

# Alaska Scientific Crime Detection Laboratory

## DataMaster Calibration Form

Effective: 1/23/2024

Version: 4.0

Instrument #: 100411 Analyst or Technician Name: C. O. Bryant

DataMaster DMT Calibration Start Date: 2/13/24

### Diagnostic Test

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

**Rejected due to multiple internal standard errors and blank errors during calibration along with a noisy chopper wheel. - COB 2024.09.09**

### 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: 221250180  
Calibration Due Date: 2/14/24

- Verify Volume Setting (1.50 L +/- 0.10 L), adjust if needed

- Print Technician Screen
- Print "Cal Factors"

**Errors occurring during linearity are not kept in the technical record due to them not printing as part of the linearity sequence. - COB 2024.11.05**

### Minimum Volume Test

- Perform Minimum Volume (Subject) Test: 1.5 liters (1.3 L to 1.7 L)

### As Left Linearity Testing

Barometric Pressure (in Hg) 29.78 Temperature (C) 22.4 Relative Humidity (%) 14  
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: 100411  
-----

Date: 02/13/2024  
Time: 16:40:35

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

TEMPERATURES

Sample Chamber = 48.9°C PASSED  
(44.0°C - 52.0°C)  
Breath Tube = 47.1°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.91 V PASSED  
(1.15 V - 2.67 V)  
Cooler Voltage = 1.79 V PASSED  
(1.07 V - 2.51 V)  
Bias Voltage = 79 V PASSED  
(48 V - 112 V)  
Chopper Freq = 541 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.7 in

PUMP INFO

Flow Rate = 4.151 L/M PASSED  
(3.500 L/M - 6.500 L/M)

DETECTOR INFO

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

FILTER INFO

Filter 1 PASSED  
Filter 2 PASSED  
Filter 3 PASSED

INTERNAL STANDARD

Xq = 0.092 0.09% PASSED  
(0.00% - 4.00%)

REJECTED

Technician Screen

-----  
DATAMASTER dmt: 100411  
-----

Date: 02/14/2024  
Time: 10:50 AM

Temperatures (°C)  
Sample Cell: 48.9°C  
Breath Tube: 47.2°C

Current Barometer 29.8 in  
Volume (Ltr) 1.53

Settings  
Lamp: 1.70 V  
Bias: 80 V  
Cooler: 1.83 V  
Chopper: 540 Hz

Voltages (V)  
Flow: 1.05 V  
Detector: 0.069 V

REJECTED

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100411  
-----

Date: 01/11/2024  
Time: 11:27:28

OPERATOR NAME:  
CARLIE GLAISTER  
CERTIFICATE #: 10436

Ca = 0.1000  
CAL = 0.978707    0.800 <= CAL < 1.200  
b1 = 0.0003    0.0000 <= b1 < 0.0040  
b2 = 0.0039    0.0010 <= b2 < 0.0100  
b3 = 0.0000    0.0000 <= b3 < 0.0040  
Xq = 0.0924    0.0500 <= Xq < 0.2000  
a21 = 1.121994    1.050 <= a21 < 1.300  
a31 = 0.474412    0.300 <= a31 < 0.800

REJECTED

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100411

Date: 02/14/2024  
Time: 10:56:05

SUBJECT NAME:  
TEST TEST  
LICENSE #: VOLUME TEST

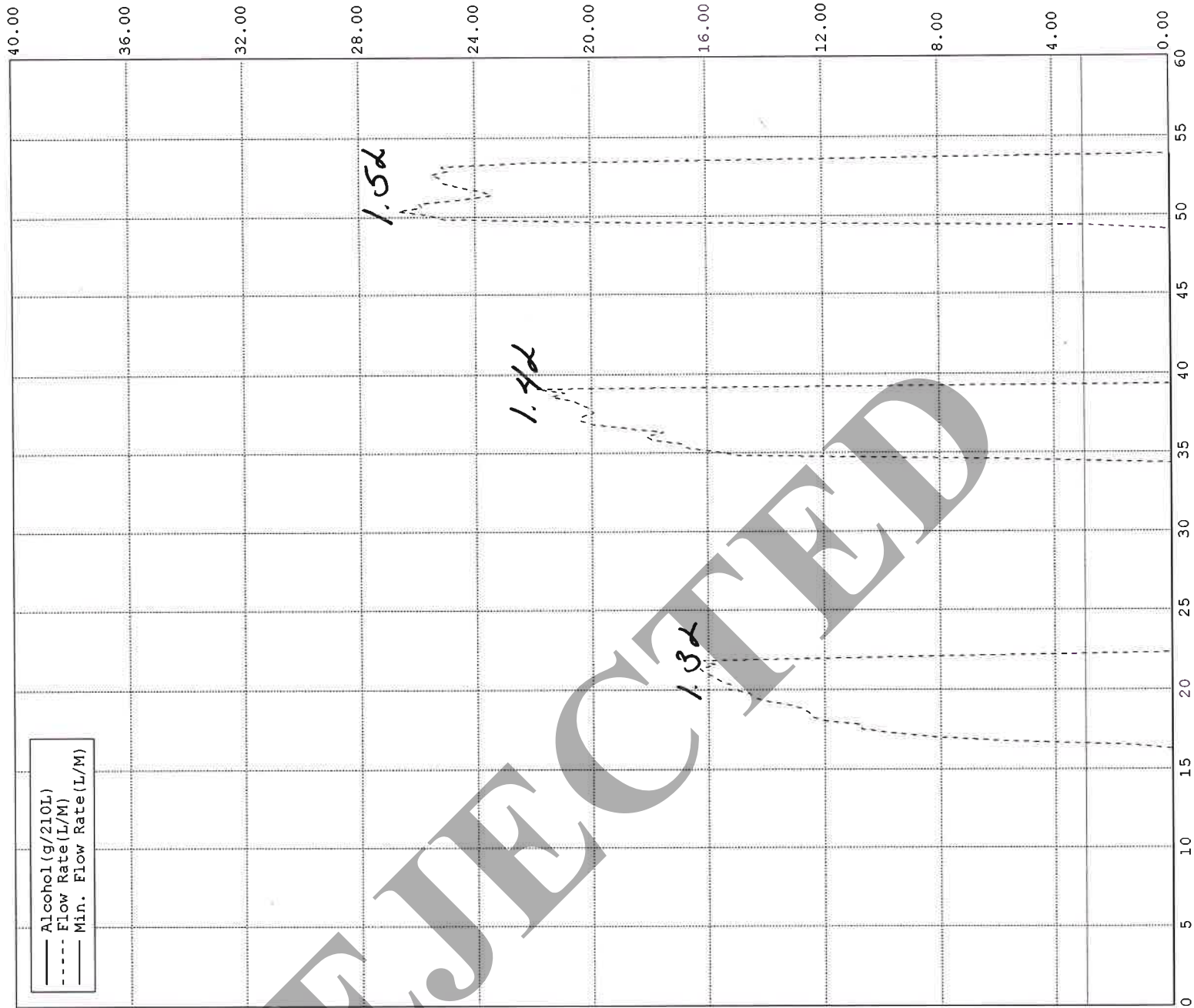
OPERATOR NAME:  
COLLEEN S O'BRYAN  
OPERATOR'S #: 6237

