

# 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 100682 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 DR6267 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 6/11/18 BMB 4/10/19
- 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: 100682  
-----

Date: 04/03/2019  
Time: 12:52:03

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

TEMPERATURES

Sample Chamber = 48.9°C PASSED  
(44.0°C - 52.0°C)  
Breath Tube = 45.4°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 2.27 V PASSED  
(1.36 V - 3.18 V)  
Cooler Voltage = 1.74 V PASSED  
(1.04 V - 2.44 V)  
Bias Voltage = 79 V PASSED  
(47 V - 111 V)  
Chopper Freq = 535 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.4 in

PUMP INFO

Flow Rate = 4.671 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 = 0.093 0.57% (0.00% - 4.00%) PASSED

Technician Screen

-----  
DATAMASTER dmt: 100682  
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Date: 04/03/2019  
Time: 12:55 PM

Temperatures (°C)

Sample Cell: 48.7°C  
Breath Tube: 44.7°C

Current Barometer 29.4 in  
Volume (Ltr) 1.53

Settings

Lamp: 2.27 V  
Bias: 79 V  
Cooler: 1.74 V  
Chopper: 534 Hz

Voltages (V)

Flow: 1.05 V  
Detector: -0.016 V

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100682  
-----

Date: 04/01/2019  
Time: 09:15:52

OPERATOR NAME:  
DEREK WALTON  
CERTIFICATE #: 9508

Ca = 0.1000  
CAL = 0.962605    0.800 <= CAL < 1.200  
b1 = 0.0010    0.0000 <= b1 < 0.0040  
b2 = 0.0048    0.0010 <= b2 < 0.0100  
b3 = 0.0002    0.0000 <= b3 < 0.0040  
Xq = 0.0924    0.0500 <= Xq < 0.2000  
a21 = 1.117691    1.050 <= a21 < 1.300  
a31 = 0.445338    0.300 <= a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

Date: 04/03/2019  
Time: 12:56:48

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

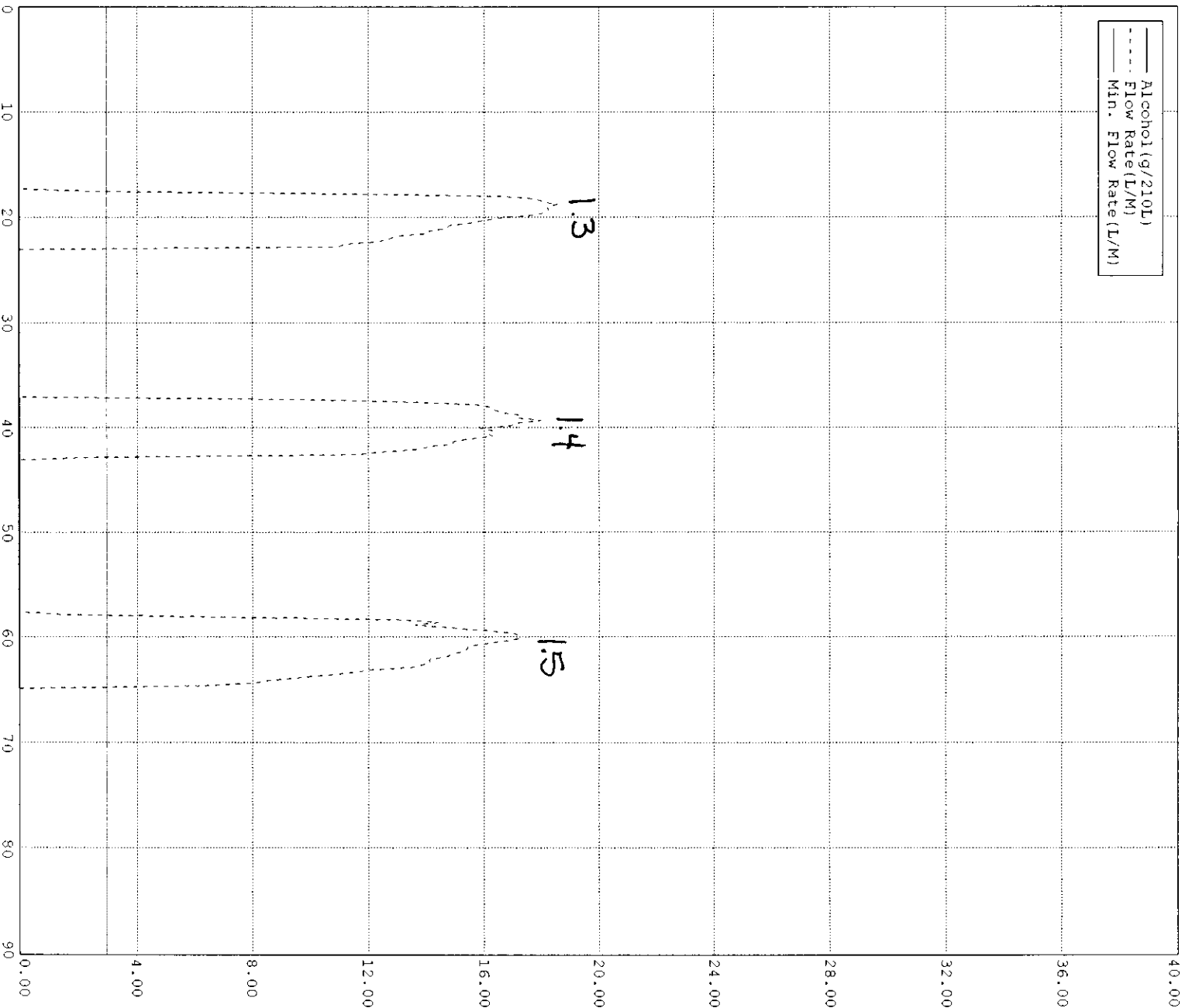
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.35: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK	PASSED	12:58
BLANK TEST	0.000	12:58
INTERNAL STANDARD	VERIFIED	12:58
EXTERNAL STANDARD	0.076	12:59
BLANK TEST	0.000	13:00
SUBJECT SAMPLE (Vol=1.51L)	0.000	13:01
BLANK TEST	0.000	13:02
EXTERNAL STANDARD	0.076	13:02
BLANK TEST	0.000	13:03

