXTERNAL STANDARD	0.081	10:26
BLANK TEST	0.000	10:27

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CMB

LINEARITY CHECK

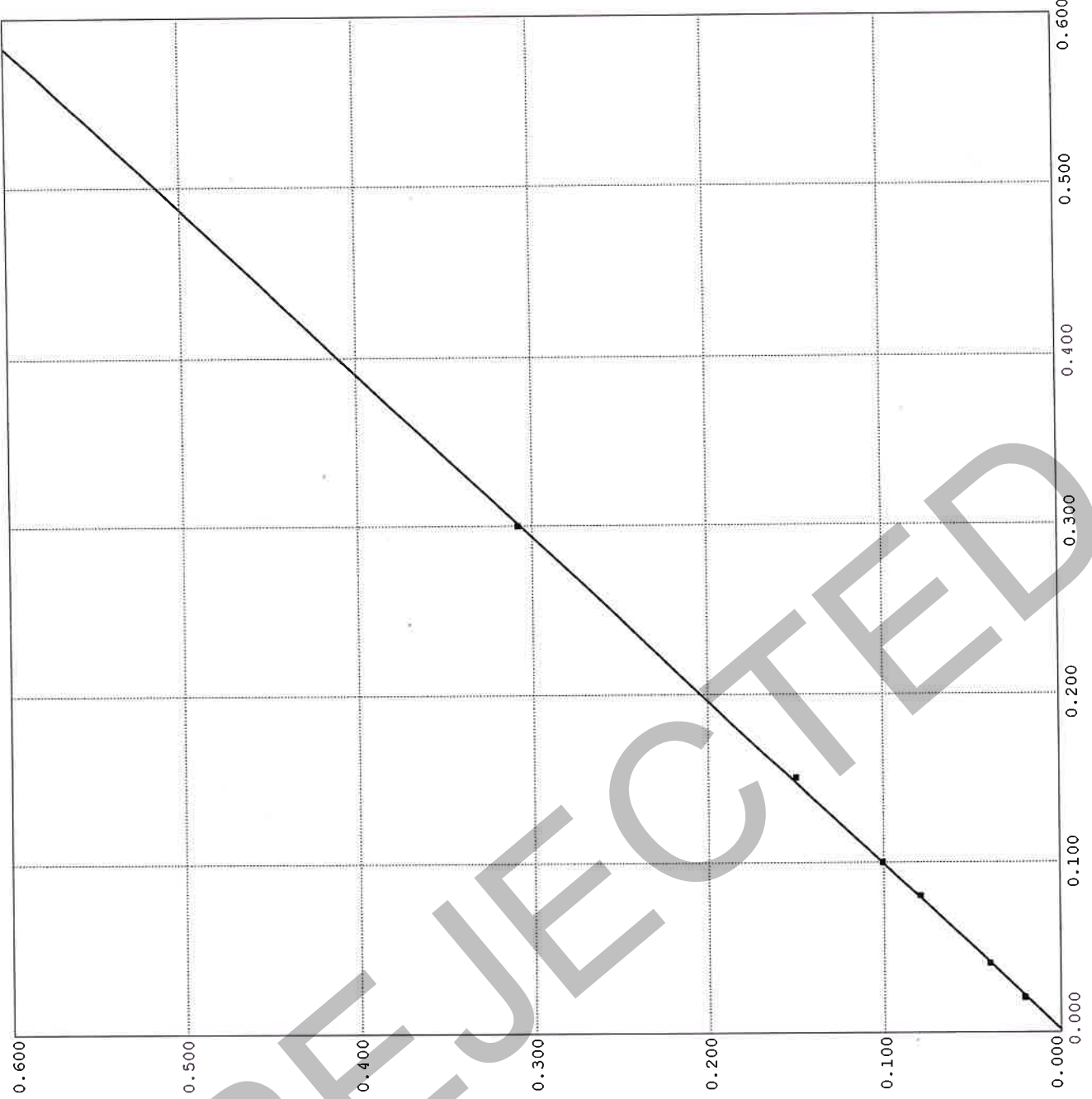
Alaska Department of Public Safety  
 DATAMASTER dmt: 100343

Date: 10/21/2024  
 Time: 10:32:24

SUPERVISOR NAME:  
 COLLEEN S O'BRYAN  
 OPERATOR'S #: 6237

TARGET	AVERAGE	STD. DEV.
0.020	0.0210	0.0000
0.040	0.0408	0.0004
0.080	0.0804	0.0005
0.100	0.1016	0.0005
0.150	0.1506	0.0005
0.299	0.3090	0.0007

