

# Alaska Scientific Crime Detection Laboratory

## DataMaster Certification Form

Issued: 7/10/2015  
Effective: 7/10/2015

Version: DMCEF 2015 R1  
Status: Active

Instrument S/N 100693 Analyst Brandi Barnett Start Date 4/3/19

1. Diagnostic Test (attached)  Internal Standard value  $\leq 3.00\%$  Yes
1. Voltage Checks
- a. Adjust voltages, if needed 
    - i. Lamp (2.6V Maximum)
    - ii. Bias
    - iii. Cooler (2.0V Maximum)
    - iv. Chopper Frequency
    - v. Detector Voltage (-0.100V to 0.100V)
  - b. Set RFI
  - c. Adjust barometer reading to match NIST traceable barometer
  - d. Adjust volume setting, if needed (1.5L +/- 0.1L)
  - e. Print Technician Screen (attached)

2. Print Calibration Factors (attached)

3. Volume Test - Minimum 1.5 L (1.3L to 1.7L)

4. Linearity Test (attached)

a. Levels Used

- i. 0.020g/210L Mnf Airgas Lot AG805804 Exp 2/27/20
- ii. 0.040g/210L Mnf Airgas Lot AG733403 Exp 11/30/19
- iii. 0.080g/210L Mnf Airgas Lot AG826101 Exp 9/18/2020
- iv. 0.100g/210L Mnf Airgas Lot AG805903 Exp 2/28/20
- v. 0.200g/210L Mnf Guth Lot 17340 Exp 10/9/19
  - 1. Simulator S/N DR4177 Date Calibrated 6/4/18
- vi. 0.300g/210L Mnf Guth Lot 17350 Exp 10/11/19
  - 1. Simulator S/N DR4 BMB Date Calibrated 6/4/18

5. Functional Tests (attached)

- a. Incomplete
- b. Invalid
- c. Interference
- d. Exceeded attempts

- i. Acetone - Mnf Guth Lot 18070 Level 0.100 Exp 5/14/19 02/26/20
  - 1. Simulator S/N SD1200 Date Calibrated 6/1/18 4/10/19 BMB
- ii. Isopropanol - Mnf Guth Lot 18070 Level 0.100 Exp 5/14/19 02/26/20
  - 1. Simulator S/N DR4176 Date Calibrated 6/4/18 BMB 4/10/19
- iii. Negative Control - Mnf Guth Lot 18070 Level 0.100 Exp 5/14/19 02/26/20
  - 1. Simulator S/N DR4163 Date Calibrated 6/4/18 BMB 4/10/19

e. RFI

- 6. Verify stylus is calibrated
- 7. Reset Options
- 8. Clear Memory
- 9. Verification of Calibration
- 10. Non-Drinking Subject Test (attached)
- 11. Upload
- 13. Remove tank prior to shut down

End Date 4/5/19

DIAGNOSTIC RECORD

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/03/2019  
Time: 12:47:40

VERSIONS  
DMT: 3.02  
PIC: 3.03  
Modem: 2.6  
Questions: 2.2

TEMPERATURES

Sample Chamber = 49.1°C PASSED  
(44.0°C - 52.0°C)  
Breath Tube = 47.1°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.70 V PASSED  
(1.02 V - 2.38 V)  
Cooler Voltage = 1.64 V PASSED  
(0.98 V - 2.30 V)  
Bias Voltage = 79 V PASSED  
(47 V - 111 V)  
Chopper Freq = 548 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.3 in

PUMP INFO

Flow Rate = 4.456 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  
(0.001 V <= 0.010 V)

FILTER INFO

Filter 1 PASSED  
Filter 2 PASSED  
Filter 3 PASSED

INTERNAL STANDARD PASSED  
Xq = 0.091 0.10% (0.00% - 4.00%)

Technician Screen

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DATAMASTER dmt: 100693  
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Date: 04/03/2019  
Time: 12:58 PM

Temperatures (°C)

Sample Cell: 48.9°C  
Breath Tube: 47.6°C

Current Barometer 29.3 in  
Volume (Ltr) 1.47

Settings

Lamp: 1.70 V  
Bias: 79 V  
Cooler: 1.77 V  
Chopper: 536 Hz

Voltages (V)

Flow: 1.04 V  
Detector: -0.034 V

CALIBRATION FACTORS

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Alaska Department of Public Safety  
DATAMASTER dmt: 100693  
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Date: 04/01/2019  
Time: 08:45:25

OPERATOR NAME:  
DEREK WALTON  
CERTIFICATE #: 9508

Ca = 0.1000  
CAL = 0.996487    0.800 <= CAL < 1.200  
b1 = 0.0023    0.0000 <= b1 < 0.0040  
b2 = 0.0072    0.0010 <= b2 < 0.0100  
b3 = 0.0010    0.0000 <= b3 < 0.0040  
Xq = 0.0909    0.0500 <= Xq < 0.2000  
a21 = 1.137783    1.050 <= a21 < 1.300  
a31 = 0.391506    0.300 <= a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/03/2019  
Time: 13:07:07

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

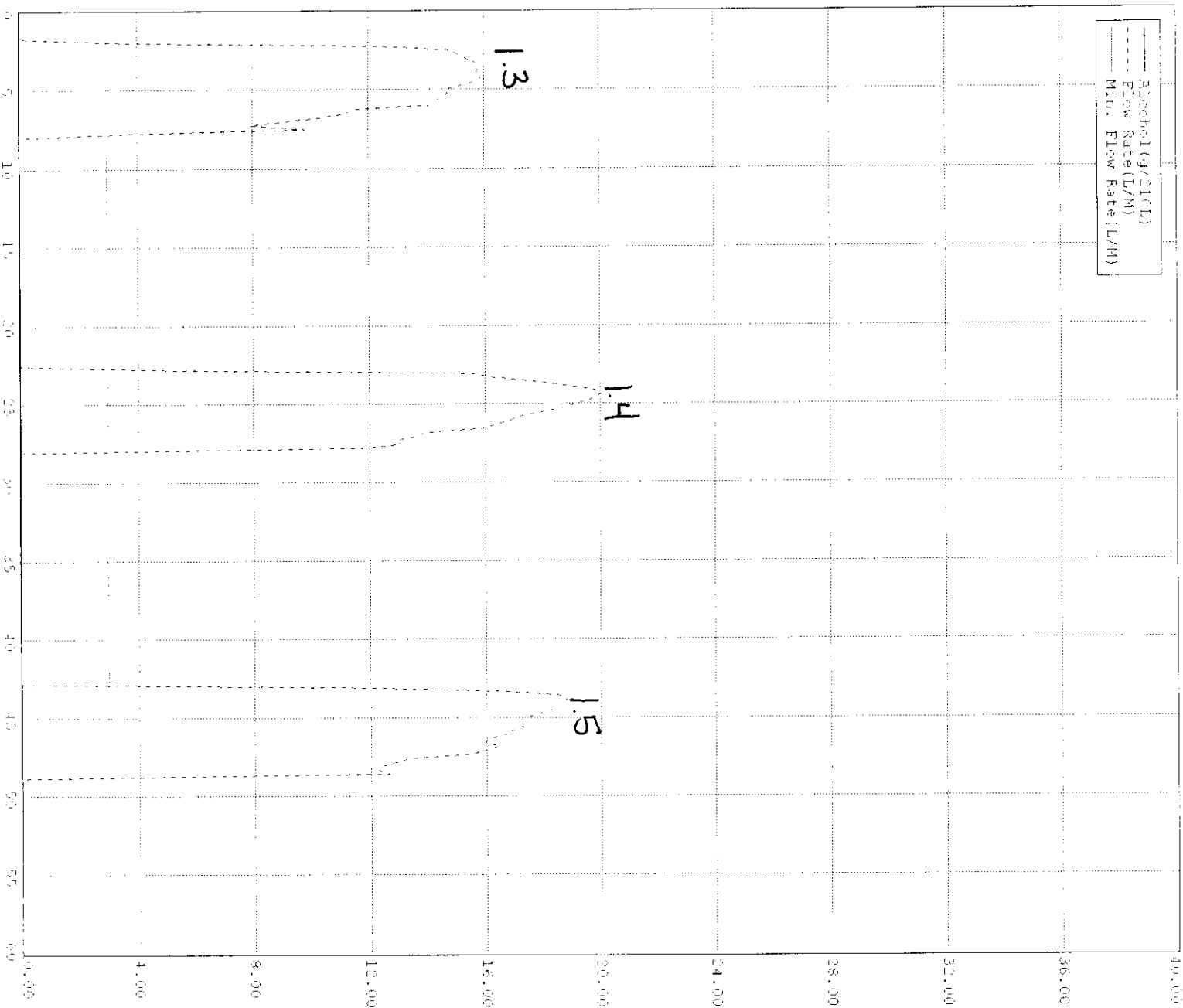
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
MINIMUM VOLUME  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.34: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK	PASSED	13:08
BLANK TEST	0.000	13:08
INTERNAL STANDARD	VERIFIED	13:08
EXTERNAL STANDARD	0.078	13:08
BLANK TEST	0.000	13:09
BLANK TEST	0.000	13:10
SUBJECT SAMPLE (Vol=1.54L)	0.000	13:11
BLANK TEST	0.000	13:11
EXTERNAL STANDARD	0.078	13:11
BLANK TEST	0.000	13:12