*BMB*



LINEARITY CHECK

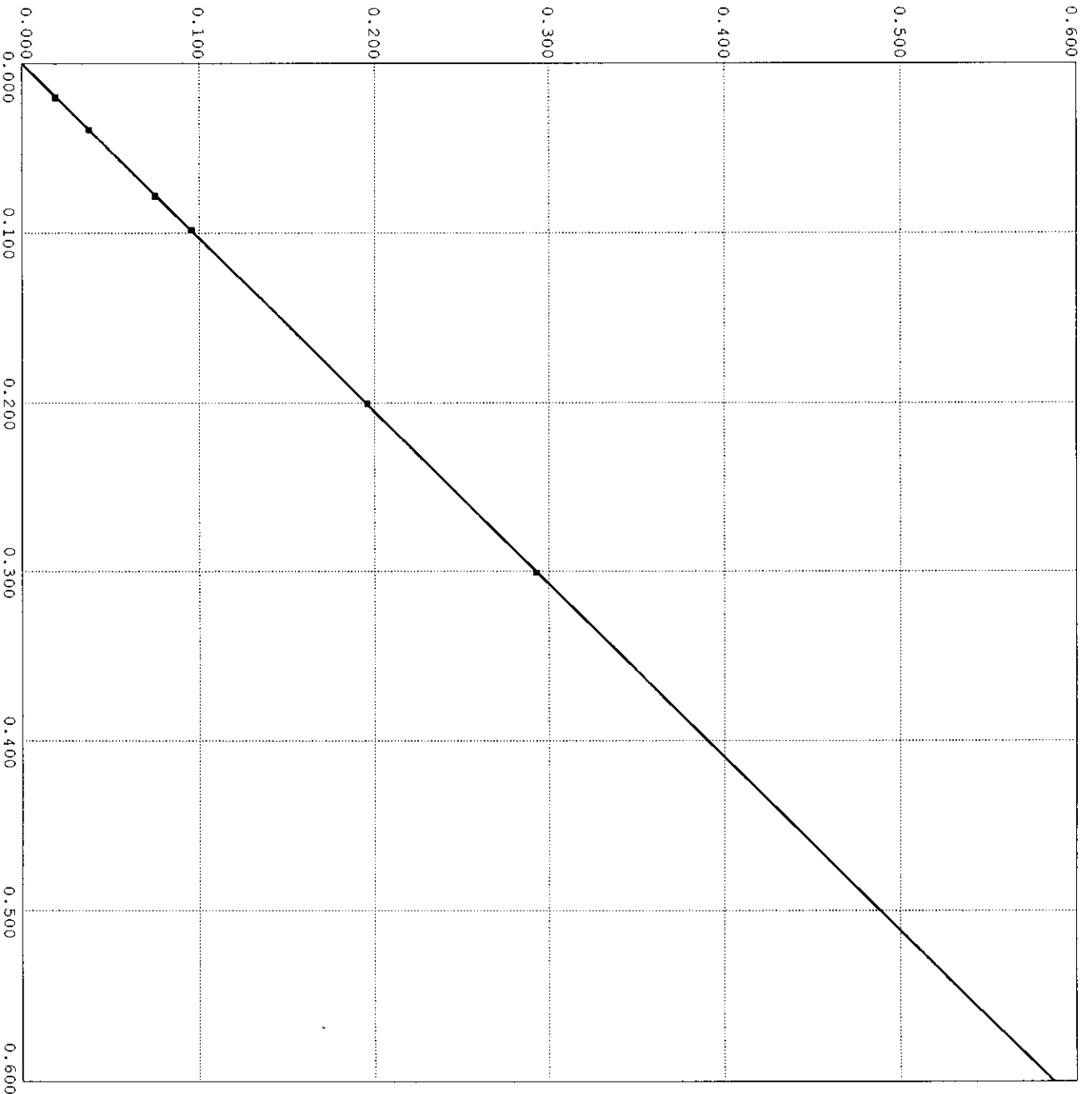
Alaska Department of Public Safety  
DATAMASTER dmt: 100682

