

# 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 100687 Analyst Brandi Barnett Start Date 12/12/18

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 1.6 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 AG824011 Exp 9/18/20
- 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 DR5298 Date Calibrated 1/24/18
- vi. 0.300g/210L Mnf Guth Lot 17350 Exp 10/11/19
  - 1. Simulator S/N SD1198 Date Calibrated 1/23/18

5. Functional Tests (attached)

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

- i. Acetone - Mnf Guth Lot 18070 Level 0.100 Exp 02/26/20
  - 1. Simulator S/N SD1177 Date Calibrated 1/24/18
- ii. Isopropanol - Mnf Guth Lot 18070 Level 0.100 Exp 02/26/20
  - 1. Simulator S/N SD1199 Date Calibrated 01/24/18
- iii. Negative Control - Mnf Guth Lot 18070 Level 0.100 Exp 02/26/20
  - 1. Simulator S/N SD1088 Date Calibrated 01/24/18

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 12/13/18

DIAGNOSTIC RECORD

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100687  
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Date: 12/12/2018  
Time: 09:21:10

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 = 42.2°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.64 V PASSED  
(1.00 V - 2.34 V)  
Cooler Voltage = 1.56 V PASSED  
(0.97 V - 2.25 V)  
Bias Voltage = 80 V PASSED  
(48 V - 112 V)  
Chopper Freq = 525 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 28.8 in

PUMP INFO

Flow Rate = 4.189 L/M PASSED  
(3.500 L/M - 6.500 L/M)

DETECTOR INFO

PUMP ON PASSED  
(0.003 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 = 0.141 1.81% (0.00% - 4.00%) PASSED

Technician Screen

-----  
DATAMASTER dmt: 100687  
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Date: 12/12/2018  
Time: 9:51 AM

Temperatures (°C)

Sample Cell: 48.7°C  
Breath Tube: 44.1°C

Current Barometer 28.9 in  
Volume (Ltr) 1.47

Settings

Lamp: 1.67 V  
Bias: 80 V  
Cooler: 1.56 V  
Chopper: 526 Hz

Voltages (V)

Flow: 1.06 V  
Detector: 0.035 V

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100687  
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Date: 03/14/2017  
Time: 13:15:09

OPERATOR NAME:  
BRANDI BARNETT  
CERTIFICATE #: 7038

Ca	=	0.1000			
CAL	=	0.987822	0.800	<=	CAL < 1.200
b1	=	0.0005	0.0000	<=	b1 < 0.0040
b2	=	0.0044	0.0010	<=	b2 < 0.0100
b3	=	0.0000	0.0000	<=	b3 < 0.0040
Xq	=	0.1385	0.0500	<=	Xq < 0.2000
a21	=	1.155003	1.050	<=	a21 < 1.300
a31	=	0.536605	0.300	<=	a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100687

Date: 12/12/2018  
Time: 09:52:23

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

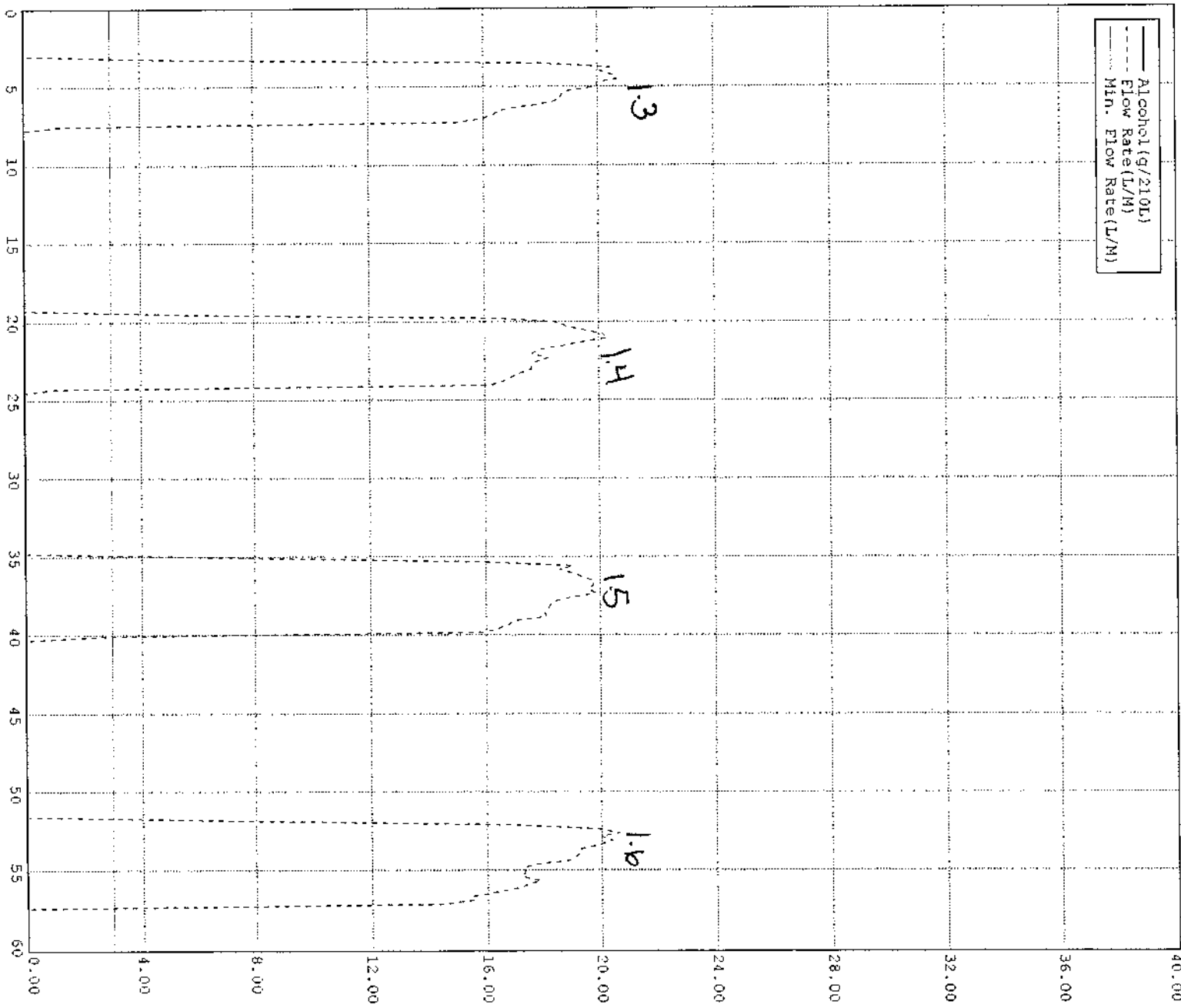
DEPT/AGENCY:  
MINIMUM VOLUME  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 28.87: 0.077  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	09:53
BLANK TEST	0.000	09:53
INTERNAL STANDARD	VERIFIED	09:53
EXTERNAL STANDARD	0.074	09:53
BLANK TEST	0.000	09:54
SUBJECT SAMPLE (Vol=1.61L)	0.000	09:55
BLANK TEST	0.000	09:56
EXTERNAL STANDARD	0.076	09:56
BLANK TEST	0.000	09:57

*BBB*



LINEARITY CHECK

Alaska Department of Public Safety  
DATAMASTER dmt: 100687

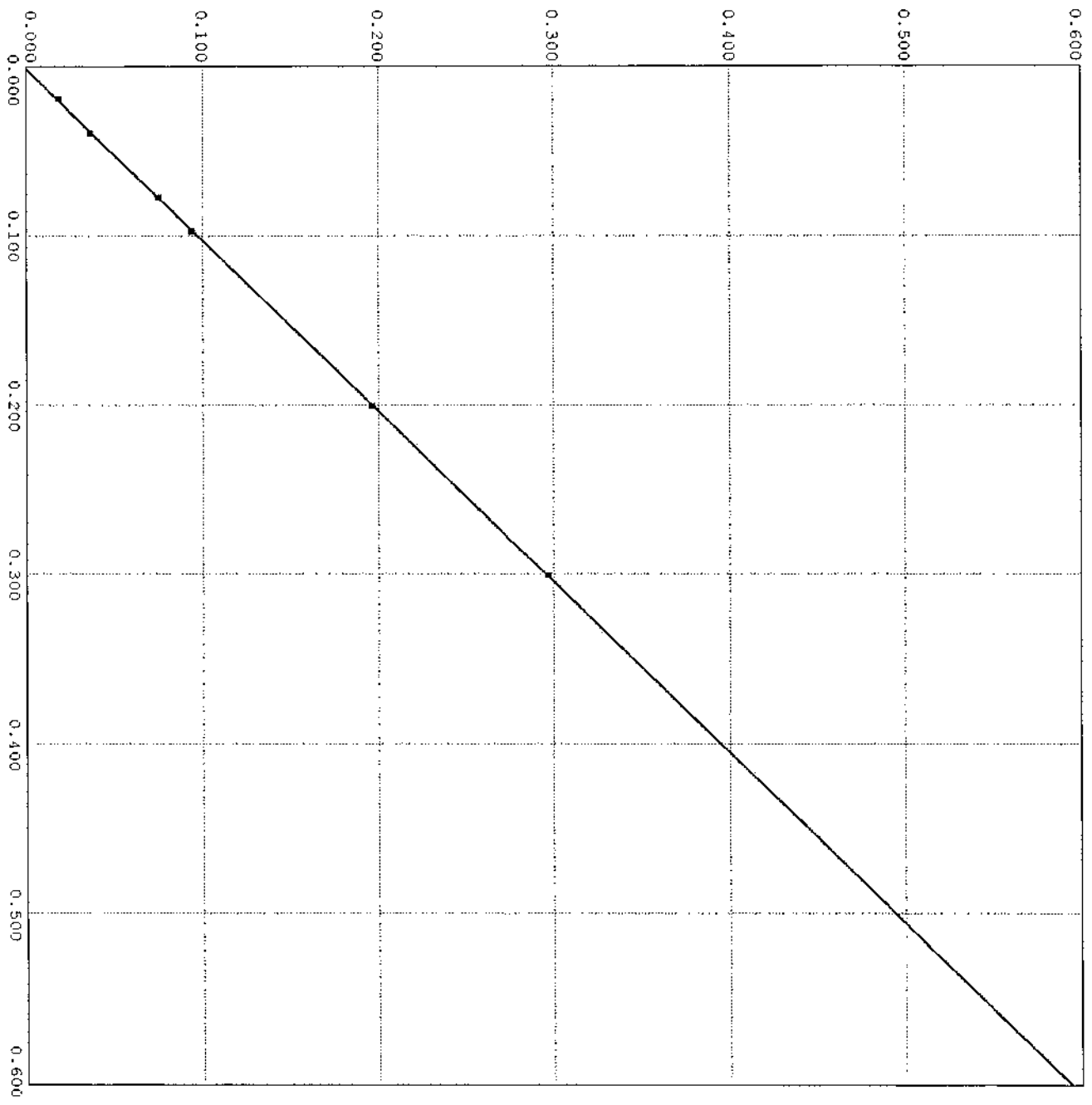
Date: 12/12/2018  
Time: 13:20:46

SUPERVISOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

TARGET	AVERAGE	STD. DEV.
0.019	0.0192	0.0004
0.039	0.0372	0.0008
0.077	0.0758	0.0004
0.097	0.0948	0.0004
0.200	0.1970	0.0007
0.300	0.2974	0.0005

