

# 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 100388 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 AG735001 Exp 12/16/19
- 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 DR4267 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 5/4/19 02/26/20
  - 1. Simulator S/N SD1200 Date Calibrated 6/1/18 BMB 4/10/19
- ii. Isopropanol - Mnf Guth Lot 18070 Level 0.100 Exp 5/4/19 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 5/4/19 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: 100388  
-----

Date: 04/03/2019  
Time: 12:44:24

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 = 47.7°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.73 V PASSED  
(1.04 V - 2.42 V)  
Cooler Voltage = 1.74 V PASSED  
(1.04 V - 2.42 V)  
Bias Voltage = 80 V PASSED  
(48 V - 112 V)  
Chopper Freq = 539 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.3 in

PUMP INFO

Flow Rate = 4.927 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 = 0.099 1.14% (0.00% - 4.00%) PASSED

Technician Screen

-----  
DATAMASTER dmt: 100388  
-----

Date: 04/03/2019  
Time: 1:07 PM

Temperatures (°C)

Sample Cell: 49.0°C  
Breath Tube: 46.9°C

Current Barometer 29.4 in  
Volume (Ltr) 1.51

Settings

Lamp: 1.78 V  
Bias: 80 V  
Cooler: 1.73 V  
Chopper: 536 Hz

Voltages (V)

Flow: 1.06 V  
Detector: -0.074 V

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100388  
-----

Date: 04/01/2019  
Time: 09:09:29

OPERATOR NAME:  
DEREK WALTON  
CERTIFICATE #: 9508

Ca = 0.1000  
CAL = 0.971164    0.800 <= CAL < 1.200  
b1 = 0.0010    0.0000 <= b1 < 0.0040  
b2 = 0.0060    0.0010 <= b2 < 0.0100  
b3 = 0.0008    0.0000 <= b3 < 0.0040  
Xq = 0.0998    0.0500 <= Xq < 0.2000  
a21 = 1.162721    1.050 <= a21 < 1.300  
a31 = 0.552254    0.300 <= a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/03/2019  
Time: 13:10:20

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

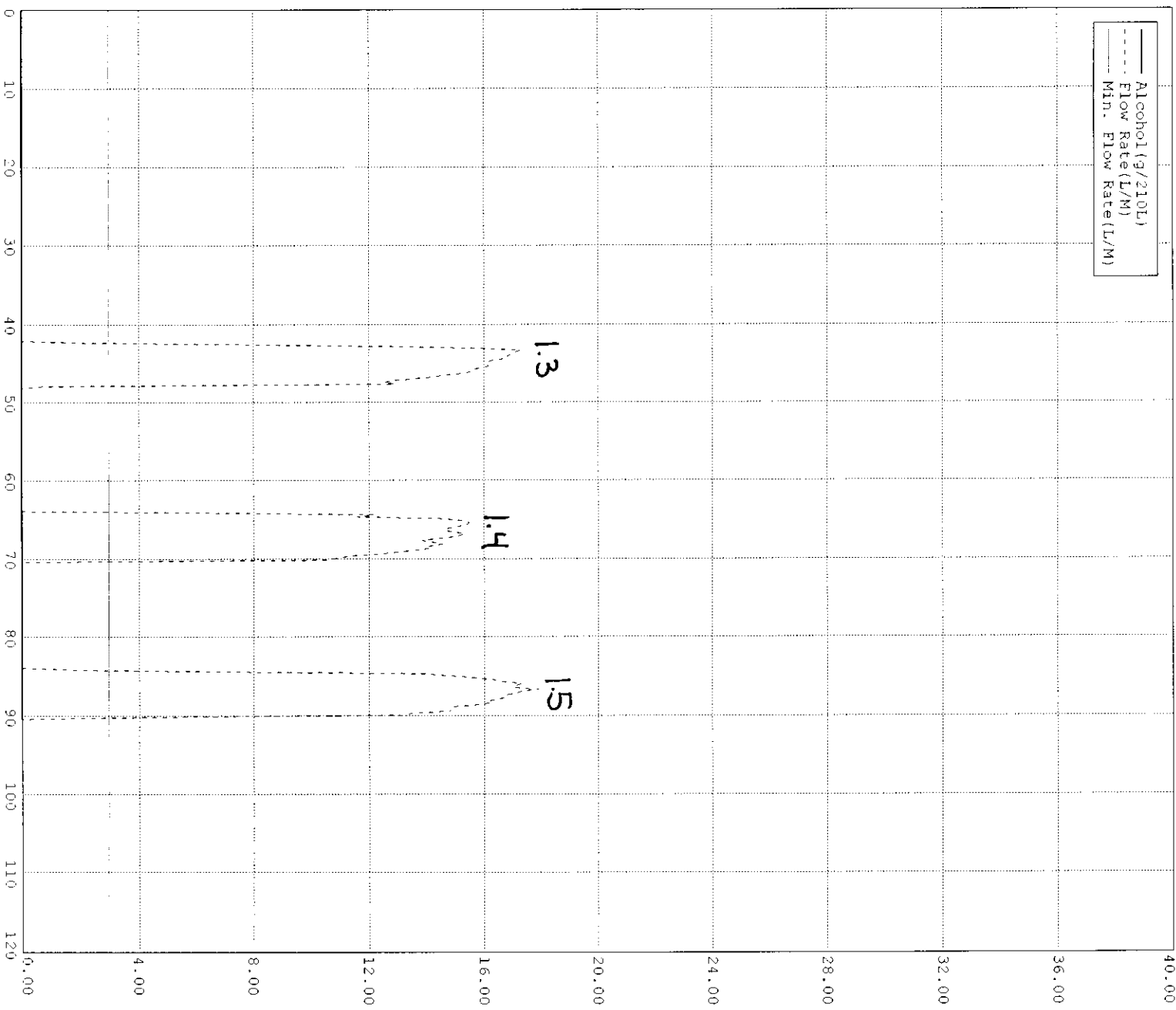
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.35: 0.079  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK	PASSED	13:11
BLANK TEST	0.000	13:11
INTERNAL STANDARD	VERIFIED	13:11
EXTERNAL STANDARD	0.076	13:12
BLANK TEST	0.000	13:13
SUBJECT SAMPLE (Vol=1.51L)	0.000	13:14
BLANK TEST	0.000	13:15
EXTERNAL STANDARD	0.076	13:15
BLANK TEST	0.000	13:16

*Handwritten signature: BMB*



LINEARITY CHECK

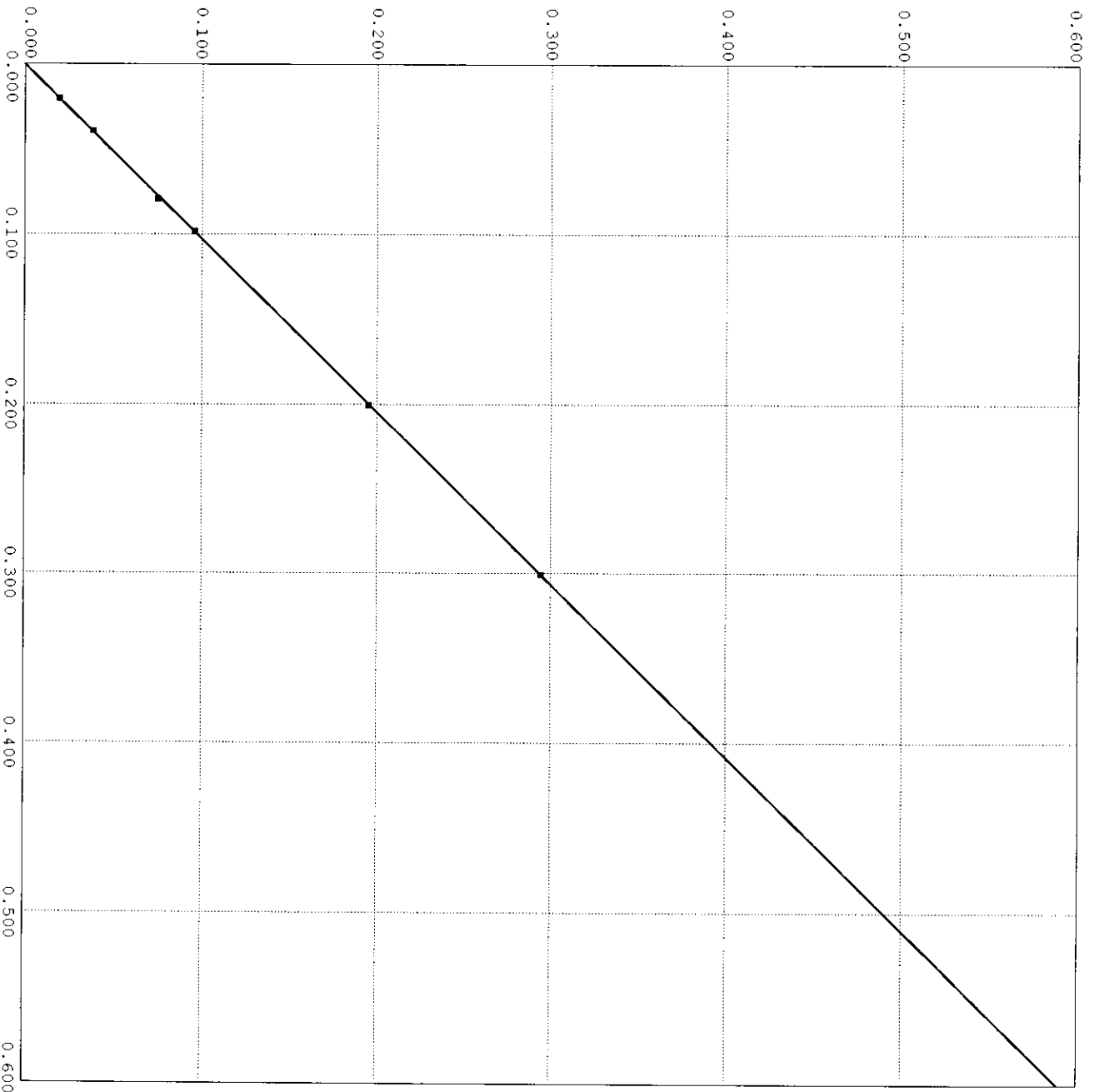
Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/04/2019  
Time: 10:48:35

SUPERVISOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

TARGET	AVERAGE	STD. DEV.
0.020	0.0200	0.0000
0.039	0.0390	0.0000
0.079	0.0760	0.0000
0.098	0.0968	0.0004
0.200	0.1962	0.0004
0.300	0.2952	0.0008

SLOPE = 0.982874  
R<sup>2</sup> = 0.999932



*BB*

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

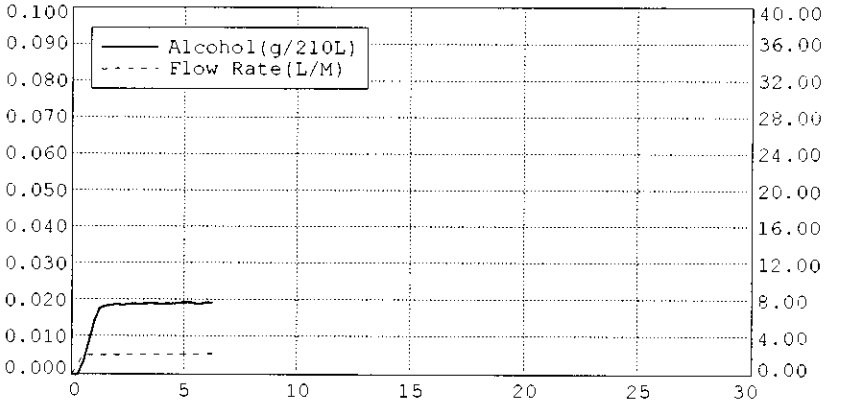
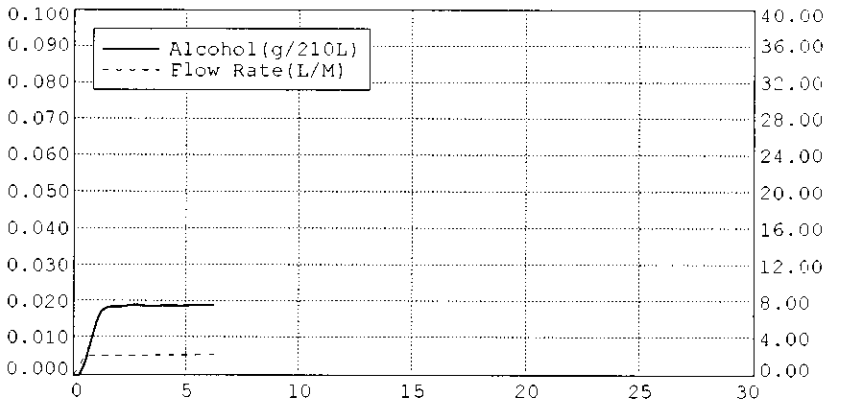
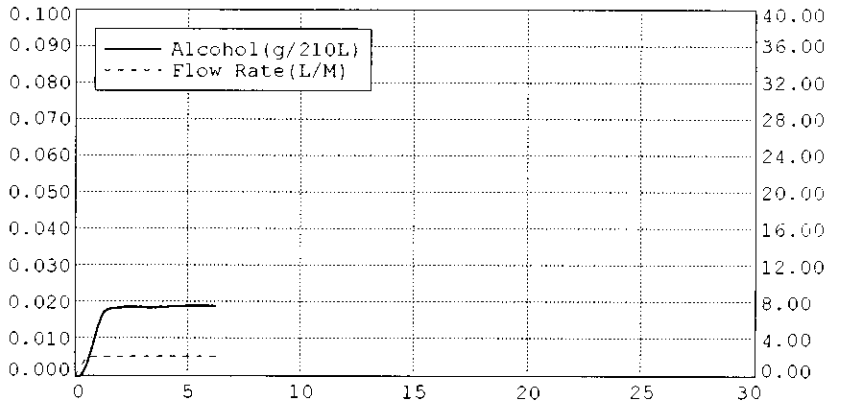
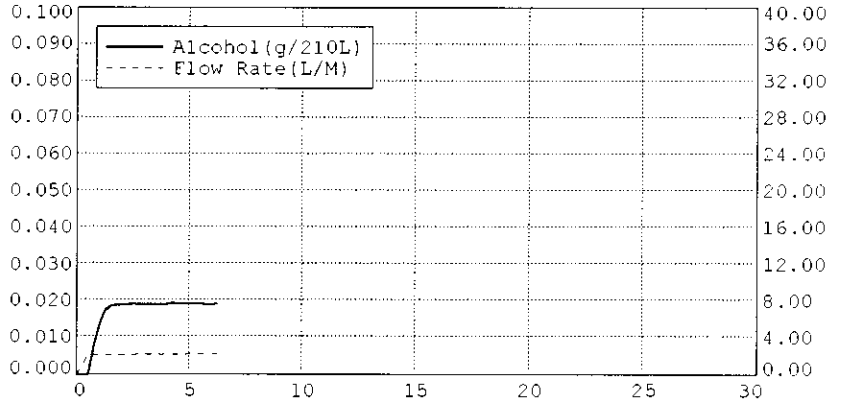
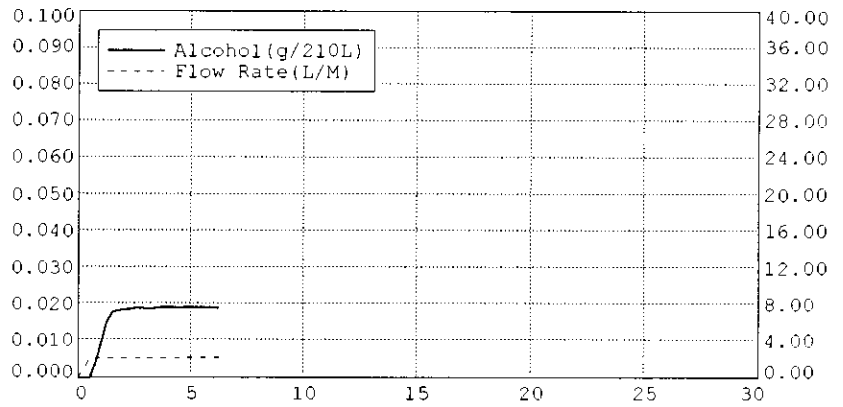
Date: 04/04/2019  
Time: 10:48:37

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
TARGET AT 29.35: 0.020  
LOT #: AG805804  
EXPIRATION: 02/27/2020  
TANK PRESSURE: 727 psi

BLANK TEST	0.000	10:49
INTERNAL STANDARD	VERIFIED	10:49
EXTERNAL STANDARD	0.020	10:50
BLANK TEST	0.000	10:50
EXTERNAL STANDARD	0.020	10:51
BLANK TEST	0.000	10:52
EXTERNAL STANDARD	0.020	10:52
BLANK TEST	0.000	10:53
EXTERNAL STANDARD	0.020	10:53
BLANK TEST	0.000	10:54
EXTERNAL STANDARD	0.020	10:54
BLANK TEST	0.000	10:55