BMB



LINEARITY CHECK

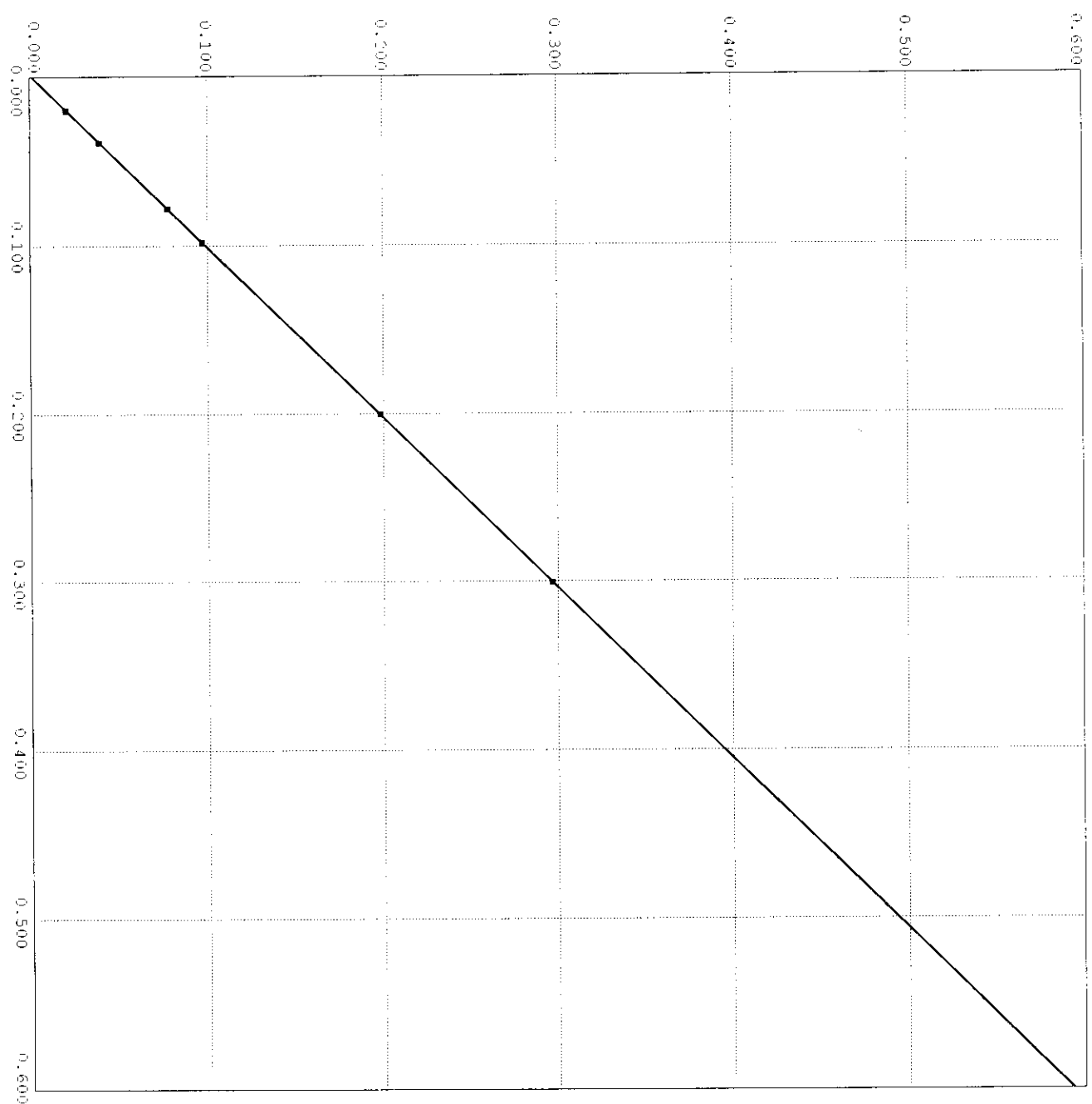
Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/04/2019  
Time: 09:50:09

SUPERVISOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

TARGET	AVERAGE	STD. DEV.
0.020	0.0210	0.0000
0.039	0.0398	0.0004
0.078	0.0786	0.0005
0.098	0.0980	0.0000
0.200	0.1990	0.0000
0.300	0.2974	0.0005

SLOPE = 0.987233  
R<sup>2</sup> = 0.999998



BMB

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100693

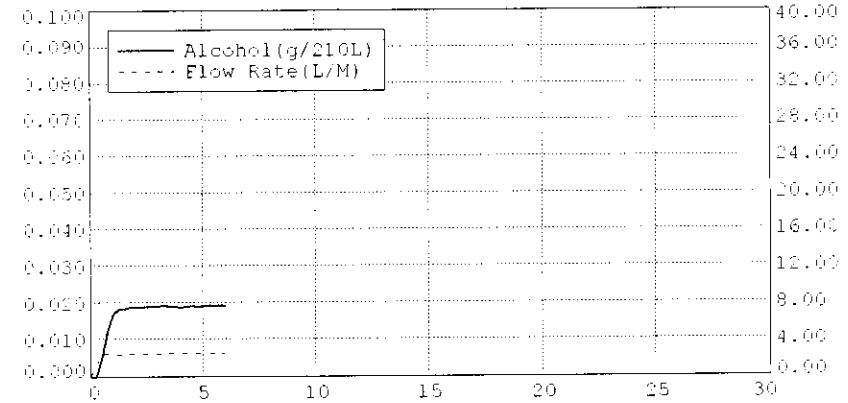
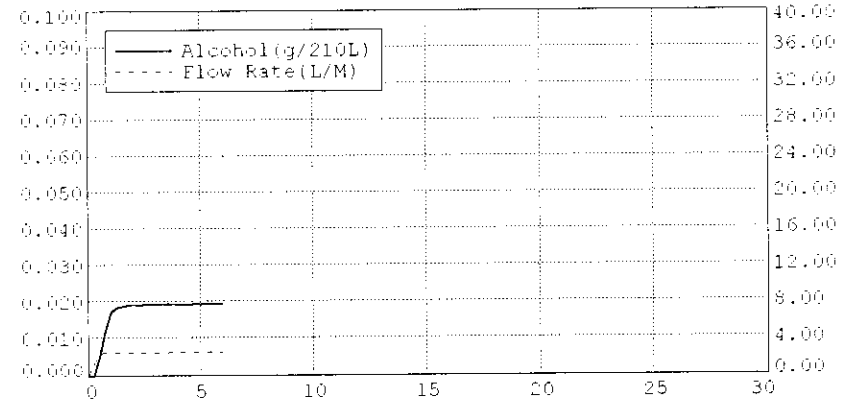
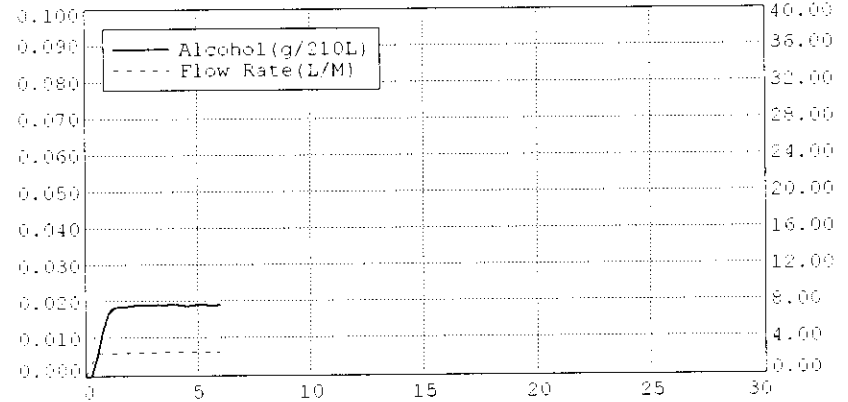
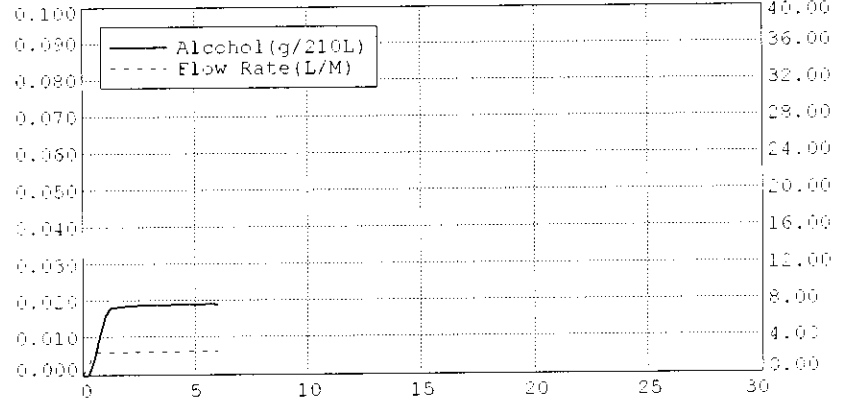
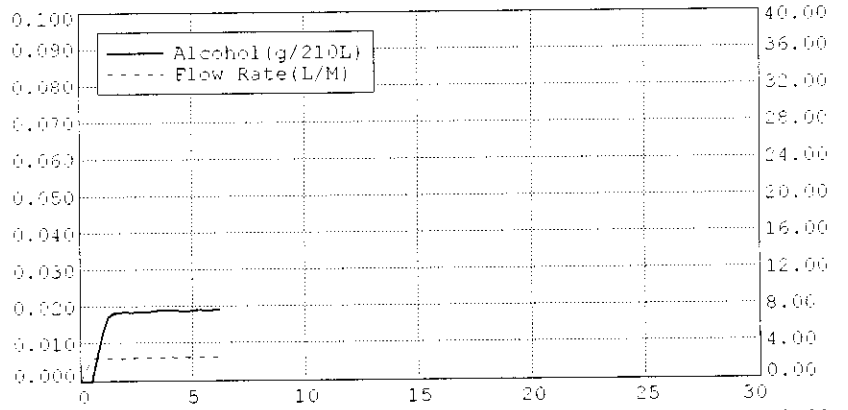
Date: 04/04/2019  
 Time: 09:50:11

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 29.33: 0.020  
 LOT #: AG805804  
 EXPIRATION: 02/27/2020  
 TANK PRESSURE: 736 psi

BLANK TEST	0.000	09:51
INTERNAL STANDARD	VERIFIED	09:51
EXTERNAL STANDARD	0.021	09:51
BLANK TEST	0.000	09:52
EXTERNAL STANDARD	0.021	09:52
BLANK TEST	0.000	09:53
EXTERNAL STANDARD	0.021	09:53
BLANK TEST	0.000	09:54
EXTERNAL STANDARD	0.021	09:54
BLANK TEST	0.000	09:55
EXTERNAL STANDARD	0.021	09:56
BLANK TEST	0.000	09:56