SLOPE = 0.992075  
R<sup>2</sup> = 0.999948

BBMB



LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100687

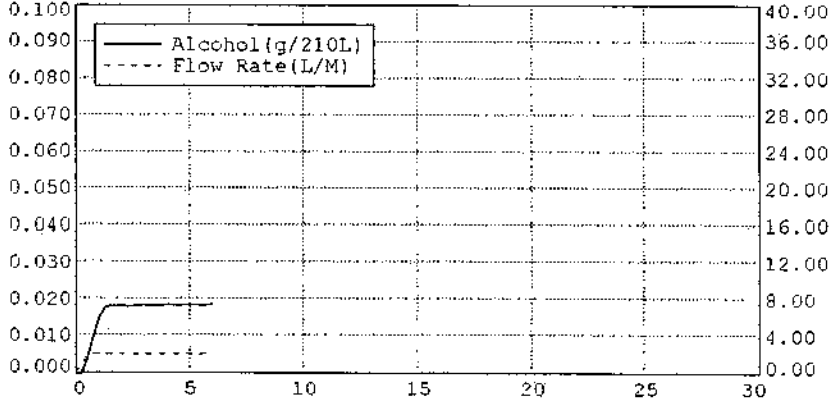
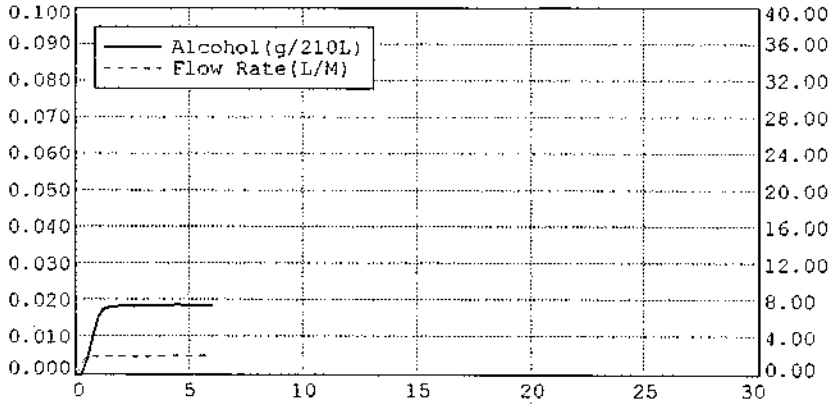
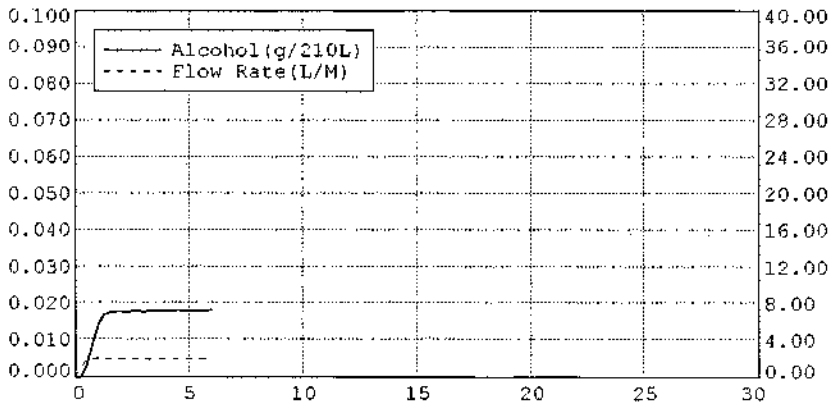
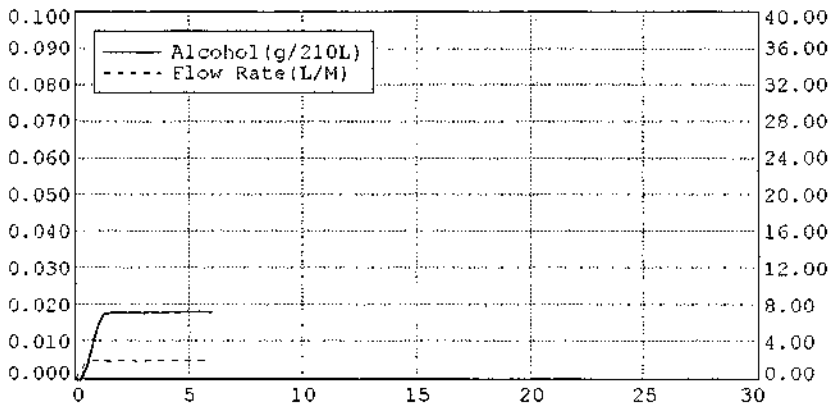
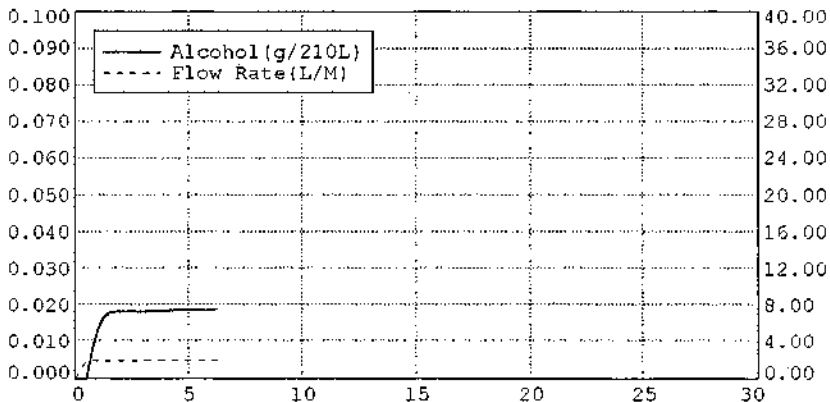
Date: 12/12/2018  
 Time: 13:20:47

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 28.92: 0.019  
 LOT #: AG805804  
 EXPIRATION: 02/27/2020  
 TANK PRESSURE: 798 psi

BLANK TEST	0.000	13:22
INTERNAL STANDARD	VERIFIED	13:22
EXTERNAL STANDARD	0.019	13:22
BLANK TEST	0.000	13:23
EXTERNAL STANDARD	0.019	13:24
BLANK TEST	0.000	13:24
EXTERNAL STANDARD	0.019	13:25
BLANK TEST	0.000	13:26
EXTERNAL STANDARD	0.020	13:26
BLANK TEST	0.000	13:27
EXTERNAL STANDARD	0.019	13:27
BLANK TEST	0.000	13:28