Date: 04/04/2019  
Time: 11:12:46

SUPERVISOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

TARGET	AVERAGE	STD. DEV.
0.020	0.0196	0.0005
0.039	0.0386	0.0005
0.078	0.0760	0.0000
0.098	0.0966	0.0005
0.200	0.1966	0.0009
0.300	0.2936	0.0005

SLOPE = 0.979125  
R<sup>2</sup> = 0.999981



*Handwritten signature: BMB*

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

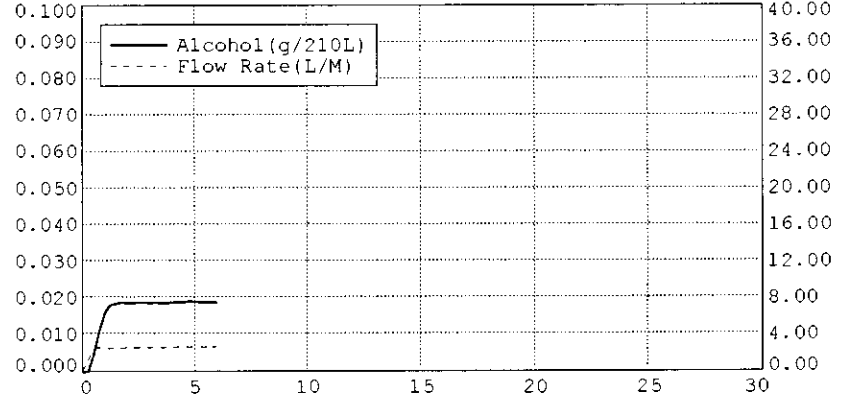
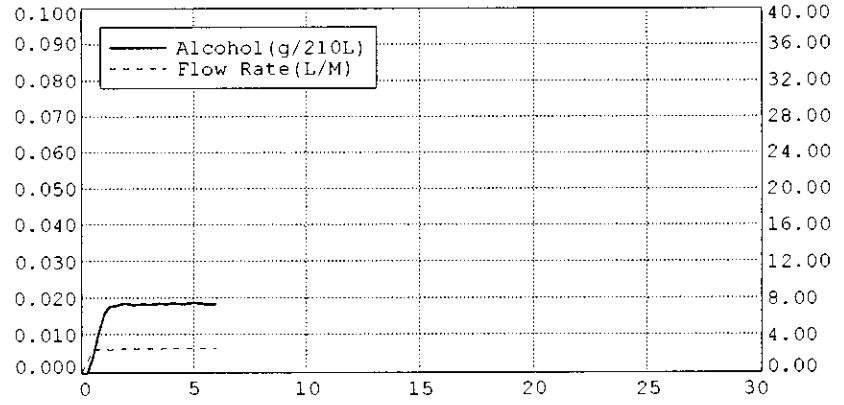
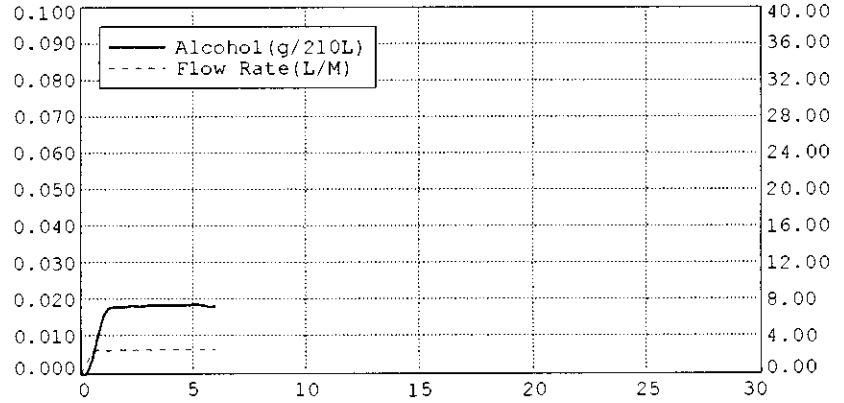
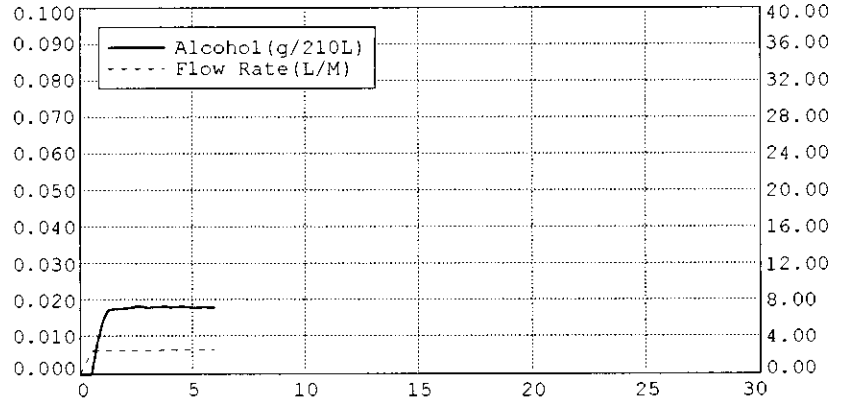
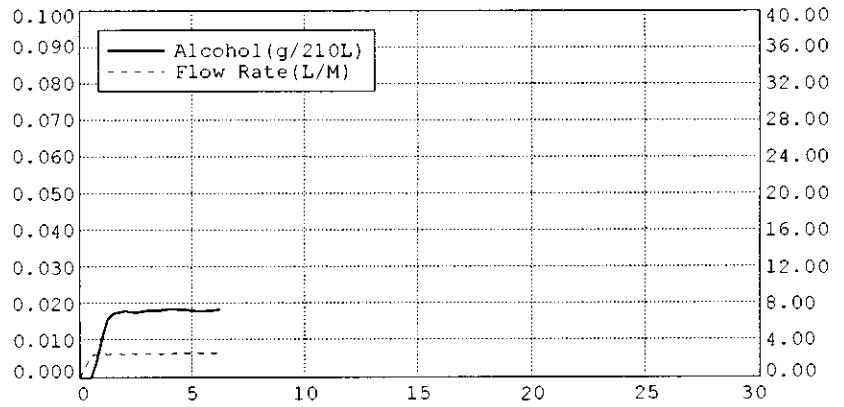
Date: 04/04/2019  
Time: 11:12:48