$$\frac{1.032637}{0.999713}$$



Slope > 1.00 +/- 0.080

CRB 10/21/24

CRB

LINEARITY CHECK: Control Test 1

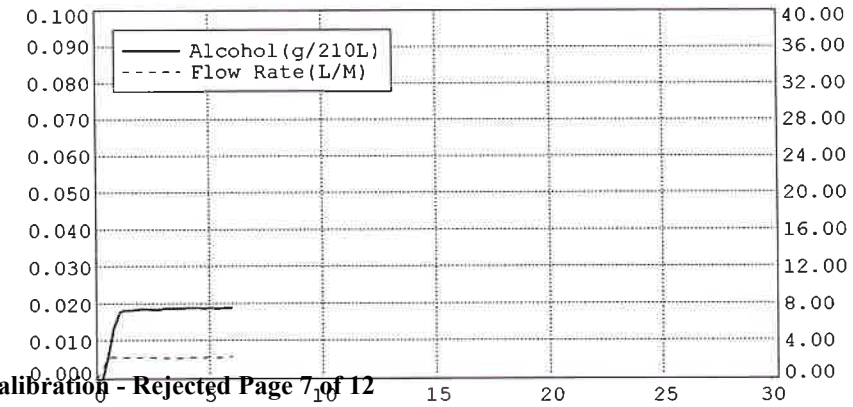
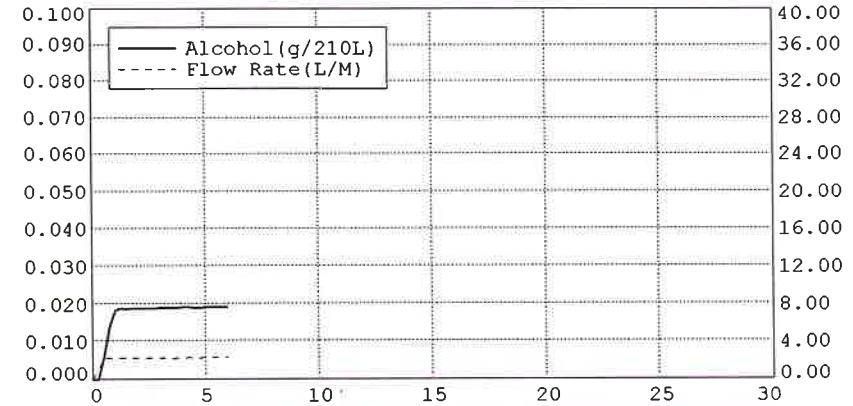
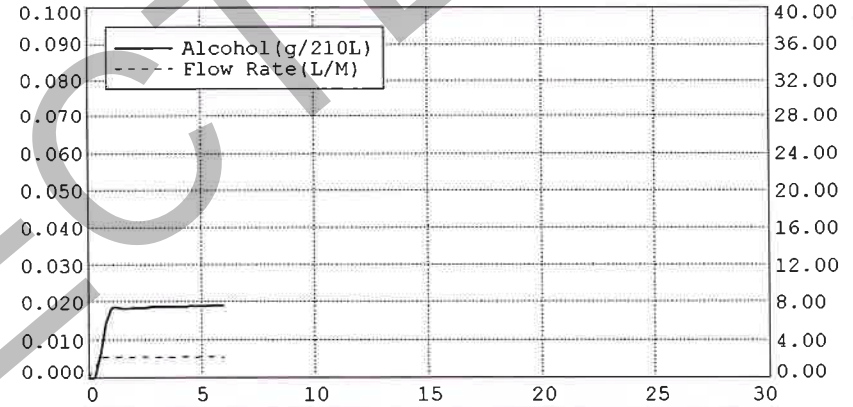
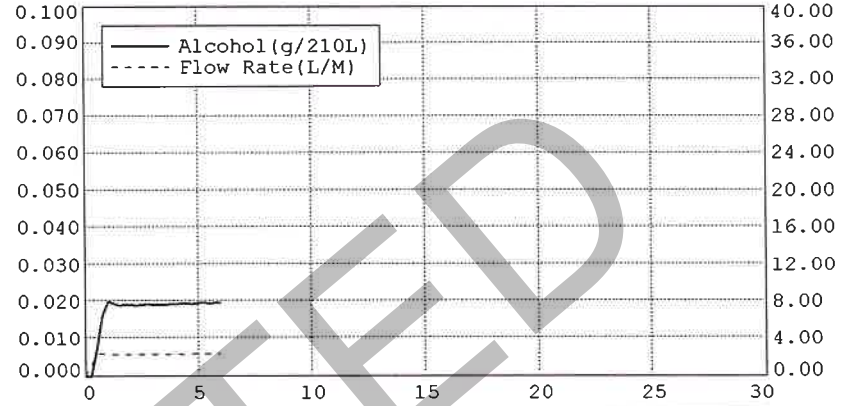
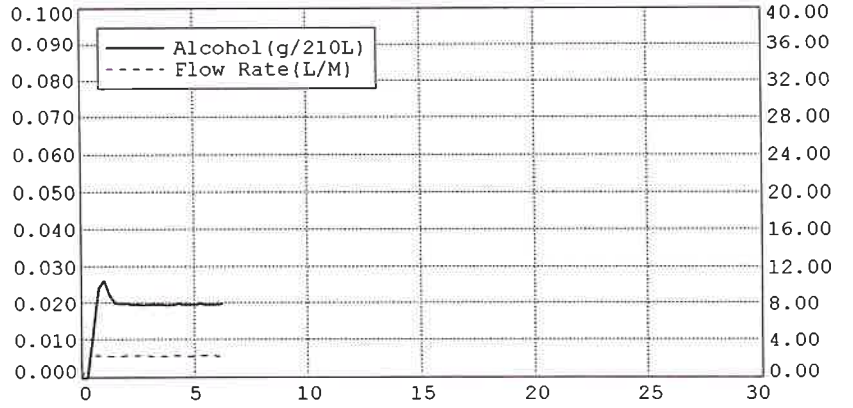
Alaska Department of Public Safety  
DATAMASTER dmt: 100343