Average = 0.0192  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100687

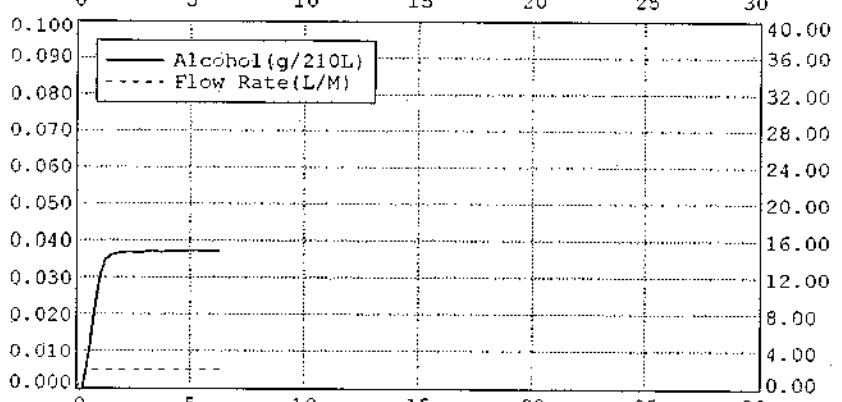
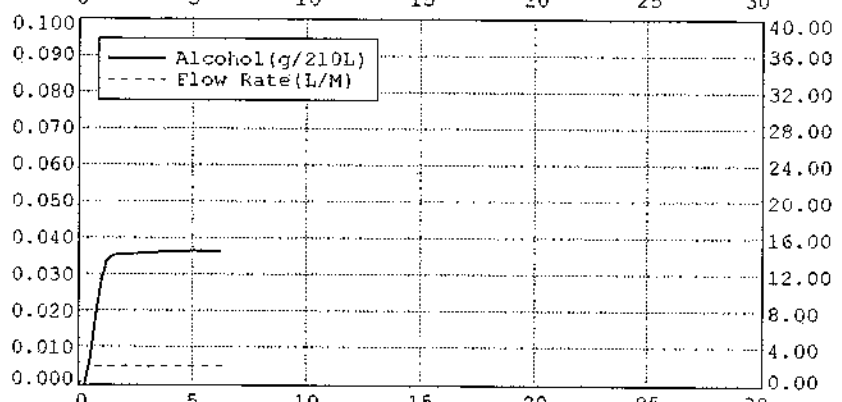
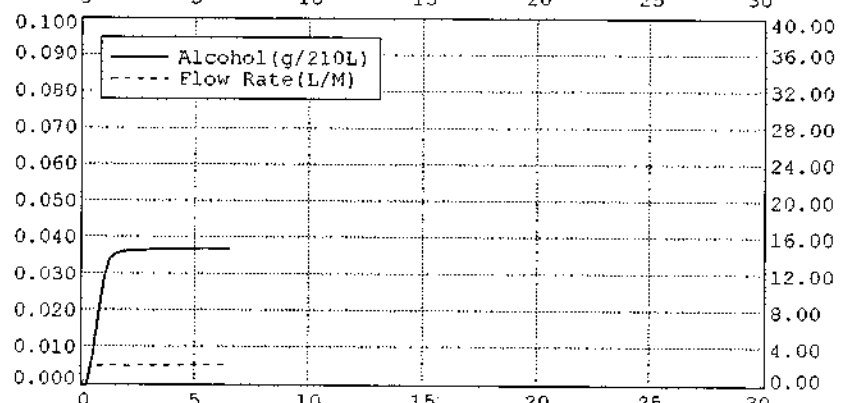
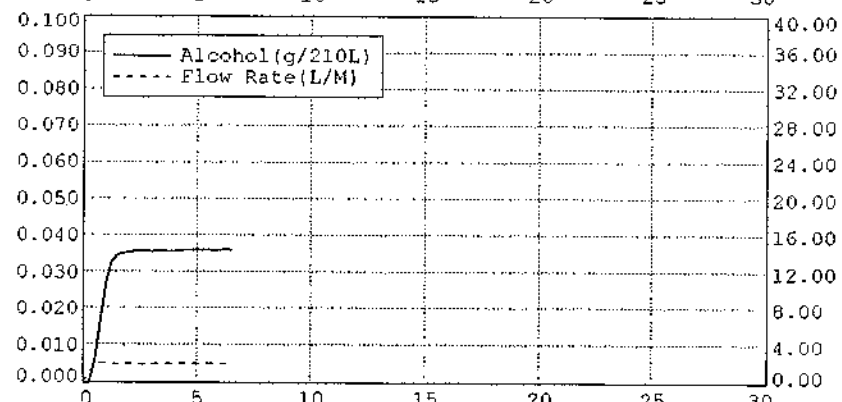
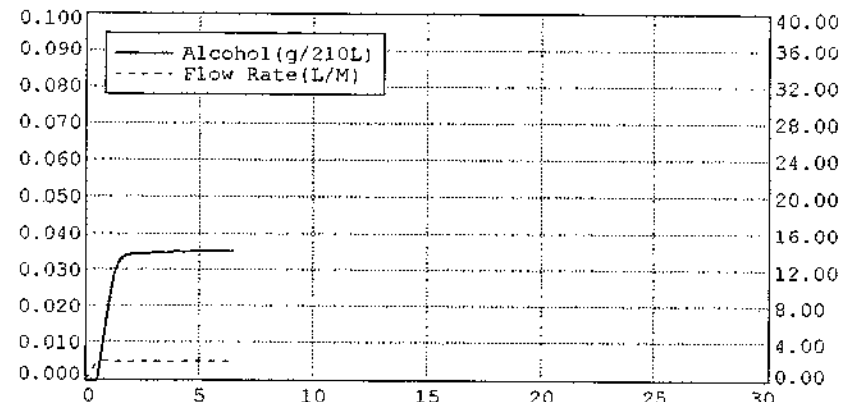
Date: 12/12/2018  
 Time: 13:34:55

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 28.91: 0.039  
 LOT #: AG733403  
 EXPIRATION: 11/30/2019  
 TANK PRESSURE: 978 psi

BLANK TEST	0.000	13:36
INTERNAL STANDARD	VERIFIED	13:36
EXTERNAL STANDARD	0.036	13:36
BLANK TEST	0.000	13:37
EXTERNAL STANDARD	0.037	13:37
BLANK TEST	0.000	13:38
EXTERNAL STANDARD	0.038	13:38
BLANK TEST	0.000	13:39
EXTERNAL STANDARD	0.037	13:39
BLANK TEST	0.000	13:40
EXTERNAL STANDARD	0.038	13:40
BLANK TEST	0.000	13:41

Average = 0.0372  
 Std Dev = 0.0008





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100687

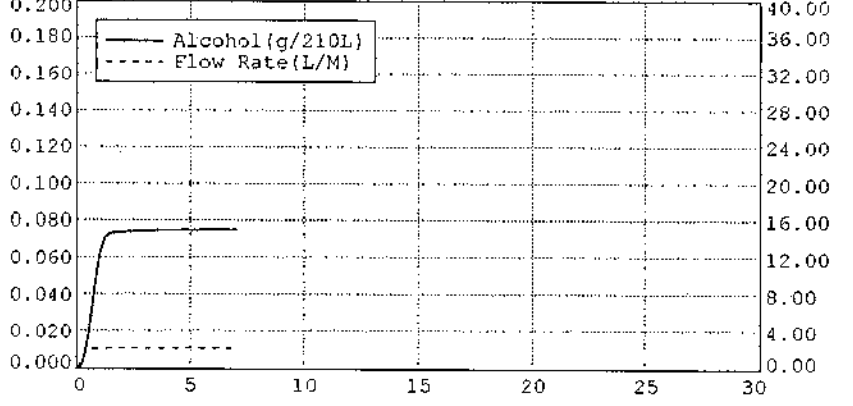
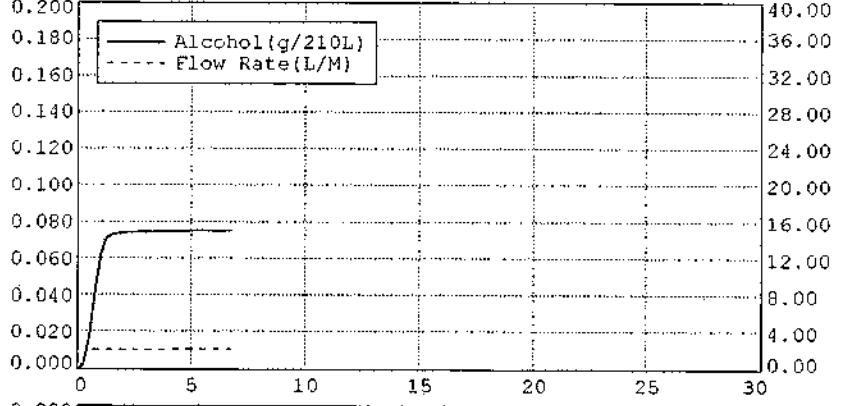
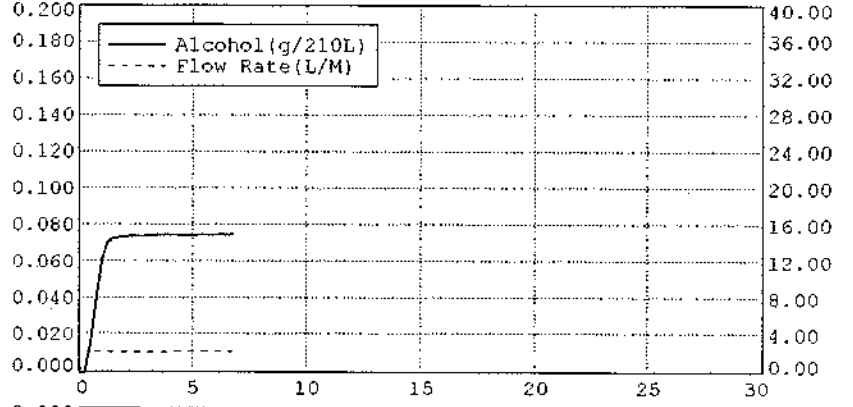
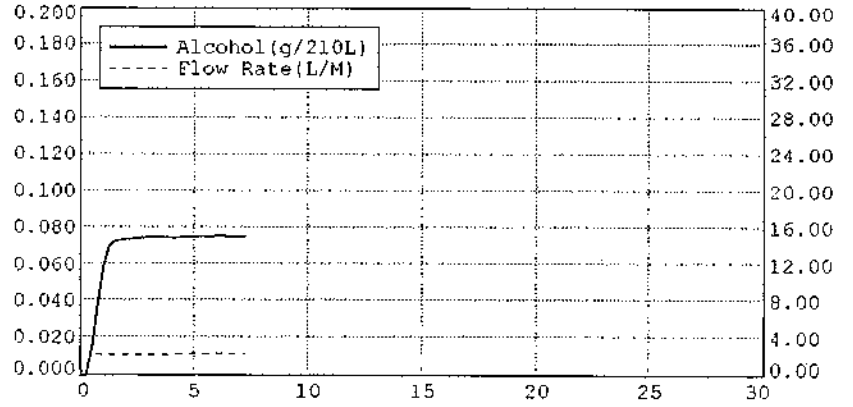
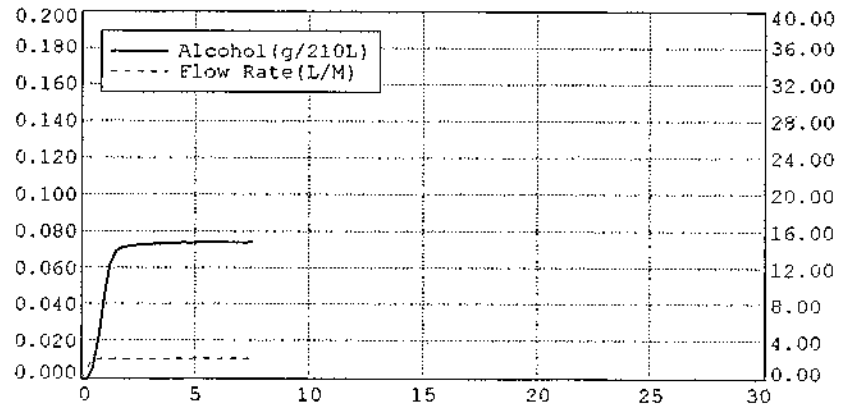
Date: 12/12/2018  
 Time: 13:44:01

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 28.92: 0.077  
 LOT #: AG826101  
 EXPIRATION: 09/18/2020  
 TANK PRESSURE: 1179 psi