Average = 0.0200  
Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100388

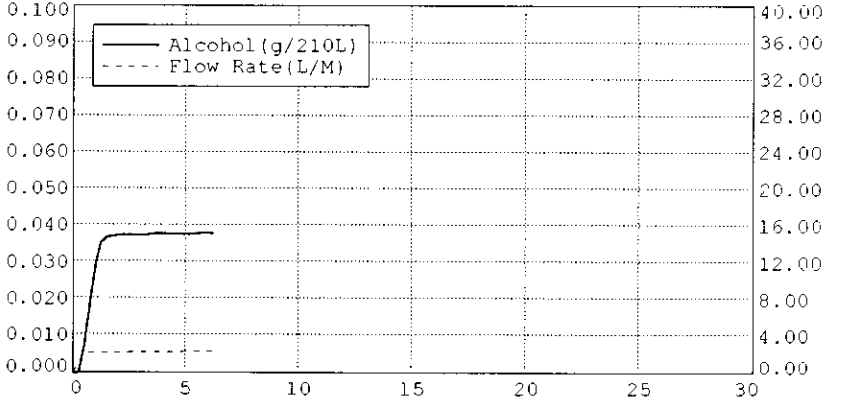
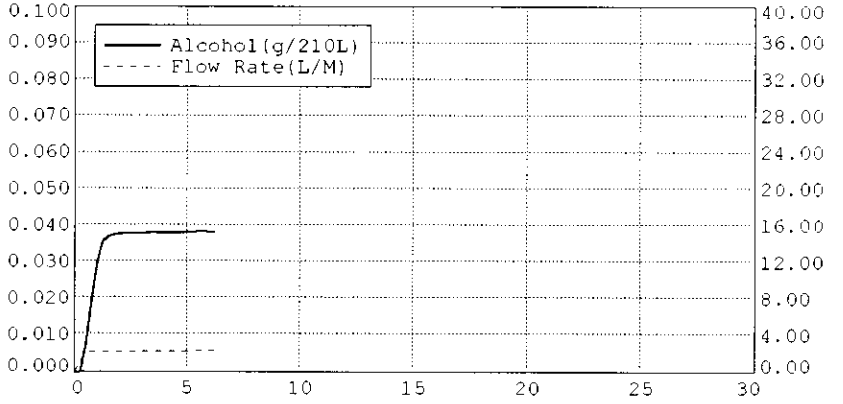
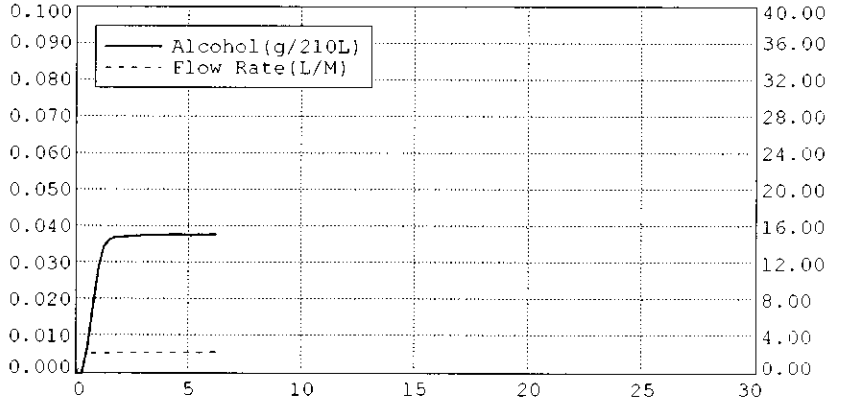
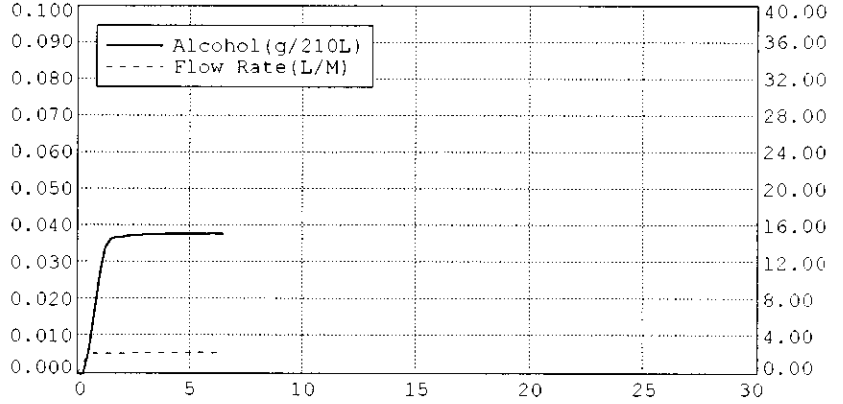
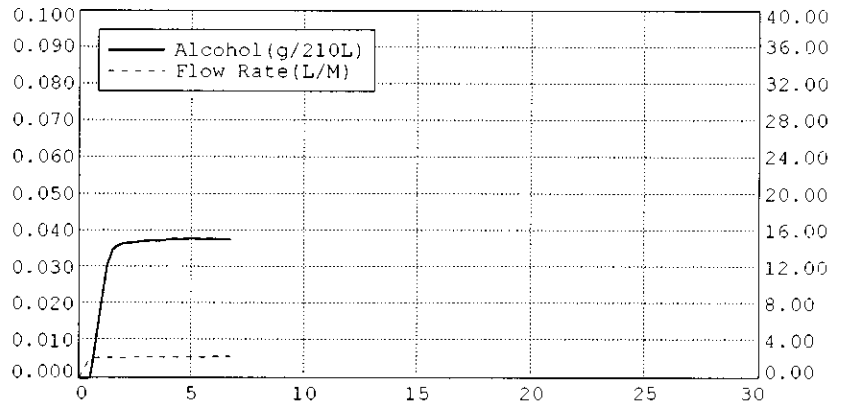
Date: 04/04/2019  
 Time: 10:57:24

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 29.36: 0.039  
 LOT #: AG733403  
 EXPIRATION: 11/30/2019  
 TANK PRESSURE: 843 psi

BLANK TEST	0.000	10:58
INTERNAL STANDARD	VERIFIED	10:58
EXTERNAL STANDARD	0.039	10:58
BLANK TEST	0.000	10:59
EXTERNAL STANDARD	0.039	10:59
BLANK TEST	0.000	11:00
EXTERNAL STANDARD	0.039	11:01
BLANK TEST	0.000	11:01
EXTERNAL STANDARD	0.039	11:02
BLANK TEST	0.000	11:03
EXTERNAL STANDARD	0.039	11:03
BLANK TEST	0.000	11:04

Average = 0.0390  
 Std Dev = 0.0000





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100388

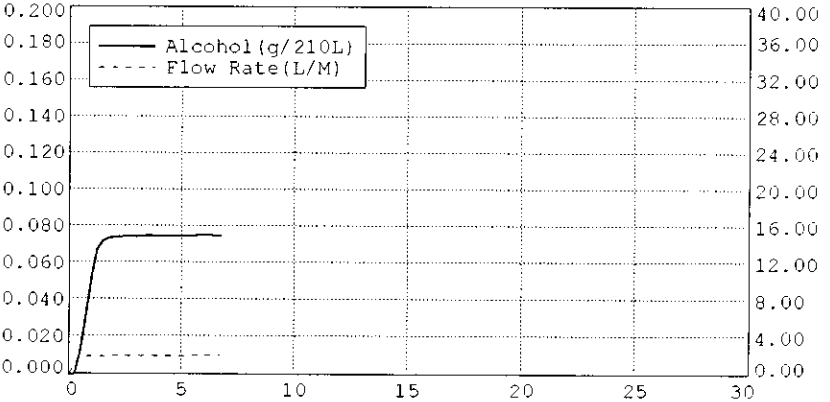
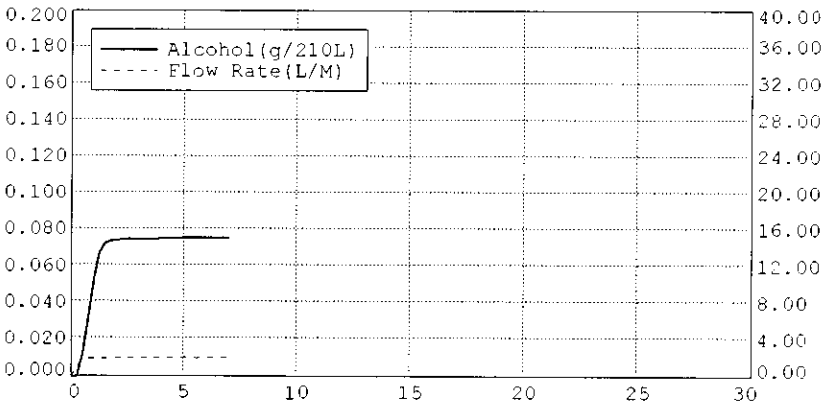
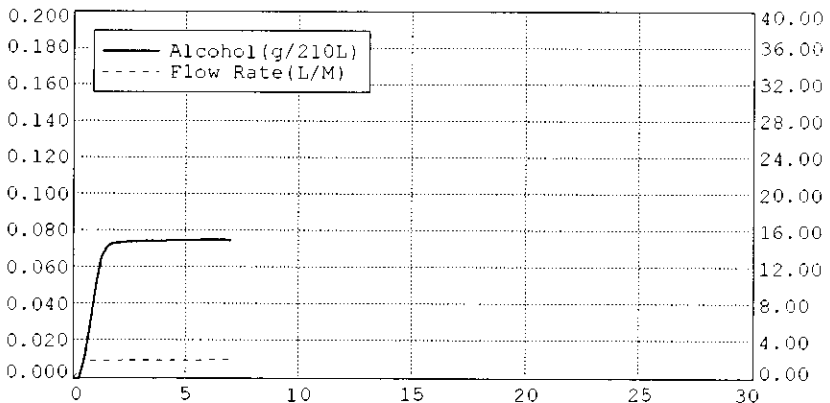
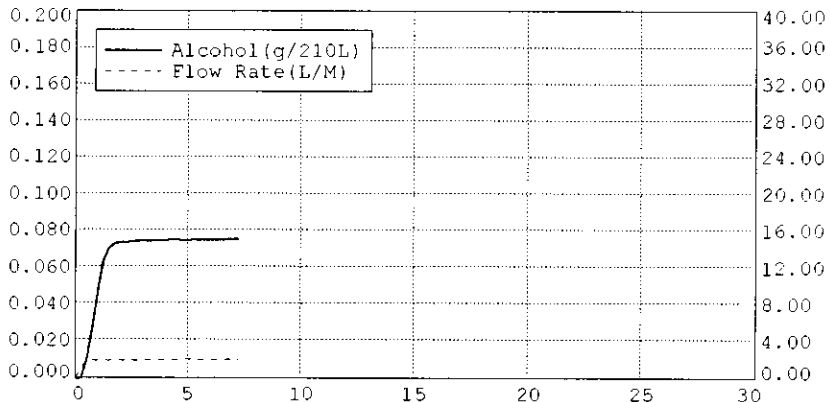
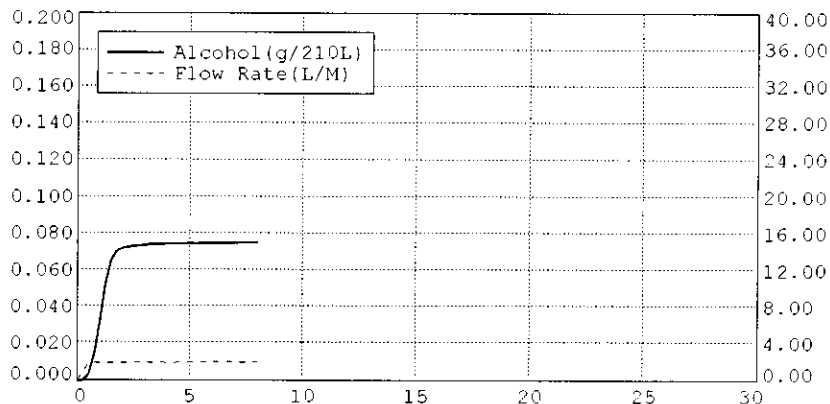
Date: 04/04/2019  
 Time: 11:07:07

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 29.35: 0.079  
 LOT #: AG735001  
 EXPIRATION: 12/16/2019  
 TANK PRESSURE: 382 psi

BLANK TEST	0.000	11:11
INTERNAL STANDARD	VERIFIED	11:11
EXTERNAL STANDARD	0.076	11:11
BLANK TEST	0.000	11:12
EXTERNAL STANDARD	0.076	11:12
BLANK TEST	0.000	11:13
EXTERNAL STANDARD	0.076	11:13
BLANK TEST	0.000	11:14
EXTERNAL STANDARD	0.076	11:14
BLANK TEST	0.000	11:15
EXTERNAL STANDARD	0.076	11:15
BLANK TEST	0.000	11:16

