

# 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 100364 Analyst Brandi Barnett Start Date 7/13/17

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 1.4 L (1.3L to 1.7L)

4. Linearity Test (attached)

a. Levels Used

- i. 0.020g/210L Mnf Airgas Lot AG 616504 Exp 6/13/18
- ii. 0.040g/210L Mnf Airgas Lot AG 630101 Exp 10/27/18
- iii. 0.080g/210L Mnf Airgas Lot AG 608504 Exp 3/25/18
- iv. 0.100g/210L Mnf Airgas Lot AG 629304 Exp 10/19/18
- v. 0.200g/210L Mnf Guth Lot 16190 Exp 8/15/18
  - 1. Simulator S/N DR5298 Date Calibrated 09/14/2016
- vi. 0.300g/210L Mnf Guth Lot 16210 Exp 8/22/18
  - 1. Simulator S/N SD1177 Date Calibrated 9/13/16

5. Functional Tests (attached)

- a. Incomplete
- b. Invalid
- c. Interference
- d. Exceeded attempts
- i. Acetone - Mnf Guth Lot 16160 Level 0.100 Exp 10/31/17 <sup>7/19/18</sup> <sub>BMB</sub>
  - 1. Simulator S/N SD1199 Date Calibrated 9/13/16
- ii. Isopropanol - Mnf Guth Lot 16160 Level 0.100 Exp 10/31/17 <sup>7/19/18</sup> <sub>BMB</sub>
  - 1. Simulator S/N SD1088 Date Calibrated 9/13/16
- iii. Negative Control - Mnf Guth Lot 16160 Level 0.100 Exp 10/31/17 <sup>7/19/18</sup> <sub>BMB</sub>
  - 1. Simulator S/N DR4161 Date Calibrated 9/14/16

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 7/14/17

DIAGNOSTIC RECORD

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
-----

Date: 07/13/2017  
Time: 13:13:45

VERSIONS

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

TEMPERATURES

Sample Chamber = 48.8°C PASSED  
(44.0°C - 52.0°C)  
Breath Tube = 45.2°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 2.10 V PASSED  
(1.16 V - 2.72 V)  
Cooler Voltage = 1.86 V PASSED  
(1.18 V - 2.76 V)  
Bias Voltage = 79 V PASSED  
(48 V - 112 V)  
Chopper Freq = 514 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.8 in

PUMP INFO

Flow Rate = 5.191 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

Xq = 0.100 1.79% PASSED  
(0.00% - 4.00%)

Technician Screen

-----  
DATAMASTER dmt: 100364  
-----

Date: 07/13/2017  
Time: 1:40 PM

Temperatures (°C)  
Sample Cell: 48.8°C  
Breath Tube: 44.5°C

Current Barometer 29.8 in  
Volume (Ltr) 1.59

Settings  
Lamp: 2.10 V  
Bias: 79 V  
Cooler: 1.98 V  
Chopper: 515 Hz

Voltages (V)  
Flow: 1.03 V  
Detector: -0.076 V



CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
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Date: 10/02/2015  
Time: 09:52:21

Ca = 0.1010	
CAL = 0.997233	0.800 <= CAL < 1.200
b1 = 0.0012	0.0000 <= b1 < 0.0040
b2 = 0.0058	0.0010 <= b2 < 0.0100
b3 = 0.0005	0.0000 <= b3 < 0.0040
Xq = 0.0980	0.0500 <= Xq < 0.2000
a21 = 1.177996	1.050 <= a21 < 1.300
a31 = 0.602952	0.300 <= a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 07/13/2017  
Time: 13:45:32

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

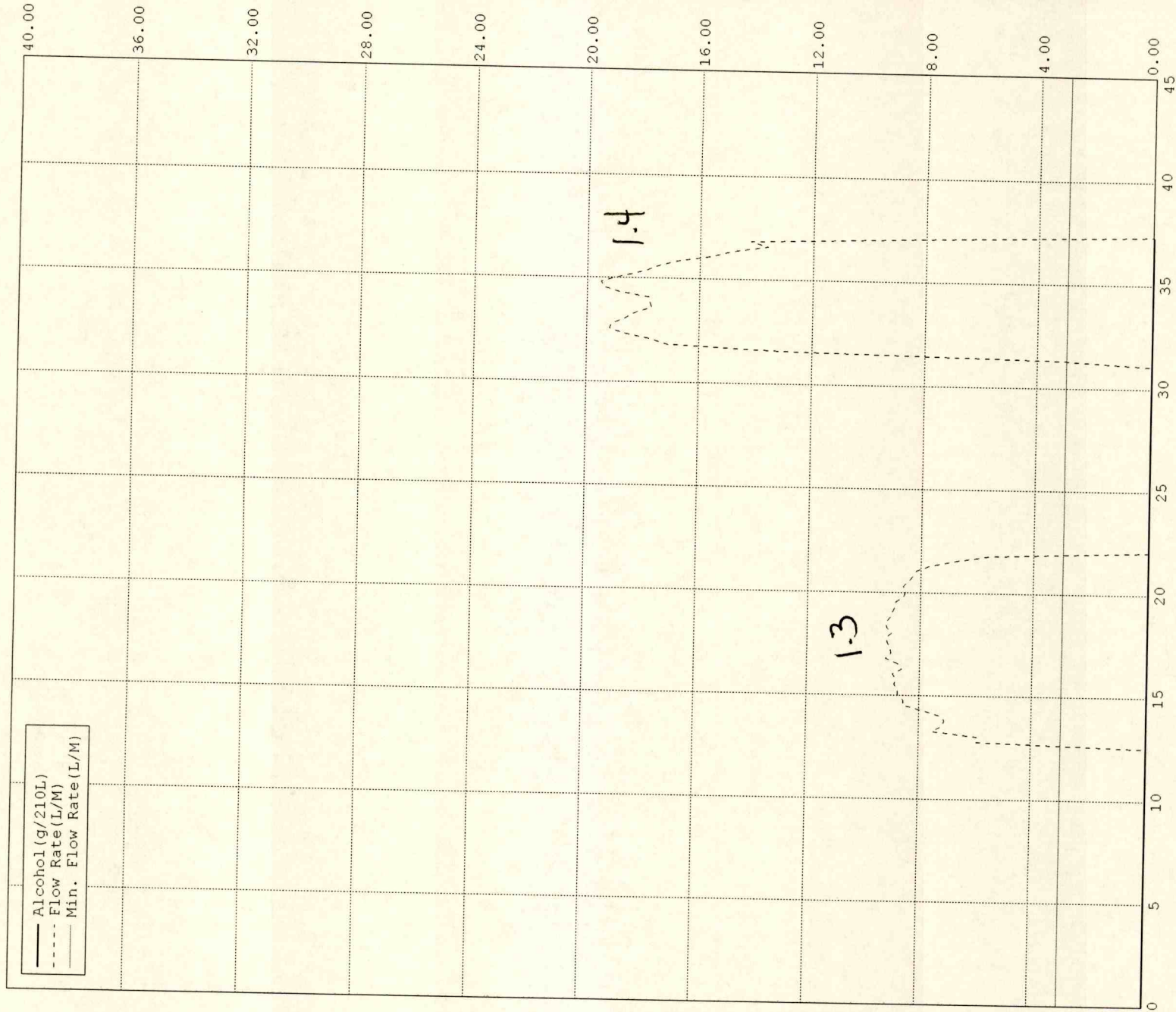
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.79: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK PASSED 13:46  
BLANK TEST 0.000 13:46  
INTERNAL STANDARD VERIFIED 13:46  
EXTERNAL STANDARD 0.081 13:47  
BLANK TEST 0.000 13:48  
SUBJECT SAMPLE (Vol=1.64L) 0.000 13:49  
BLANK TEST 0.000 13:50  
EXTERNAL STANDARD 0.081 13:50  
BLANK TEST 0.000 13:51



LINEARITY CHECK

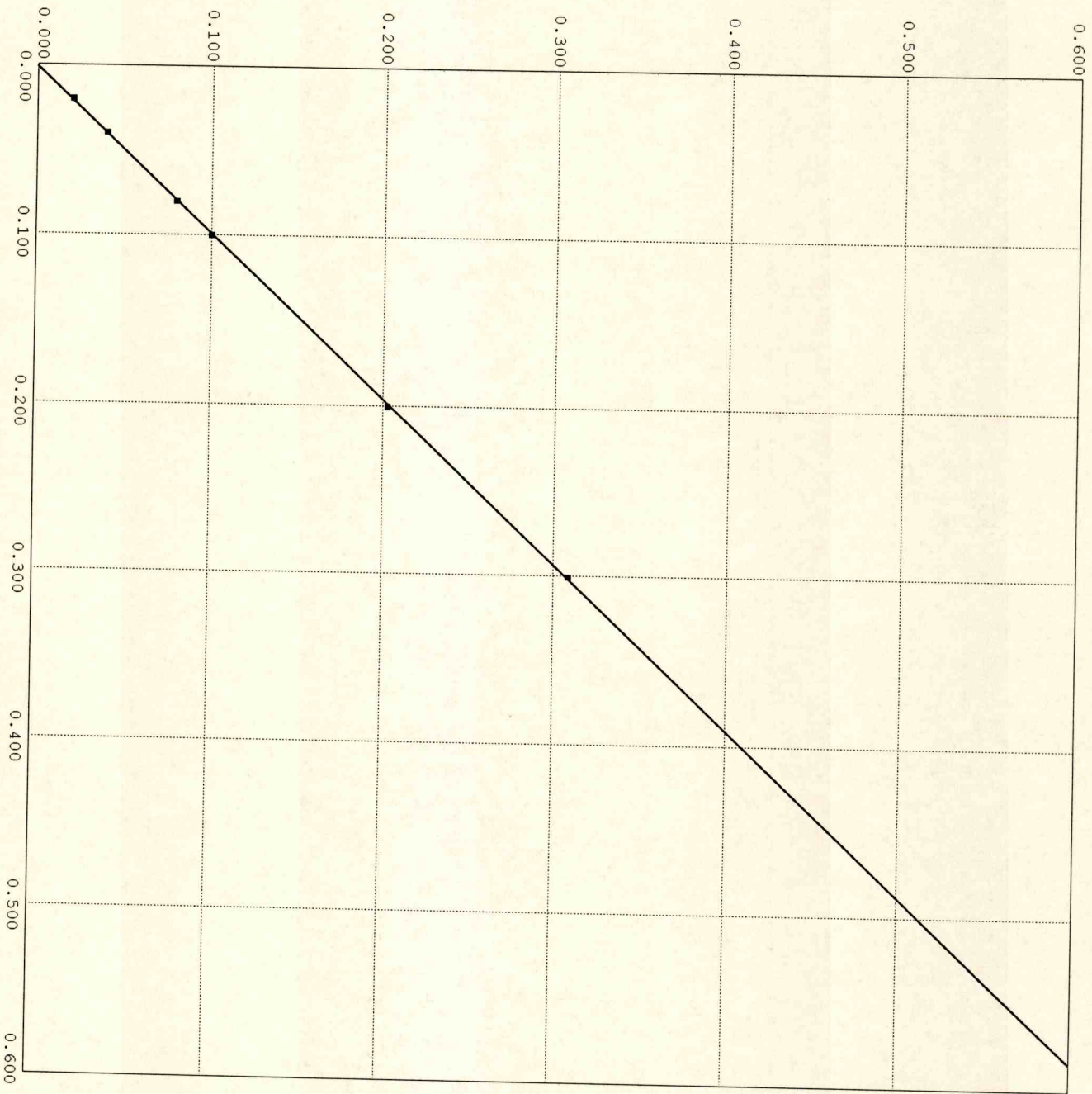
Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 07/13/2017  
Time: 13:53:44

SUPERVISOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

TARGET	AVERAGE	STD. DEV.
0.020	0.0210	0.0000
0.040	0.0406	0.0005
0.080	0.0810	0.0000
0.100	0.1012	0.0004
0.200	0.2036	0.0005
0.300	0.3092	0.0004

SLOPE = 1.029347  
R<sup>2</sup> = 0.999896



BMB



LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

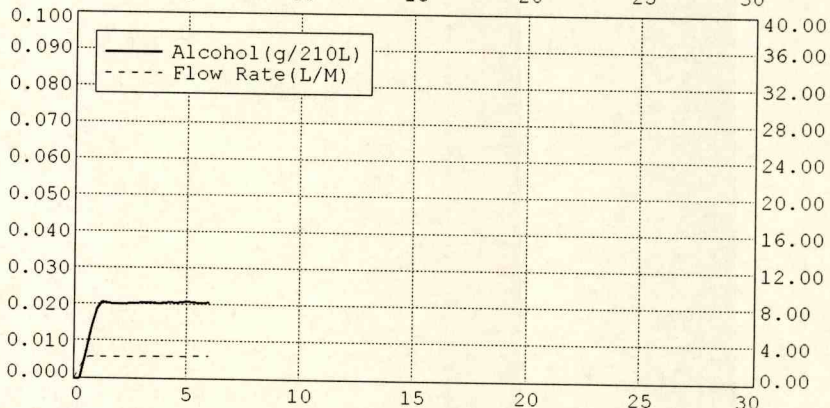
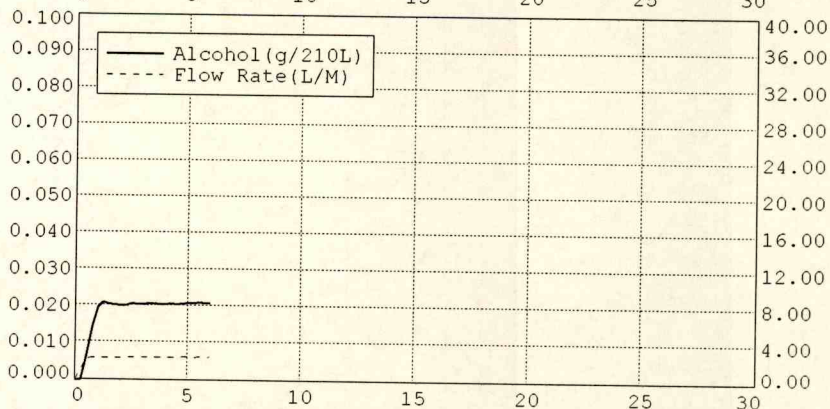
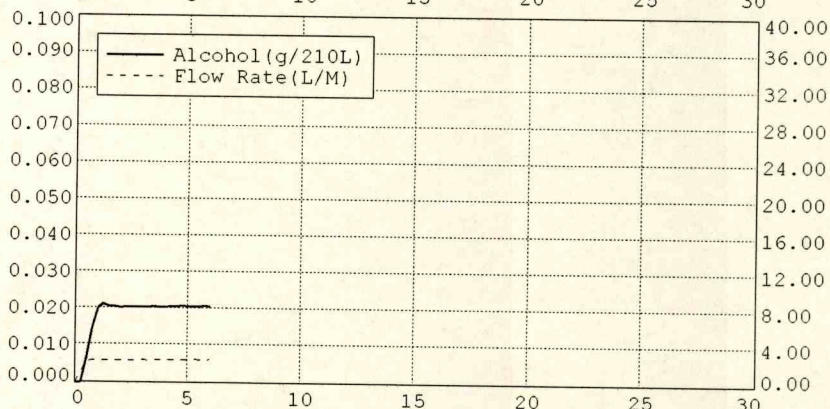
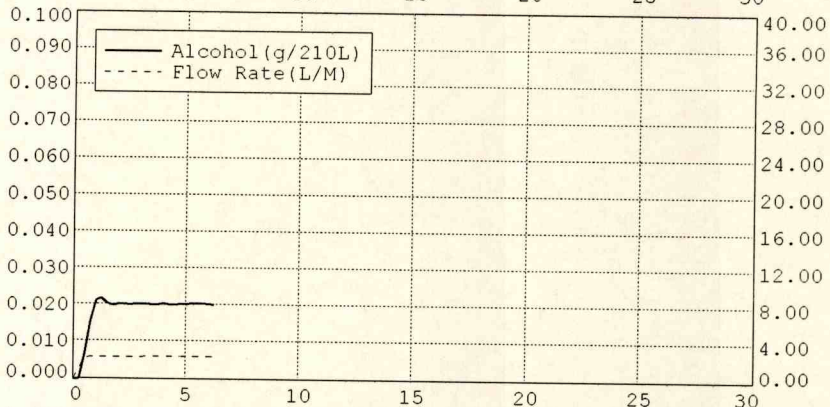
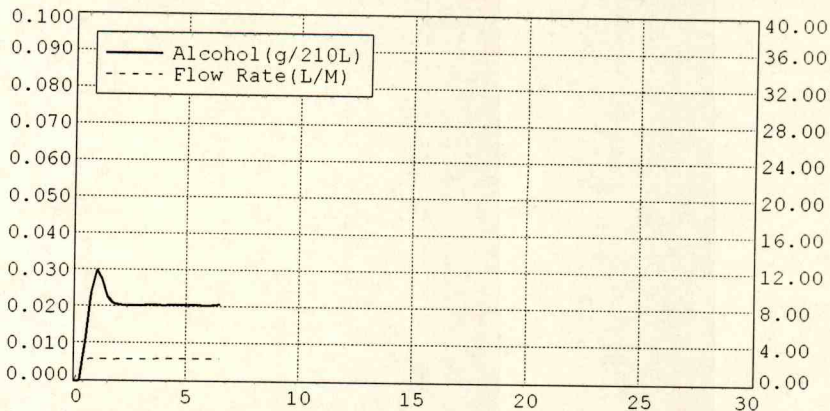
Date: 07/13/2017  
 Time: 13:53:46

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 29.79: 0.020  
 LOT #: AG616504  
 EXPIRATION: 06/13/2018  
 TANK PRESSURE: 800 psi

BLANK TEST	0.000	13:54
INTERNAL STANDARD	VERIFIED	13:55
EXTERNAL STANDARD	0.021	13:55
BLANK TEST	0.000	13:56
EXTERNAL STANDARD	0.021	13:56
BLANK TEST	0.000	13:57
EXTERNAL STANDARD	0.021	13:57
BLANK TEST	0.000	13:58
EXTERNAL STANDARD	0.021	13:58
BLANK TEST	0.000	13:59
EXTERNAL STANDARD	0.021	13:59
BLANK TEST	0.000	14:00