DEPT/AGENCY:  
AAA1  
CASE/REPORT: 24-1234  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.80: 0.080  
LOT #: 09523080A1  
EXPIRATION: 05/05/2025

DIAGNOSTIC CHECK	PASSED	10:57
BLANK TEST	0.000	10:57
INTERNAL STANDARD	VERIFIED	10:57
EXTERNAL STANDARD	0.080	10:57
BLANK TEST	0.000	10:58
SUBJECT SAMPLE (Vol=1.68L)	0.000	10:59
BLANK TEST	0.000	11:00
EXTERNAL STANDARD	0.077	11:00
BLANK TEST	0.000	11:01

*COB*



LINEARITY CHECK

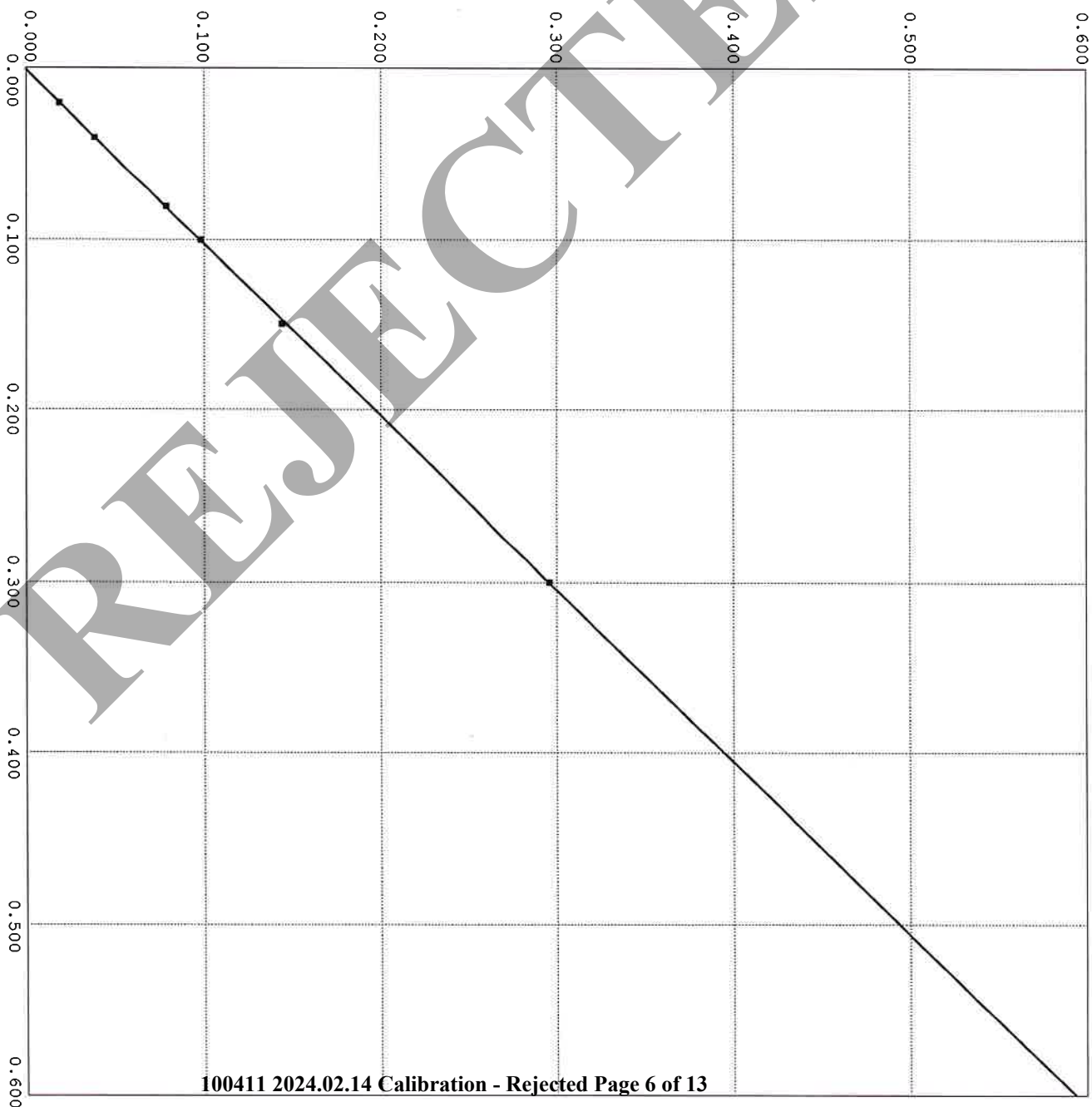
Alaska Department of Public Safety  
DATAMASTER dmt: 100411

Date: 02/14/2024  
Time: 11:07:05

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

TARGET	AVERAGE	STD. DEV.
0.020	0.0192	0.0013
0.040	0.0392	0.0004
0.080	0.0798	0.0015
0.100	0.0990	0.0016
0.149	0.1448	0.0011
0.299	0.2966	0.0009