Average = 0.0760  
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100388

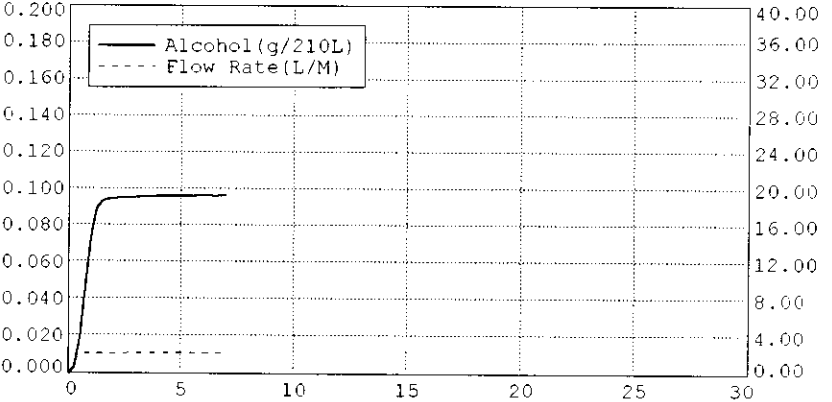
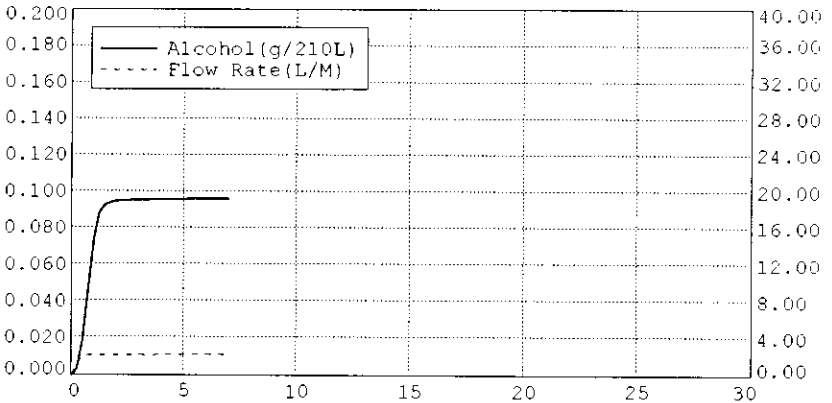
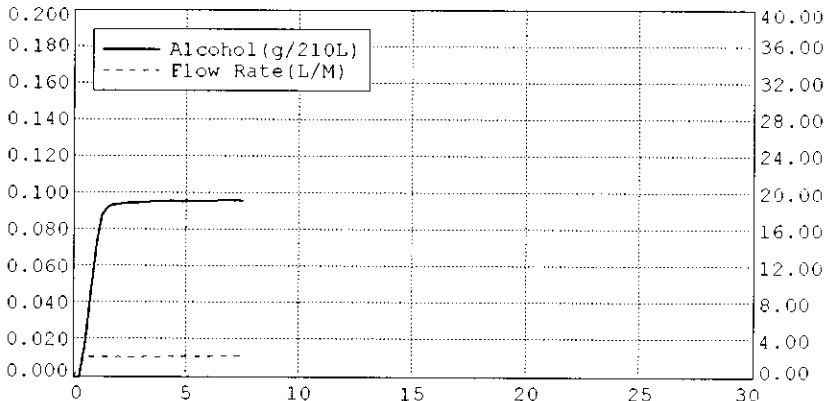
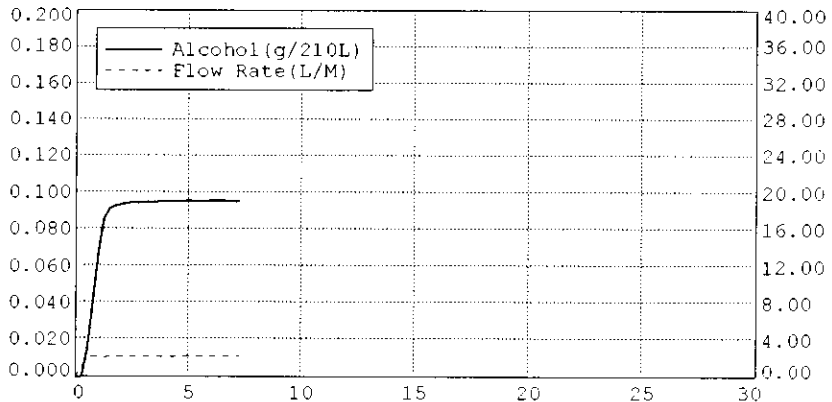
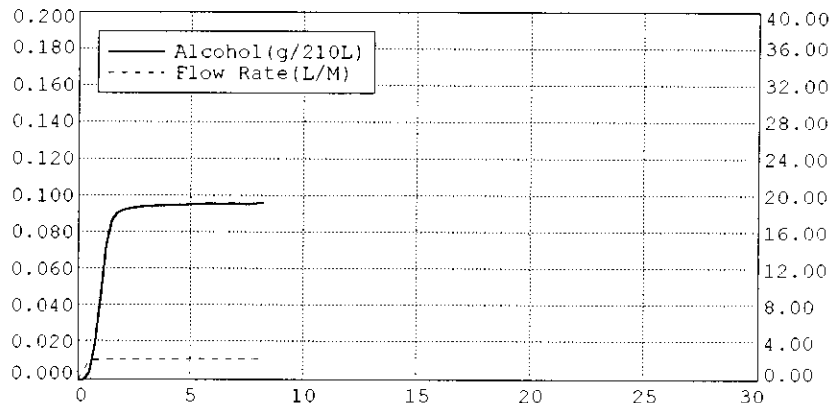
Date: 04/04/2019  
 Time: 12:45:05

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.36: 0.098  
 LOT #: AG805903  
 EXPIRATION: 02/28/2020  
 TANK PRESSURE: 789 psi

BLANK TEST	0.000	12:46
INTERNAL STANDARD	VERIFIED	12:46
EXTERNAL STANDARD	0.097	12:46
BLANK TEST	0.000	12:47
EXTERNAL STANDARD	0.096	12:47
BLANK TEST	0.000	12:48
EXTERNAL STANDARD	0.097	12:48
BLANK TEST	0.000	12:49
EXTERNAL STANDARD	0.097	12:50
BLANK TEST	0.000	12:51
EXTERNAL STANDARD	0.097	12:51
BLANK TEST	0.000	12:52

Average = 0.0968  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 5

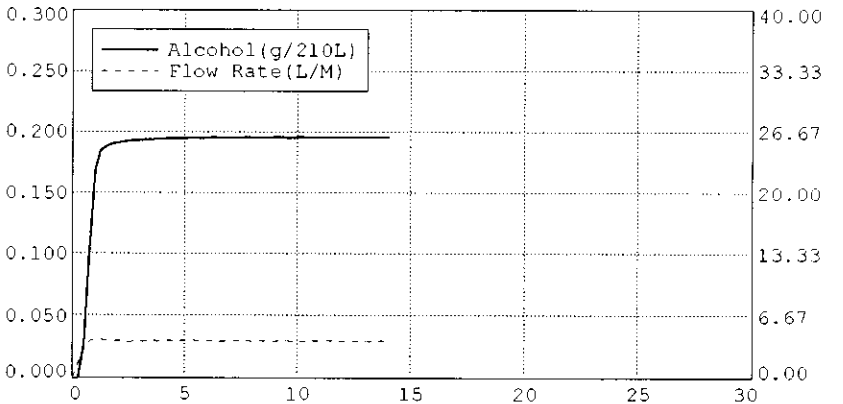
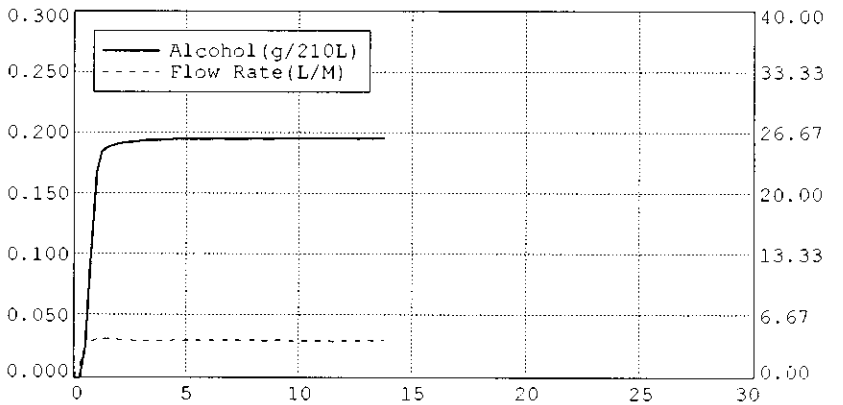
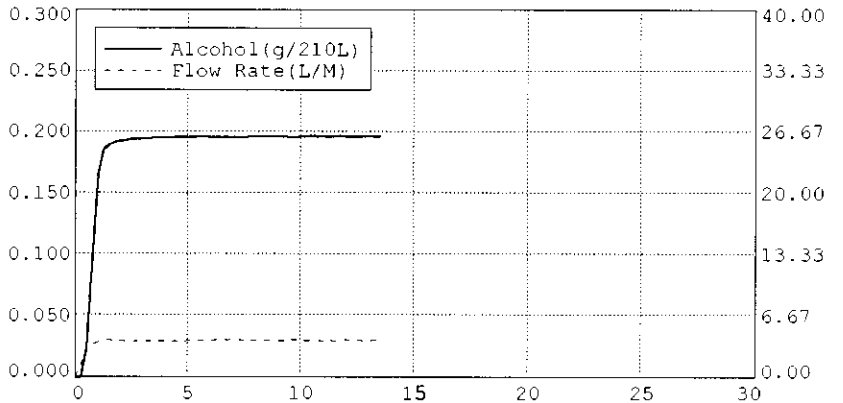
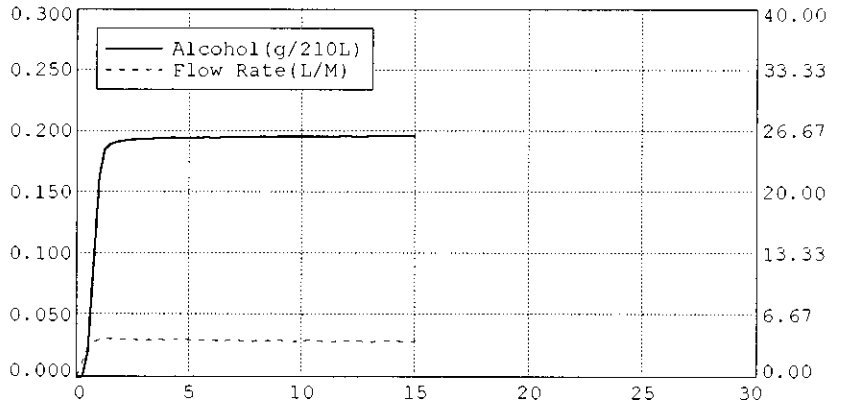
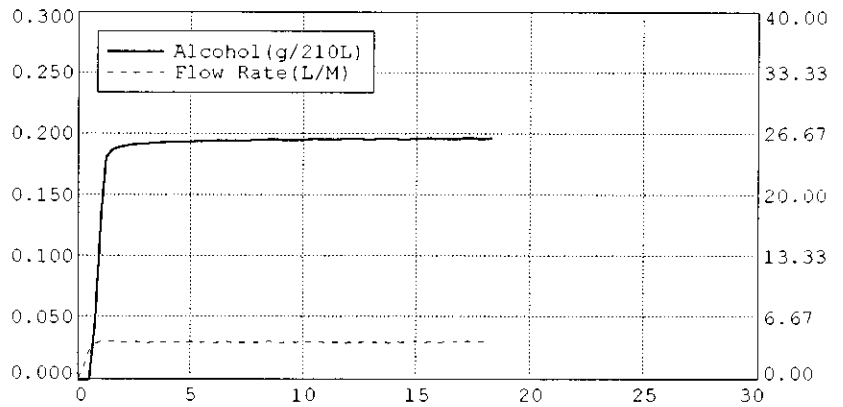
Alaska Department of Public Safety  
 DATAMASTER dmt: 100388