Average = 0.0210  
 Std Dev = 0.0000





LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

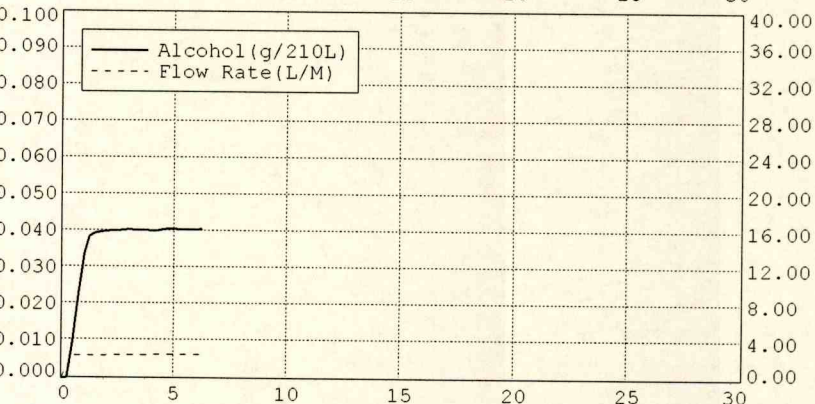
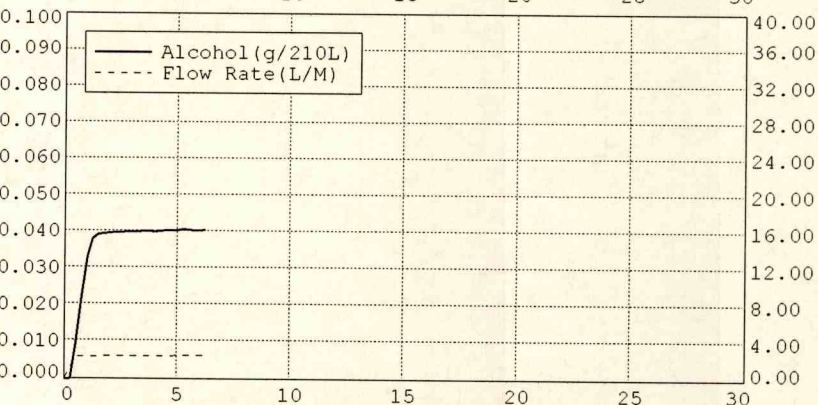
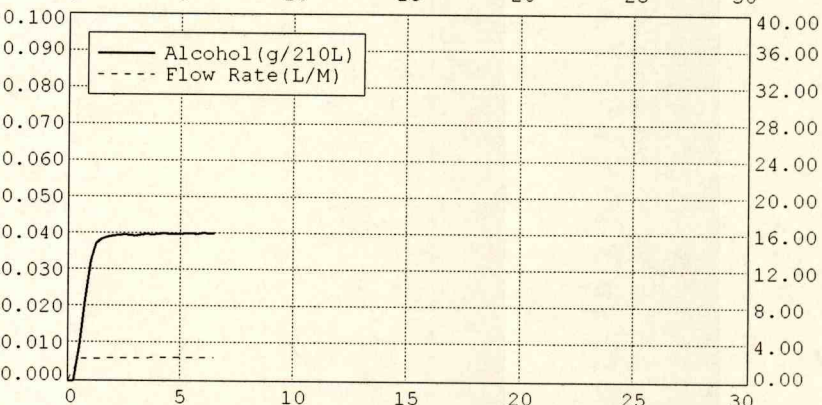
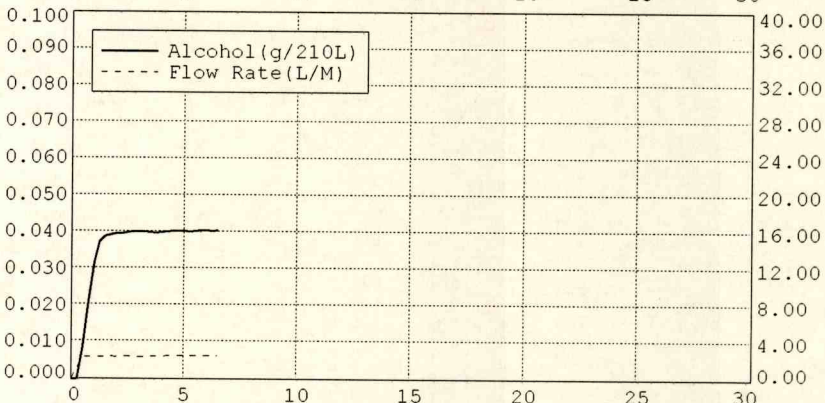
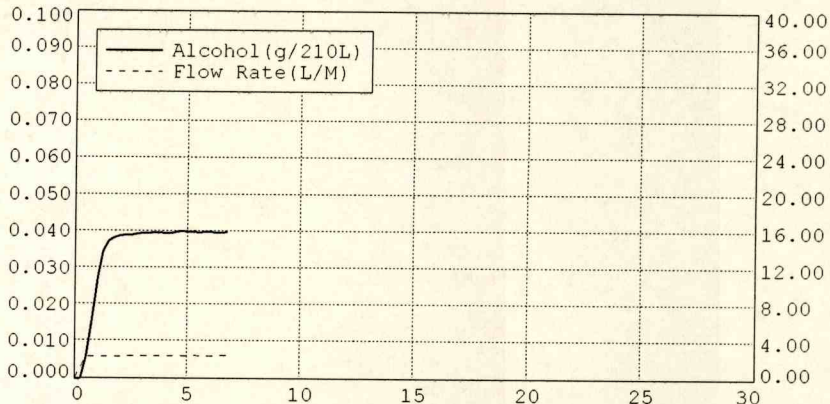
Date: 07/13/2017  
 Time: 14:03:40

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 29.79: 0.040  
 LOT #: AG630101  
 EXPIRATION: 10/27/2018  
 TANK PRESSURE: 791 psi

BLANK TEST	0.000	14:04
INTERNAL STANDARD	VERIFIED	14:04
EXTERNAL STANDARD	0.040	14:05
BLANK TEST	0.000	14:05
EXTERNAL STANDARD	0.041	14:06
BLANK TEST	0.000	14:07
EXTERNAL STANDARD	0.040	14:07
BLANK TEST	0.000	14:08
EXTERNAL STANDARD	0.041	14:08
BLANK TEST	0.000	14:09
EXTERNAL STANDARD	0.041	14:09
BLANK TEST	0.000	14:10

Average = 0.0406  
 Std Dev = 0.0005





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

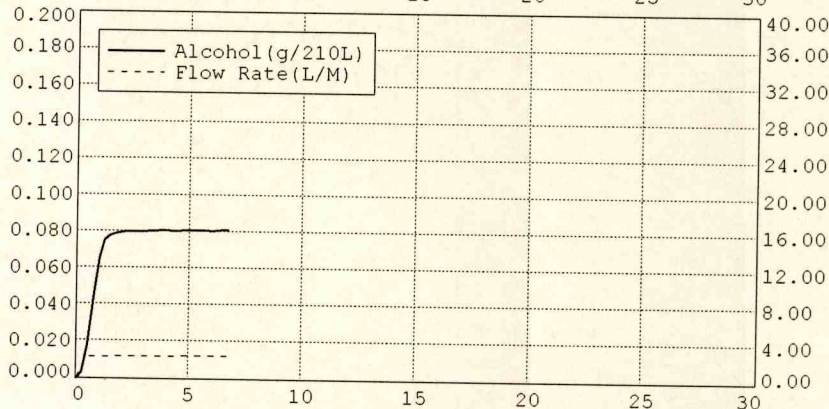
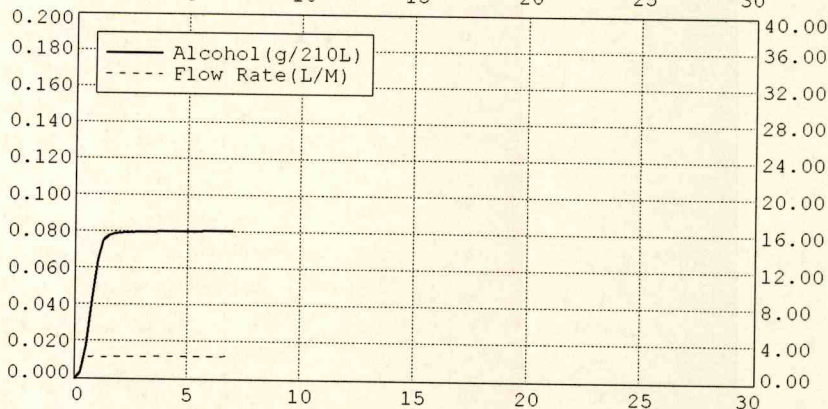
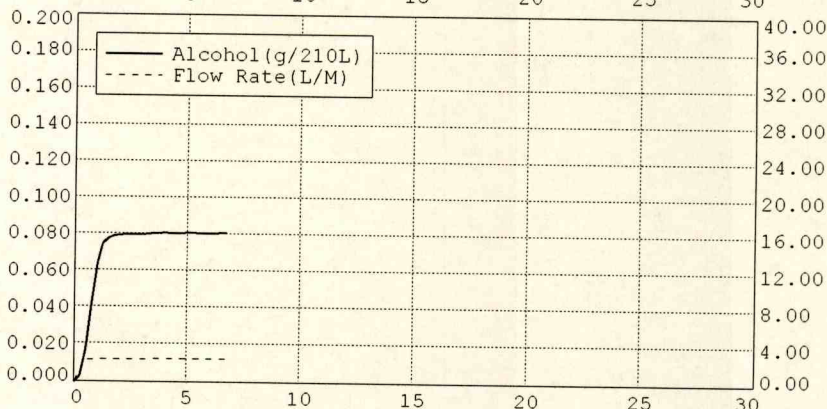
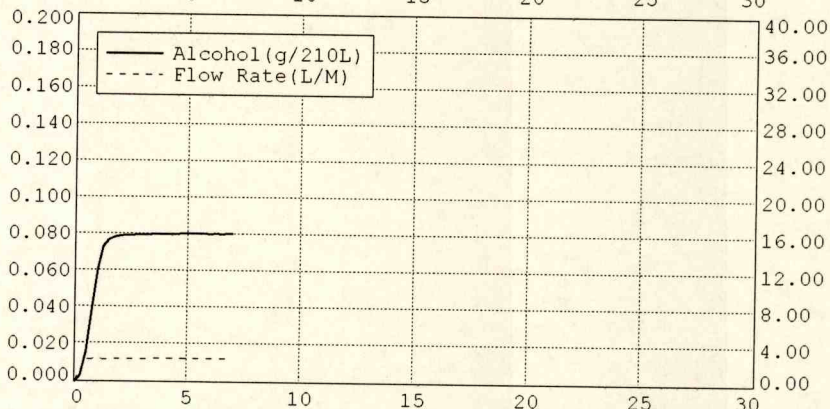
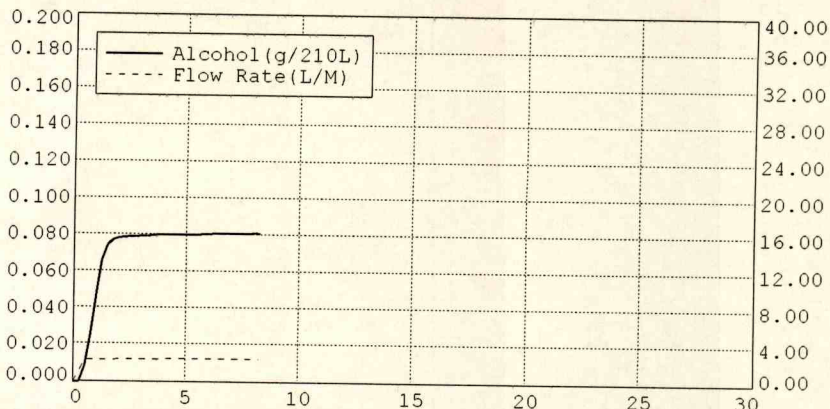
Date: 07/13/2017  
 Time: 14:11:57