SLOPE = 0.991596  
R<sup>2</sup> = 0.999853



OS

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
DATAMASTER dmt: 100411

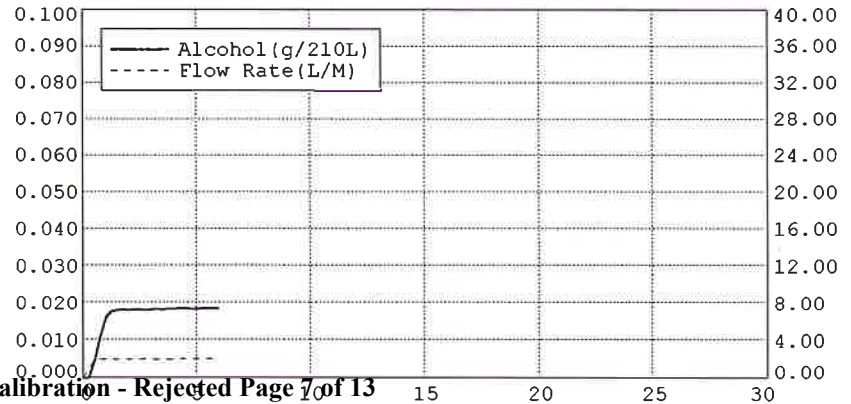
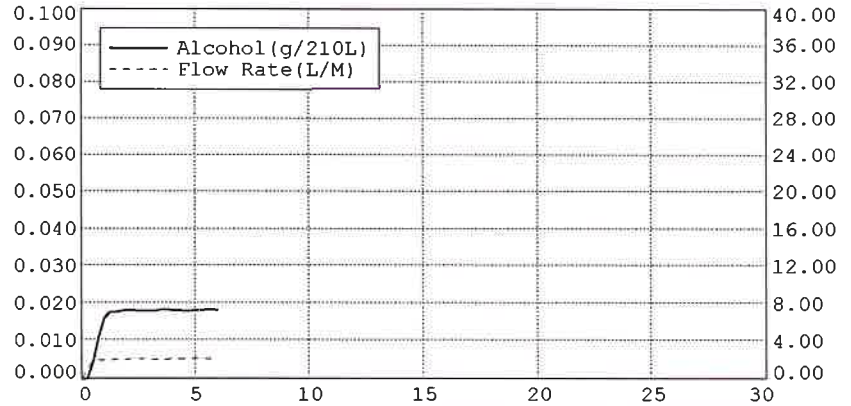
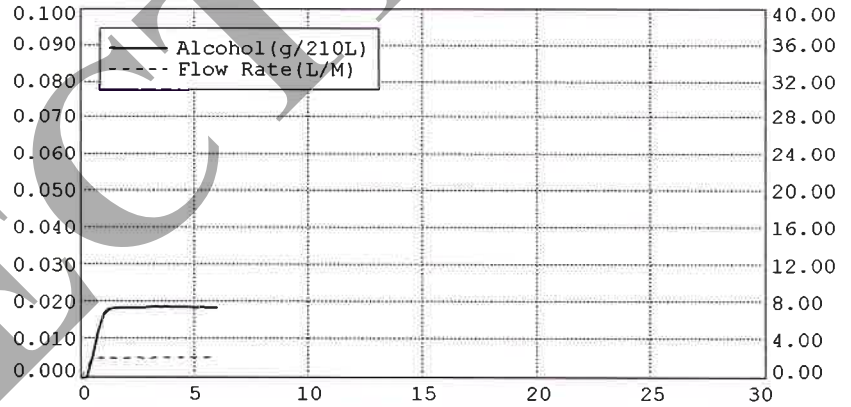
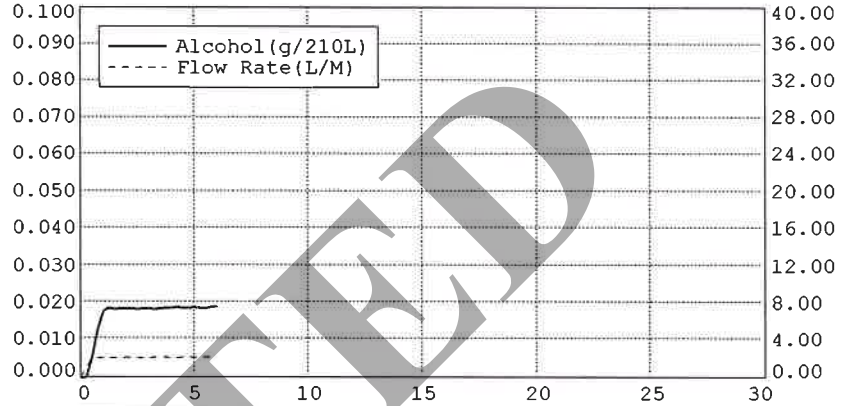
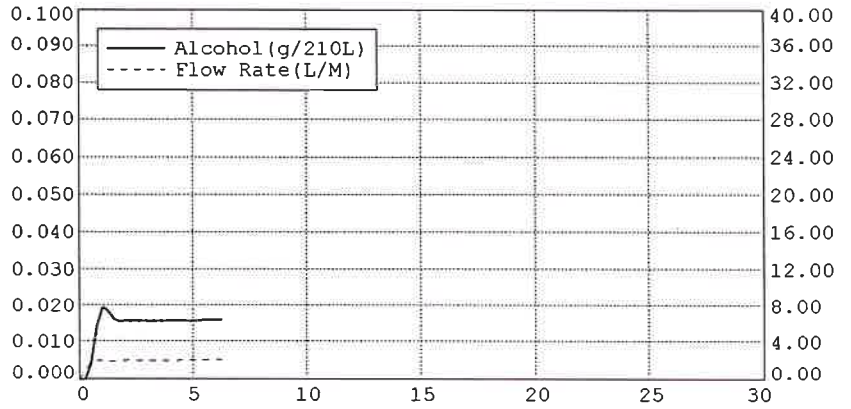
Date: 02/14/2024  
Time: 11:09:02

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
TARGET AT 29.80: 0.020  
LOT #: AG217902  
EXPIRATION: 06/28/2024  
TANK PRESSURE: 378 psi

BLANK TEST	0.000	11:10
INTERNAL STANDARD	VERIFIED	11:10
EXTERNAL STANDARD	0.017	11:10
BLANK TEST	0.000	11:11
EXTERNAL STANDARD	0.020	11:11
BLANK TEST	0.000	11:12
EXTERNAL STANDARD	0.020	11:12
BLANK TEST	0.000	11:13
EXTERNAL STANDARD	0.020	11:13
BLANK TEST	0.000	11:14
EXTERNAL STANDARD	0.019	11:14
BLANK TEST	0.000	11:15