Date: 04/04/2019  
 Time: 12:53:02

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

BLANK TEST	0.000	12:54
INTERNAL STANDARD	VERIFIED	12:54
EXTERNAL STANDARD	0.197	12:54
BLANK TEST	0.000	12:55
EXTERNAL STANDARD	0.196	12:56
BLANK TEST	0.000	12:56
EXTERNAL STANDARD	0.196	12:57
BLANK TEST	0.000	12:58
EXTERNAL STANDARD	0.196	12:58
BLANK TEST	0.000	12:59
EXTERNAL STANDARD	0.196	12:59
BLANK TEST	0.000	13:00

Average = 0.1962  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 6

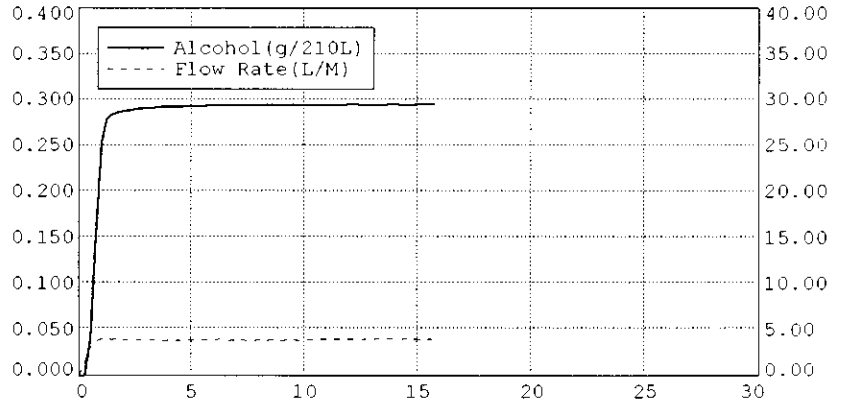
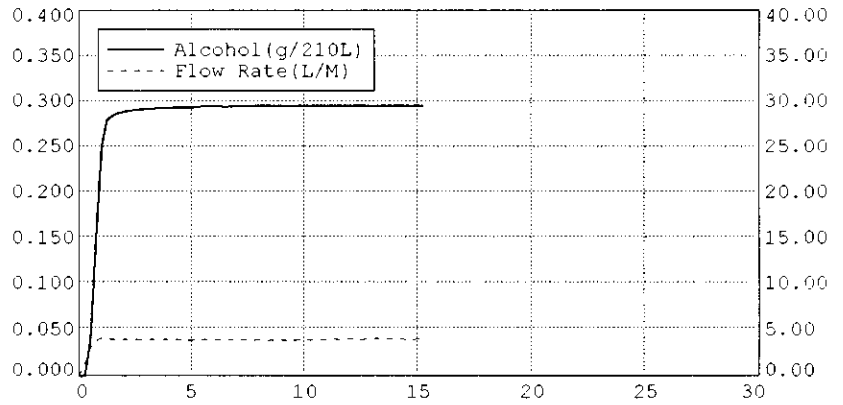
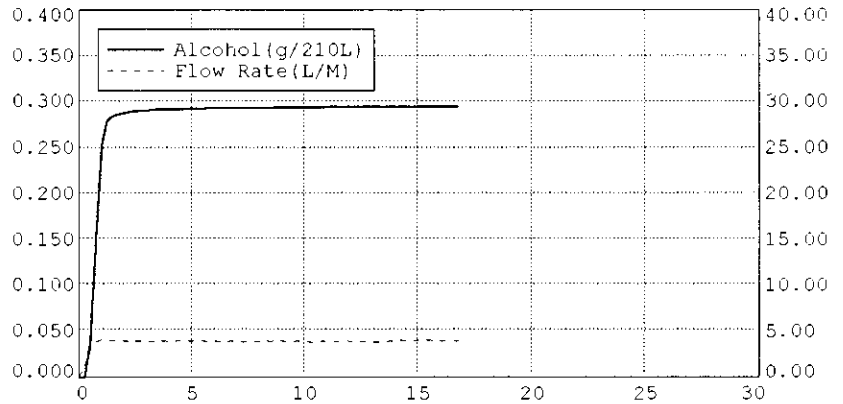
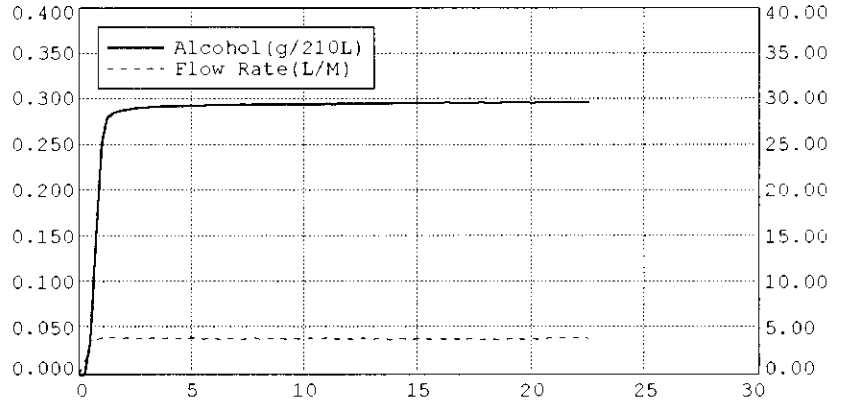
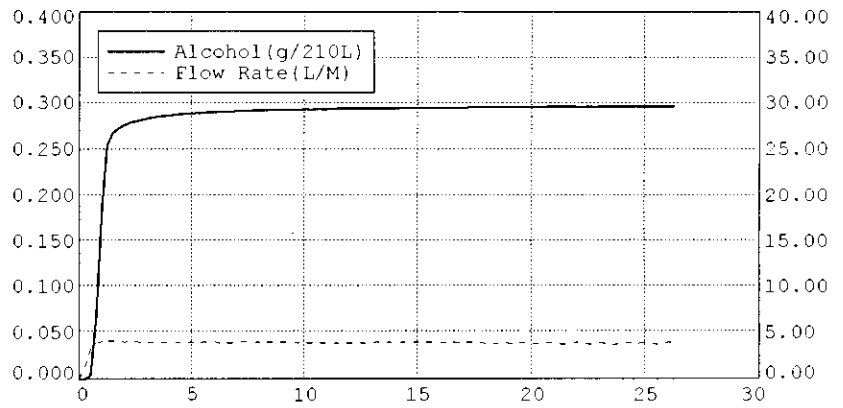
Alaska Department of Public Safety  
 DATAMASTER dmt: 100388

Date: 04/04/2019  
 Time: 13:05:13

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

BLANK TEST	0.000	13:06
INTERNAL STANDARD	VERIFIED	13:06
EXTERNAL STANDARD	0.296	13:07
BLANK TEST	0.000	13:08
EXTERNAL STANDARD	0.296	13:08
BLANK TEST	0.000	13:09
EXTERNAL STANDARD	0.294	13:09
BLANK TEST	0.000	13:10
EXTERNAL STANDARD	0.295	13:11
BLANK TEST	0.000	13:12
EXTERNAL STANDARD	0.295	13:12
BLANK TEST	0.000	13:13