Date: 10/21/2024  
Time: 10:32:26

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.020  
TARGET AT 29.86: 0.020  
LOT #: AG408002  
EXPIRATION: 03/20/2025 2026 COB 2024.11.19  
TANK PRESSURE: 836 psi

BLANK TEST	0.000	10:33
INTERNAL STANDARD	VERIFIED	10:33
EXTERNAL STANDARD	0.021	10:34
BLANK TEST	0.000	10:35
EXTERNAL STANDARD	0.021	10:35
BLANK TEST	0.000	10:36
EXTERNAL STANDARD	0.021	10:36
BLANK TEST	0.000	10:37
EXTERNAL STANDARD	0.021	10:37
BLANK TEST	0.000	10:38
EXTERNAL STANDARD	0.021	10:38
BLANK TEST	0.000	10:39

Average = 0.0210  
Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

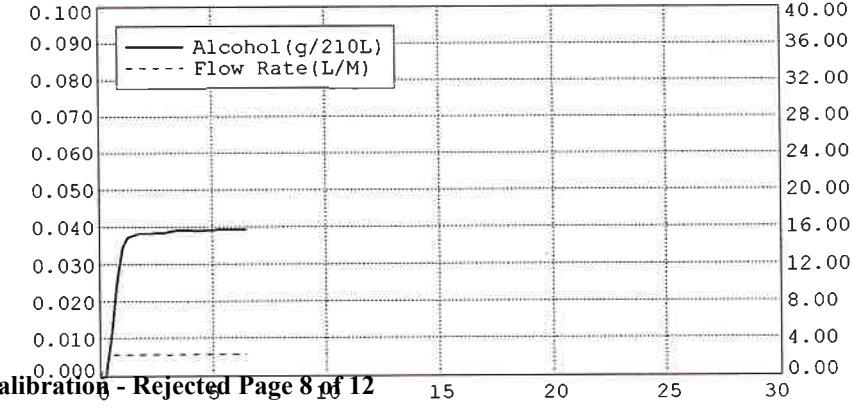
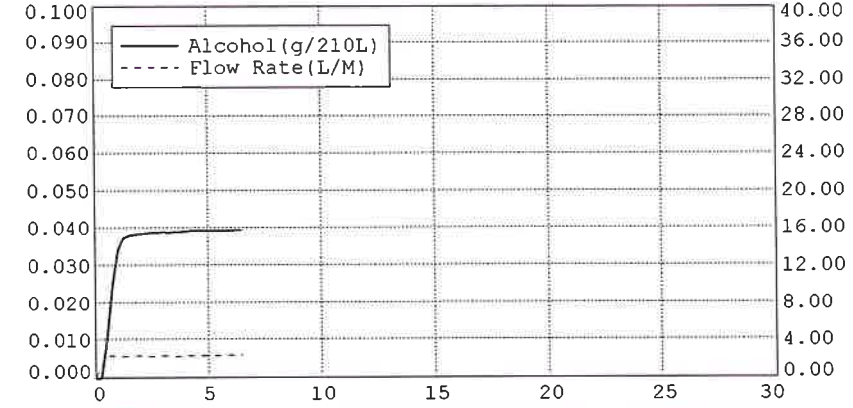
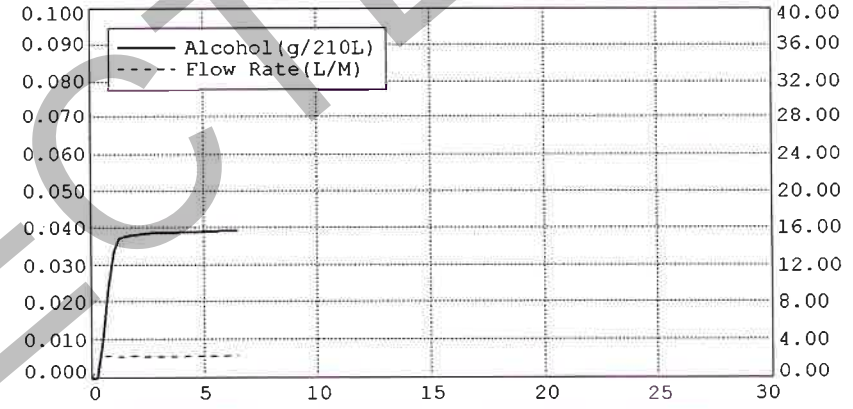
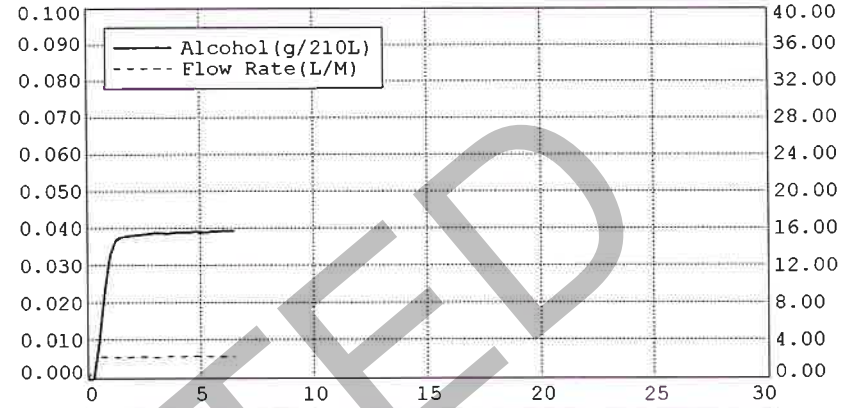
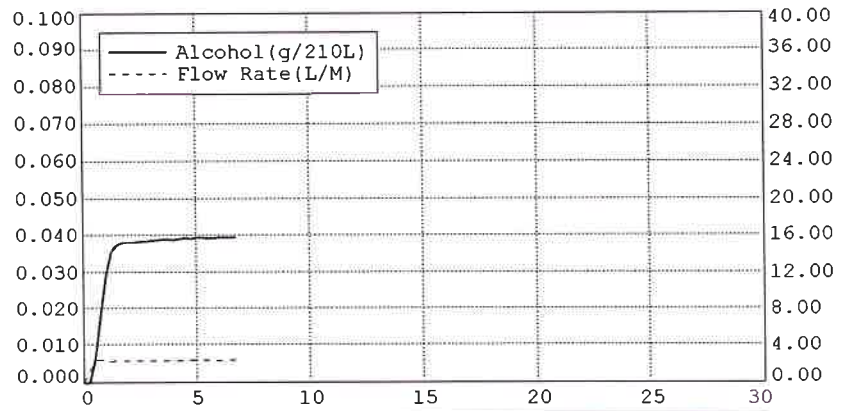
Alaska Department of Public Safety  
DATAMASTER dmt: 100343