Average = 0.0210  
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100693

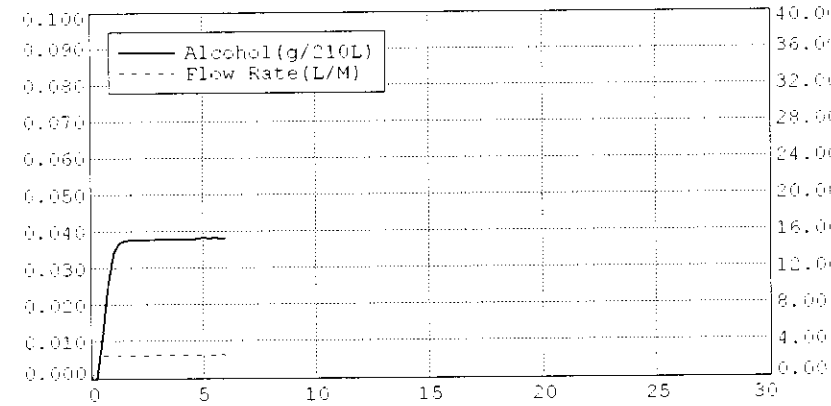
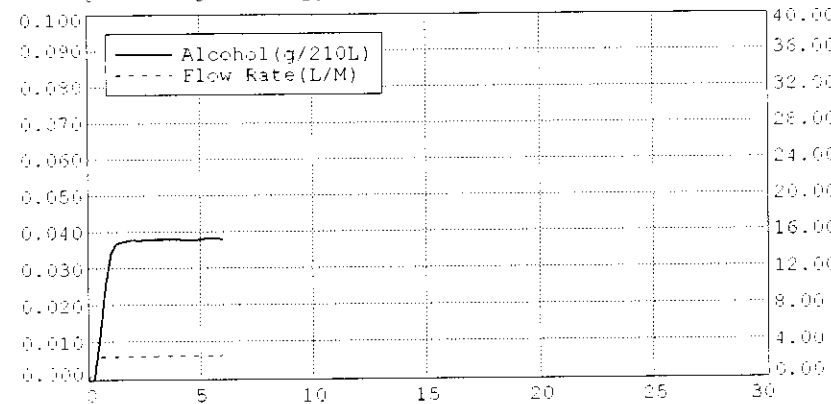
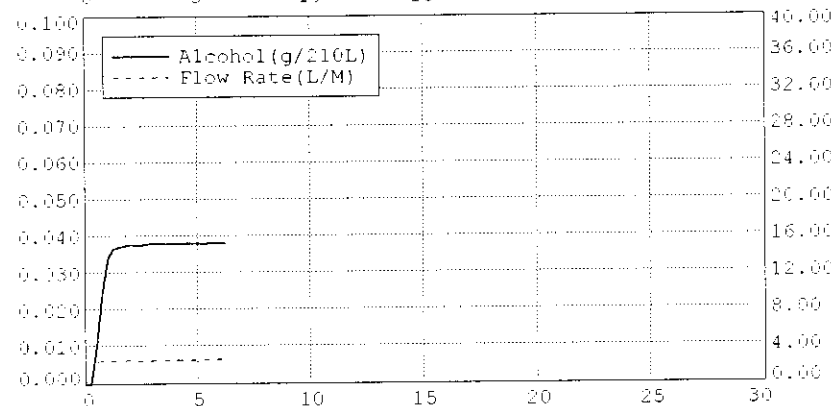
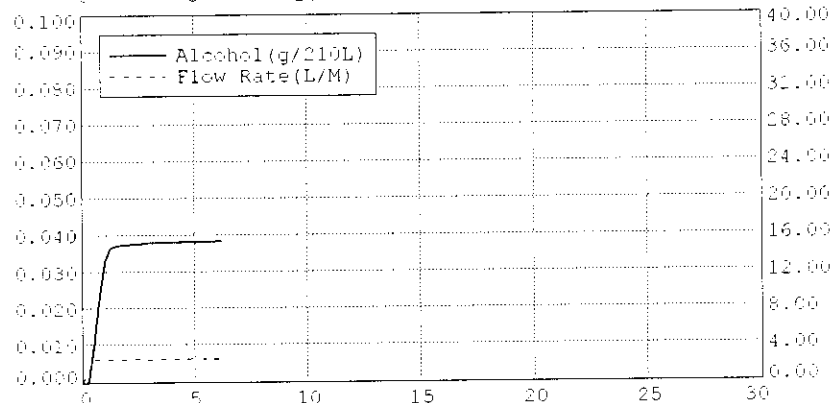
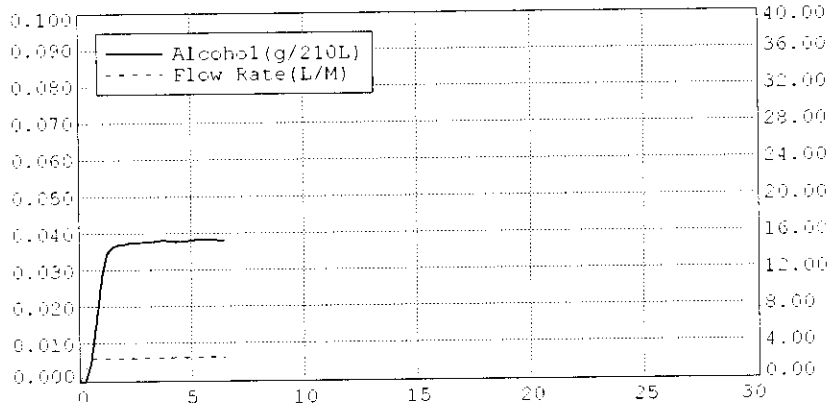
Date: 04/04/2019  
 Time: 09:59:15

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 29.33: 0.039  
 LOT #: AG733403  
 EXPIRATION: 11/30/2019  
 TANK PRESSURE: 855 psi

BLANK TEST	0.000	10:01
INTERNAL STANDARD	VERIFIED	10:01
EXTERNAL STANDARD	0.040	10:01
BLANK TEST	0.000	10:02
EXTERNAL STANDARD	0.040	10:03
BLANK TEST	0.000	10:03
EXTERNAL STANDARD	0.039	10:04
BLANK TEST	0.000	10:05
EXTERNAL STANDARD	0.040	10:05
BLANK TEST	0.000	10:06
EXTERNAL STANDARD	0.040	10:06
BLANK TEST	0.000	10:07

Average = 0.0398  
 Std Dev = 0.0004





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

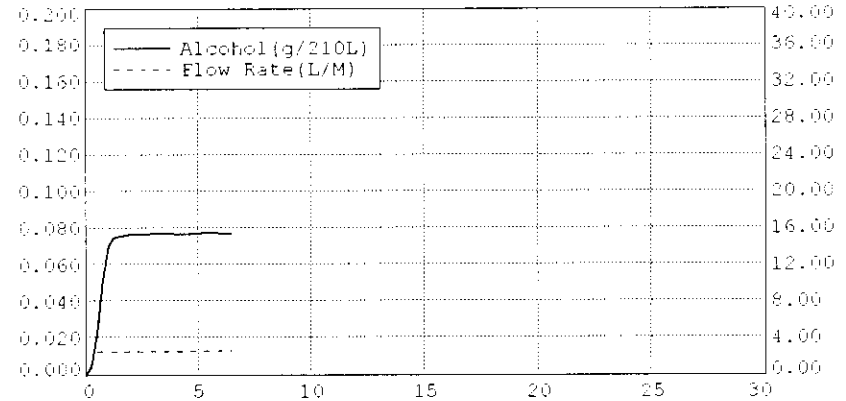
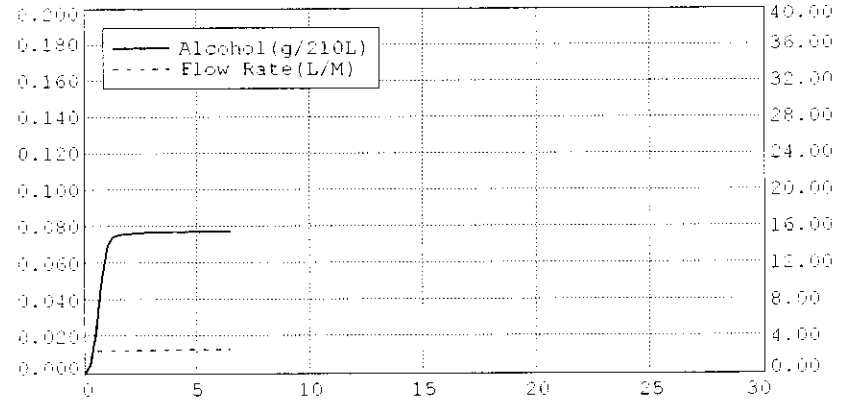
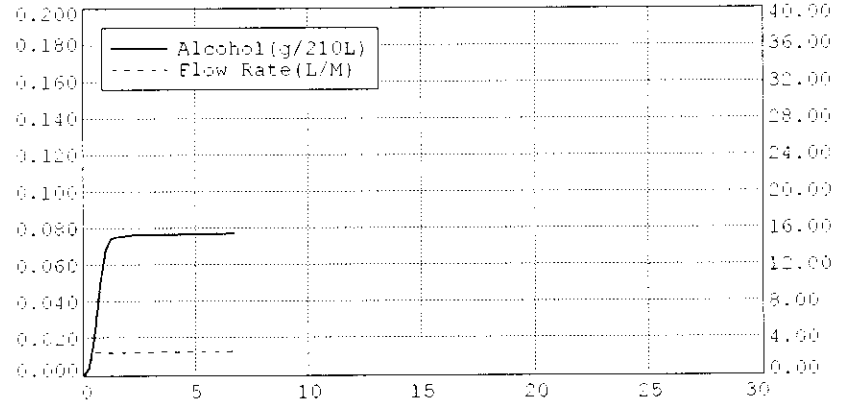
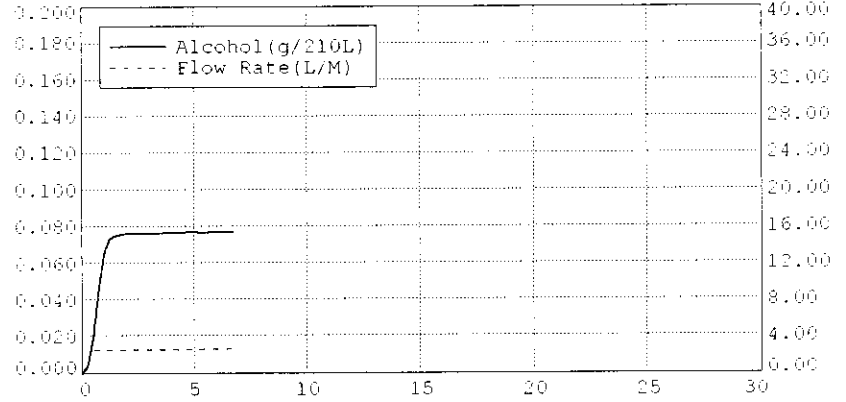
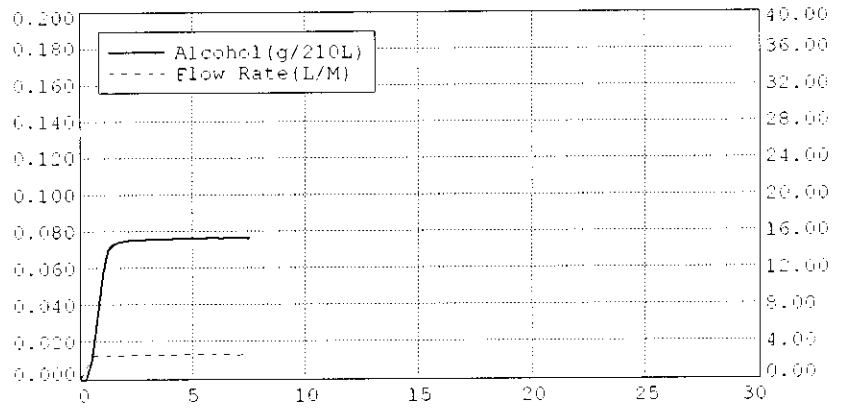
Date: 04/04/2019  
Time: 10:08:37