Average = 0.2952  
 Std Dev = 0.0008



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/05/2019  
Time: 10:46:58

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

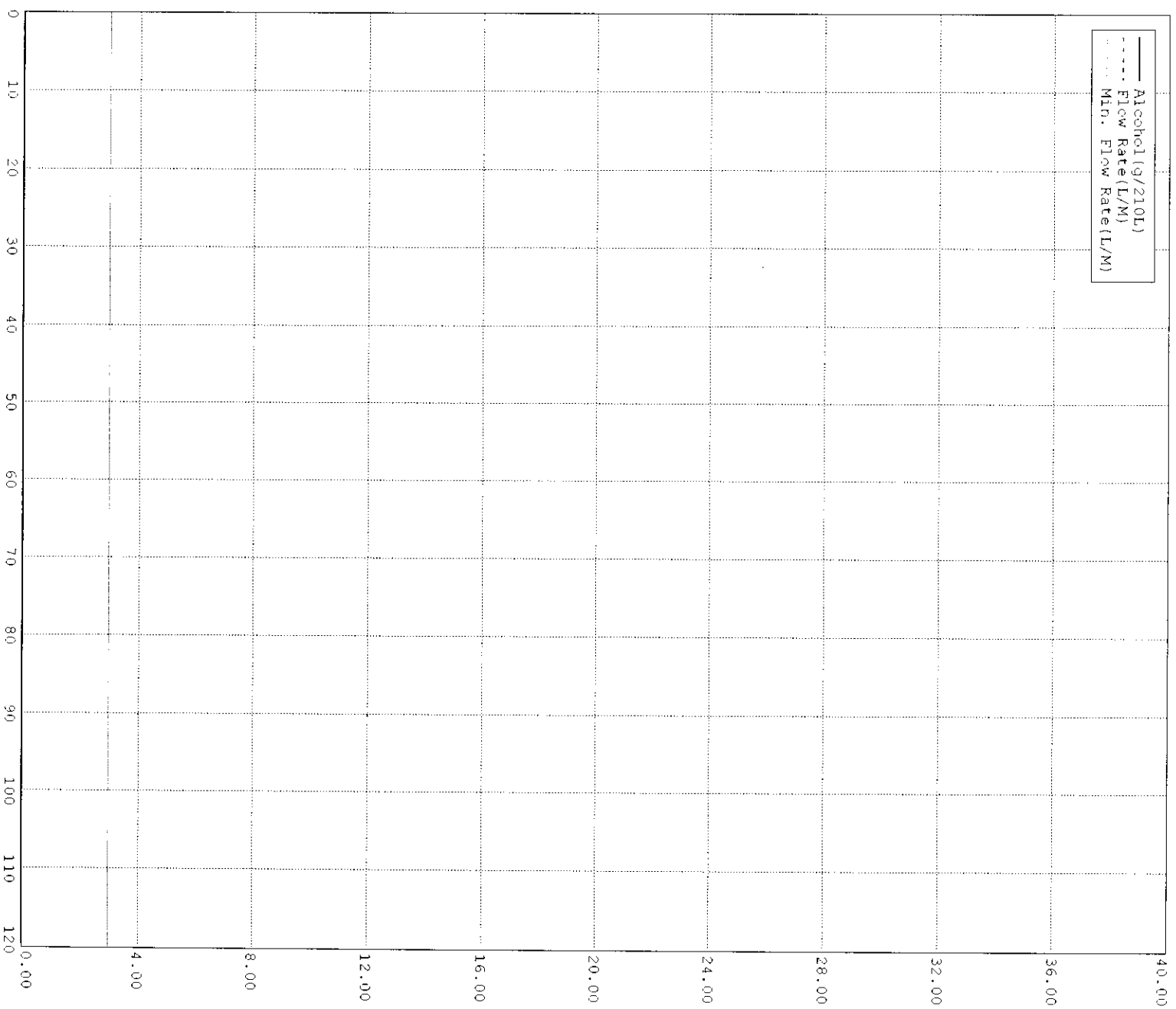
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.20: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK	PASSED	10:48
BLANK TEST	0.000	10:48
INTERNAL STANDARD	VERIFIED	10:49
EXTERNAL STANDARD	0.075	10:49
BLANK TEST	0.000	10:50
SUBJECT SAMPLE	INCOMPLETE	10:52

EBMB



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/05/2019  
Time: 10:54:18

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

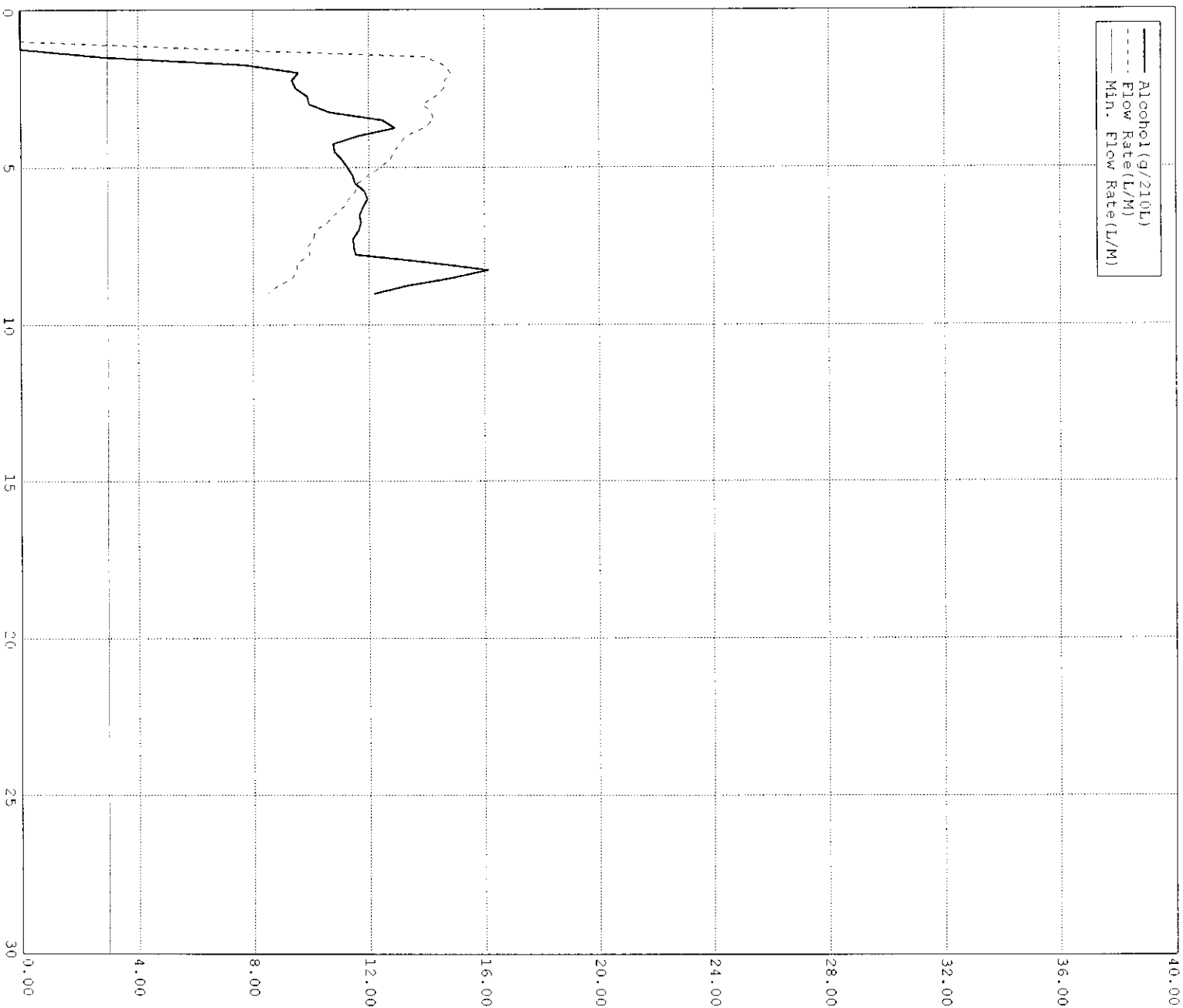
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.20: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK	PASSED	10:56
BLANK TEST	0.000	10:57
INTERNAL STANDARD	VERIFIED	10:57
EXTERNAL STANDARD	0.076	10:57
BLANK TEST	0.000	10:58
SUBJECT SAMPLE	INVALID	10:59

BMB



SUBJECT TEST

Alaska Department of Public Safety  
DATA MASTER dmt: 100388

Date: 04/05/2019  
Time: 12:19:54

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

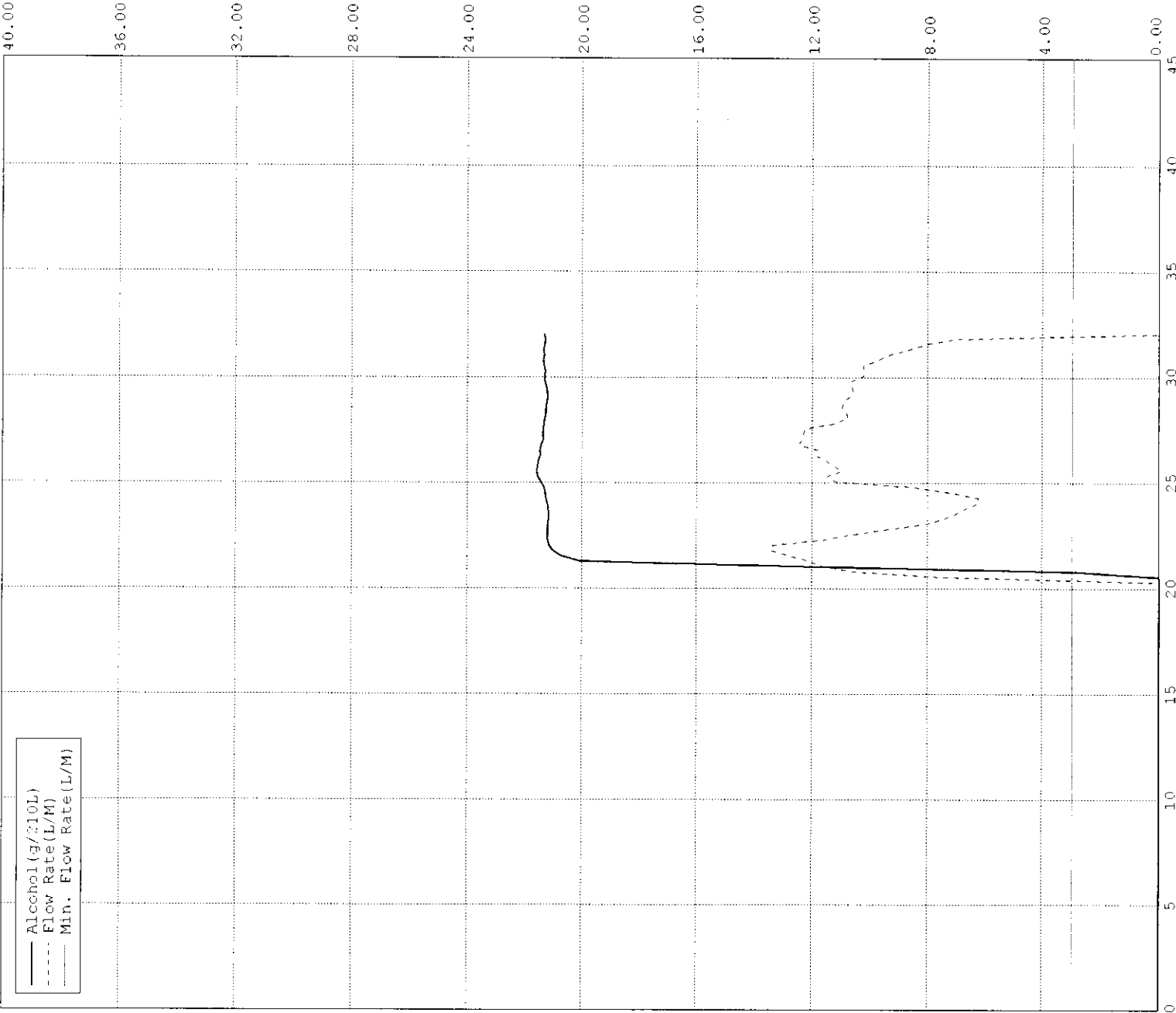
EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.19: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK PASSED 12:21  
BLANK TEST 0.000 12:21  
INTERNAL STANDARD VERIFIED 12:21  
Xg = 0.100 (0.09%)  
EXTERNAL STANDARD 0.076 12:21  
X[1] = 0.0759 (-0.0004) (0.0022)  
BLANK TEST 0.000 12:22  
SUBJECT SAMPLE XXX 12:23  
X[1] = 0.1072 (-0.0164) (0.0008)