Date: 10/21/2024  
Time: 10:41:04

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.040  
TARGET AT 29.86: 0.040  
LOT #: AG407908  
EXPIRATION: 03/19/2025- 2026  
TANK PRESSURE: 1033 psi COB 2024.11.19

BLANK TEST	0.000	10:42
INTERNAL STANDARD	VERIFIED	10:42
EXTERNAL STANDARD	0.041	10:42
BLANK TEST	0.000	10:43
EXTERNAL STANDARD	0.041	10:43
BLANK TEST	0.000	10:44
EXTERNAL STANDARD	0.040	10:44
BLANK TEST	0.000	10:45
EXTERNAL STANDARD	0.041	10:45
BLANK TEST	0.000	10:46
EXTERNAL STANDARD	0.041	10:47
BLANK TEST	0.000	10:47

Average = 0.0408  
Std Dev = 0.0004





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
DATAMASTER dmt: 100343

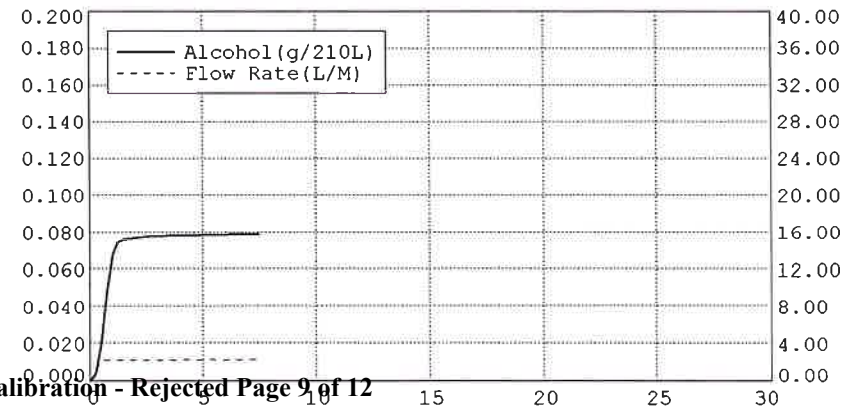