Average = 0.0192  
Std Dev = 0.0013



REJECTED

LINEARITY CHECK: Control Test 2

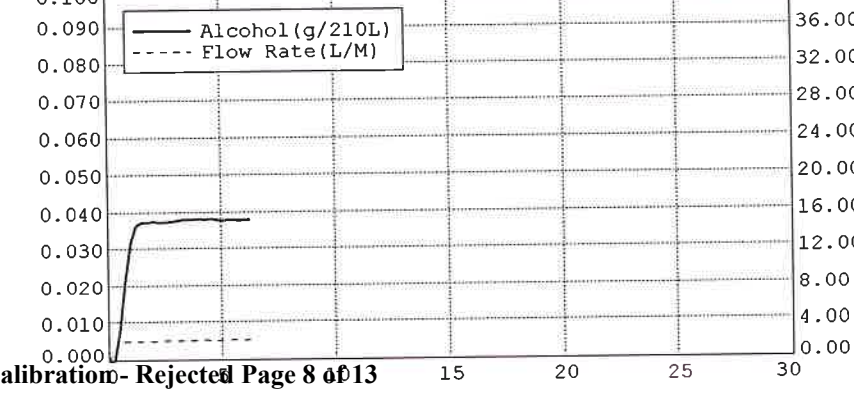
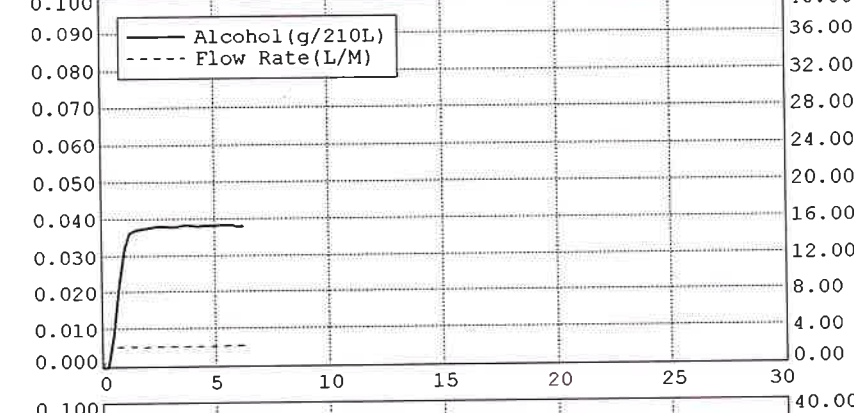
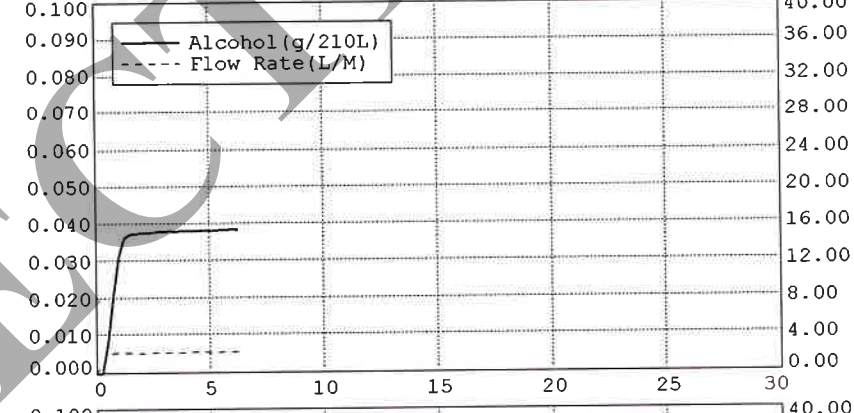
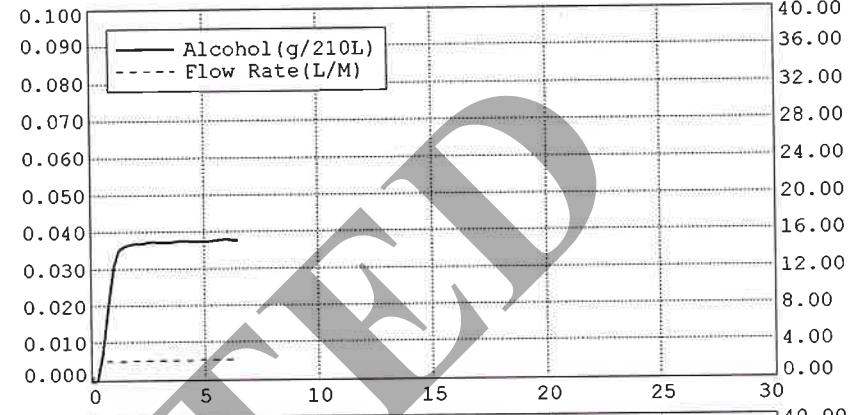
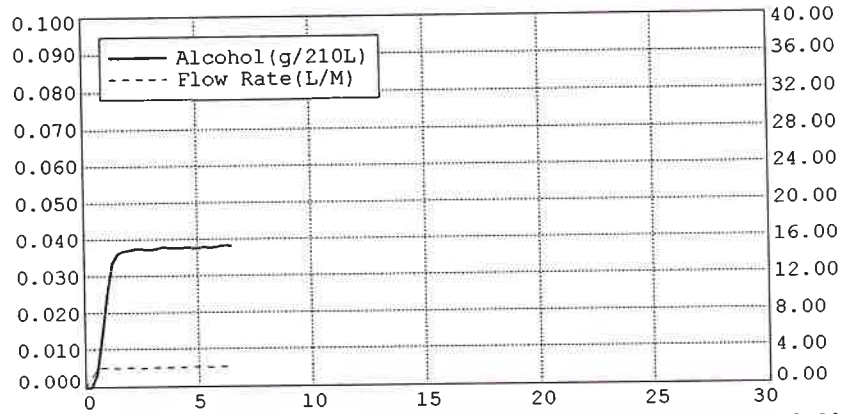
Alaska Department of Public Safety  
DATAMASTER dmt: 100411

Date: 02/14/2024  
Time: 11:19:24

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.040  
TARGET AT 29.79: 0.040  
LOT #: AG217904  
EXPIRATION: 06/28/2024  
TANK PRESSURE: 748 psi

BLANK TEST	0.000	11:20
INTERNAL STANDARD	VERIFIED	11:20
EXTERNAL STANDARD	0.039	11:20
BLANK TEST	0.000	11:21
EXTERNAL STANDARD	0.039	11:21
BLANK TEST	0.000	11:22
EXTERNAL STANDARD	0.039	11:23
BLANK TEST	0.000	11:23
EXTERNAL STANDARD	0.039	11:24
BLANK TEST	0.000	11:24
EXTERNAL STANDARD	0.040	11:25
BLANK TEST	0.000	11:26