Interference Detected

Filter 2 Avg: -0.0008  
Filter 3 Avg: 0.0022  
SMB 4/5/19



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/05/2019  
Time: 12:31:19

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

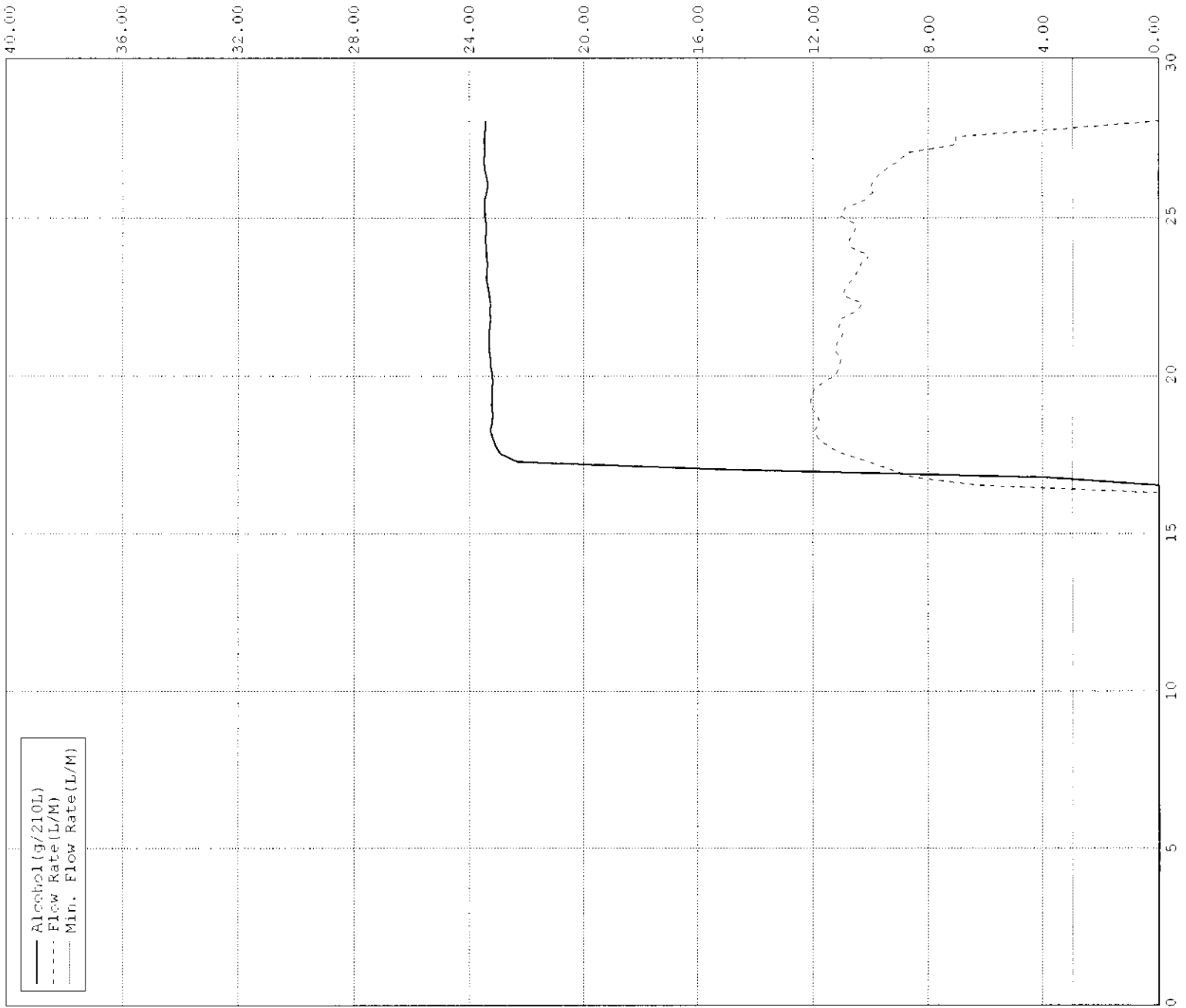
DEPT/AGENCY:  
INTERFERENCE ISOPROPANOL  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK	PASSED	12:32
BLANK TEST	0.000	12:32
INTERNAL STANDARD	VERIFIED	12:32
Xq = 0.099 (0.70%)		
EXTERNAL STANDARD	0.075	12:32
X[1] = 0.0754 (-0.0011) (0.0024)		
BLANK TEST	0.000	12:33
SUBJECT SAMPLE	XXX	12:34
X[1] = 0.1178 (-0.0223) (0.0008)		

Interference Detected

*Handwritten signature: BMB*





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/05/2019  
Time: 12:37:22

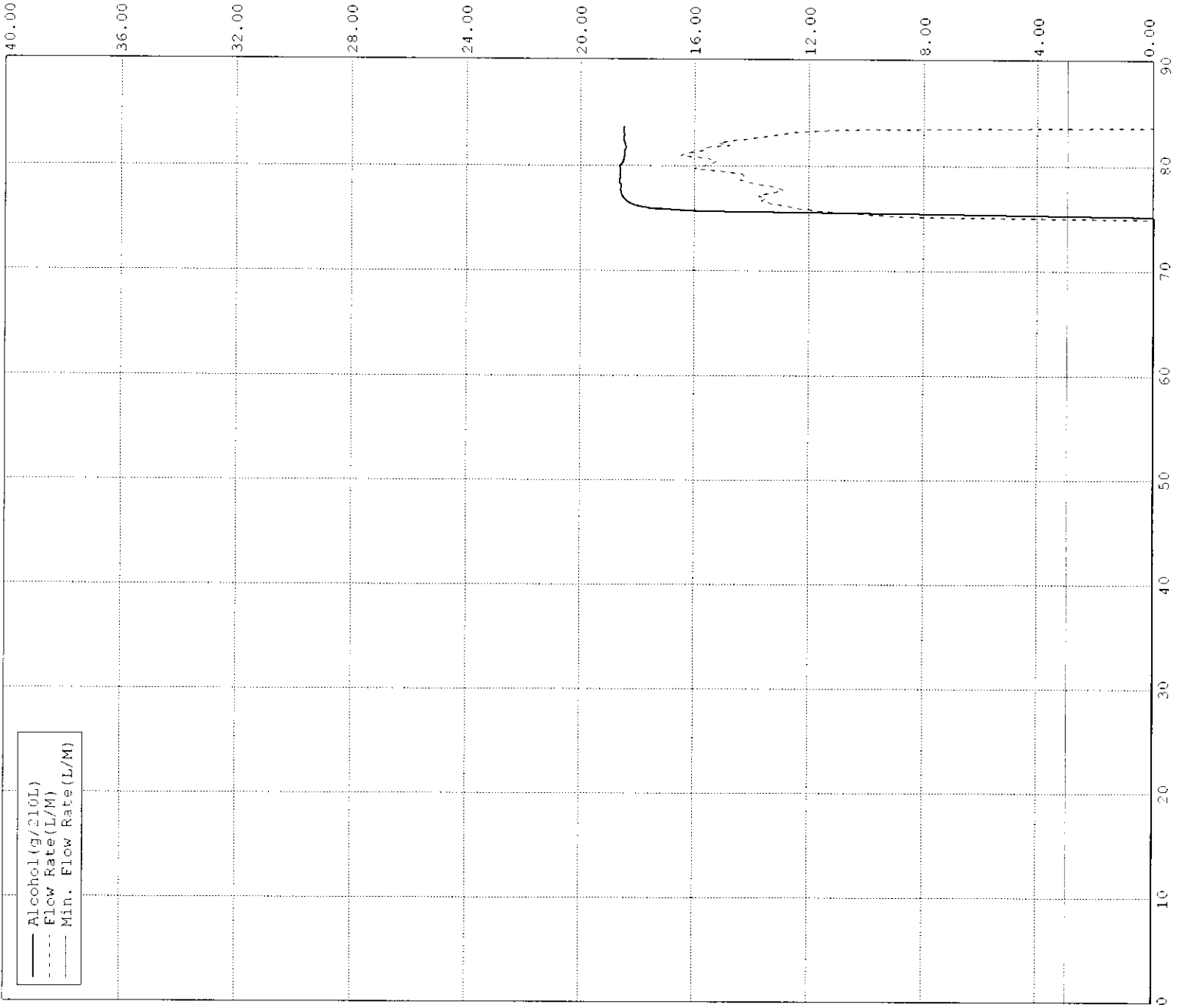
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