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.33: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020  
TANK PRESSURE: 1197 psi

BLANK TEST	0.000	10:11
INTERNAL STANDARD	VERIFIED	10:11
EXTERNAL STANDARD	0.078	10:11
BLANK TEST	0.000	10:12
EXTERNAL STANDARD	0.078	10:12
BLANK TEST	0.000	10:13
EXTERNAL STANDARD	0.079	10:13
BLANK TEST	0.000	10:14
EXTERNAL STANDARD	0.079	10:15
BLANK TEST	0.000	10:15
EXTERNAL STANDARD	0.079	10:16
BLANK TEST	0.000	10:17

Average = 0.0786  
Std Dev = 0.0005



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100693

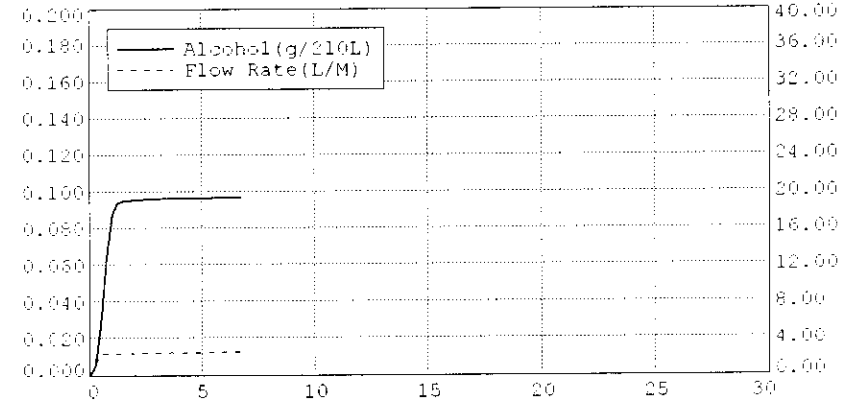
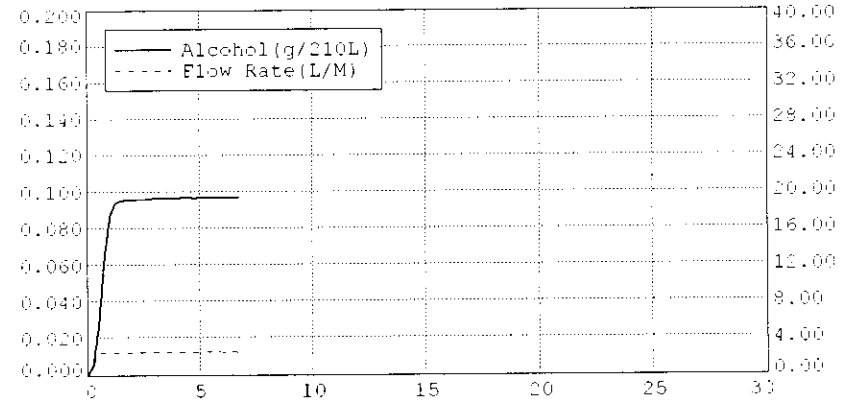
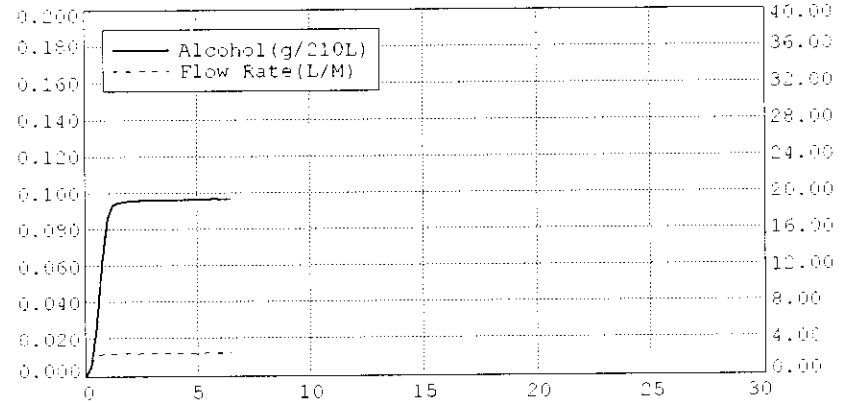
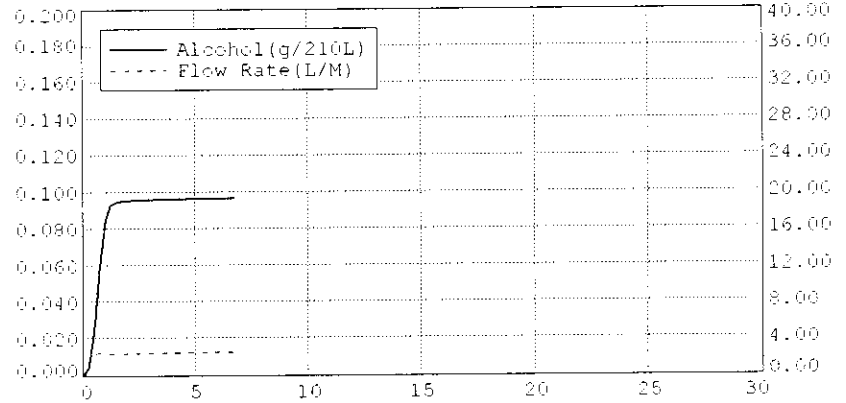
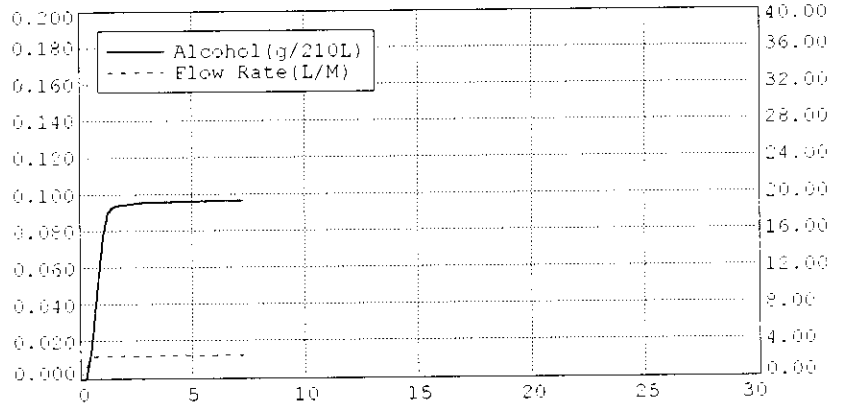
Date: 04/04/2019  
 Time: 10:20:28

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.33: 0.098  
 LOT #: AG805903  
 EXPIRATION: 02/28/2020  
 TANK PRESSURE: 806 psi

BLANK TEST	0.000	10:21
INTERNAL STANDARD	VERIFIED	10:21
EXTERNAL STANDARD	0.098	10:22
BLANK TEST	0.000	10:23
EXTERNAL STANDARD	0.098	10:23
BLANK TEST	0.000	10:24
EXTERNAL STANDARD	0.098	10:24
BLANK TEST	0.000	10:25
EXTERNAL STANDARD	0.098	10:25
BLANK TEST	0.000	10:26
EXTERNAL STANDARD	0.098	10:26
BLANK TEST	0.000	10:27