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
TARGET AT 29.35: 0.020  
LOT #: AG805804  
EXPIRATION: 02/27/2020  
TANK PRESSURE: 800 psi

BLANK TEST	0.000	11:13
INTERNAL STANDARD	VERIFIED	11:13
EXTERNAL STANDARD	0.020	11:14
BLANK TEST	0.000	11:15
EXTERNAL STANDARD	0.019	11:15
BLANK TEST	0.000	11:16
EXTERNAL STANDARD	0.019	11:16
BLANK TEST	0.000	11:17
EXTERNAL STANDARD	0.020	11:17
BLANK TEST	0.000	11:18
EXTERNAL STANDARD	0.020	11:18
BLANK TEST	0.000	11:19

Average = 0.0196  
Std Dev = 0.0005



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100682

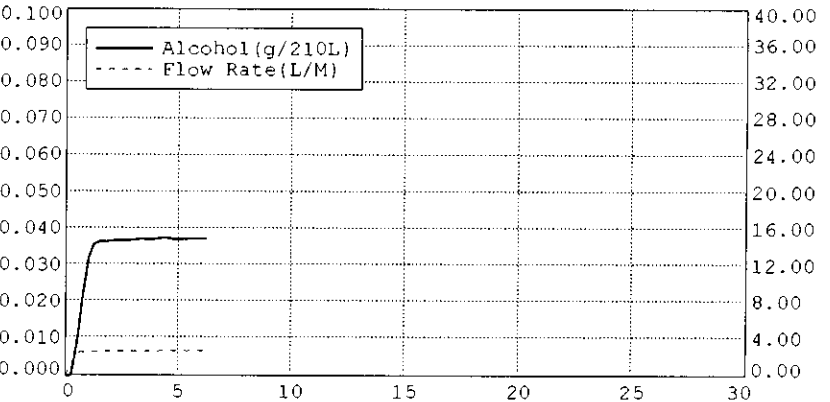
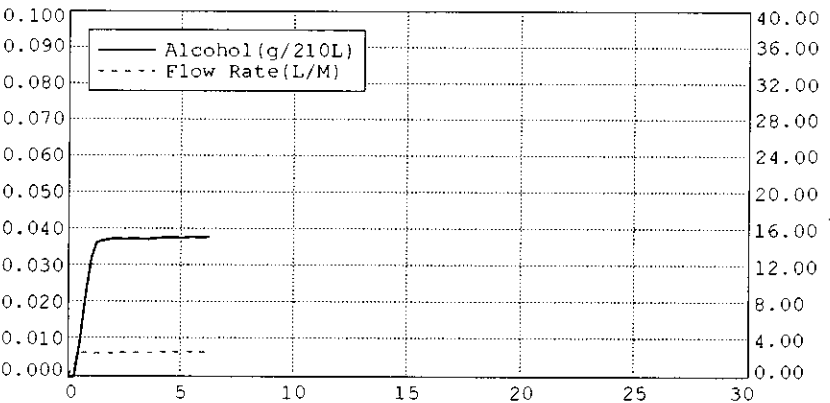
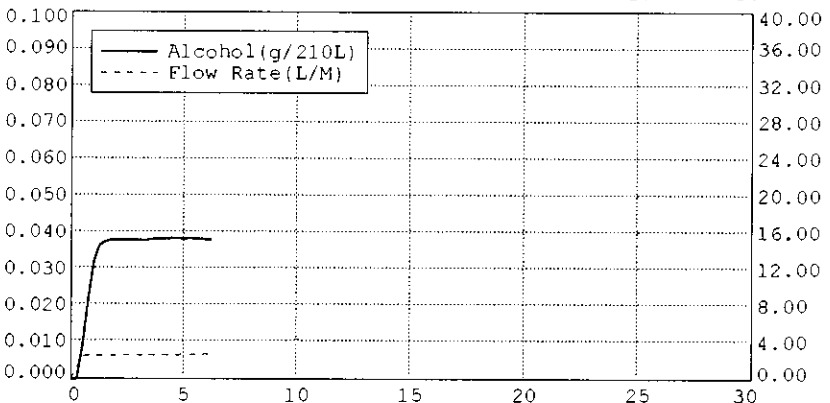
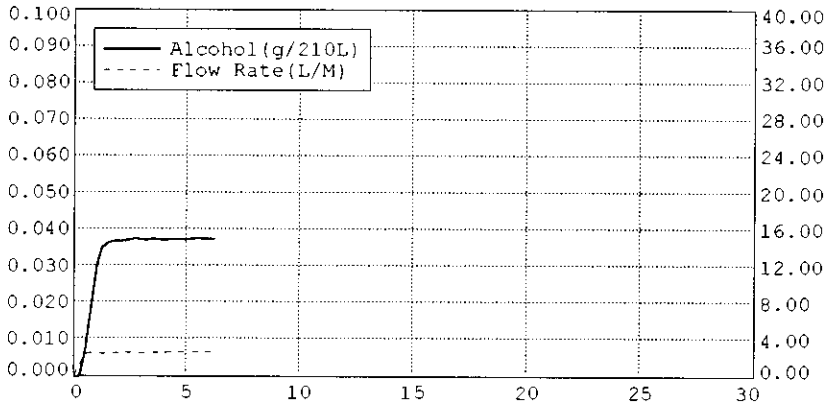
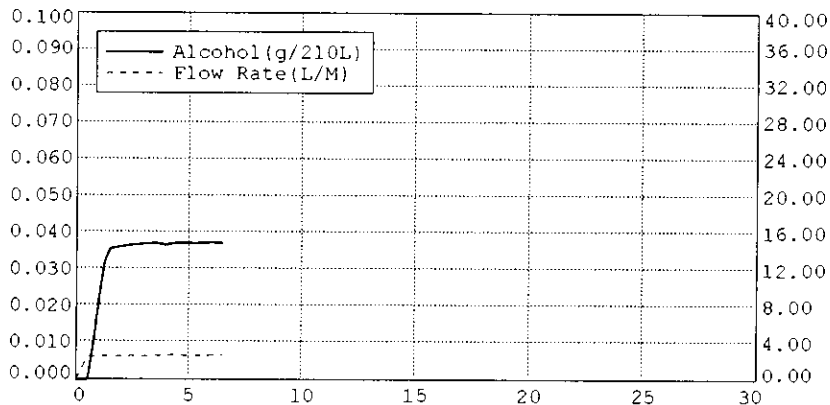
Date: 04/04/2019  
 Time: 12:47:25