Average = 0.0392  
Std Dev = 0.0004



REJECTED



LINEARITY CHECK: Control Test 3

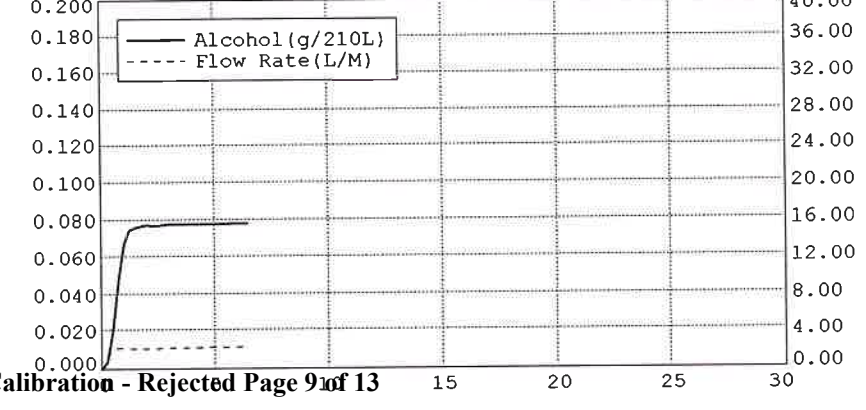
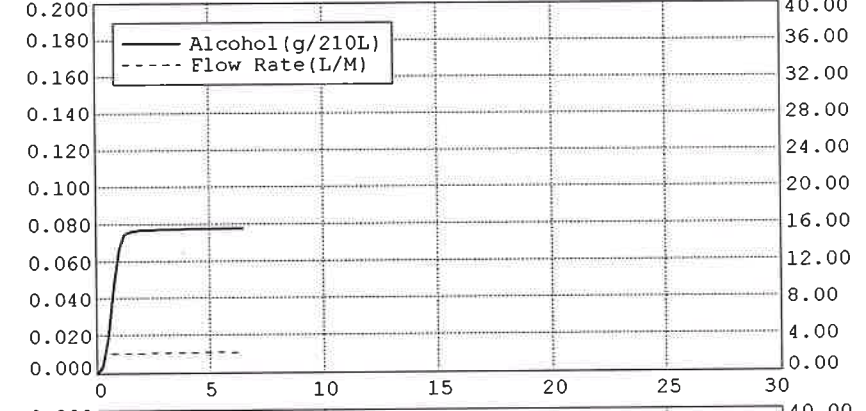
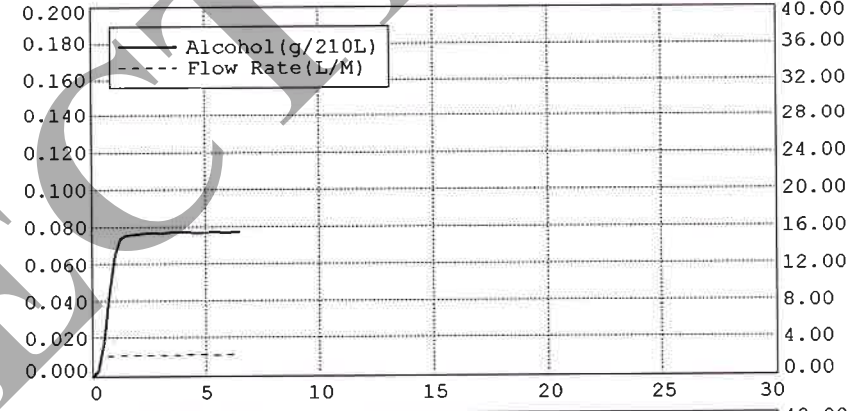
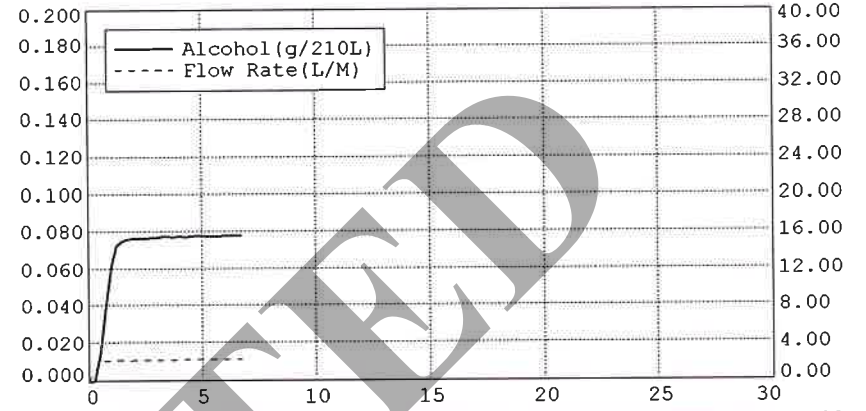
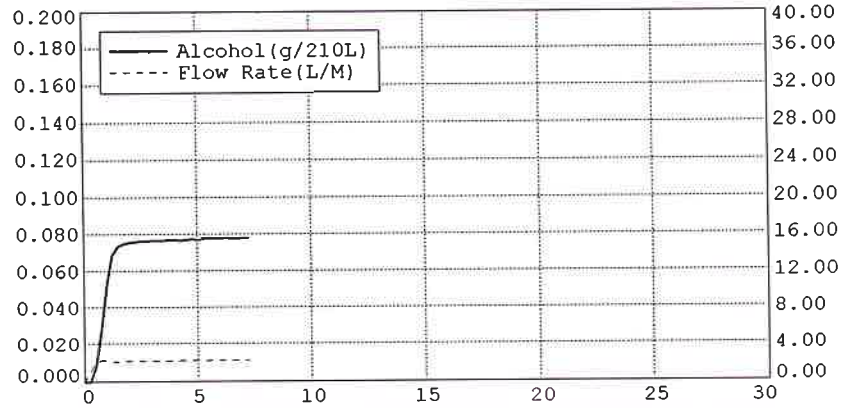
Alaska Department of Public Safety  
DATAMASTER dmt: 100411

Date: 02/14/2024  
Time: 11:26:45

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.79: 0.080  
LOT #: AG310901  
EXPIRATION: 04/19/2025  
TANK PRESSURE: 1001 psi

BLANK TEST	0.000	11:28
INTERNAL STANDARD	VERIFIED	11:28
EXTERNAL STANDARD	0.082	11:28
BLANK TEST	0.000	11:29
EXTERNAL STANDARD	0.080	11:29
BLANK TEST	0.000	11:30
EXTERNAL STANDARD	0.080	11:31
BLANK TEST	0.000	11:31
EXTERNAL STANDARD	0.079	11:32
BLANK TEST	0.000	11:33
EXTERNAL STANDARD	0.078	11:33
BLANK TEST	0.000	11:34