Average = 0.0980  
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 5

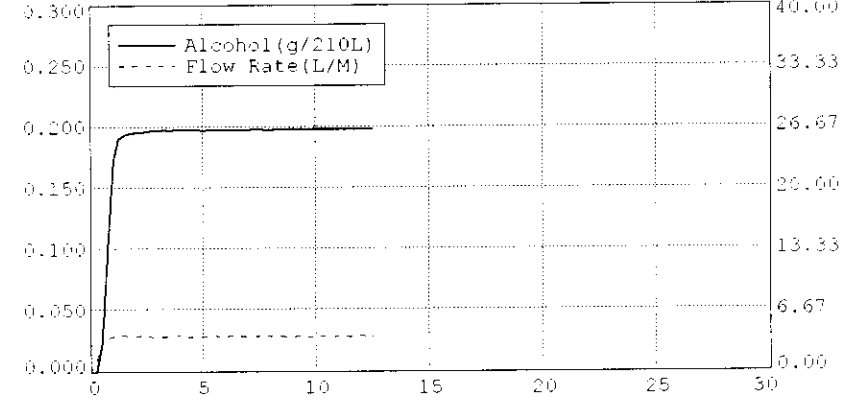
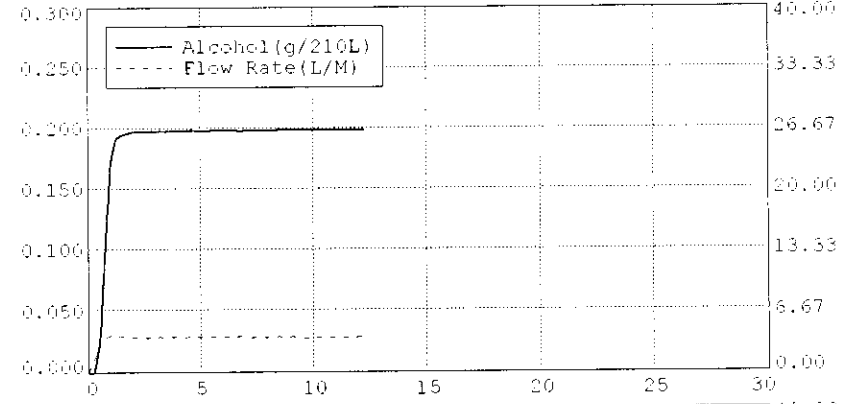
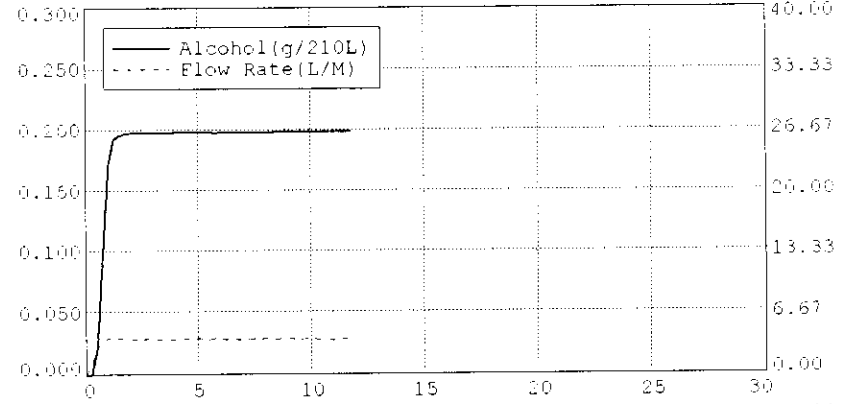
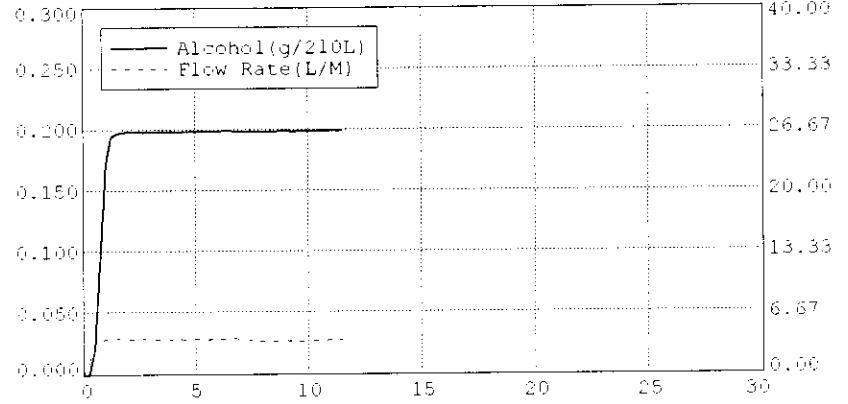
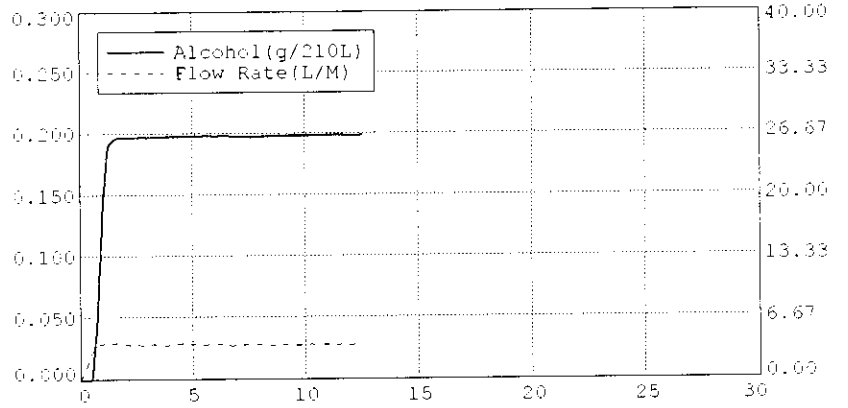
Alaska Department of Public Safety  
 DATAMASTER dmt: 100693

Date: 04/04/2019  
 Time: 10:30:58

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.200  
 LOT #: GUTH 17340  
 EXPIRATION: 10/09/2019

BLANK TEST	0.000	10:32
INTERNAL STANDARD	VERIFIED	10:32
EXTERNAL STANDARD	0.199	10:32
BLANK TEST	0.000	10:33
EXTERNAL STANDARD	0.199	10:33
BLANK TEST	0.000	10:34
EXTERNAL STANDARD	0.199	10:34
BLANK TEST	0.000	10:35
EXTERNAL STANDARD	0.199	10:36
BLANK TEST	0.000	10:37
EXTERNAL STANDARD	0.199	10:37
BLANK TEST	0.000	10:38

Average = 0.1990  
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 6

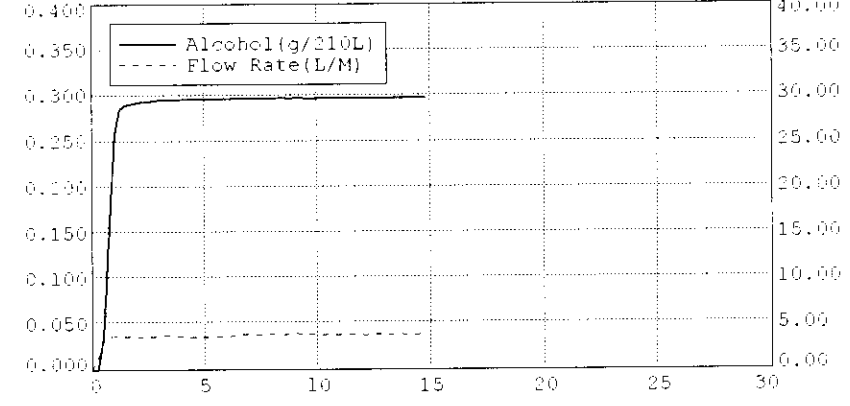
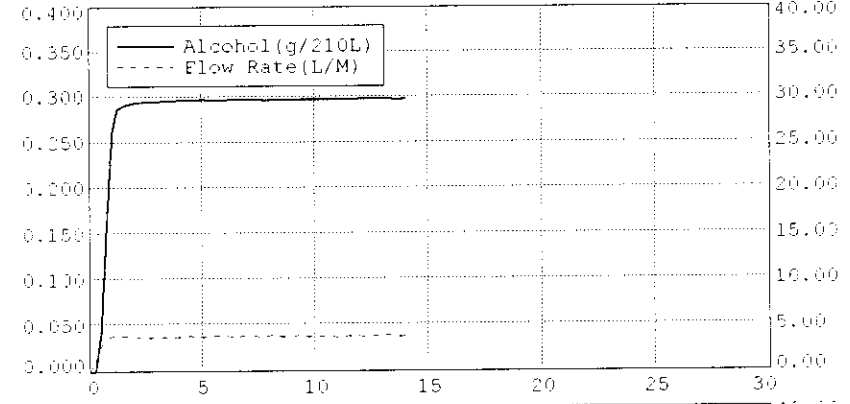
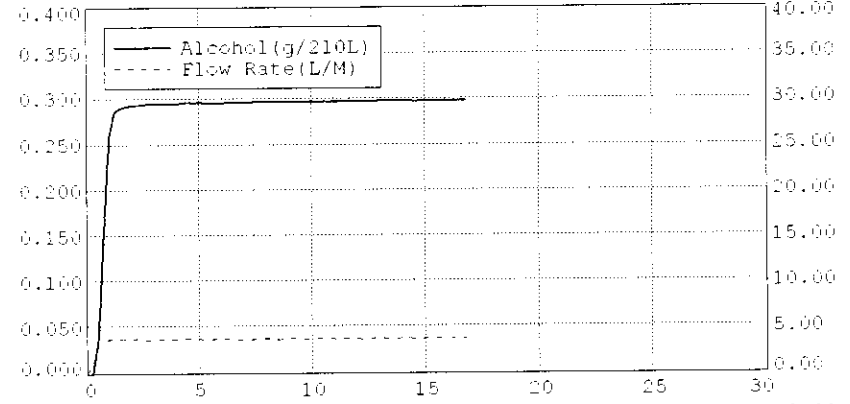
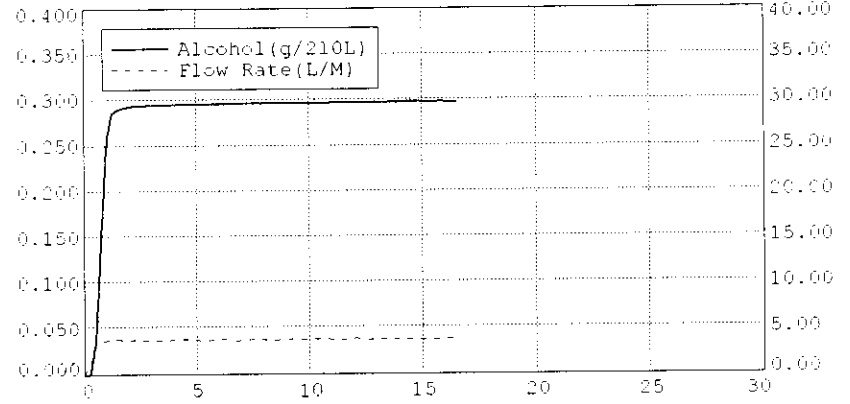
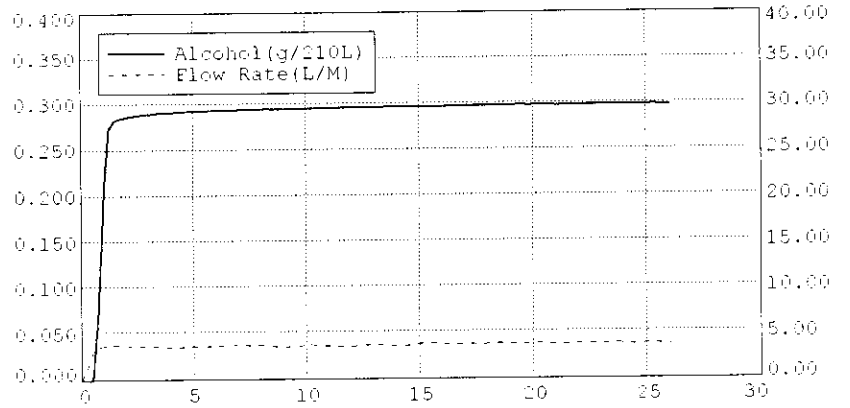
Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/04/2019  
Time: 12:05:01

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.300  
LOT #: GUTH 17350  
EXPIRATION: 10/11/2019