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 29.79: 0.080  
 LOT #: AG608504  
 EXPIRATION: 03/25/2018  
 TANK PRESSURE: 793 psi

BLANK TEST	0.000	14:13
INTERNAL STANDARD	VERIFIED	14:13
EXTERNAL STANDARD	0.081	14:13
BLANK TEST	0.000	14:14
EXTERNAL STANDARD	0.081	14:14
BLANK TEST	0.000	14:15
EXTERNAL STANDARD	0.081	14:15
BLANK TEST	0.000	14:16
EXTERNAL STANDARD	0.081	14:16
BLANK TEST	0.000	14:17
EXTERNAL STANDARD	0.081	14:17
BLANK TEST	0.000	14:18

Average = 0.0810  
 Std Dev = 0.0000





LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

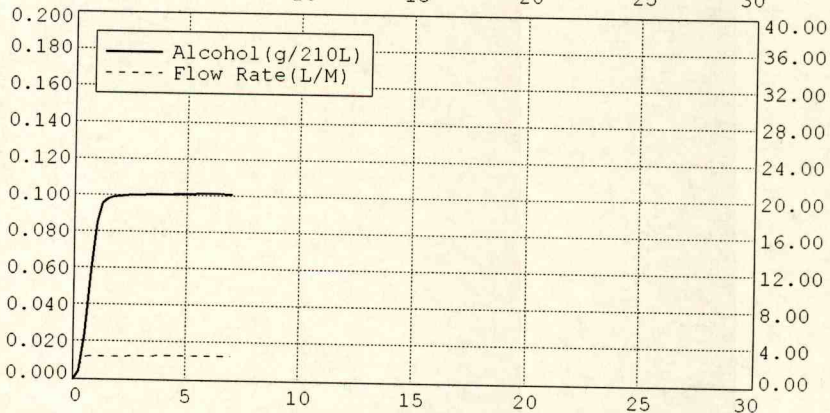
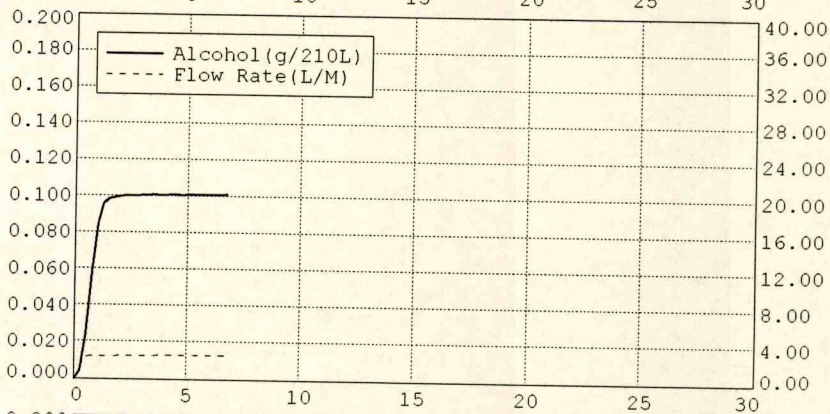
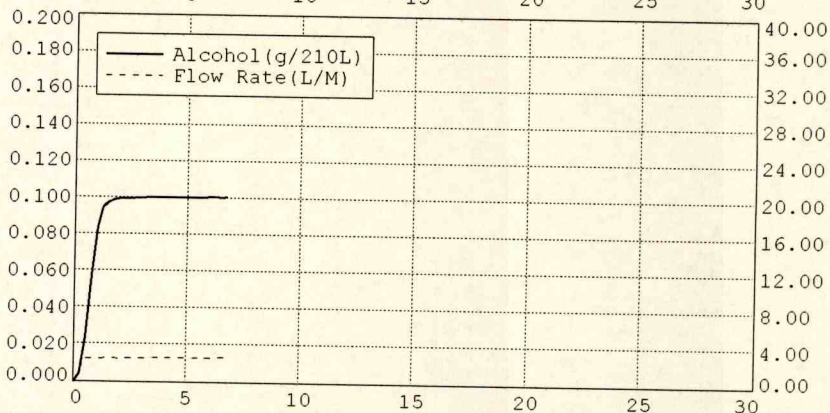
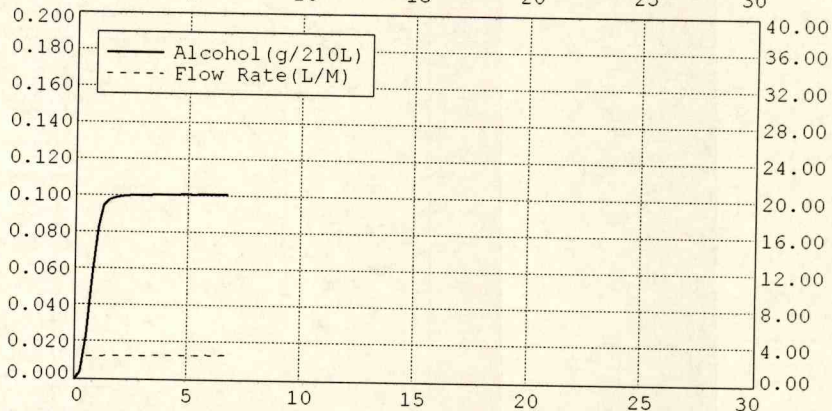
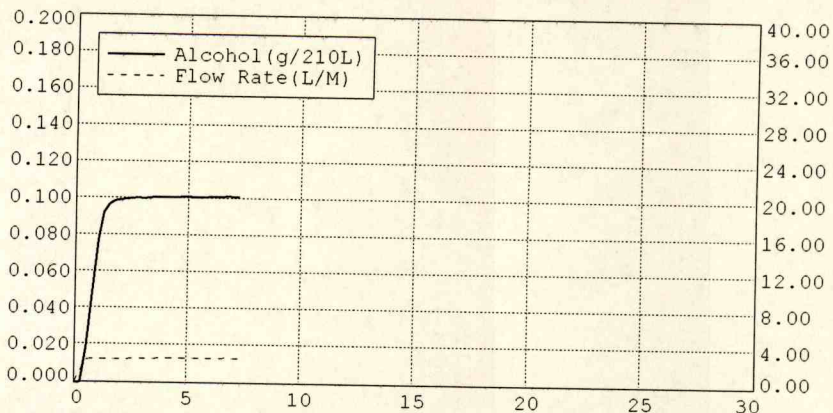
Date: 07/13/2017  
 Time: 14:24:52

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.79: 0.100  
 LOT #: AG629304  
 EXPIRATION: 10/19/2018  
 TANK PRESSURE: 1102 psi

BLANK TEST	0.000	14:25
INTERNAL STANDARD	VERIFIED	14:26
EXTERNAL STANDARD	0.101	14:26
BLANK TEST	0.000	14:27
EXTERNAL STANDARD	0.101	14:27
BLANK TEST	0.000	14:28
EXTERNAL STANDARD	0.101	14:28
BLANK TEST	0.000	14:29
EXTERNAL STANDARD	0.101	14:29
BLANK TEST	0.000	14:30
EXTERNAL STANDARD	0.102	14:30
BLANK TEST	0.000	14:31