Average = 0.0798  
Std Dev = 0.0015



REJECTED

LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
DATAMASTER dmt: 100411

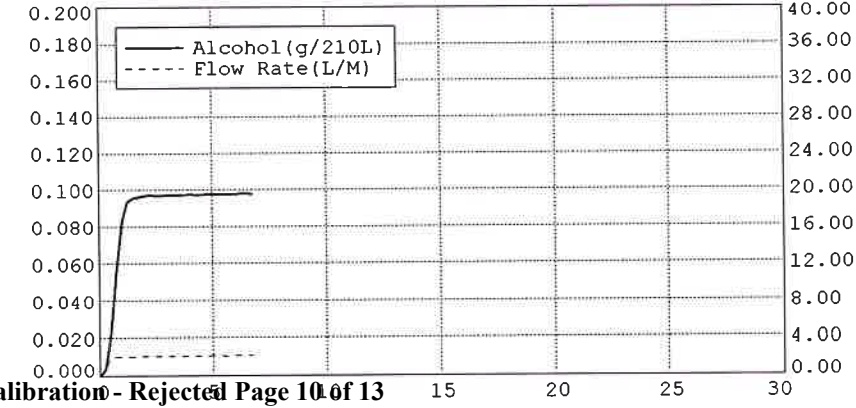
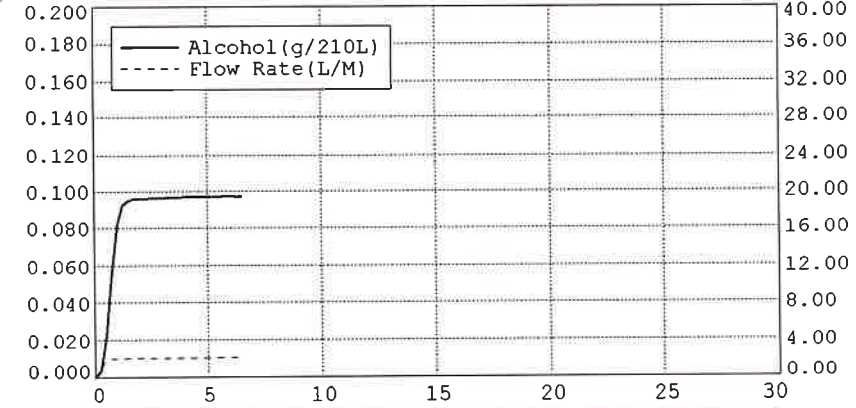
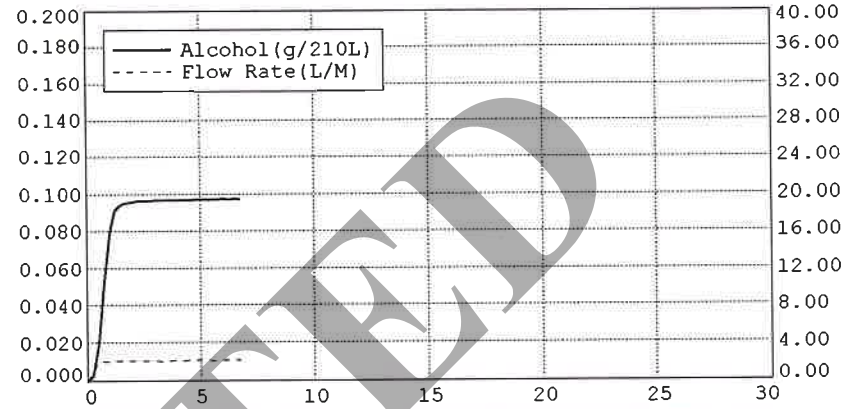
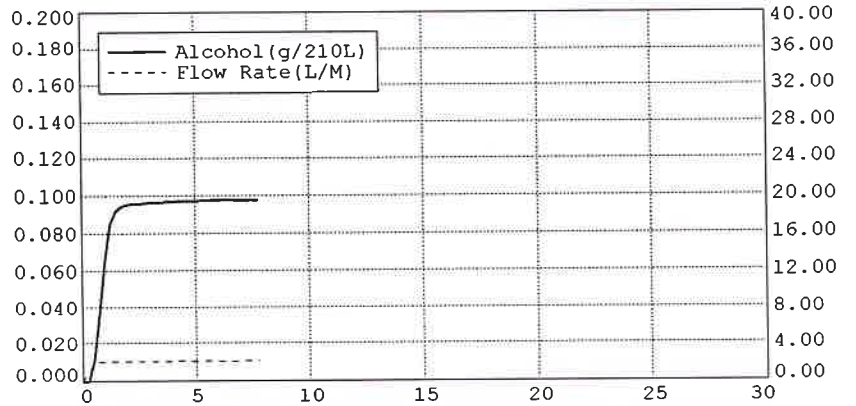
Date: 02/14/2024  
Time: 11:39:38

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
TARGET AT 29.78: 0.100  
LOT #: AG211003  
EXPIRATION: 04/20/2024  
TANK PRESSURE: 968 psi

BLANK TEST	0.000	11:40
INTERNAL STANDARD	VERIFIED	11:40
EXTERNAL STANDARD	0.098	11:41
BLANK TEST	0.000	11:42
EXTERNAL STANDARD	0.097	11:42
BLANK TEST	0.000	11:43
EXTERNAL STANDARD	0.101	11:43
BLANK TEST	0.000	11:44
EXTERNAL STANDARD	0.099	11:44
BLANK TEST	0.000	11:45
EXTERNAL STANDARD	0.100	11:45
BLANK TEST	0.000	11:46