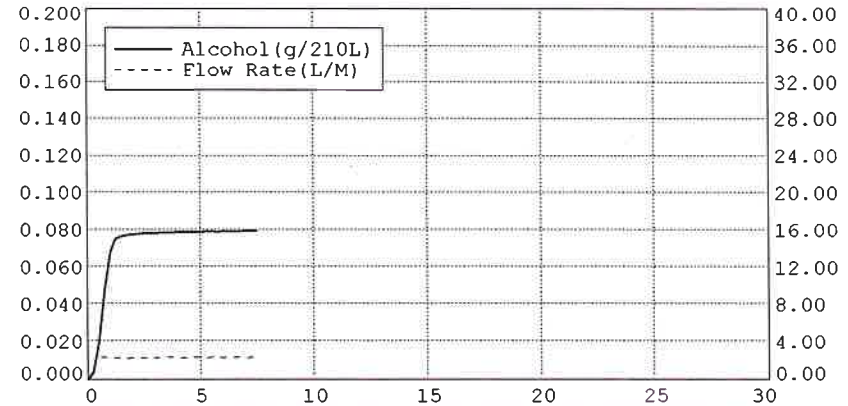
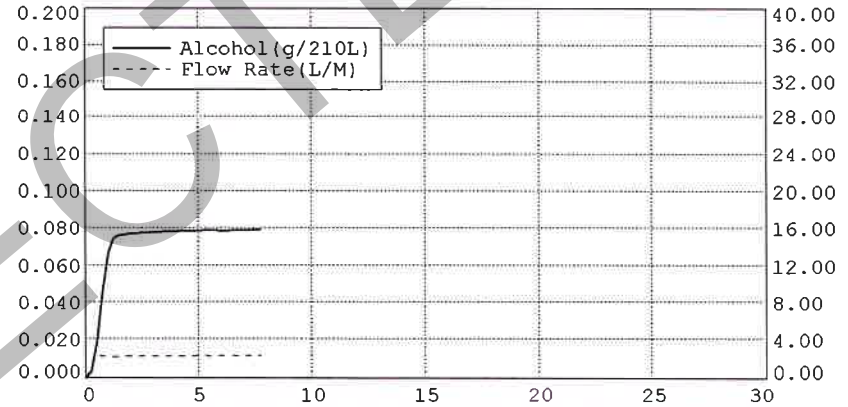
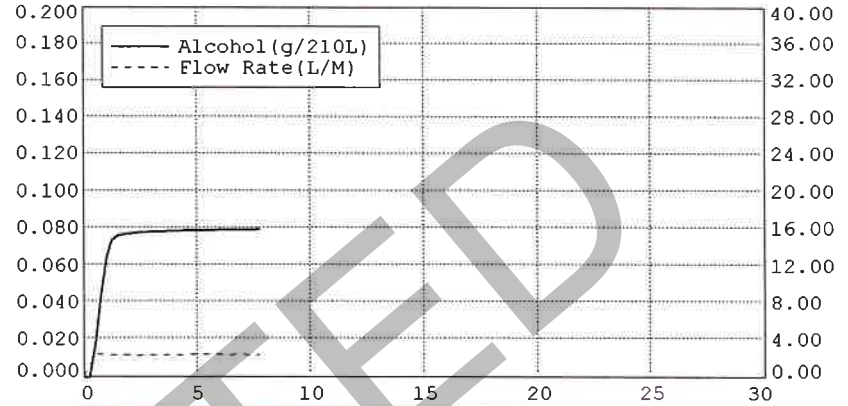
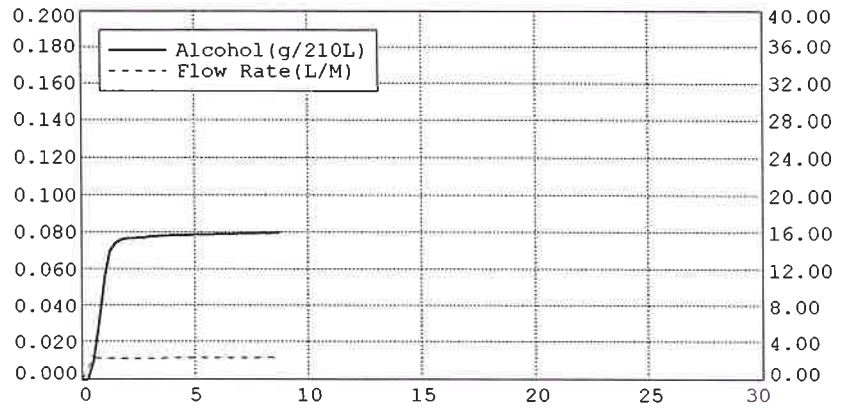
Date: 10/21/2024  
Time: 10:50:19

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.86: 0.080  
LOT #: AG335202  
EXPIRATION: 12/18/2025  
TANK PRESSURE: 858 psi

BLANK TEST	0.000	10:51
INTERNAL STANDARD	VERIFIED	10:51
EXTERNAL STANDARD	0.081	10:51
BLANK TEST	0.000	10:52
EXTERNAL STANDARD	0.080	10:53
BLANK TEST	0.000	10:53
EXTERNAL STANDARD	0.080	10:54
BLANK TEST	0.000	10:55
EXTERNAL STANDARD	0.081	10:55
BLANK TEST	0.000	10:56
EXTERNAL STANDARD	0.080	10:56
BLANK TEST	0.000	10:57