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 29.35: 0.039  
 LOT #: AG733403  
 EXPIRATION: 11/30/2019  
 TANK PRESSURE: 797 psi

BLANK TEST	0.000	12:48
INTERNAL STANDARD	VERIFIED	12:48
EXTERNAL STANDARD	0.038	12:48
BLANK TEST	0.000	12:49
EXTERNAL STANDARD	0.039	12:49
BLANK TEST	0.000	12:50
EXTERNAL STANDARD	0.039	12:51
BLANK TEST	0.000	12:51
EXTERNAL STANDARD	0.039	12:52
BLANK TEST	0.000	12:53
EXTERNAL STANDARD	0.038	12:53
BLANK TEST	0.000	12:54

Average = 0.0386  
 Std Dev = 0.0005





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

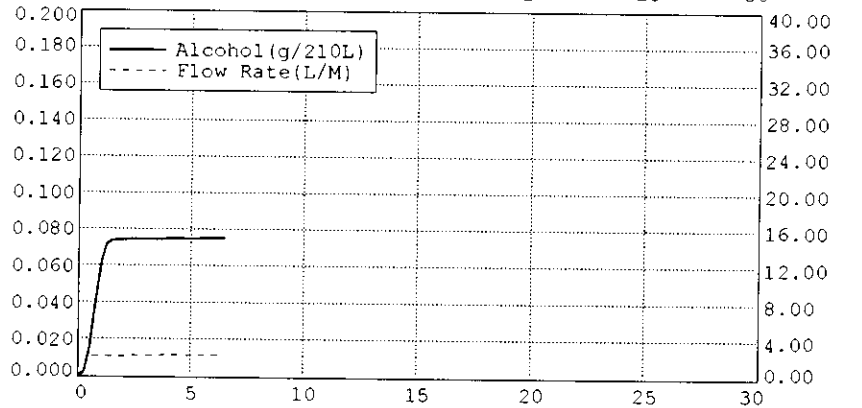
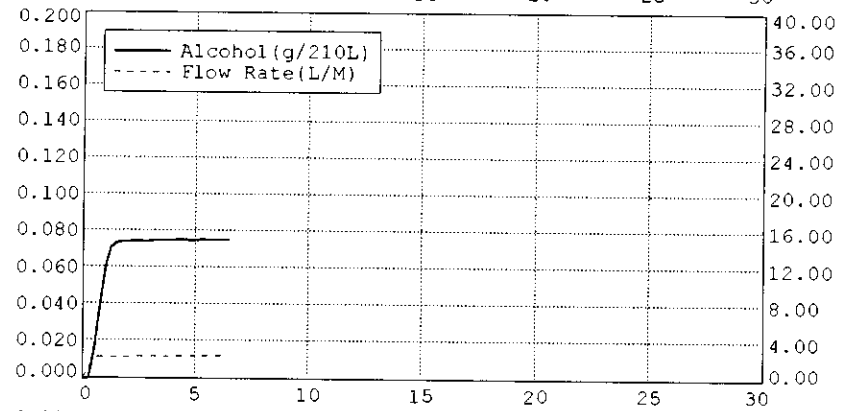
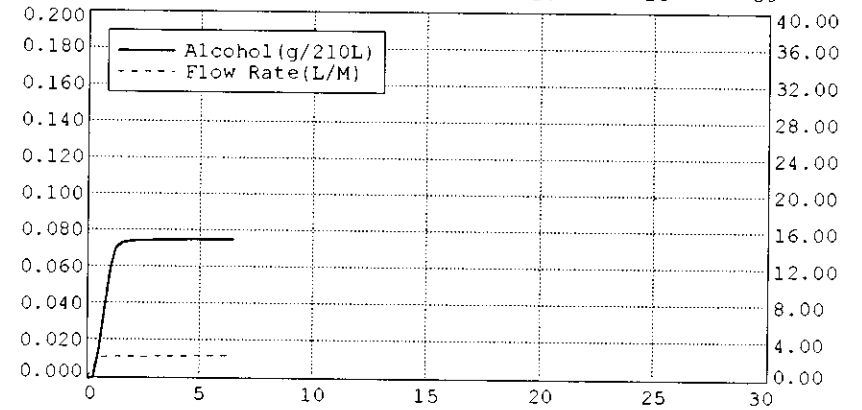
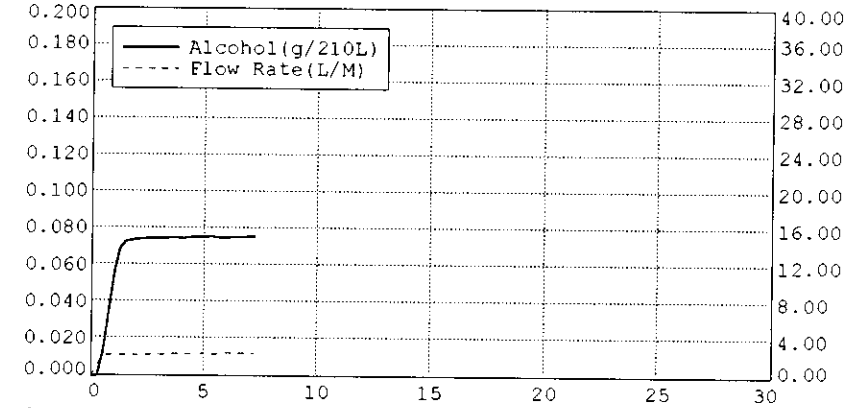
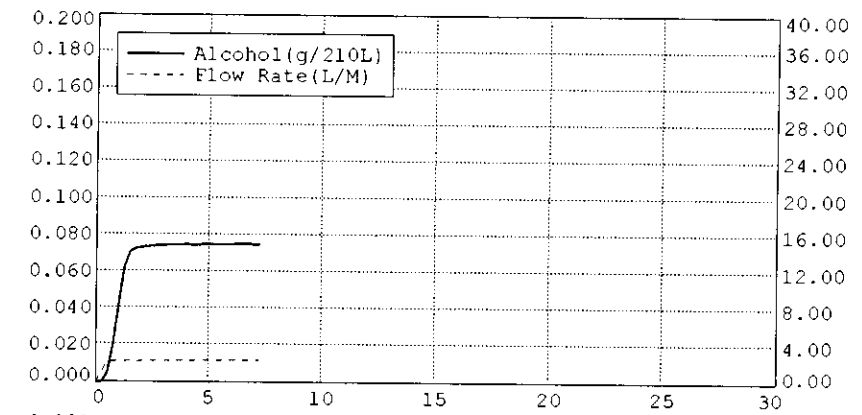
Date: 04/04/2019  
Time: 12:57:34