Average = 0.0990  
Std Dev = 0.0016



REJECTED

LINEARITY CHECK: Control Test 5

Alaska Department of Public Safety  
DATAMASTER dmt: 100411

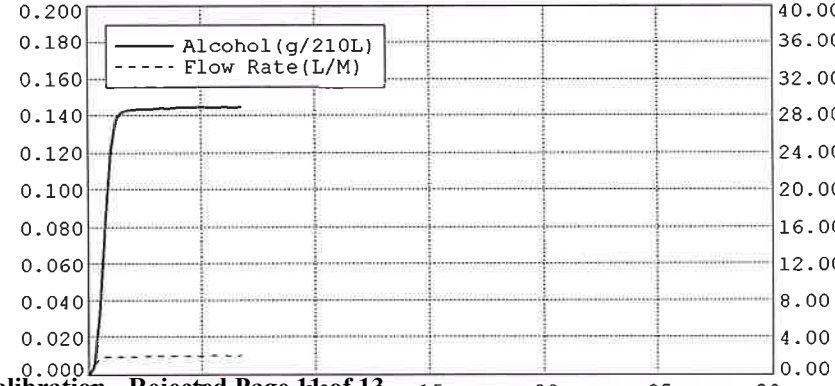
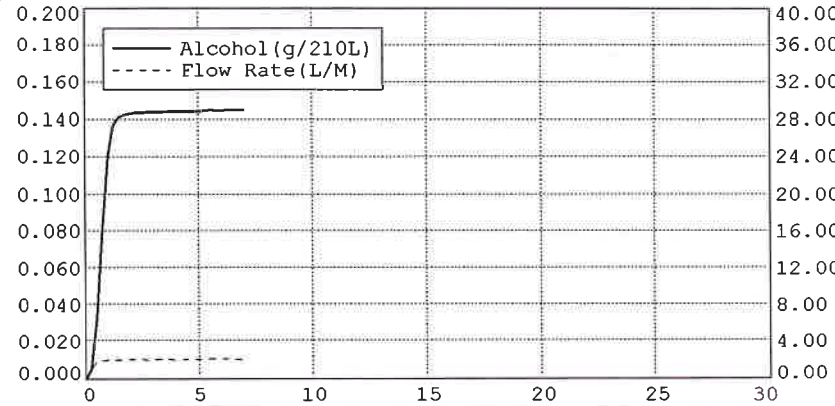
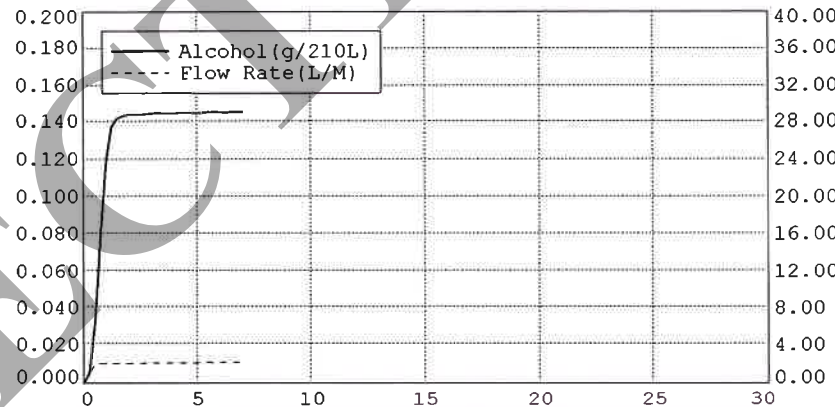
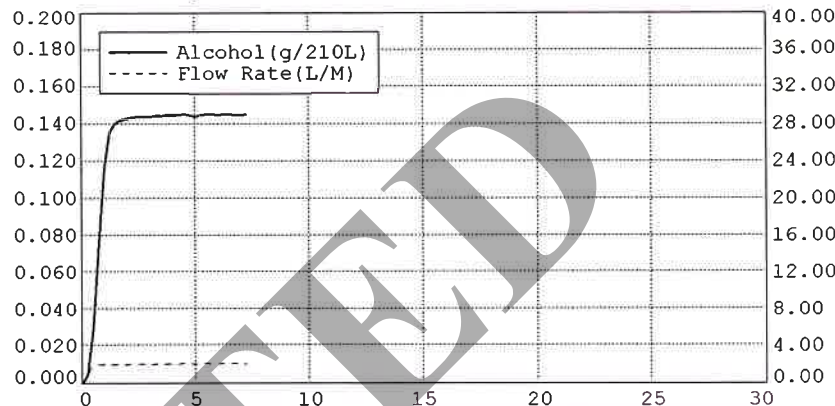
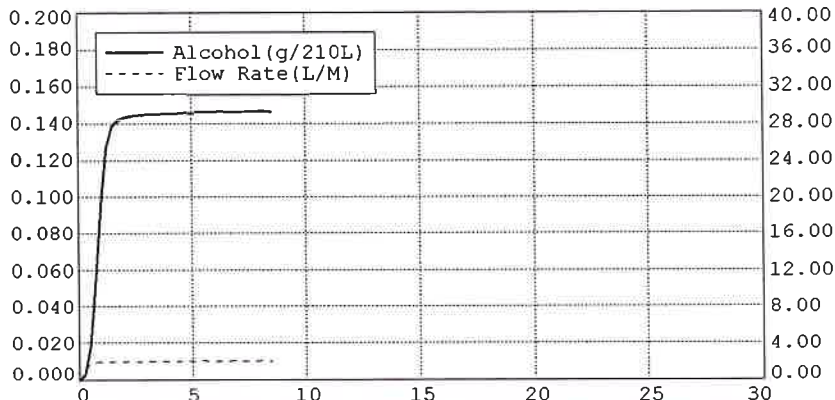
Date: 02/14/2024  
Time: 11:47:38

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.150  
TARGET AT 29.78: 0.149  
LOT #: AG332004  
EXPIRATION: 11/16/2025  
TANK PRESSURE: 776 psi

BLANK TEST	0.000	11:48
INTERNAL STANDARD	VERIFIED	11:48
EXTERNAL STANDARD	0.145	11:49
BLANK TEST	0.000	11:50
EXTERNAL STANDARD	0.146	11:50
BLANK TEST	0.000	11:51
EXTERNAL STANDARD	0.145	11:51
BLANK TEST	0.000	11:52
EXTERNAL STANDARD	0.143	11:52
BLANK TEST	0.000	11:53
EXTERNAL STANDARD	0.145	11:53
BLANK TEST	0.000	11:54