Average = 0.1012  
 Std Dev = 0.0004





LINEARITY CHECK: Control Test 5

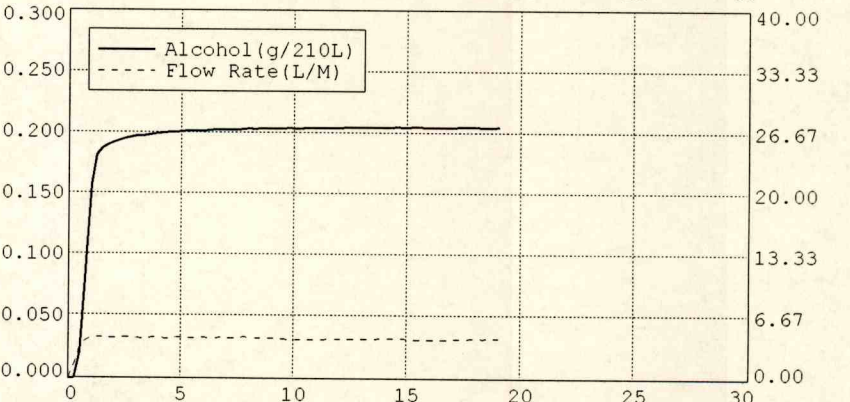
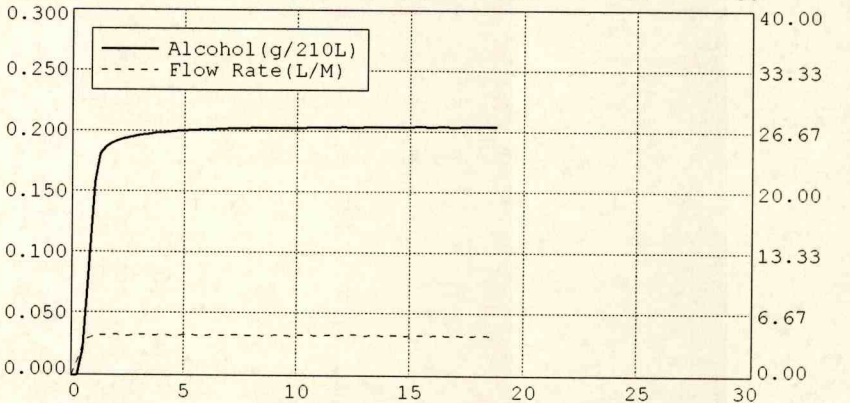
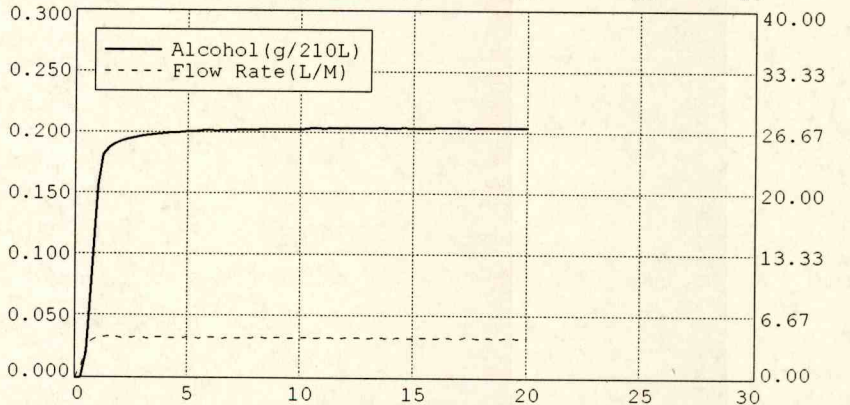
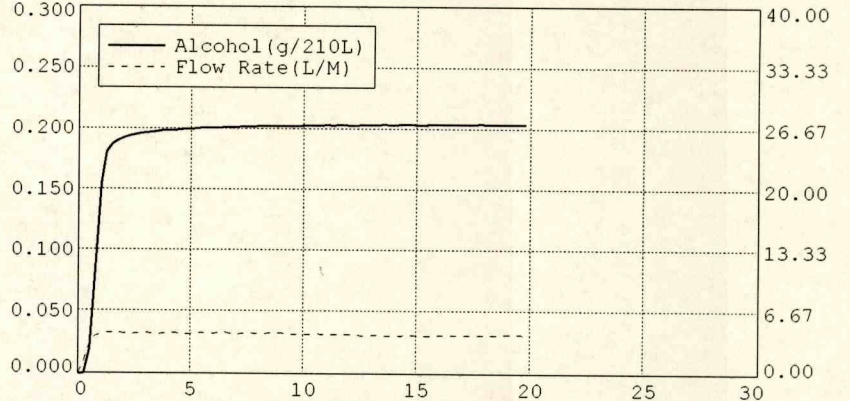
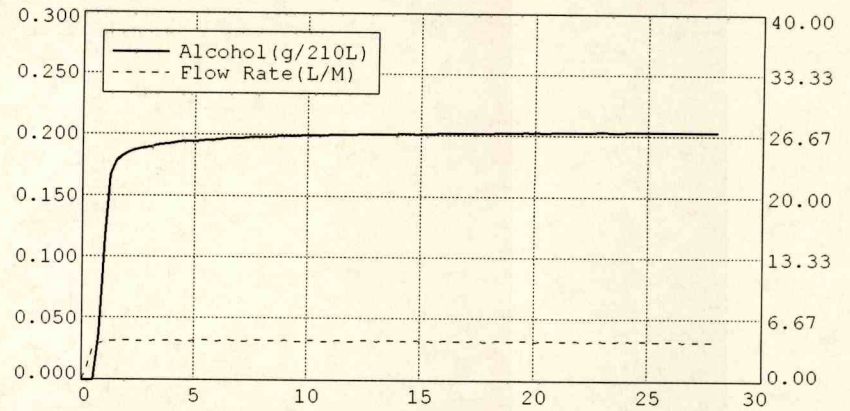
Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

Date: 07/13/2017  
 Time: 14:40:37

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.200  
 LOT #: GUTH 16190  
 EXPIRATION: 08/15/2018

BLANK TEST	0.000	14:41
INTERNAL STANDARD	VERIFIED	14:41
EXTERNAL STANDARD	0.203	14:42
BLANK TEST	0.000	14:43
EXTERNAL STANDARD	0.203	14:43
BLANK TEST	0.000	14:44
EXTERNAL STANDARD	0.204	14:45
BLANK TEST	0.000	14:46
EXTERNAL STANDARD	0.204	14:46
BLANK TEST	0.000	14:47
EXTERNAL STANDARD	0.204	14:47
BLANK TEST	0.000	14:48

Average = 0.2036  
 Std Dev = 0.0005





LINEARITY CHECK: Control Test 6

Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

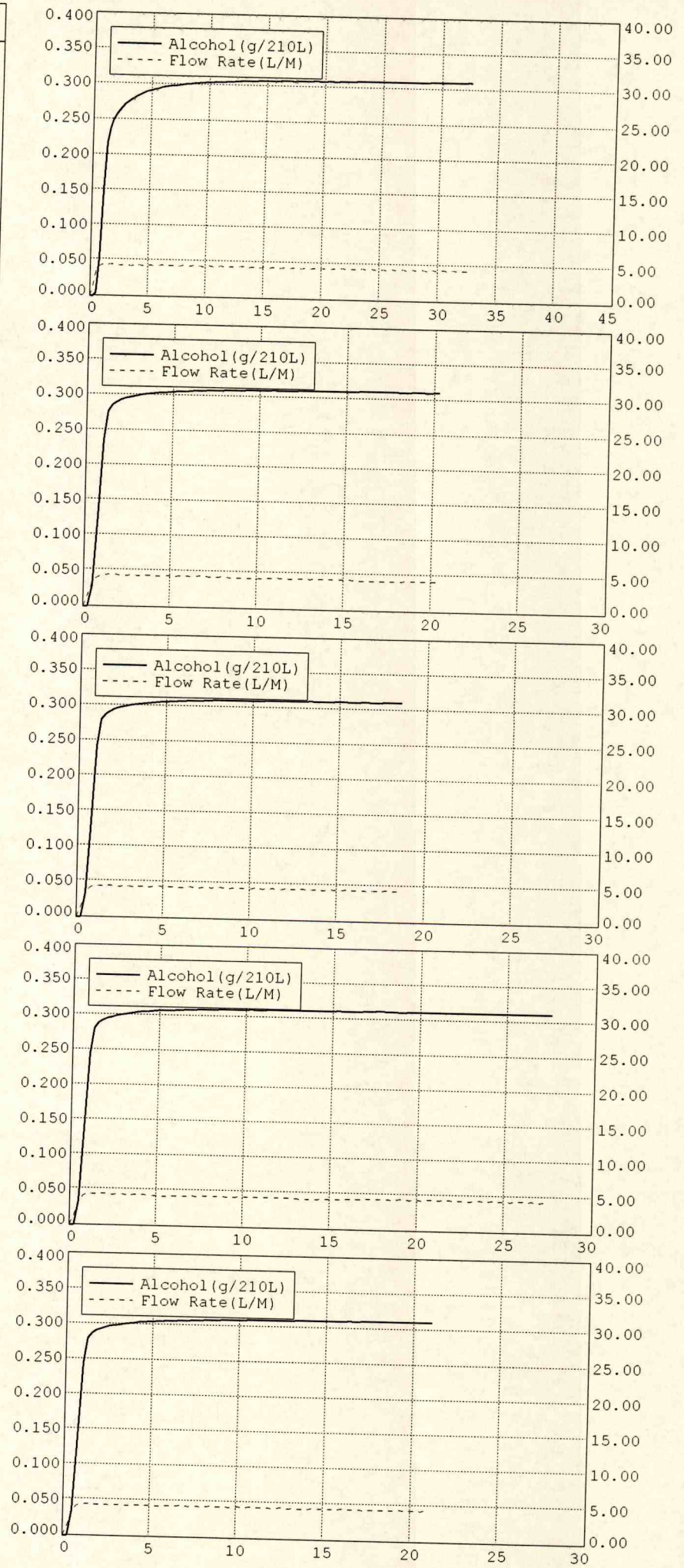
Date: 07/13/2017  
 Time: 14:50:39

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.300  
 LOT #: GUTH 16210  
 EXPIRATION: 08/22/2018

BLANK TEST	0.000	14:51
INTERNAL STANDARD	VERIFIED	14:51
EXTERNAL STANDARD	0.309	14:52
BLANK TEST	0.000	14:53
EXTERNAL STANDARD	0.309	14:53
BLANK TEST	0.000	14:54
EXTERNAL STANDARD	0.309	14:55
BLANK TEST	0.000	14:56
EXTERNAL STANDARD	0.310	14:56
BLANK TEST	0.000	14:57
EXTERNAL STANDARD	0.309	14:58
BLANK TEST	0.000	14:59

Average = 0.3092  
 Std Dev = 0.0004





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 07/14/2017  
Time: 12:07:23