BLANK TEST	0.000	12:06
INTERNAL STANDARD	VERIFIED	12:06
EXTERNAL STANDARD	0.298	12:06
BLANK TEST	0.000	12:07
EXTERNAL STANDARD	0.297	12:08
BLANK TEST	0.000	12:09
EXTERNAL STANDARD	0.298	12:09
BLANK TEST	0.000	12:10
EXTERNAL STANDARD	0.297	12:10
BLANK TEST	0.000	12:11
EXTERNAL STANDARD	0.297	12:11
BLANK TEST	0.000	12:12

Average = 0.2974  
Std Dev = 0.0005



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/05/2019  
Time: 10:08:11

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

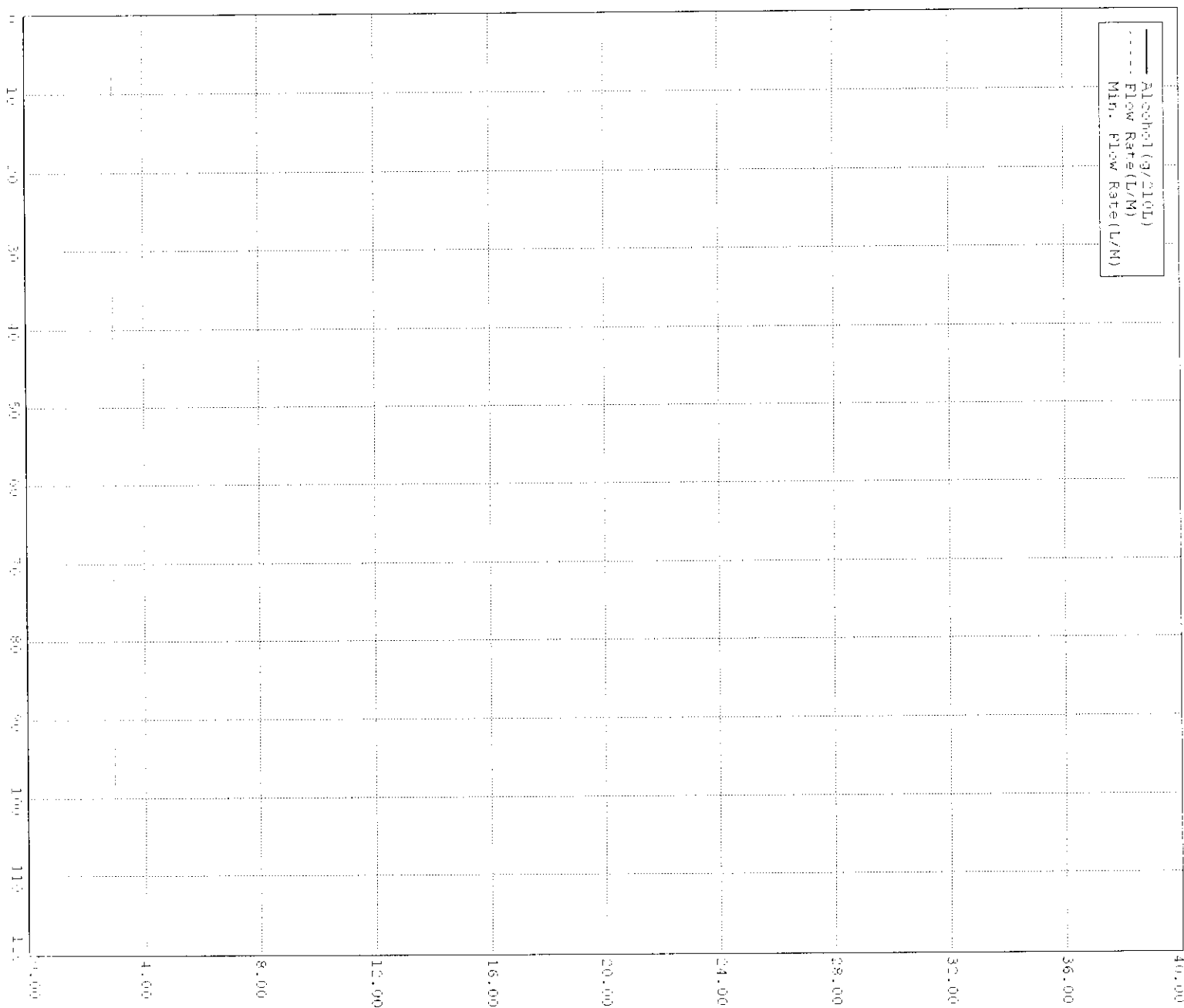
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
INCOMPLETE  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.21: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	10:10
BLANK TEST	0.000	10:10
INTERNAL STANDARD	VERIFIED	10:10
EXTERNAL STANDARD	0.077	10:11
BLANK TEST	0.000	10:12
SUBJECT SAMPLE	INCOMPLETE	10:14

*BMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/05/2019  
Time: 10:15:58

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

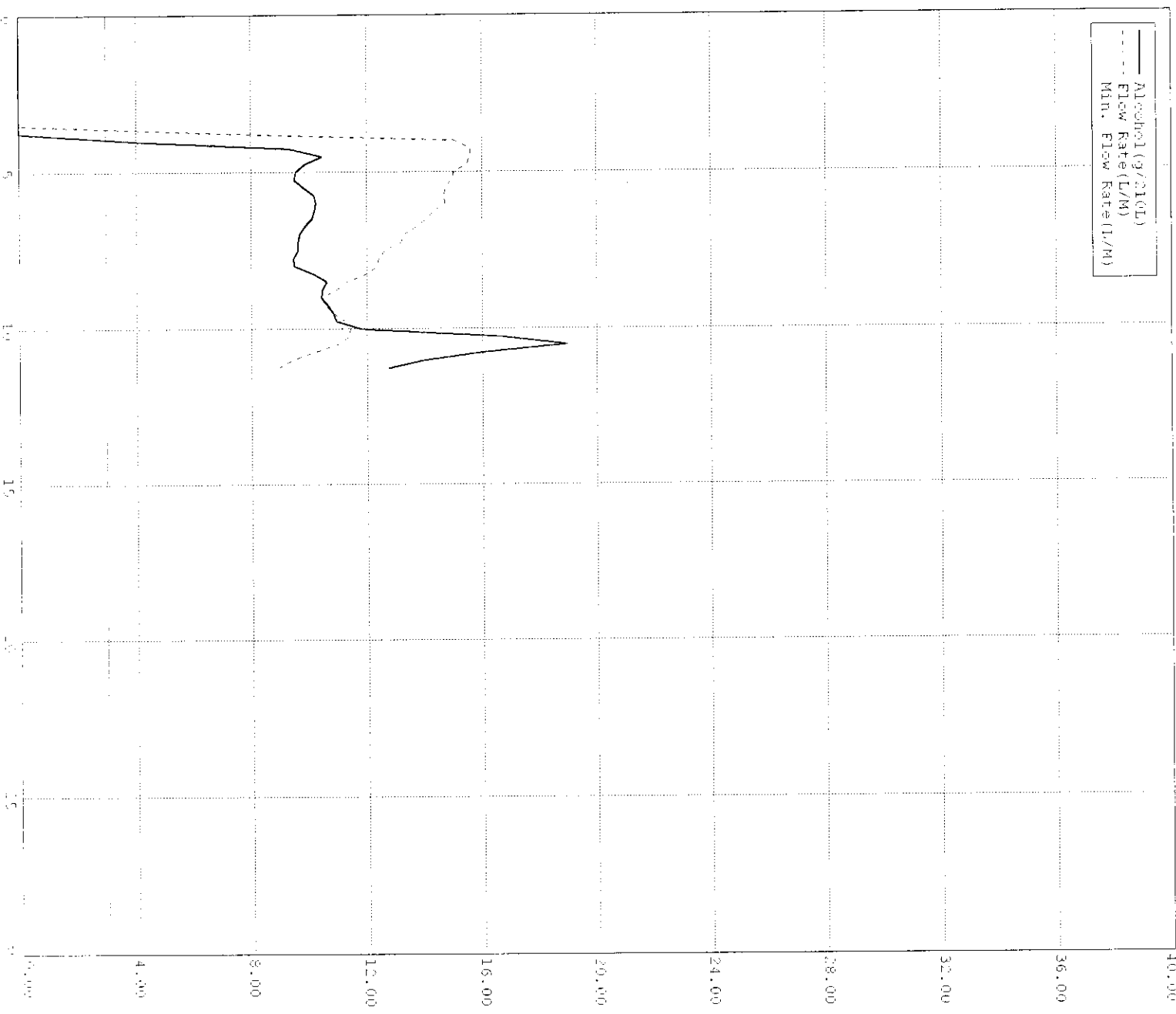
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
INVALID  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.21: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	10:18
BLANK TEST	0.000	10:18
INTERNAL STANDARD	VERIFIED	10:18
EXTERNAL STANDARD	0.078	10:18
BLANK TEST	0.000	10:19
SUBJECT SAMPLE	INVALID	10:21

*BMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/05/2019  
Time: 11:40:12