BLANK TEST	0.000	13:45
INTERNAL STANDARD	VERIFIED	13:45
EXTERNAL STANDARD	0.075	13:45
BLANK TEST	0.000	13:46
EXTERNAL STANDARD	0.076	13:46
BLANK TEST	0.000	13:47
EXTERNAL STANDARD	0.076	13:47
BLANK TEST	0.000	13:48
EXTERNAL STANDARD	0.076	13:48
BLANK TEST	0.000	13:49
EXTERNAL STANDARD	0.076	13:49
BLANK TEST	0.000	13:50

Average = 0.0758  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100687

Date: 12/12/2018  
 Time: 14:07:47

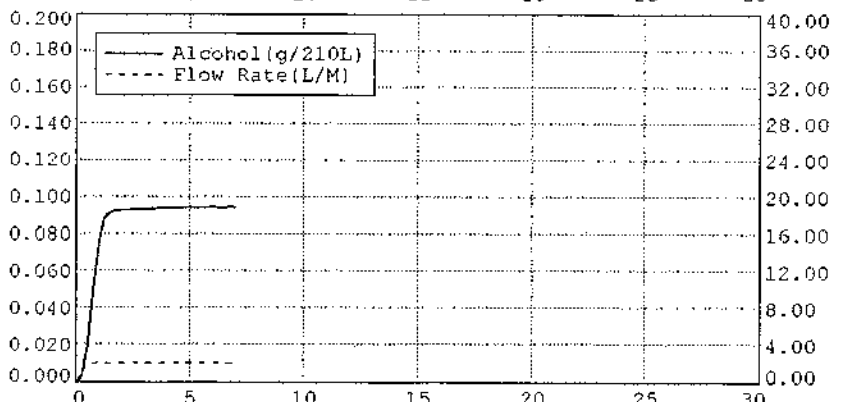
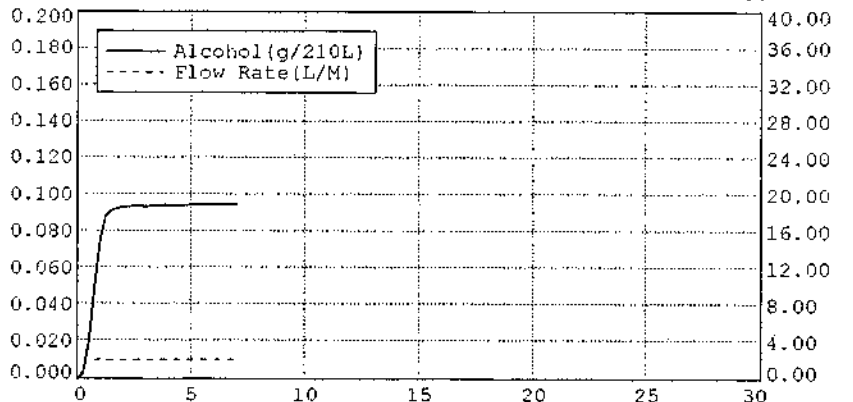
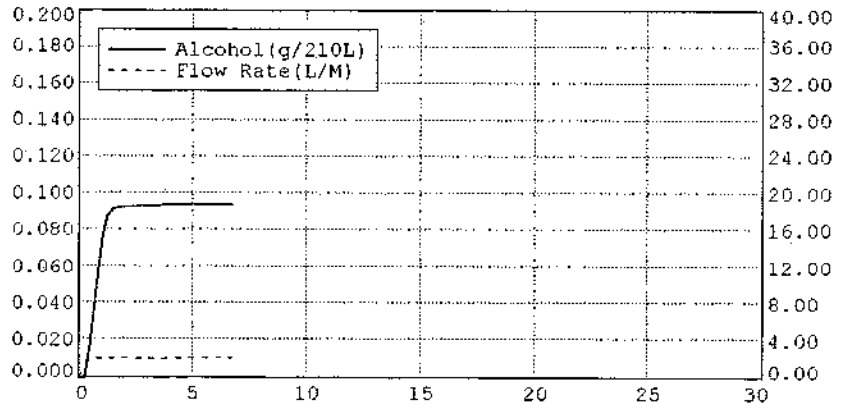
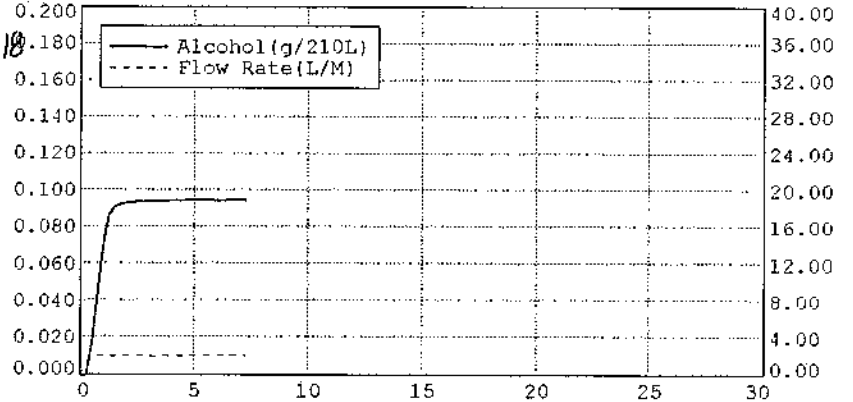
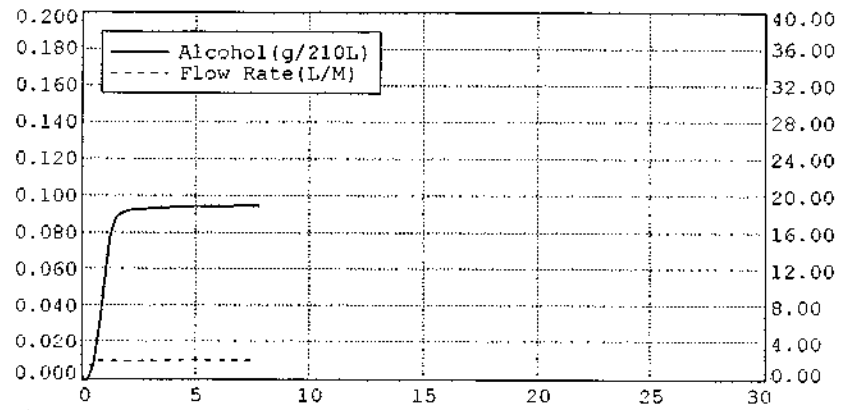
EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 28.92: 0.097  
 LOT #: AG805903  
 EXPIRATION: 02/28/2020  
 TANK PRESSURE: 0 psi

*Tank was inserted  
 as tank pressure was  
 being read.*

BLANK TEST	0.000	14:19
INTERNAL STANDARD	VERIFIED	14:19
EXTERNAL STANDARD	0.095	14:19
BLANK TEST	0.000	14:20
EXTERNAL STANDARD	0.095	14:21
BLANK TEST	0.000	14:22
EXTERNAL STANDARD	0.094	14:22
BLANK TEST	0.000	14:23
EXTERNAL STANDARD	0.095	14:23
BLANK TEST	0.000	14:24
EXTERNAL STANDARD	0.095	14:24
BLANK TEST	0.000	14:25

Average = 0.0948  
 Std Dev = 0.0004



*BMB  
 12/14/18*

LINEARITY CHECK: Control Test 5

Alaska Department of Public Safety  
 DATAMASTER dmt: 100687

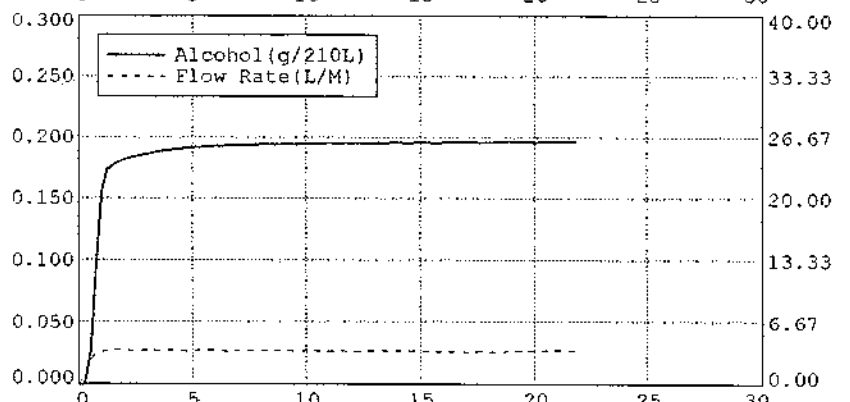
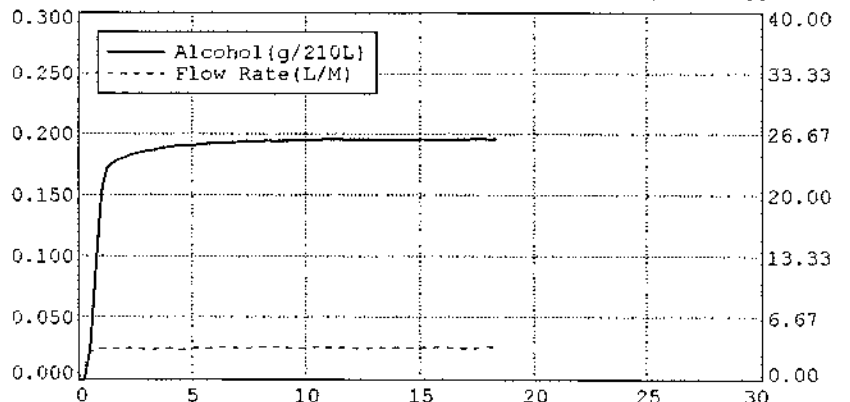
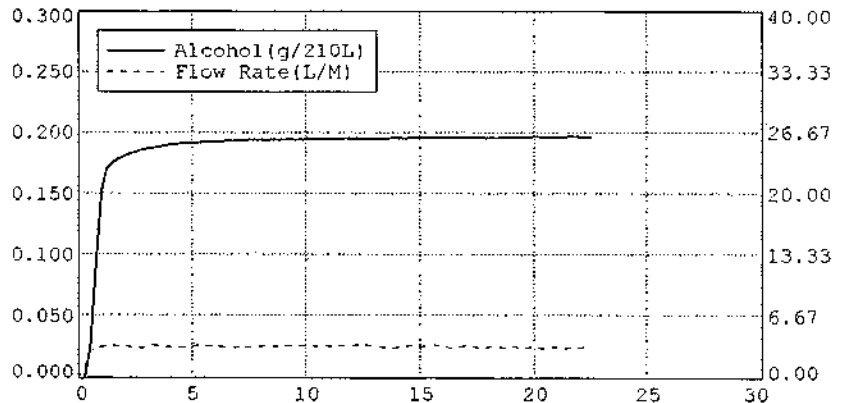
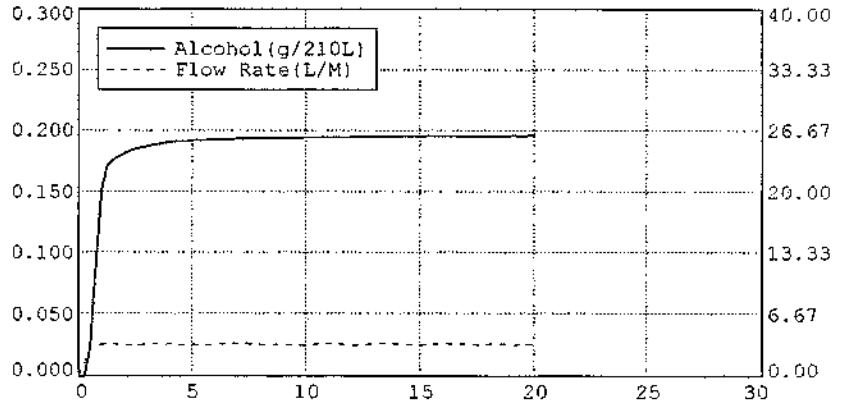
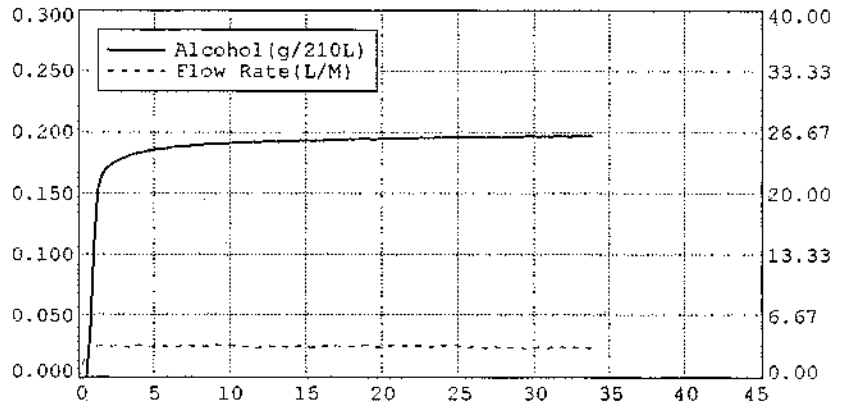
Date: 12/12/2018  
 Time: 14:30:59