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

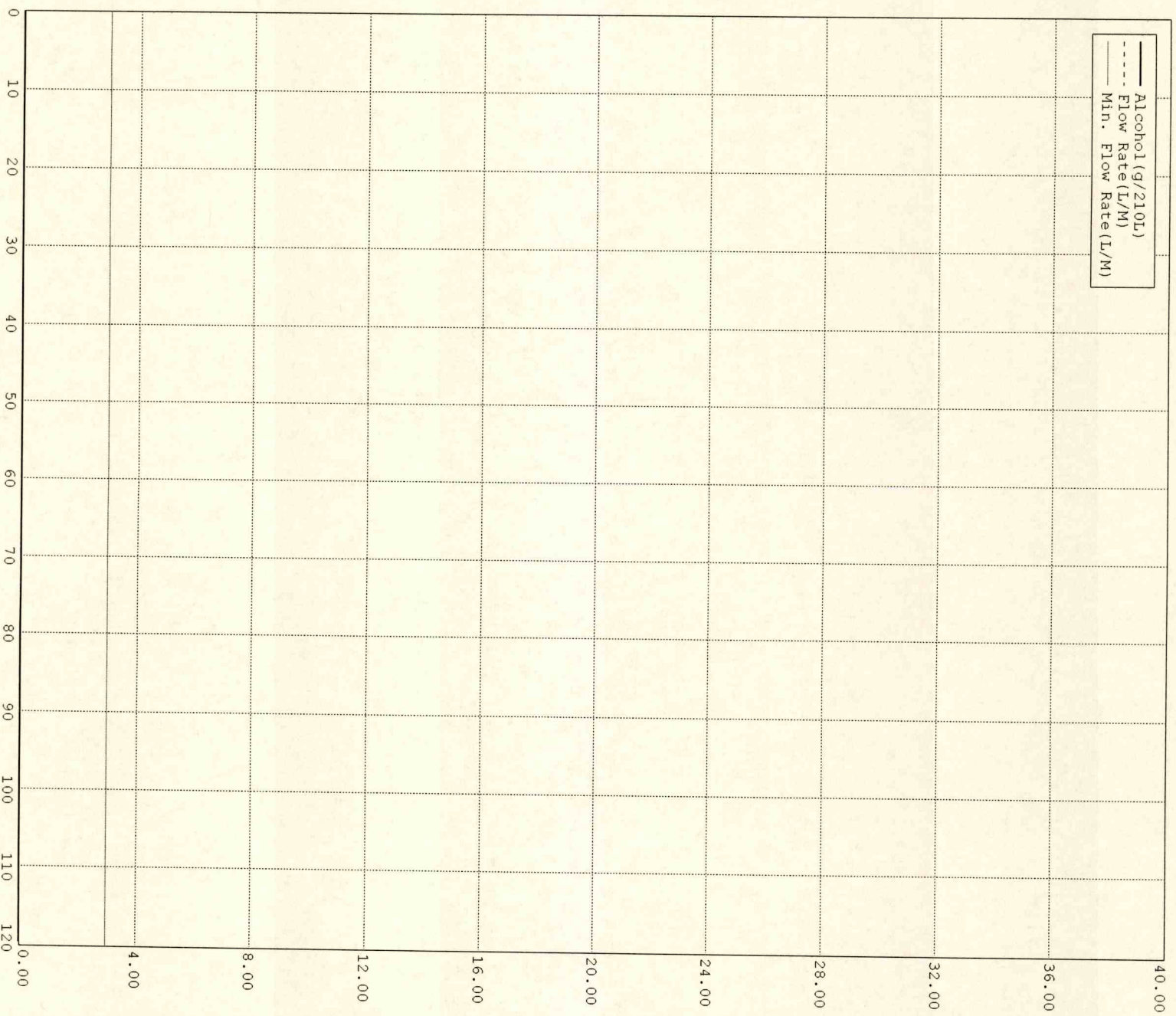
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.81: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK	PASSED	12:08
BLANK TEST	0.000	12:08
INTERNAL STANDARD	VERIFIED	12:08
EXTERNAL STANDARD	0.080	12:08
BLANK TEST	0.000	12:09
SUBJECT SAMPLE	INCOMPLETE	12:11

*Handwritten signature: BMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 07/14/2017  
Time: 12:13:42

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

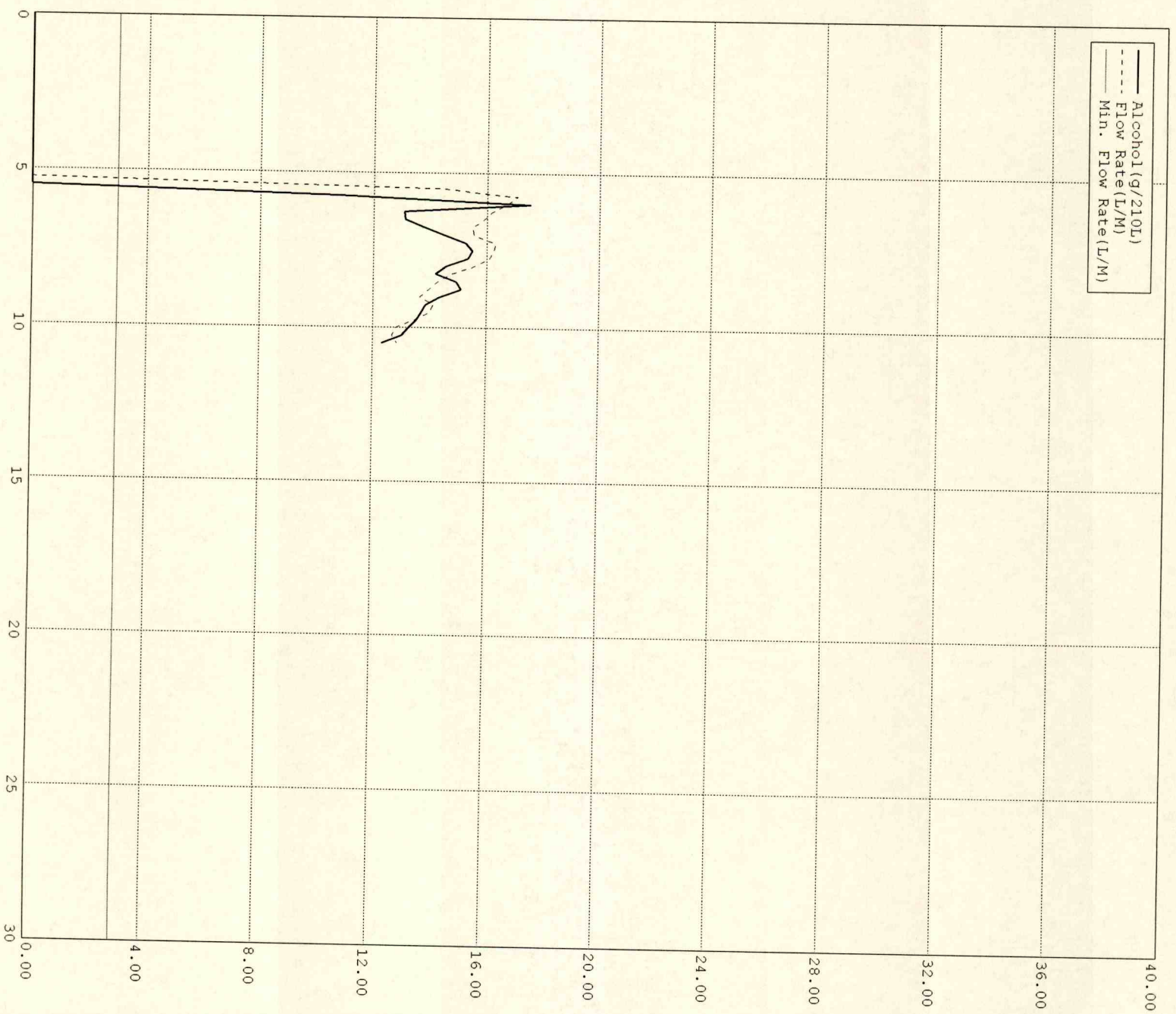
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.81: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK	PASSED	12:14
BLANK TEST	0.000	12:14
INTERNAL STANDARD	VERIFIED	12:15
EXTERNAL STANDARD	0.081	12:15
BLANK TEST	0.000	12:16
SUBJECT SAMPLE	INVALID	12:16

BMB





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 07/14/2017  
Time: 12:33:47

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

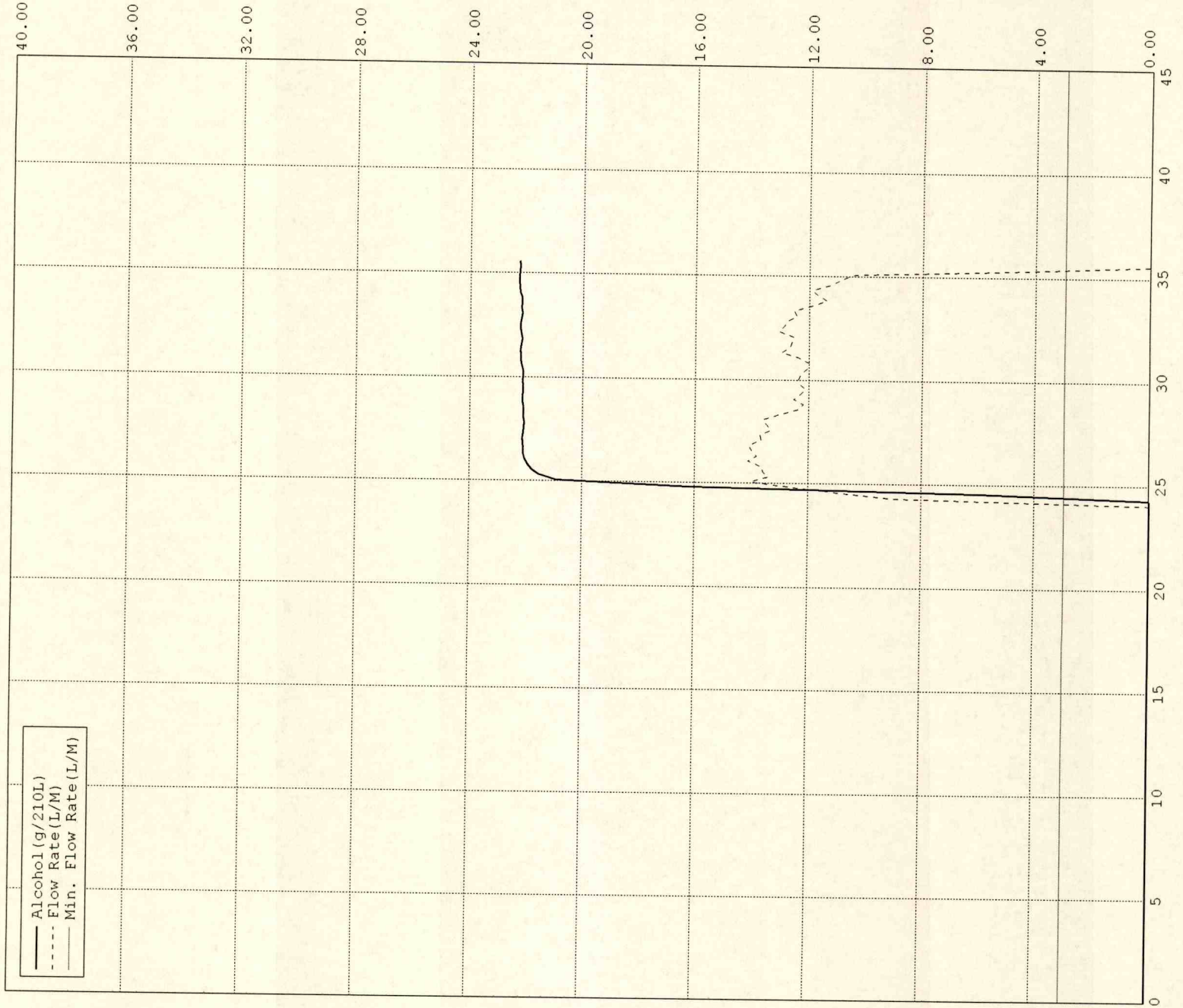
EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.81: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK PASSED 12:34  
BLANK TEST 0.000 12:34  
INTERNAL STANDARD VERIFIED 12:35  
Xq = 0.100 (1.61%)  
EXTERNAL STANDARD 0.081 12:35  
X[1] = 0.0808 (0.0002) (0.0035)  
BLANK TEST 0.000 12:36  
SUBJECT SAMPLE XXX 12:36  
X[1] = 0.1114 (-0.0165) (0.0036)