Average = 0.0804  
Std Dev = 0.0005



LINEARITY CHECK: Control Test 4

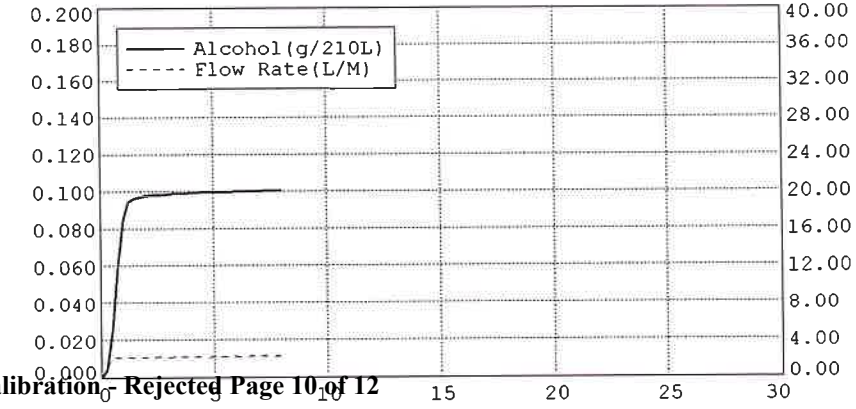
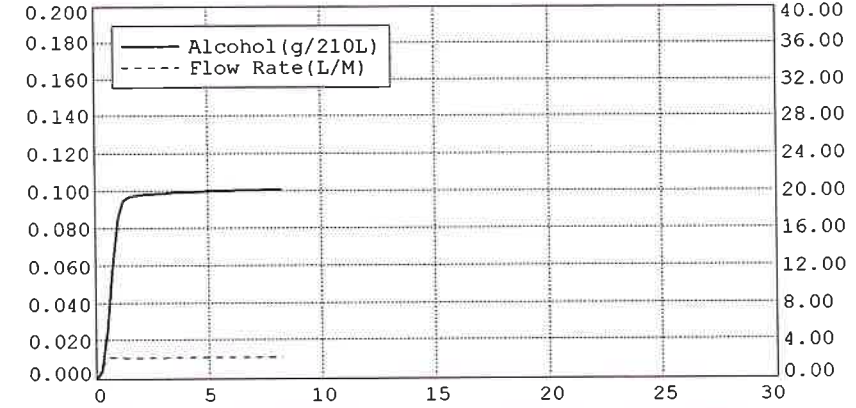
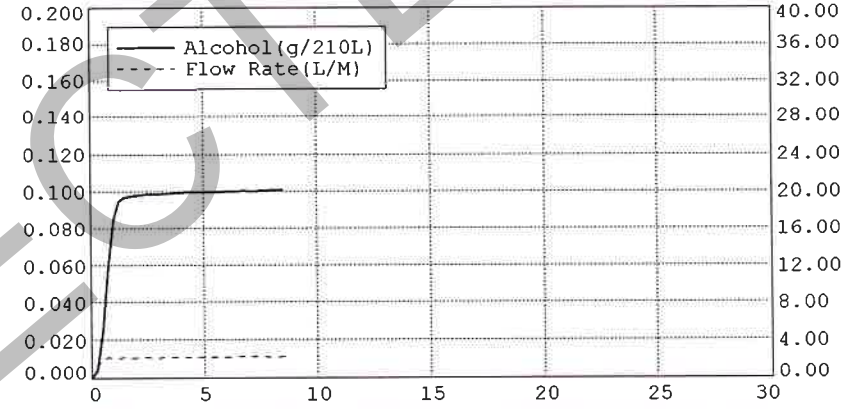
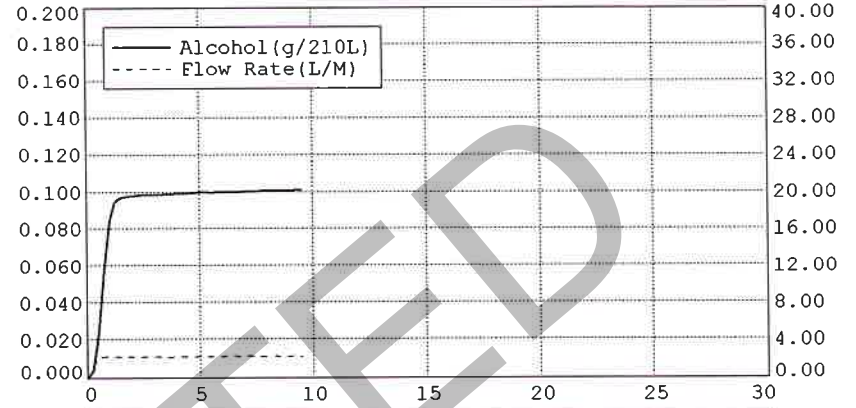
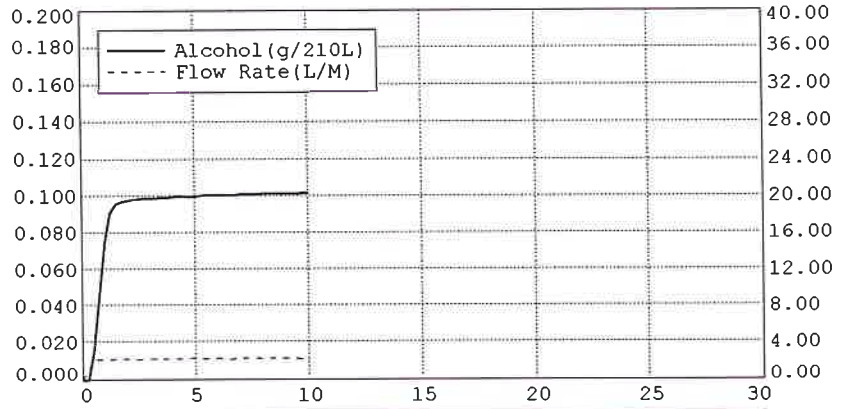
Alaska Department of Public Safety  
 DATAMASTER dmt: 100343