EXTERNAL STANDARD INFORMATION

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

BLANK TEST	0.000	14:32
INTERNAL STANDARD	VERIFIED	14:32
EXTERNAL STANDARD	0.198	14:33
BLANK TEST	0.000	14:34
EXTERNAL STANDARD	0.196	14:34
BLANK TEST	0.000	14:35
EXTERNAL STANDARD	0.197	14:36
BLANK TEST	0.000	14:37
EXTERNAL STANDARD	0.197	14:37
BLANK TEST	0.000	14:38
EXTERNAL STANDARD	0.197	14:38
BLANK TEST	0.000	14:39

Average = 0.1970  
 Std Dev = 0.0007



LINEARITY CHECK: Control Test 6

Alaska Department of Public Safety  
 DATAMASTER dmt: 100687

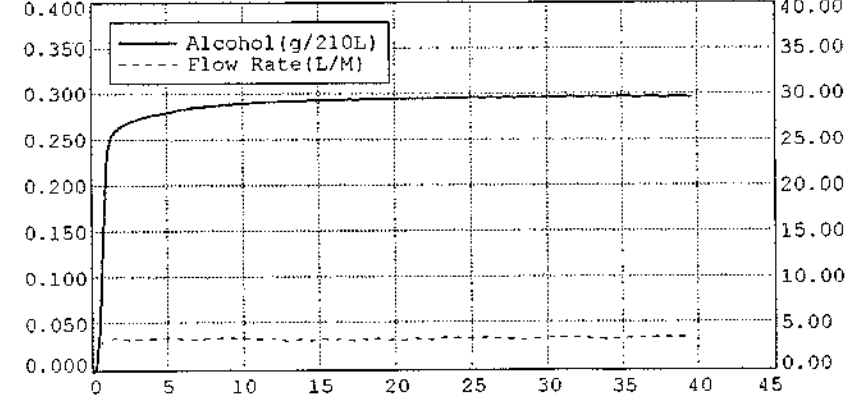
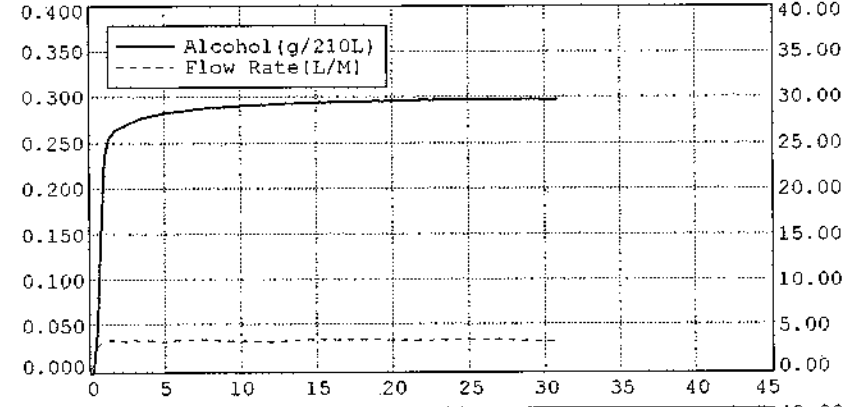
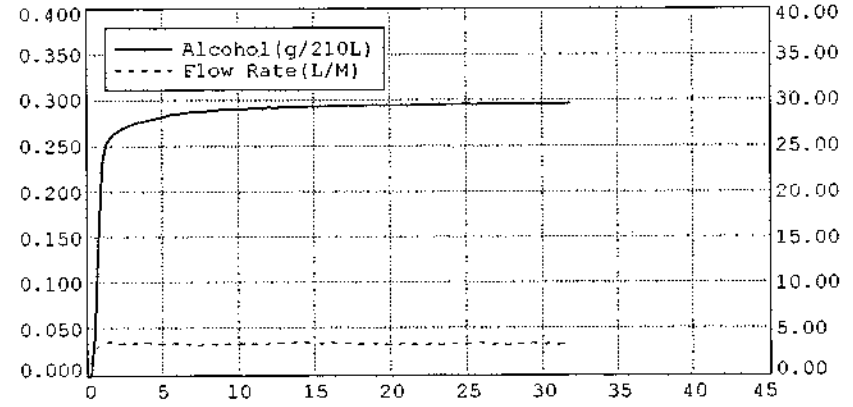
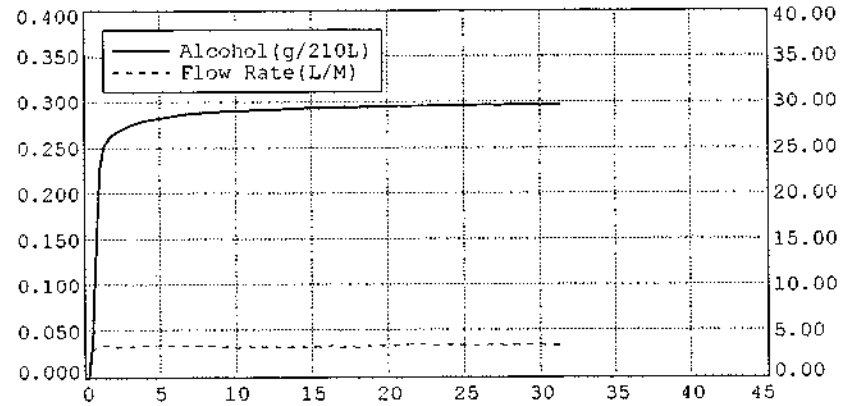
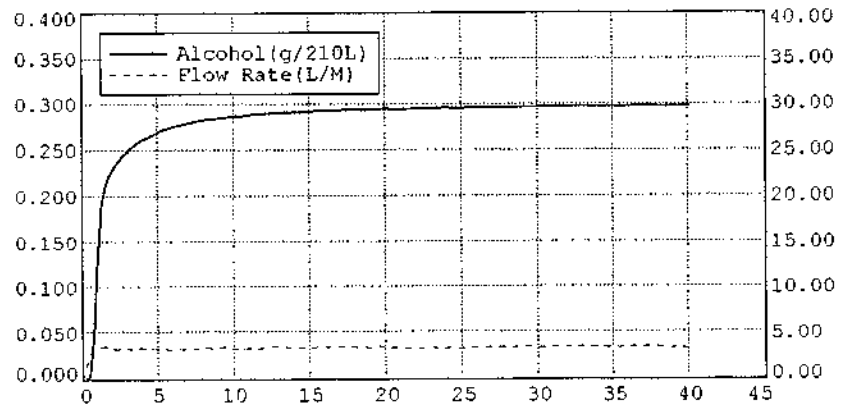
Date: 12/12/2018  
 Time: 14:41:08

EXTERNAL STANDARD INFORMATION

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

BLANK TEST	0.000	14:42
INTERNAL STANDARD	VERIFIED	14:42
EXTERNAL STANDARD	0.298	14:43
BLANK TEST	0.000	14:44
EXTERNAL STANDARD	0.297	14:45
BLANK TEST	0.000	14:46
EXTERNAL STANDARD	0.297	14:46
BLANK TEST	0.000	14:47
EXTERNAL STANDARD	0.298	14:48
BLANK TEST	0.000	14:49
EXTERNAL STANDARD	0.297	14:50
BLANK TEST	0.000	14:50