Interference Detected

Filter 2 Avg: 0.0008  
Filter 3 Avg: 0.0037

BMB 7/14/17



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 07/14/2017  
Time: 12:42:08

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

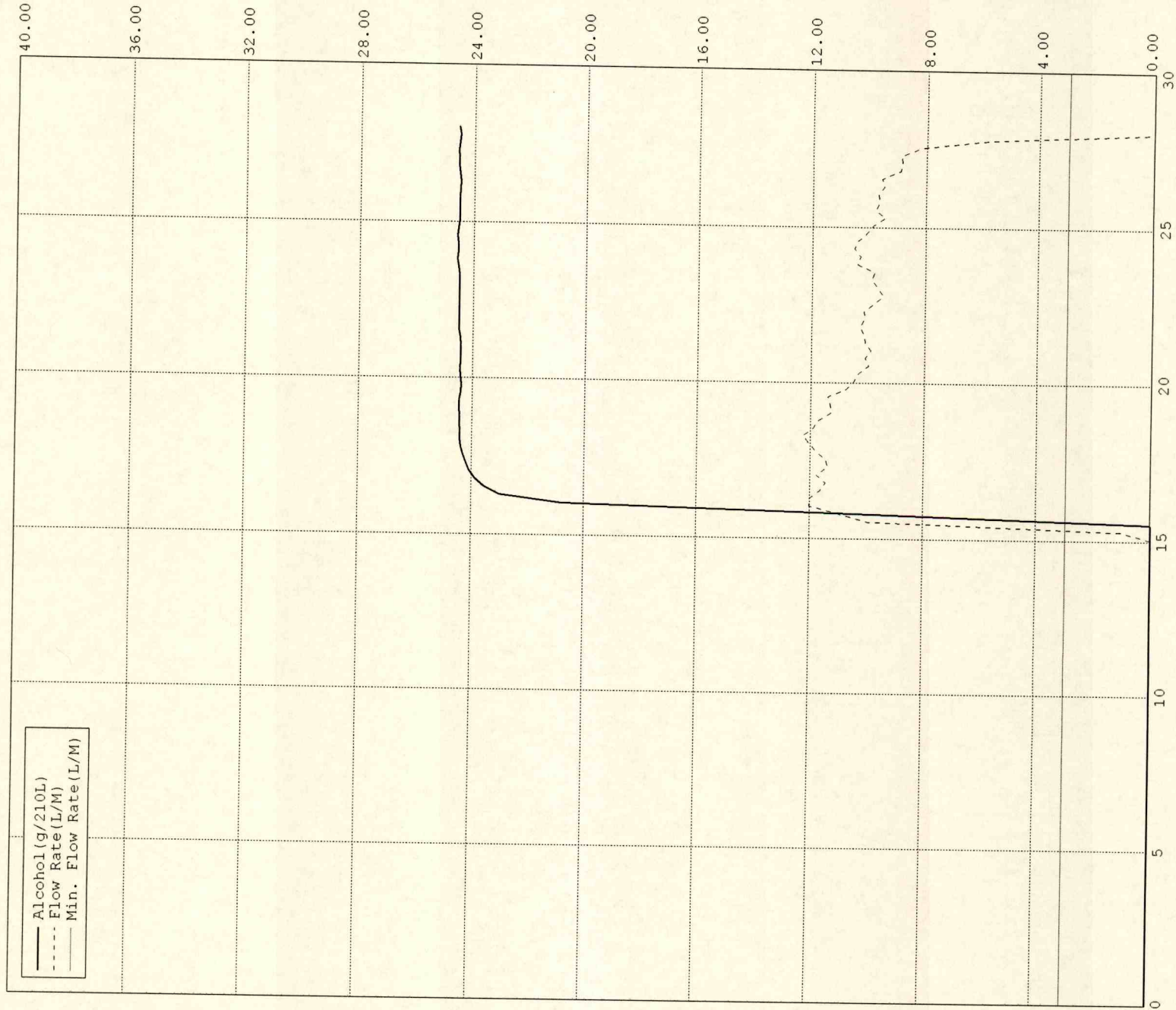
DEPT/AGENCY:  
INTERFERENCE ISOPROPYL  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.81: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK	PASSED	12:43
BLANK TEST	0.000	12:43
INTERNAL STANDARD	VERIFIED	12:43
Xg = 0.099 (1.43%)		
EXTERNAL STANDARD	0.081	12:43
X[1] = 0.0809 (0.0009) (0.0042)		
BLANK TEST	0.000	12:44
SUBJECT SAMPLE	XXX	12:45
X[1] = 0.1231 (-0.0255) (0.0029)		

Interference Detected





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 07/14/2017  
Time: 12:48:27

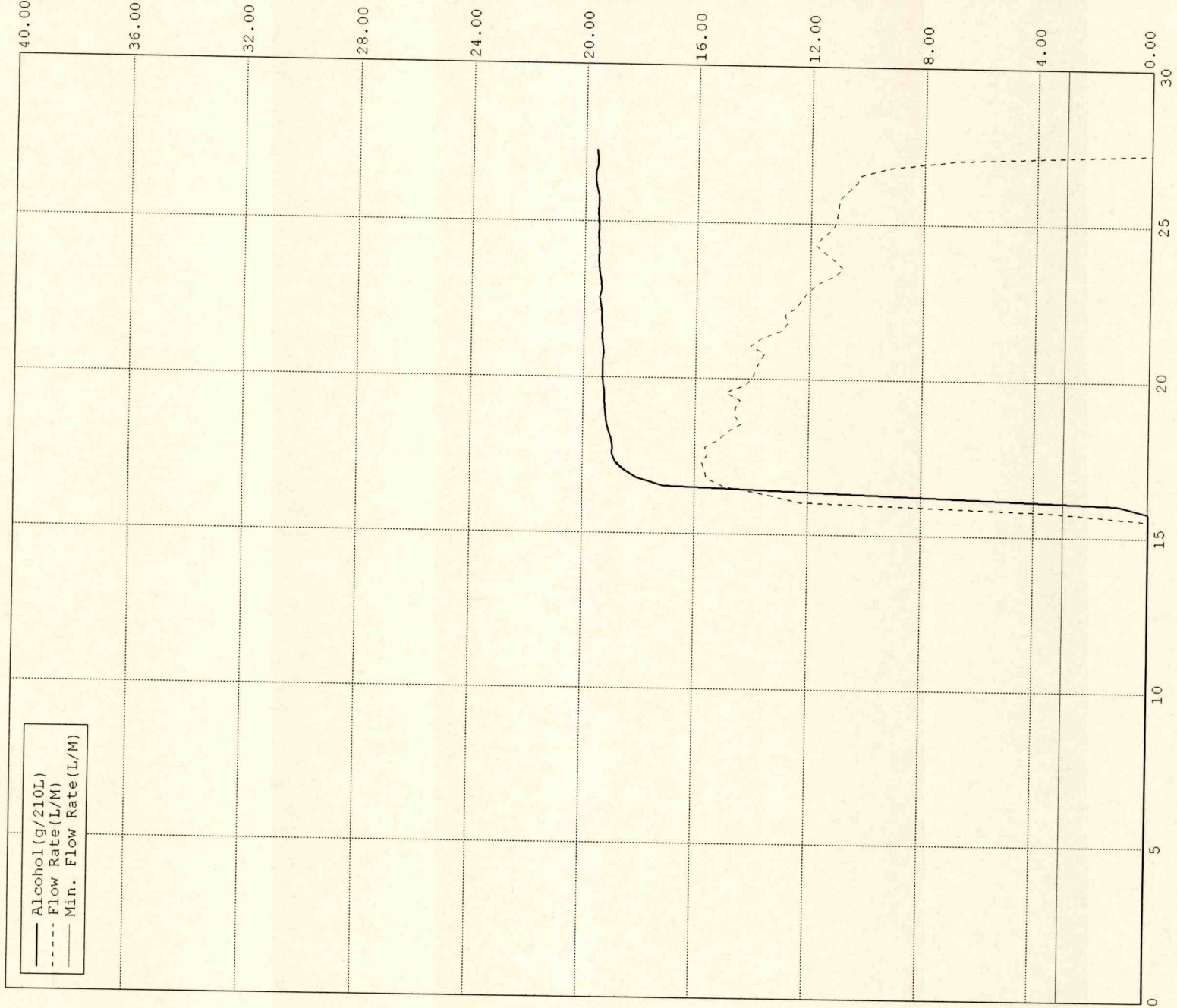
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