Date: 10/21/2024  
 Time: 10:58:55

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.100  
 TARGET AT 29.86: 0.100  
 LOT #: AG333401  
 EXPIRATION: 11/30/2025  
 TANK PRESSURE: 734 psi

BLANK TEST	0.000	11:00
INTERNAL STANDARD	VERIFIED	11:00
EXTERNAL STANDARD	0.102	11:00
BLANK TEST	0.000	11:01
EXTERNAL STANDARD	0.102	11:01
BLANK TEST	0.000	11:02
EXTERNAL STANDARD	0.101	11:02
BLANK TEST	0.000	11:03
EXTERNAL STANDARD	0.102	11:04
BLANK TEST	0.000	11:04
EXTERNAL STANDARD	0.101	11:05
BLANK TEST	0.000	11:06

Average = 0.1016  
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 5

Alaska Department of Public Safety  
DATAMASTER dmt: 100343

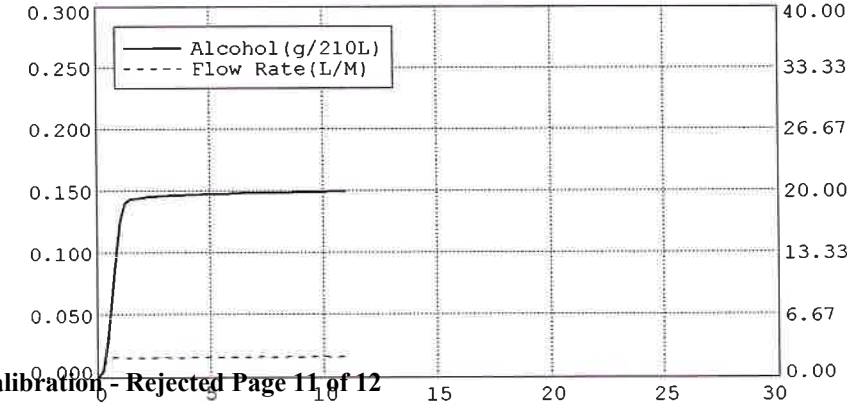
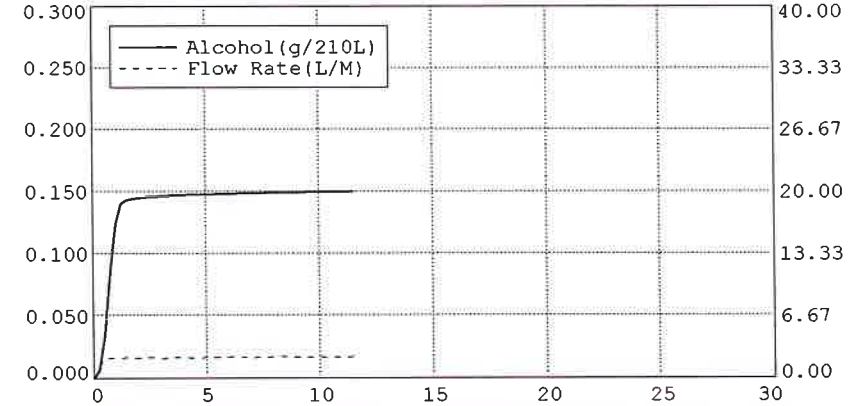
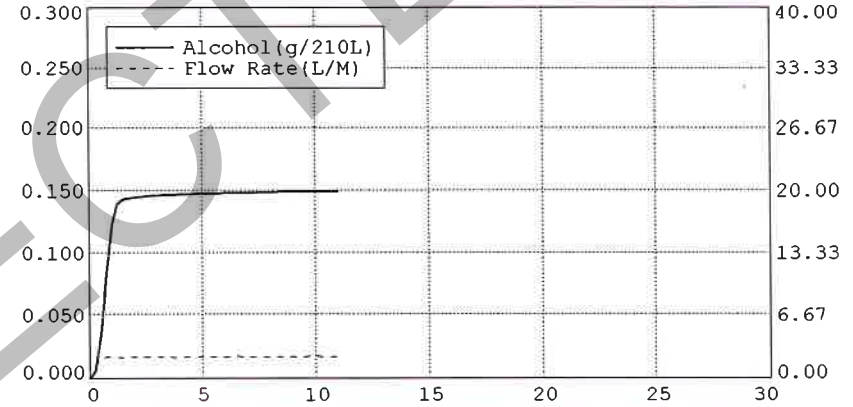
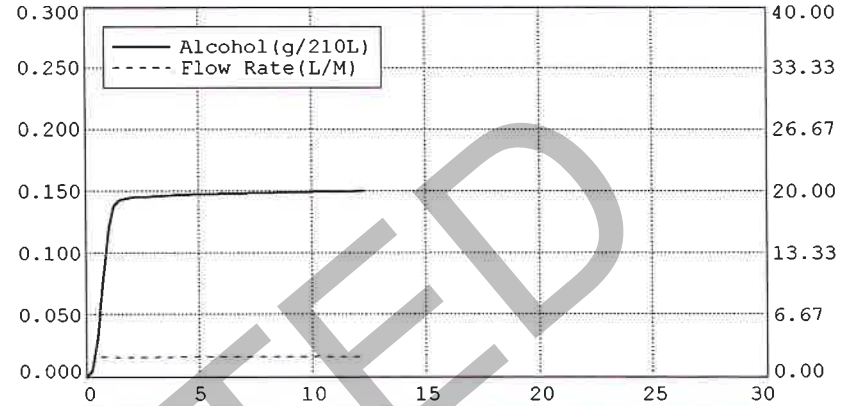
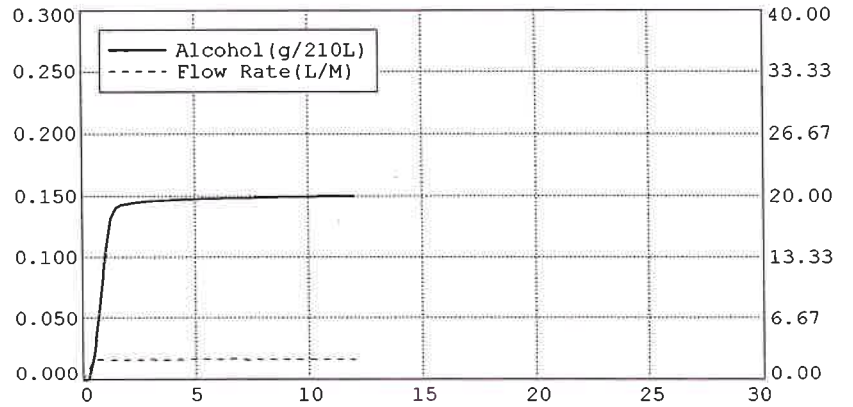
Date: 10/21/2024  
Time: 11:07:51

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.150  
TARGET AT 29.85: 0.150  
LOT #: AG332004  
EXPIRATION: 11/16/2025  