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
INTERFERENCE ACETONE  
CASE/REPORT: XXXX  
TEST TYPE: TEST

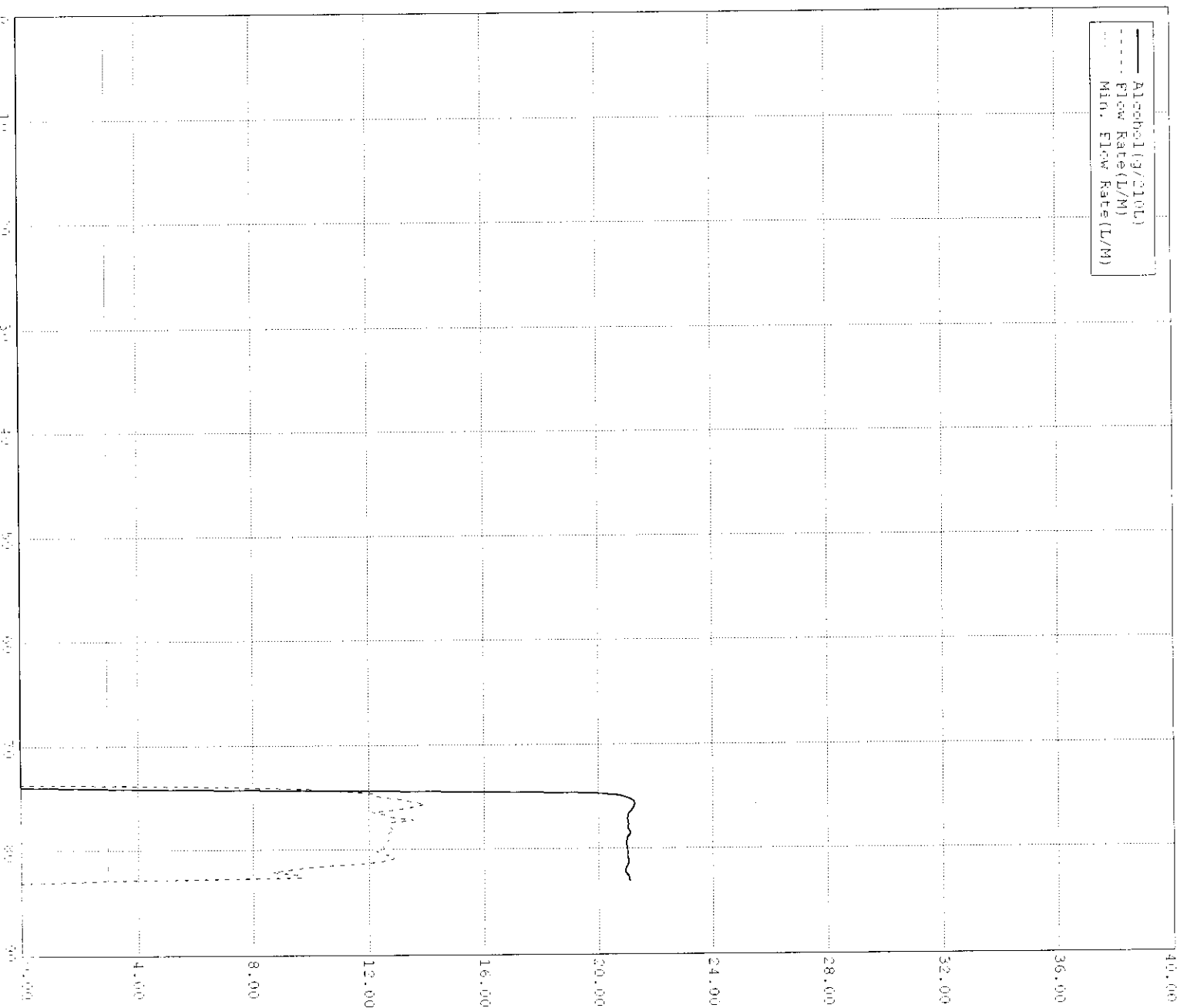
EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.19: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	11:41
BLANK TEST	0.000	11:41
INTERNAL STANDARD	VERIFIED	11:41
Xq = 0.090 (0.67%)	0.078	11:41
EXTERNAL STANDARD	X[1] = 0.0776 (-0.0010)	(0.0025)
BLANK TEST	0.000	11:42
SUBJECT SAMPLE	XXX	11:44
X[1] = 0.1064 (-0.0169)	(-0.0001)	

Interference Detected

Filter 2 Avg: -0.0013  
Filter 3 Avg: 0.0027  
BMB 4/5/19

BMB



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/05/2019  
Time: 11:50:14

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

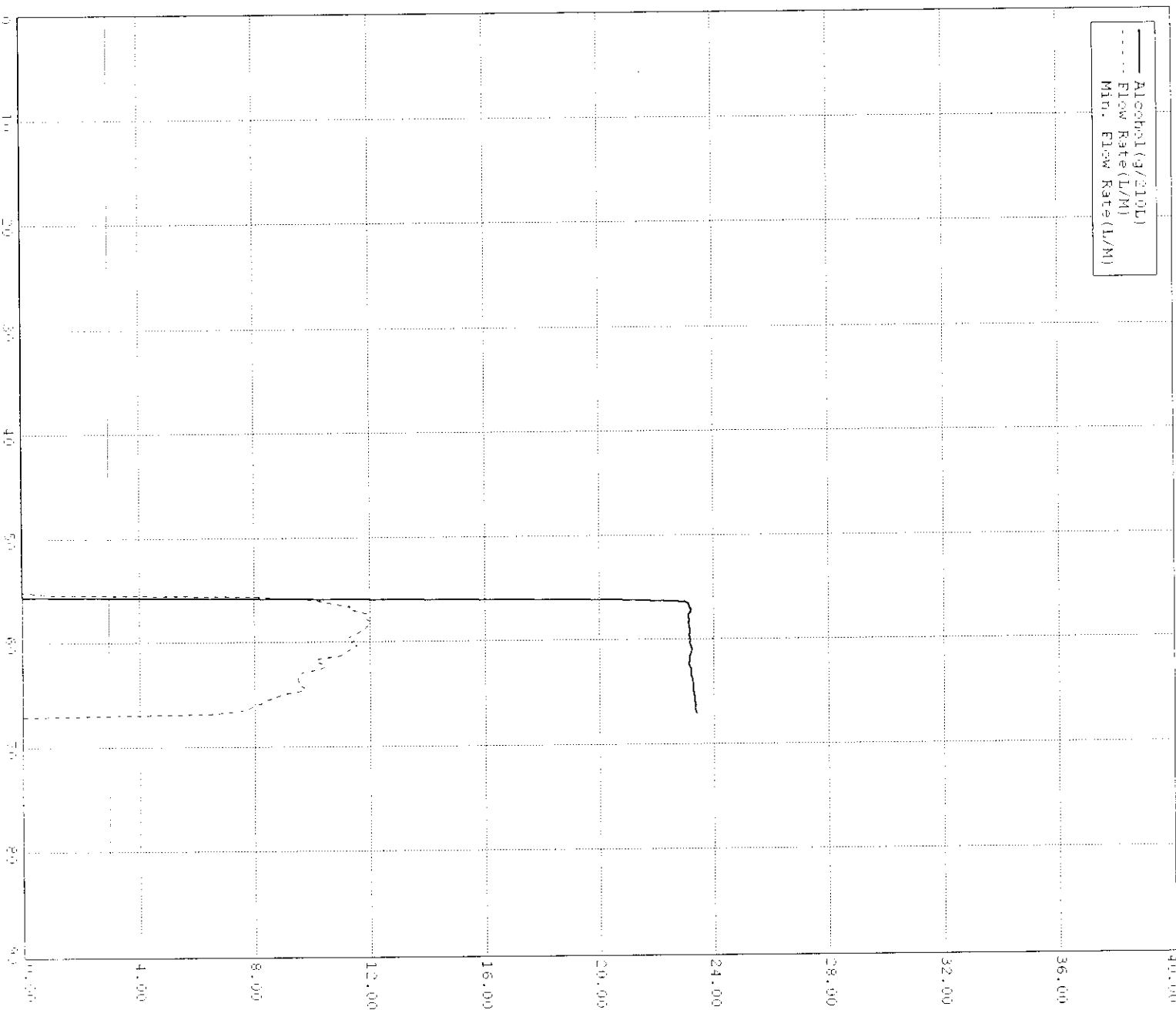
DEPT/AGENCY:  
INTERFERENCE ISOPROPANOL  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	11:51
BLANK TEST	0.000	11:51
INTERNAL STANDARD	VERIFIED	11:51
Xq = 0.091 (0.29%)		
EXTERNAL STANDARD	0.078	11:52
X[1] = 0.0778 (-0.0015)	(0.0029)	
BLANK TEST	0.000	11:53
SUBJECT SAMPLE	XXX	11:54
X[1] = 0.1178 (-0.0209)	(0.0010)	

Interference Detected

*BRMB*





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/05/2019  
Time: 11:58:59

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

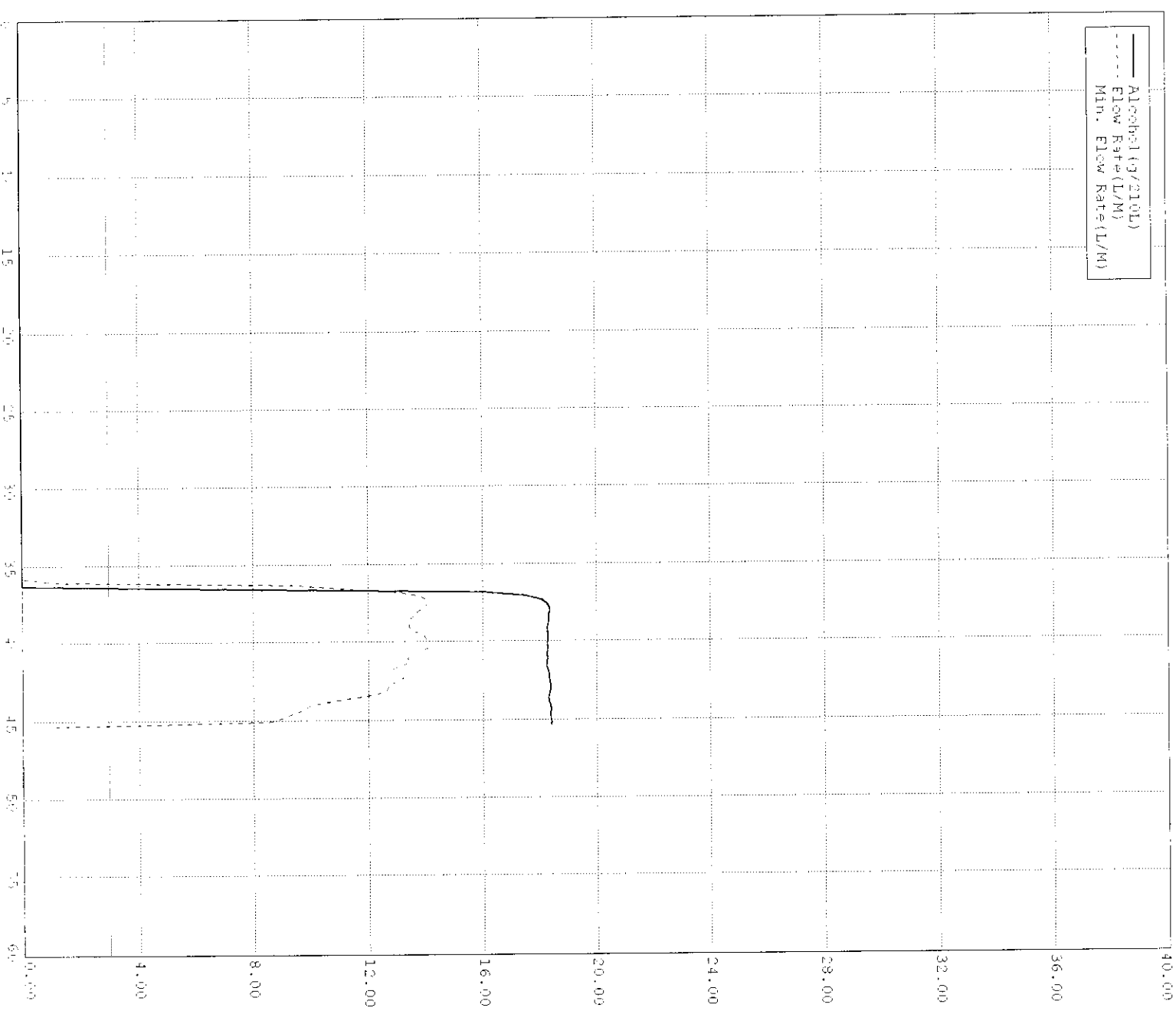
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
INTERFERENCE NEGATIVE CONTROL  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	12:00
BLANK TEST	0.000	12:00
INTERNAL STANDARD	VERIFIED	12:00
Xq = 0.091 (0.19%)	0.078	12:00
EXTERNAL STANDARD	X[1] = 0.0777 (-0.0012)	(0.0029)
BLANK TEST	0.000	12:01
SUBJECT SAMPLE (Vol=1.89L)	0.093	12:02
X[1] = 0.0931 (0.0007)	(0.0011)	
BLANK TEST	0.000	12:03
EXTERNAL STANDARD	0.077	12:03
X[1] = 0.0772 (-0.0016)	(0.0023)	
BLANK TEST	0.000	12:04