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.35: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019  
TANK PRESSURE: 361 psi

BLANK TEST	0.000	12:58
INTERNAL STANDARD	VERIFIED	12:58
EXTERNAL STANDARD	0.076	12:59
BLANK TEST	0.000	12:59
EXTERNAL STANDARD	0.076	13:00
BLANK TEST	0.000	13:01
EXTERNAL STANDARD	0.076	13:01
BLANK TEST	0.000	13:02
EXTERNAL STANDARD	0.076	13:02
BLANK TEST	0.000	13:03
EXTERNAL STANDARD	0.076	13:03
BLANK TEST	0.000	13:04

Average = 0.0760  
Std Dev = 0.0000



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100682

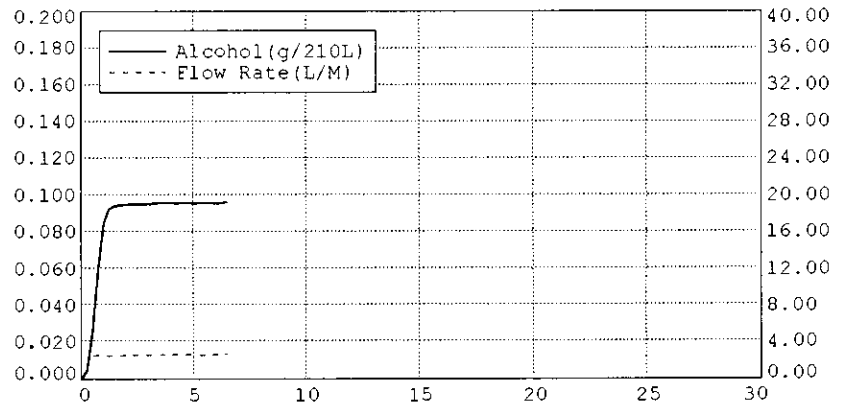