Average = 0.2974  
 Std Dev = 0.0005



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100687

Date: 12/13/2018  
Time: 08:07:55

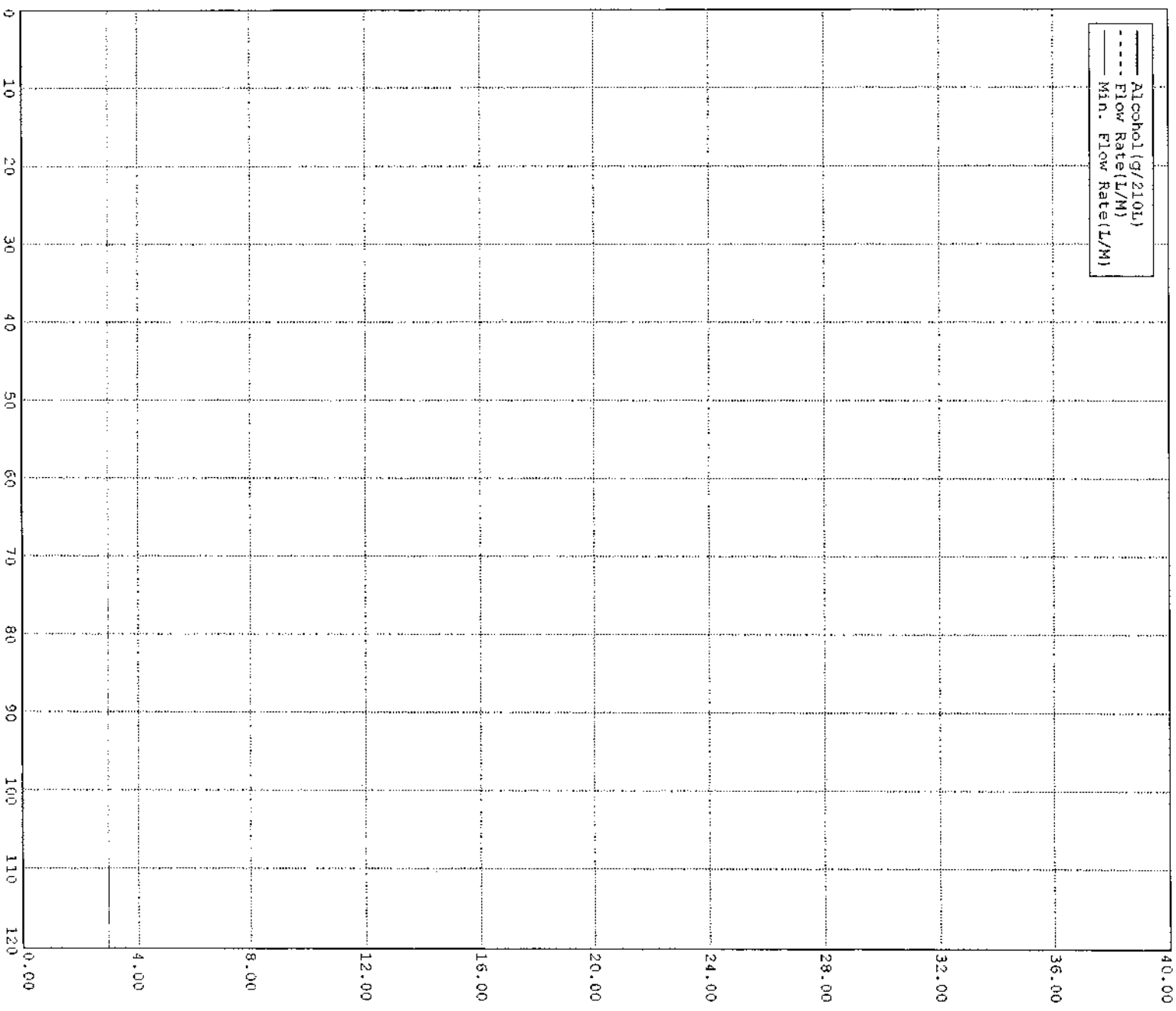
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.01: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	08:09
BLANK TEST	0.000	08:09
INTERNAL STANDARD	VERIFIED	08:09
EXTERNAL STANDARD	0.076	08:09
BLANK TEST	0.000	08:10
SUBJECT SAMPLE	INCOMPLETE	08:12



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100687

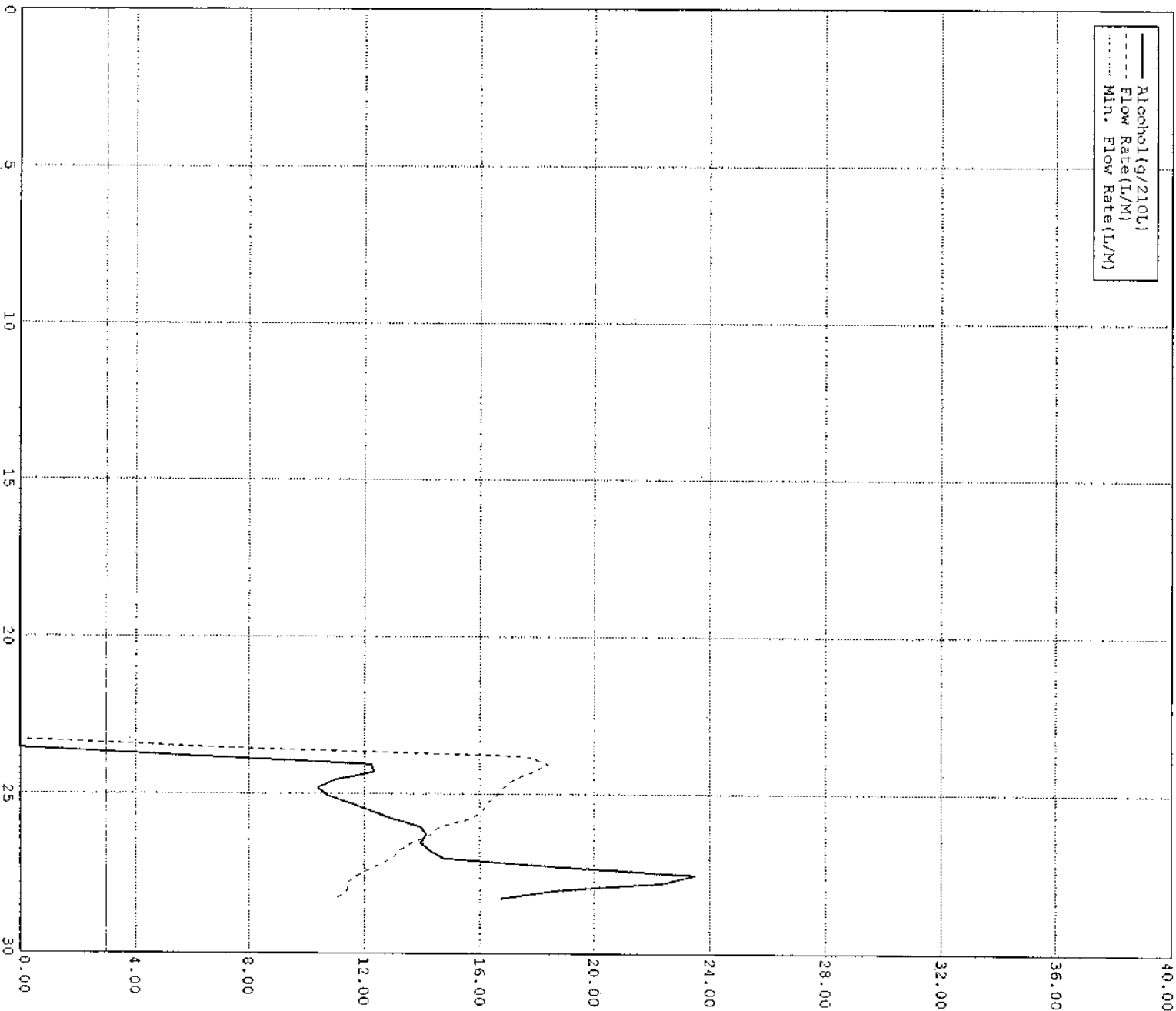
Date: 12/13/2018  
Time: 08:15:44

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 29.01: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK  
BLANK TEST PASSED 08:17  
INTERNAL STANDARD VERIFIED 08:17  
EXTERNAL STANDARD 0.074 08:17  
BLANK TEST 0.000 08:18  
SUBJECT SAMPLE INVALID 08:19



SUBJECT TEST

Alaska Department of Public Safety  
DATA MASTER dmt: 100687

Date: 12/13/2018  
Time: 08:23:41

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 29.01: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK  
BLANK TEST PASSED 08:30  
INTERNAL STANDARD VERIFIED 08:30  
Xq = 0.142 (2.20%)  
EXTERNAL STANDARD 0.074 08:31  
X[1] = 0.0743 (-0.0042) (0.0013)  
BLANK TEST 0.000 08:32  
SUBJECT SAMPLE XXX 08:33  
X[1] = 0.1046 (-0.0197) (-0.0006)