*Handwritten signature: BMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/05/2019  
Time: 10:23:53

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

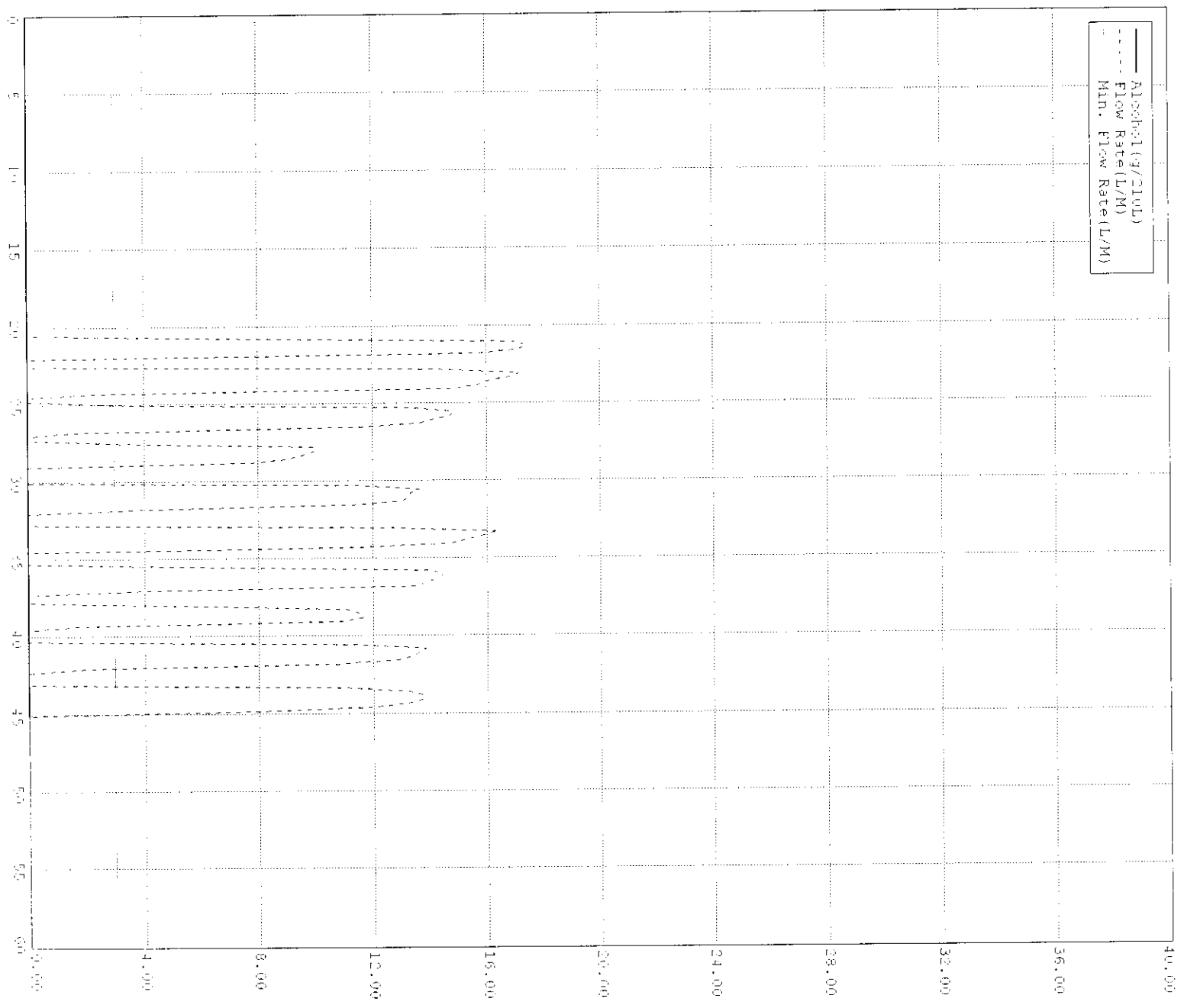
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
EXCEEDED ATTEMPTS  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.20: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	10:25
BLANK TEST	0.000	10:25
INTERNAL STANDARD	VERIFIED	10:25
EXTERNAL STANDARD	0.078	10:26
BLANK TEST	0.000	10:27
SUBJECT SAMPLE	XXX	10:27

Maximum Attempts Exceeded



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/05/2019  
Time: 11:24:41

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

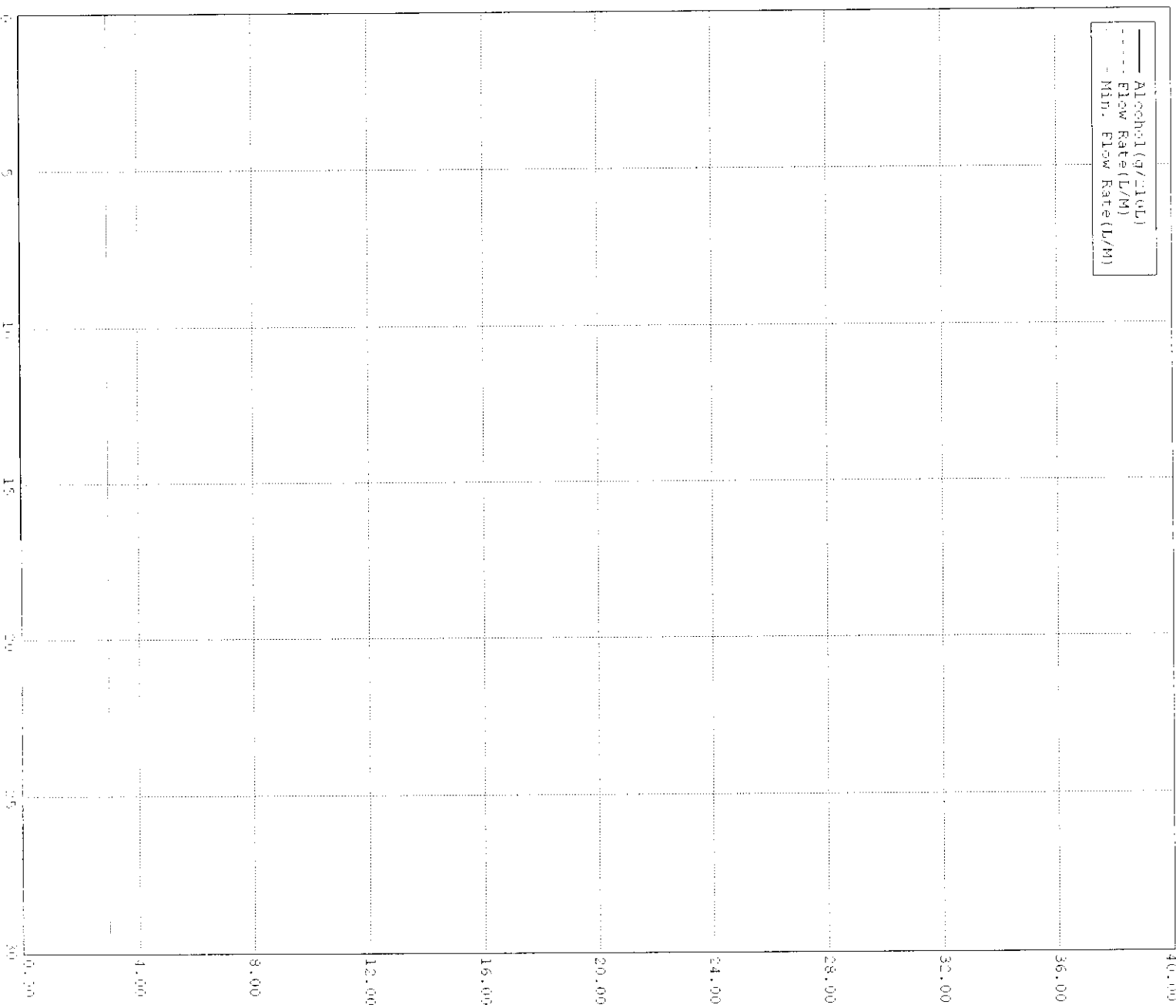
DEPT/AGENCY:  
RFI  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.19: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK  
BLANK TEST PASSED 11:26  
INTERNAL STANDARD VERIFIED 11:26  
EXTERNAL STANDARD 0.077 11:27  
BLANK TEST 0.000 11:27

RFI DETECTED

*BB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100693

Date: 04/05/2019  
Time: 12:21:57

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
NONDRINKING SUBJECT TEST  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	12:23
BLANK TEST	0.000	12:23
INTERNAL STANDARD	VERIFIED	12:23
EXTERNAL STANDARD	0.078	12:23
BLANK TEST	0.000	12:24
SUBJECT SAMPLE (Vol=2.06L)	0.000	12:24
BLANK TEST	0.000	12:25
EXTERNAL STANDARD	0.078	12:25
BLANK TEST	0.000	12:26

BBMB