TANK PRESSURE: 364 psi

BLANK TEST	0.000	11:09
INTERNAL STANDARD	VERIFIED	11:09
EXTERNAL STANDARD	0.151	11:09
BLANK TEST	0.000	11:10
EXTERNAL STANDARD	0.151	11:10
BLANK TEST	0.000	11:11
EXTERNAL STANDARD	0.150	11:12
BLANK TEST	0.000	11:12
EXTERNAL STANDARD	0.151	11:13
BLANK TEST	0.000	11:14
EXTERNAL STANDARD	0.150	11:14
BLANK TEST	0.000	11:15

Average = 0.1506  
Std Dev = 0.0005



LINEARITY CHECK: Control Test 6

Alaska Department of Public Safety  
 DATAMASTER dmt: 100343

Date: 10/21/2024  
 Time: 11:19:03

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.300  
 TARGET AT 29.85: 0.299  
 LOT #: AG327804  
 EXPIRATION: 10/05/2025  
 TANK PRESSURE: 170 psi

BLANK TEST	0.000	11:20
INTERNAL STANDARD	VERIFIED	11:20
EXTERNAL STANDARD	0.310	11:21
BLANK TEST	0.000	11:22
EXTERNAL STANDARD	0.309	11:22
BLANK TEST	0.000	11:23
EXTERNAL STANDARD	0.309	11:24
BLANK TEST	0.000	11:25
EXTERNAL STANDARD	0.308	11:25
BLANK TEST	0.000	11:26
EXTERNAL STANDARD	0.309	11:27
BLANK TEST	0.000	11:28

Average = 0.3090  
 Std Dev = 0.0007