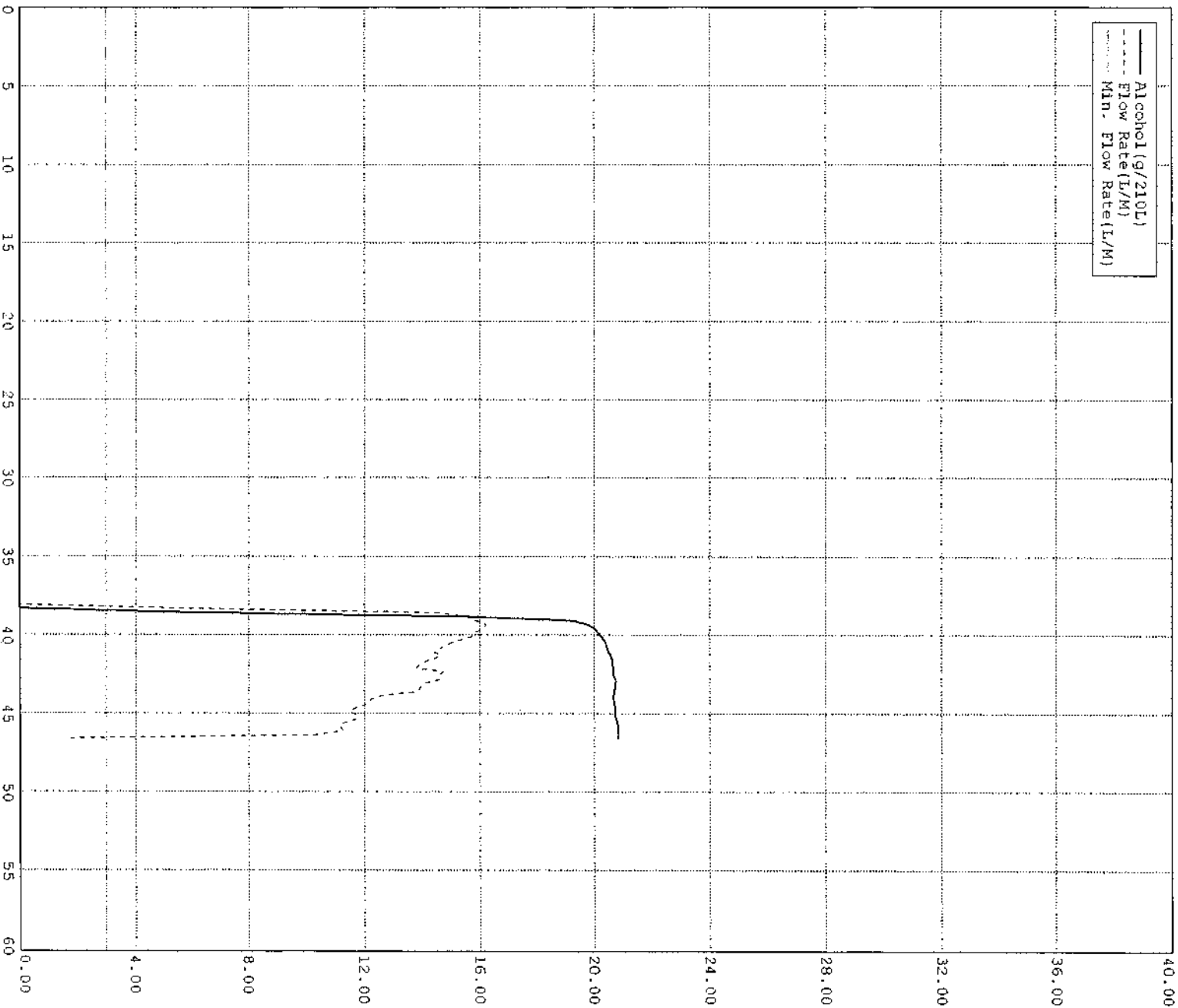
Interference Detected

Filter 2 Avg: -0.0024

Filter 3 Avg: 0.0020

BMB  
12/14/18

BMB



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmc: 100687

Date: 12/13/2018  
Time: 08:39:57

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

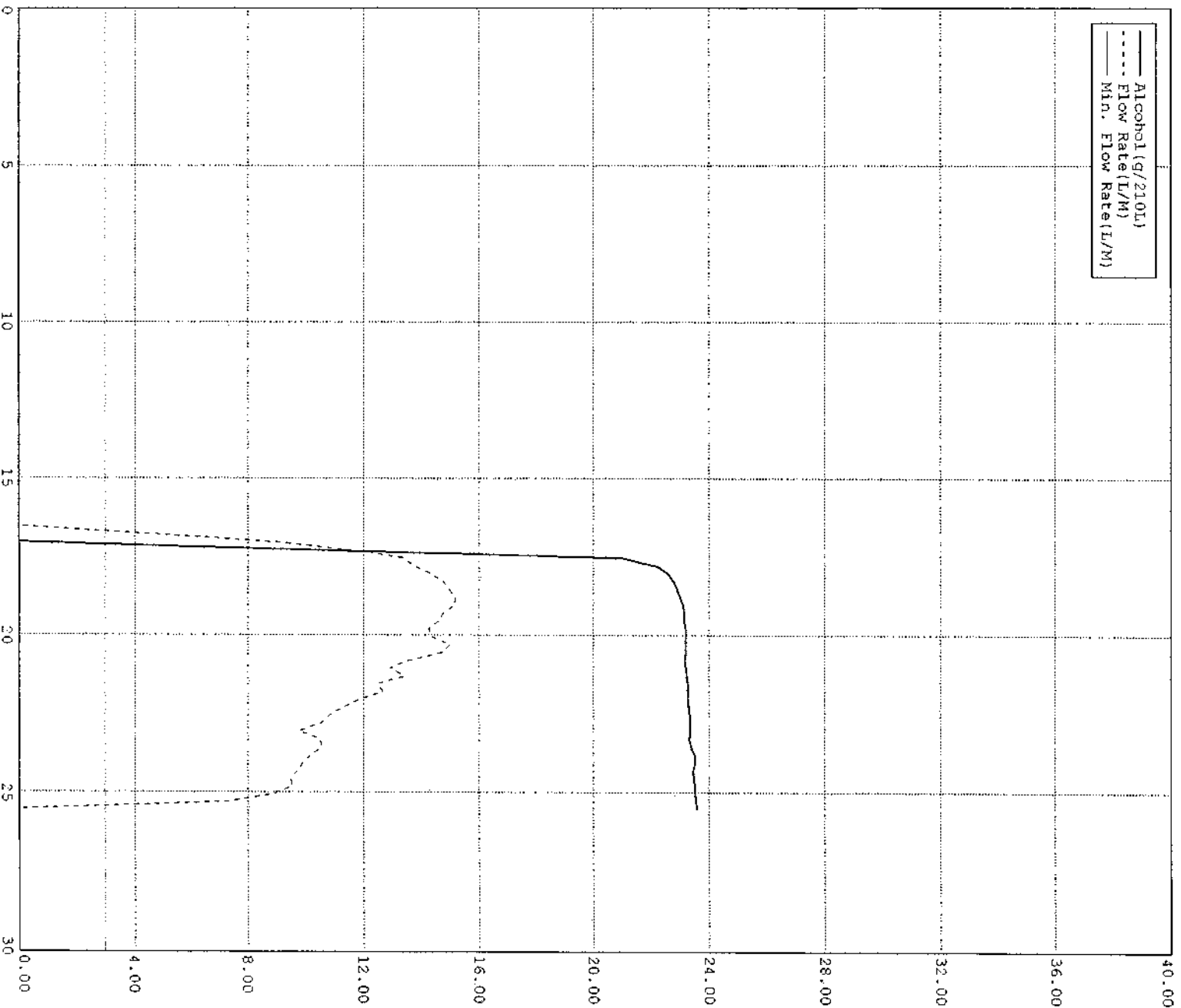
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.01: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK PASSED 08:41  
BLANK TEST 0.000 08:42  
INTERNAL STANDARD VERIFIED 08:42  
X[1] = 0.140 (1.36%) 0.075 08:42  
EXTERNAL STANDARD X[1] = 0.0752 (-0.0018) (0.0019)  
BLANK TEST 0.000 08:43  
SUBJECT SAMPLE XXX 08:43  
X[1] = 0.1180 (-0.0205) (0.0020)

Interference Detected





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100687

Date: 12/13/2018  
Time: 08:46:30

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

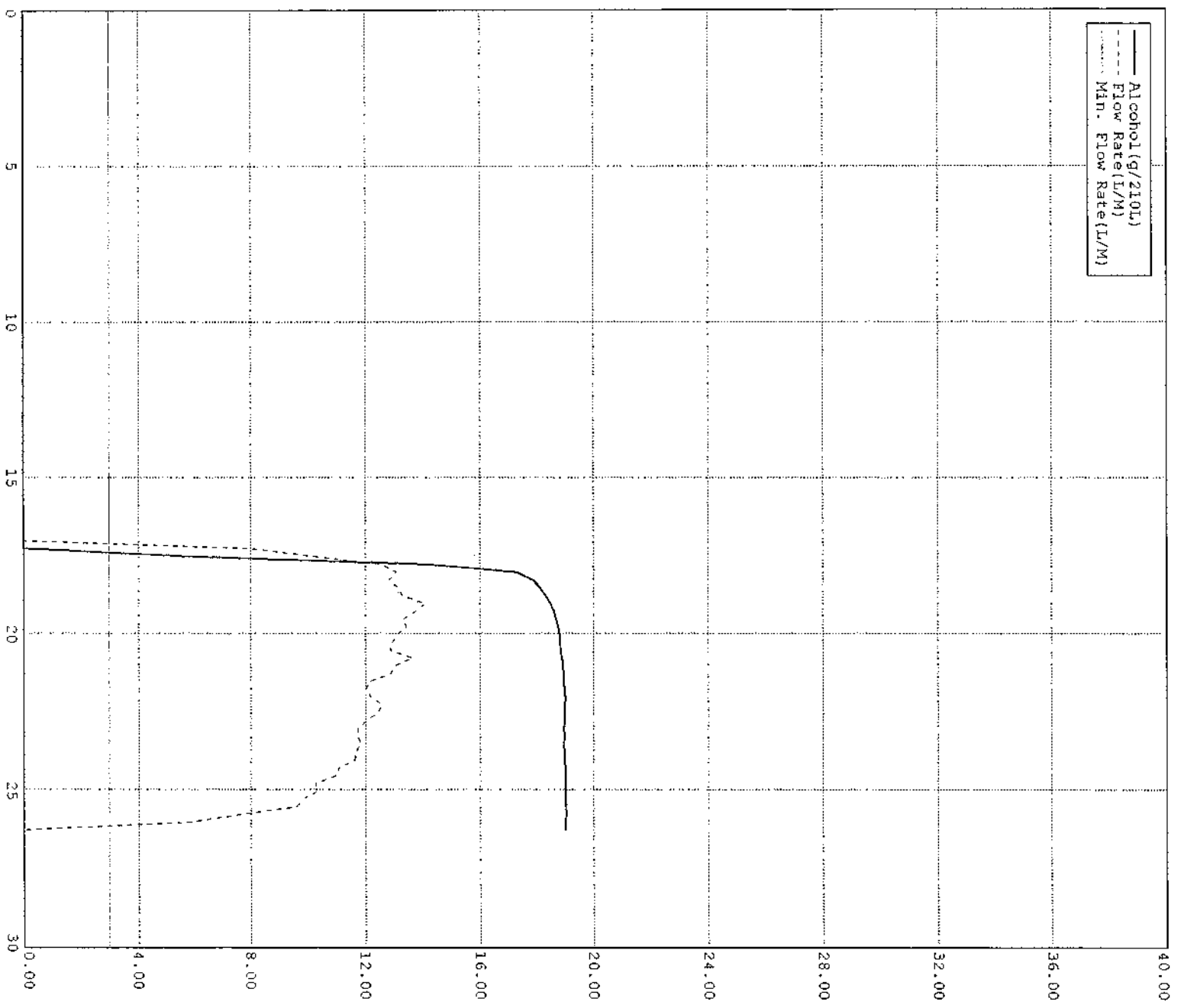
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.01: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	08:52
BLANK TEST	0.000	08:52
INTERNAL STANDARD	VERIFIED	08:52
Xg = 0.140 (1.03%)	0.076	08:52
EXTERNAL STANDARD	X[1] = 0.0759 (-0.0019)	(-0.0029)
BLANK TEST	0.000	08:53
SUBJECT SAMPLE (Vol=1.77L)	0.095	08:54
X[1] = 0.0957 (0.0008)	(0.0000)	
BLANK TEST	0.000	08:55
EXTERNAL STANDARD	0.075	08:55
X[1] = 0.0755 (-0.0017)	(0.0018)	
BLANK TEST	0.000	08:56

*EMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100697

Date: 12/13/2018  
Time: 09:39:59

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

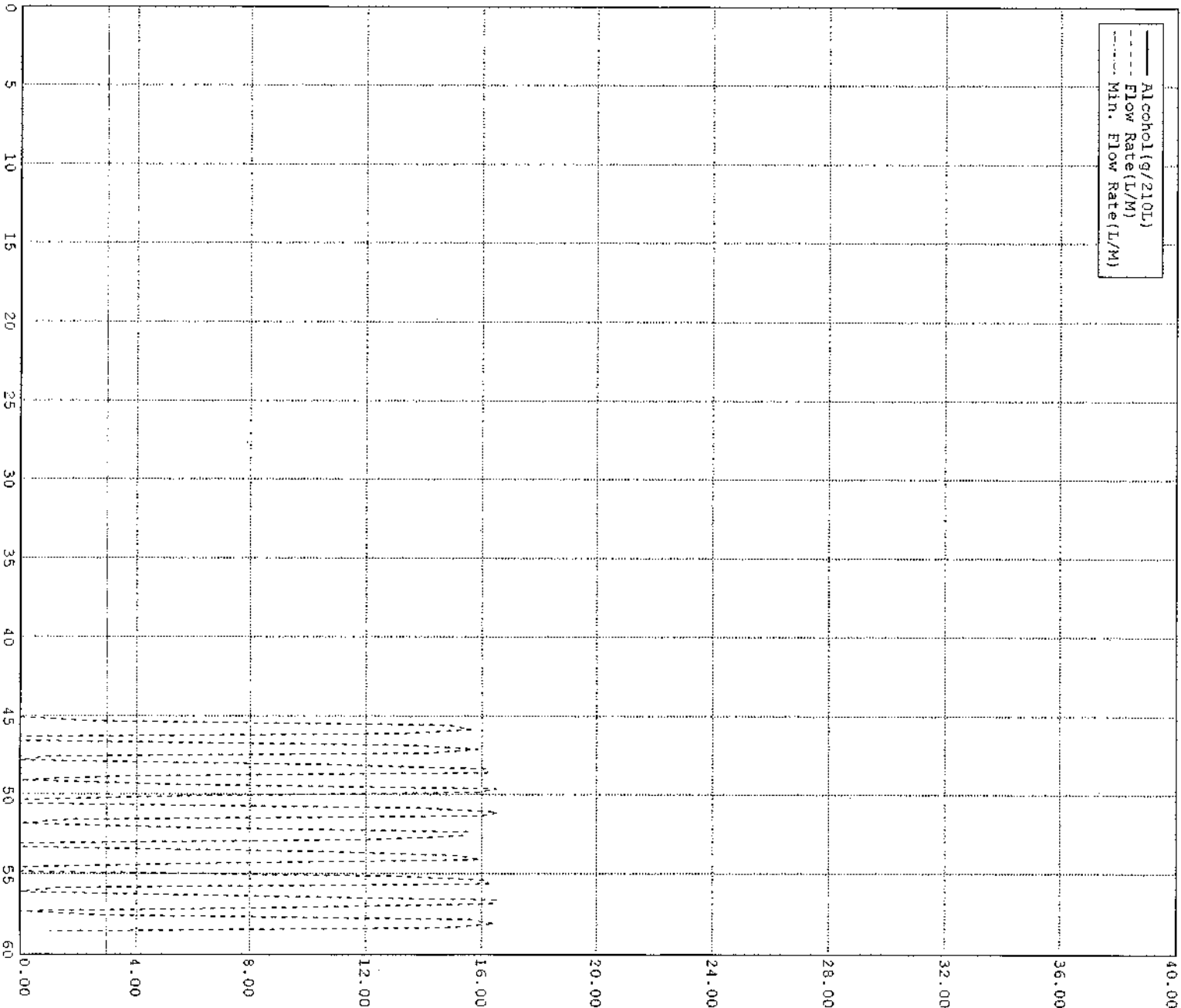
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.04: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	09:44
BLANK TEST	0.000	09:44
INTERNAL STANDARD	VERIFIED	09:44
EXTERNAL STANDARD	0.074	09:44
BLANK TEST	0.000	09:45
SUBJECT SAMPLE	XXX	09:46

Maximum Attempts Exceeded



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100687

Date: 12/13/2018  
Time: 09:49:56

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

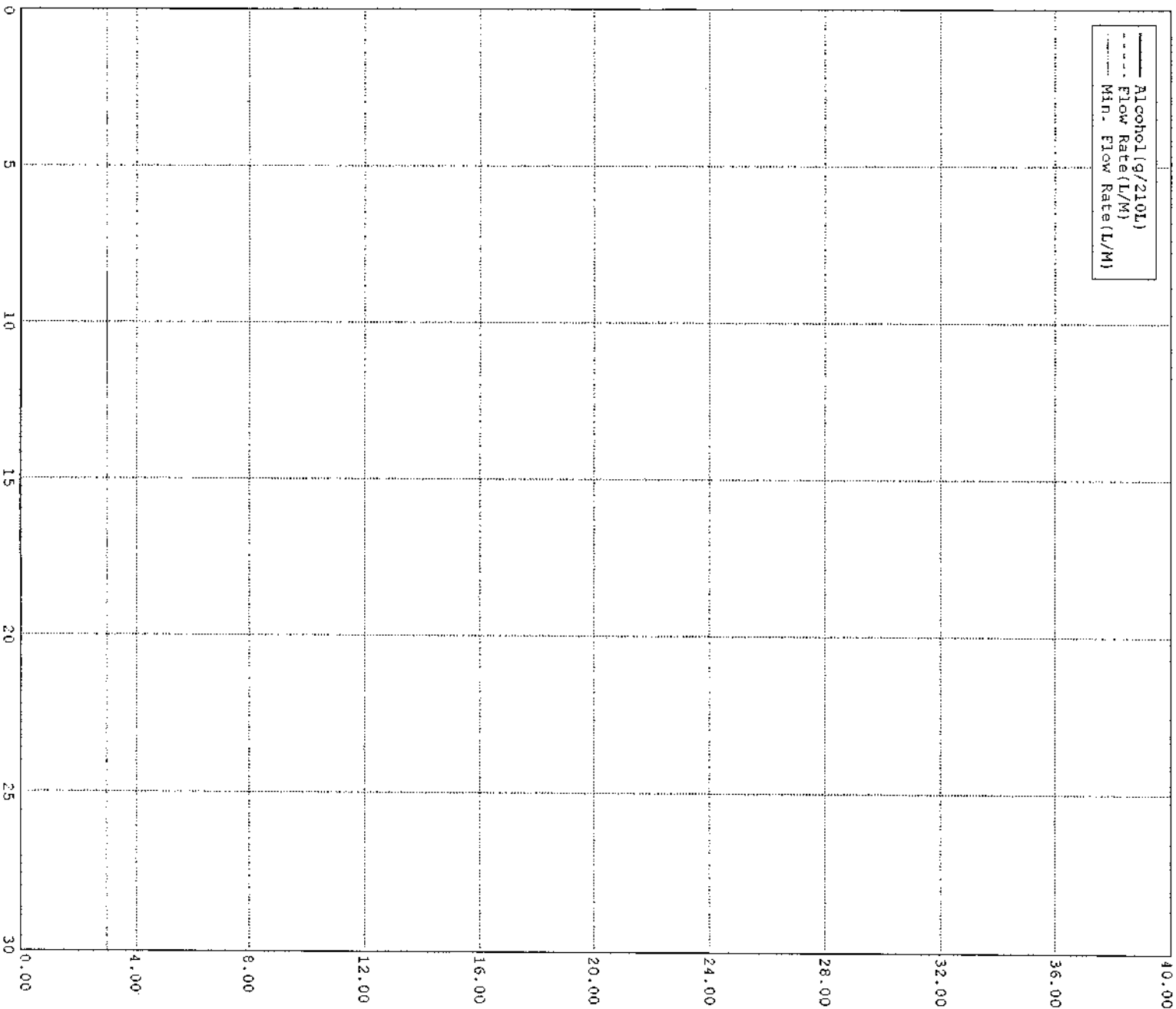
DEPT/AGENCY:  
RFI  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.04: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK PASSED 09:54  
BLANK TEST 0.000 09:55  
INTERNAL STANDARD VERIFIED 09:55  
EXTERNAL STANDARD 0.077 09:55  
BLANK TEST 0.000 09:56

RFI DETECTED

*BSMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100687

Date: 12/13/2018  
Time: 10:13:57

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 29.04: 0.078  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	10:15
BLANK TEST	0.000	10:15
INTERNAL STANDARD	VERIFIED	10:15
EXTERNAL STANDARD	0.077	10:15
BLANK TEST	0.000	10:16
SUBJECT SAMPLE (VOL=1.75L)	0.000	10:17
BLANK TEST	0.000	10:18
EXTERNAL STANDARD	0.076	10:18
BLANK TEST	0.000	10:19

*BMB*