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 #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK PASSED 12:38  
BLANK TEST 0.000 12:38  
INTERNAL STANDARD VERIFIED 12:38  
Xg = 0.099 (0.44%)  
EXTERNAL STANDARD 0.076 12:39  
X[1] = 0.0759 (-0.0010) (0.0024)  
BLANK TEST 0.000 12:40  
SUBJECT SAMPLE (Vol=1.97L) 0.092 12:41  
X[1] = 0.0929 (-0.0002) (0.0001)  
BLANK TEST 0.000 12:42  
EXTERNAL STANDARD 0.075 12:42  
X[1] = 0.0752 (-0.0008) (0.0016)  
BLANK TEST 0.000 12:43



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/05/2019  
Time: 11:02:17

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

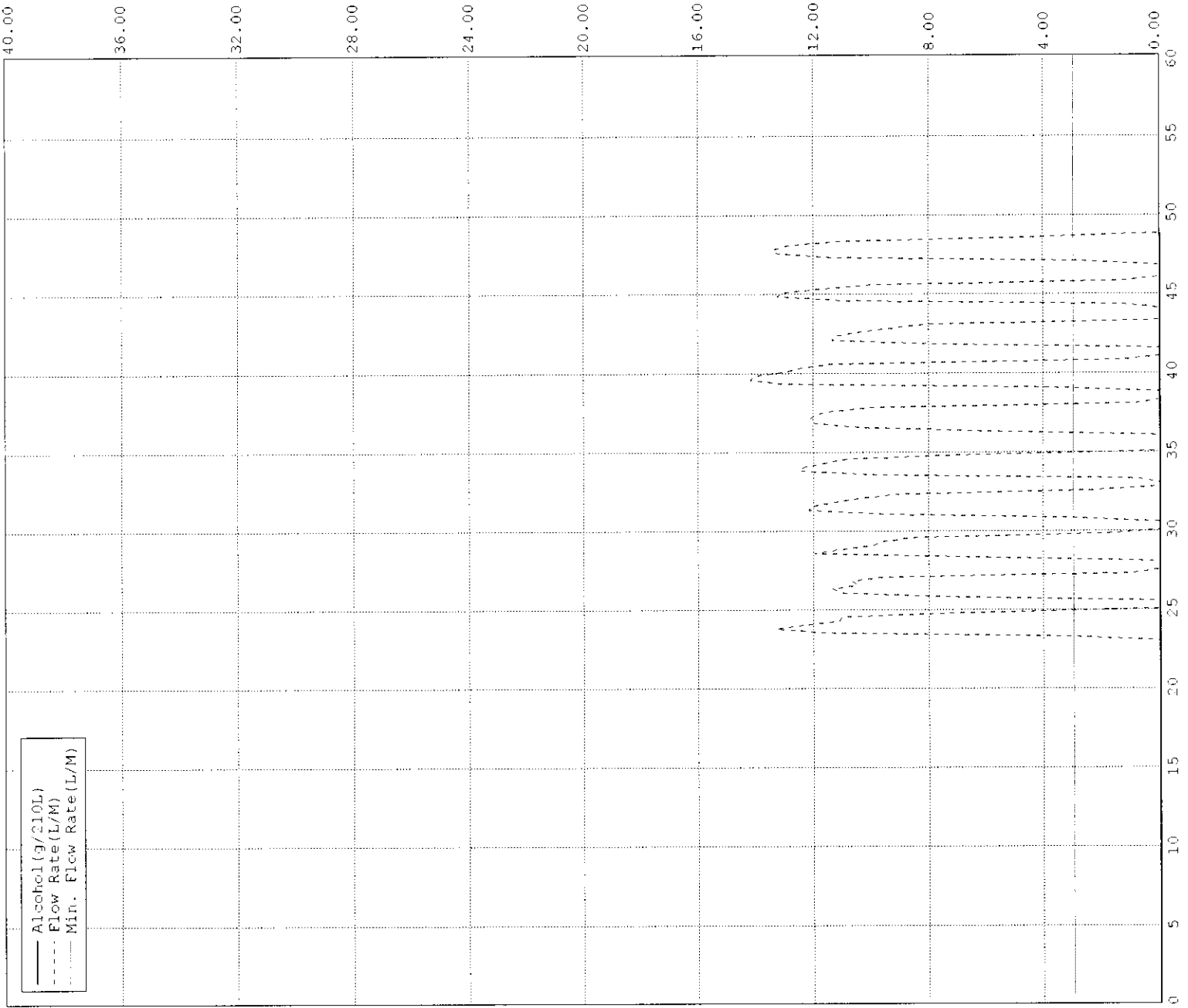
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.20: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK PASSED 11:04  
BLANK TEST 0.000 11:04  
INTERNAL STANDARD VERIFIED 11:05  
EXTERNAL STANDARD 0.076 11:05  
BLANK TEST 0.000 11:06  
SUBJECT SAMPLE XXX 11:07

Maximum Attempts Exceeded



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/05/2019  
Time: 12:03:14

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

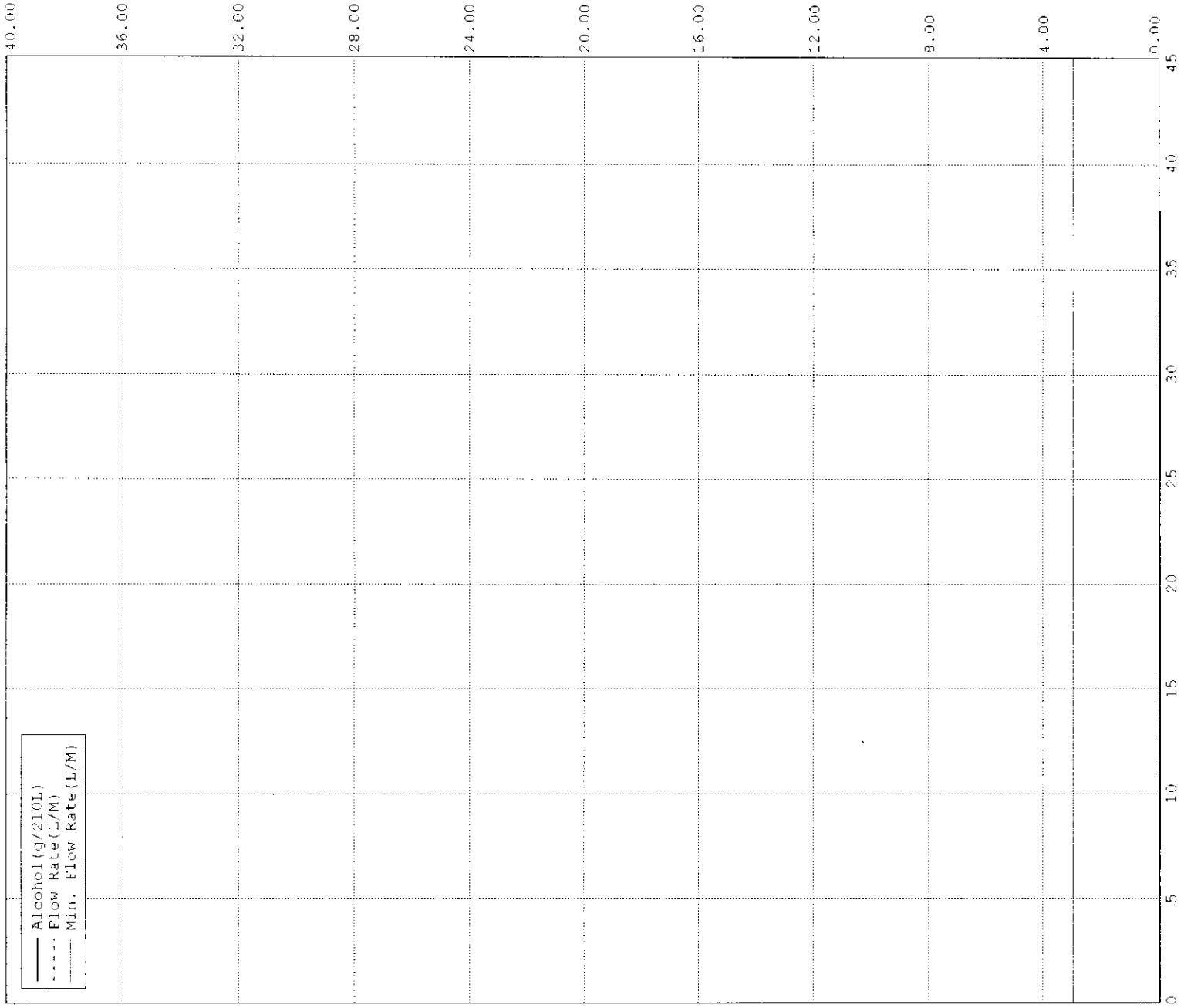
DEPT/AGENCY:  
RFI  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.19: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK PASSED 12:04  
BLANK TEST 0.000 12:04  
INTERNAL STANDARD VERIFIED 12:04  
EXTERNAL STANDARD 0.076 12:05  
BLANK TEST 0.000 12:06

RFI DETECTED



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100388

Date: 04/05/2019  
Time: 13:01:58

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 29.17: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK PASSED 13:03  
BLANK TEST 0.000 13:03  
INTERNAL STANDARD VERIFIED 13:03  
EXTERNAL STANDARD 0.076 13:03  
BLANK TEST 0.000 13:04  
SUBJECT SAMPLE (Vol=2.16L) 0.000 13:04  
BLANK TEST 0.000 13:05  
EXTERNAL STANDARD 0.076 13:05  
BLANK TEST 0.000 13:06

BMB