Average = 0.1448  
Std Dev = 0.0011



REJECTED

LINEARITY CHECK: Control Test 6

Alaska Department of Public Safety  
DATAMASTER dmt: 100411

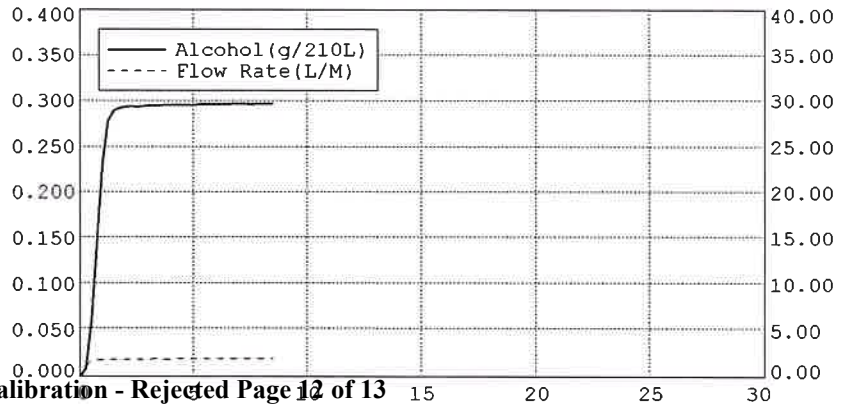
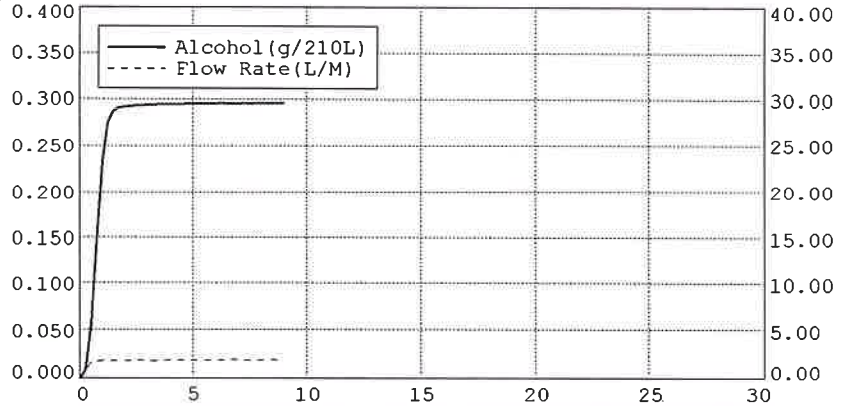
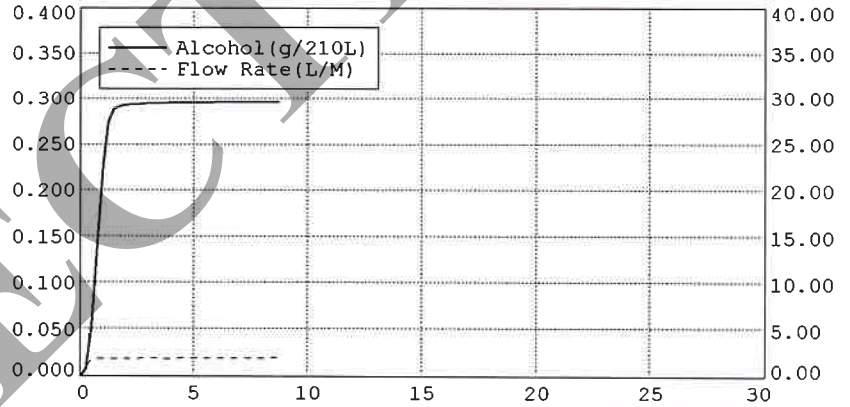
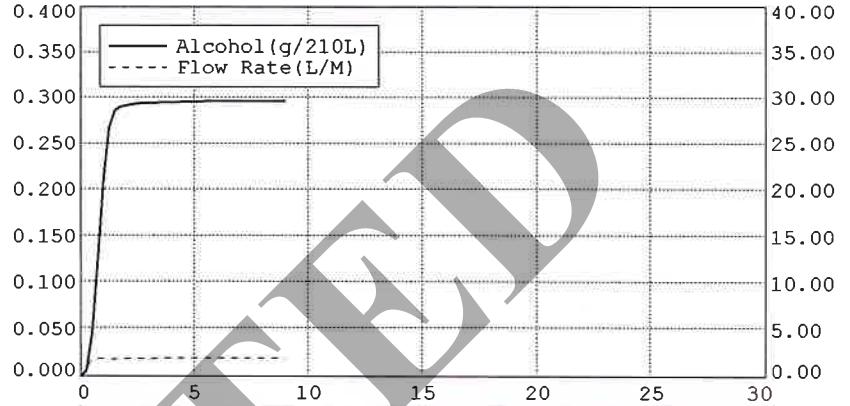
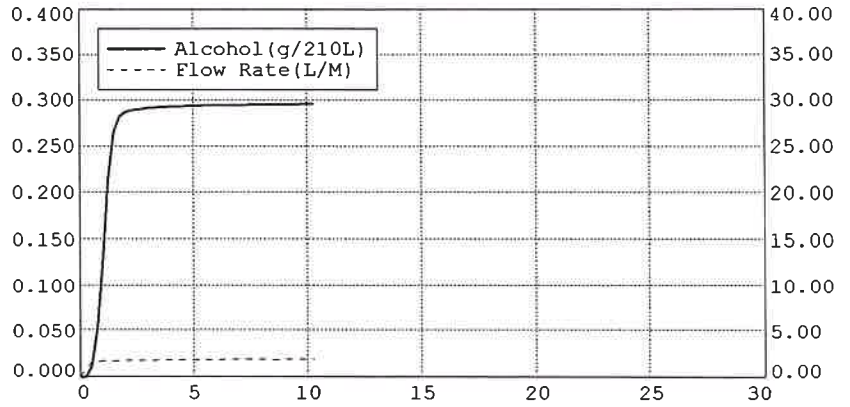
Date: 02/14/2024  
Time: 12:08:53

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.300  
TARGET AT 29.78: 0.299  
LOT #: AG327804  
EXPIRATION: 10/05/2025  
TANK PRESSURE: 271 psi

BLANK TEST	0.000	12:09
INTERNAL STANDARD	VERIFIED	12:10
EXTERNAL STANDARD	0.297	12:10
BLANK TEST	0.000	12:11
EXTERNAL STANDARD	0.296	12:11
BLANK TEST	0.000	12:12
EXTERNAL STANDARD	0.296	12:12
BLANK TEST	0.000	12:13
EXTERNAL STANDARD	0.296	12:13
BLANK TEST	0.000	12:14
EXTERNAL STANDARD	0.298	12:14
BLANK TEST	0.000	12:15

Average = 0.2966  
Std Dev = 0.0009



REJECTED

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100411

Date: 02/14/2024  
Time: 13:39:43

SUBJECT NAME:  
TEST TEST  
LICENSE #: INCOMPLETE

OPERATOR NAME:  
COLLEEN S OBRyant  
OPERATOR'S #: 6237

DEPT/AGENCY:  
AAA1  
CASE/REPORT: 24-1234  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.74: 0.080  
LOT #: 09523080A1  
EXPIRATION: 05/05/2025

DIAGNOSTIC CHECK PASSED 13:40  
BLANK TEST 0.000 13:40  
INTERNAL STANDARD ERROR 13:40

Internal Standard Error

REJECTED