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 29.81: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK	PASSED	12:49
BLANK TEST	0.000	12:49
INTERNAL STANDARD	VERIFIED	12:50
$X_g = 0.100$ (1.88%)		
EXTERNAL STANDARD	0.081	12:50
$X[1] = 0.0809$ (0.0009) (0.0041)		
BLANK TEST	0.000	12:51
SUBJECT SAMPLE (Vol=2.43L)	0.098	12:51
$X[1] = 0.0985$ (0.0011) (0.0021)		
BLANK TEST	0.000	12:52
EXTERNAL STANDARD	0.081	12:52
$X[1] = 0.0809$ (0.0012) (0.0031)		
BLANK TEST	0.000	12:53



SUBJECT TEST

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
-----

Date: 07/14/2017  
Time: 12:25:05

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

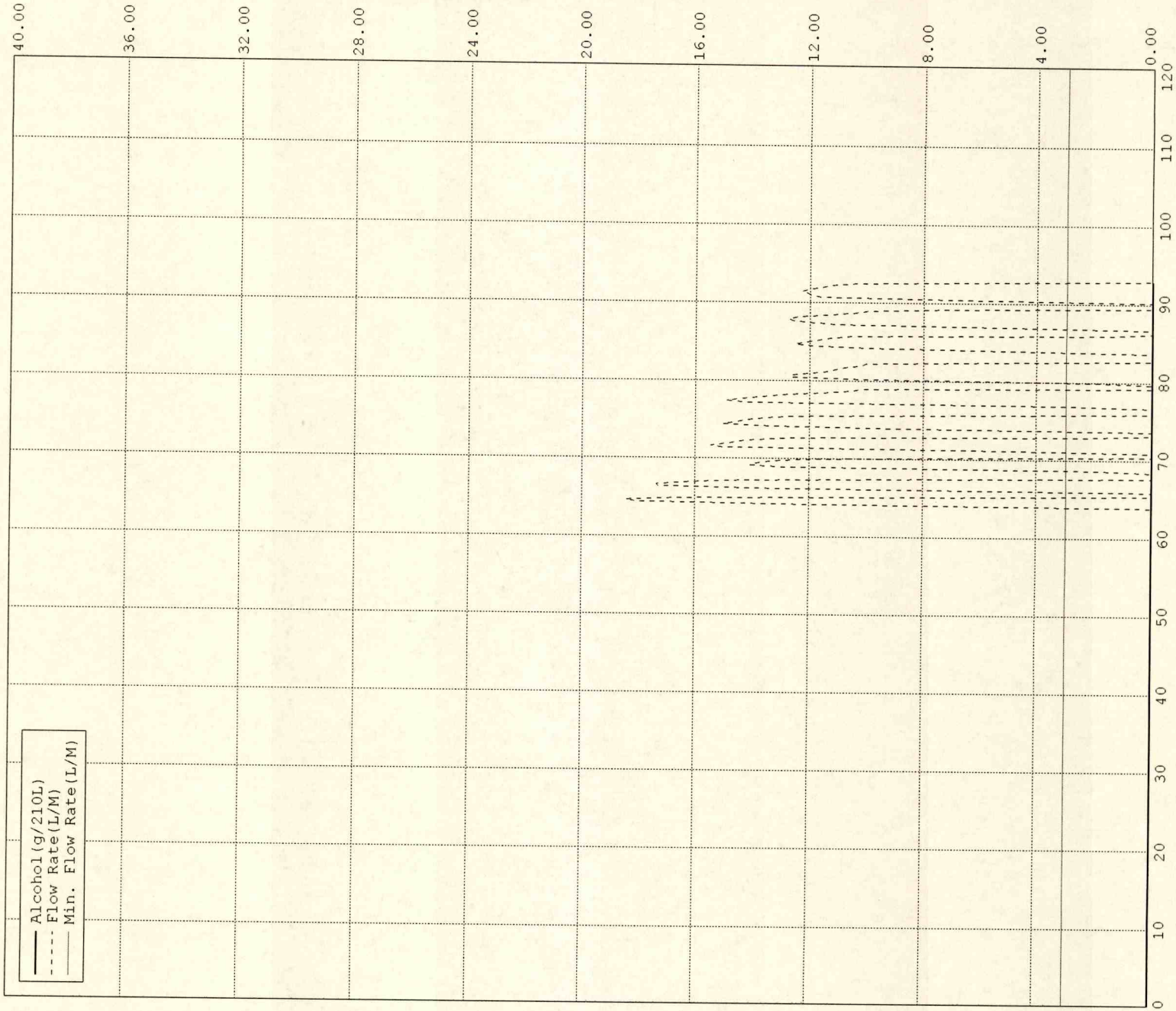
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.81: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK PASSED 12:26  
BLANK TEST 0.000 12:26  
INTERNAL STANDARD VERIFIED 12:26  
EXTERNAL STANDARD 0.081 12:26  
BLANK TEST 0.000 12:27  
SUBJECT SAMPLE XXX 12:29

Maximum Attempts Exceeded





SUBJECT TEST

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
-----

Date: 07/14/2017  
Time: 12:18:28

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

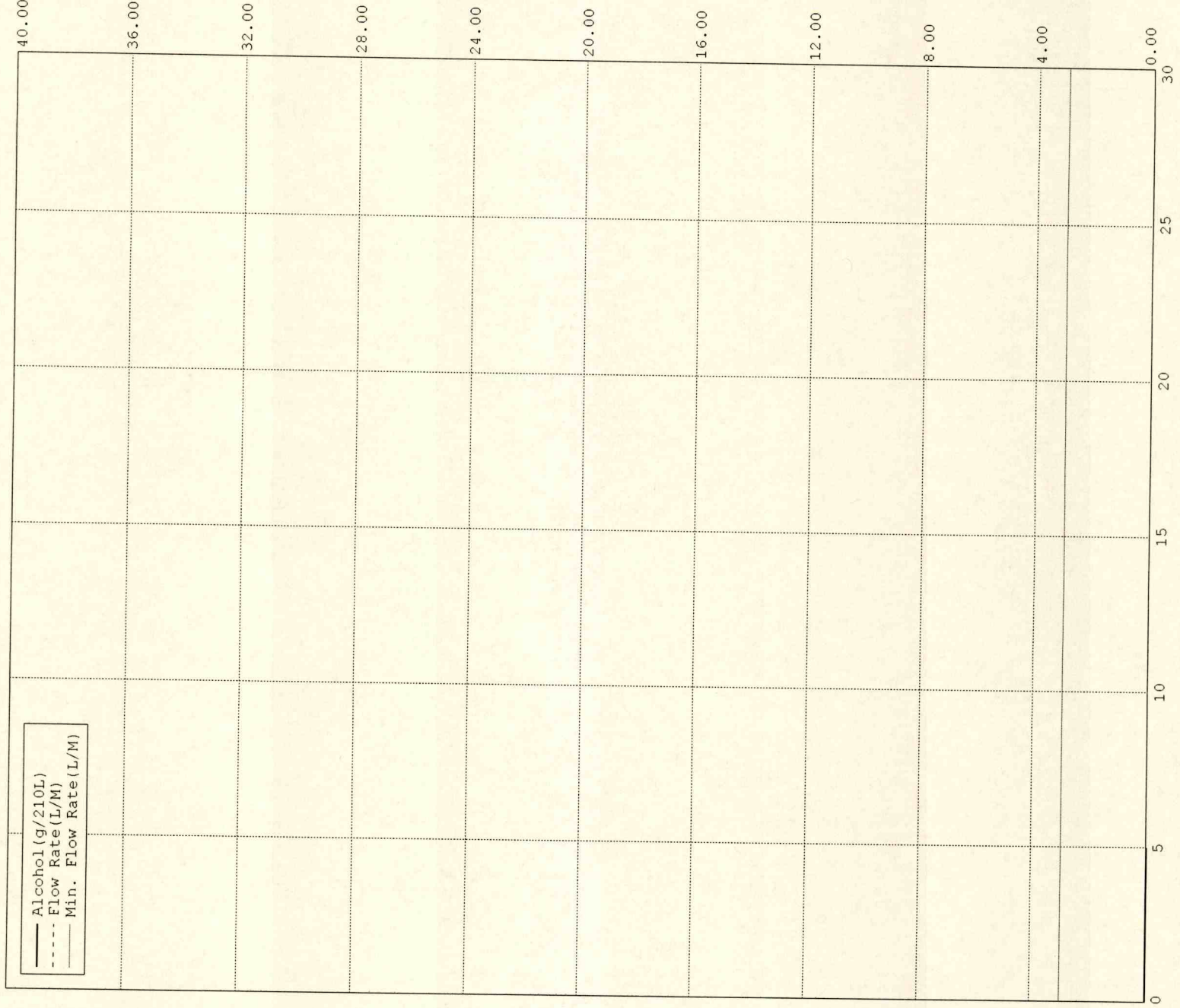
EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.81: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK  
BLANK TEST PASSED 12:19  
INTERNAL STANDARD VERIFIED 12:19  
EXTERNAL STANDARD 0.081 12:19  
BLANK TEST 0.000 12:20

RFI DETECTED

*BMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 07/14/2017  
Time: 13:32:57

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
NON DRINKING SUBJECT TEST  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.81: 0.080  
LOT #: AG608504  
EXPIRATION: 03/25/2018

DIAGNOSTIC CHECK	PASSED	13:34
BLANK TEST	0.000	13:34
INTERNAL STANDARD	VERIFIED	13:34
EXTERNAL STANDARD	0.081	13:34
BLANK TEST	0.000	13:35
SUBJECT SAMPLE (Vol=2.22L)	0.000	13:36
BLANK TEST	0.000	13:37
EXTERNAL STANDARD	0.082	13:37
BLANK TEST	0.000	13:38

AMB