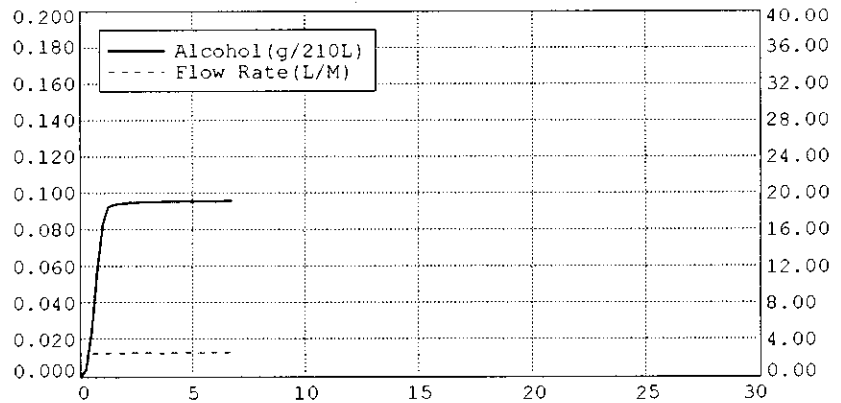
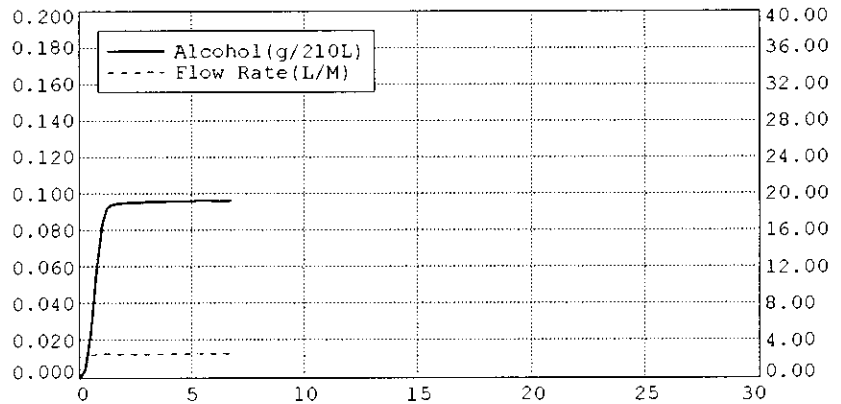
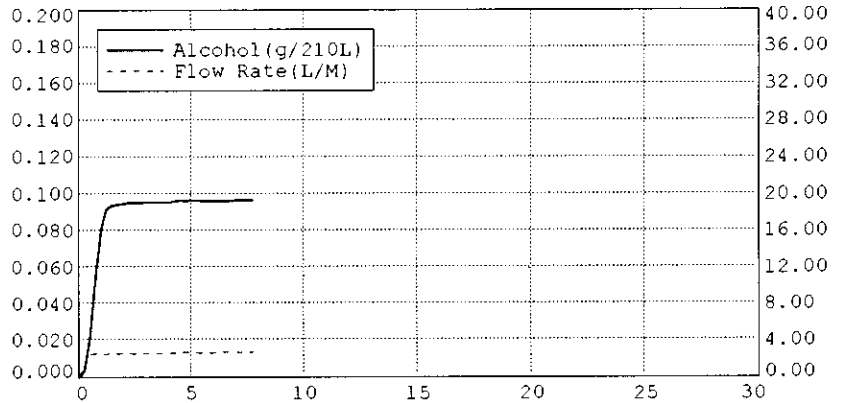
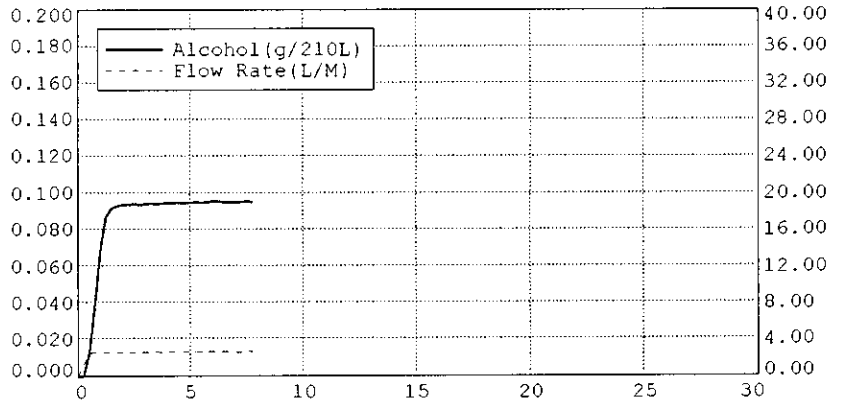
Date: 04/04/2019  
 Time: 13:09:51

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.35: 0.098  
 LOT #: AG805903  
 EXPIRATION: 02/28/2020  
 TANK PRESSURE: 736 psi

BLANK TEST	0.000	13:11
INTERNAL STANDARD	VERIFIED	13:11
EXTERNAL STANDARD	0.096	13:11
BLANK TEST	0.000	13:12
EXTERNAL STANDARD	0.097	13:12
BLANK TEST	0.000	13:13
EXTERNAL STANDARD	0.097	13:13
BLANK TEST	0.000	13:14
EXTERNAL STANDARD	0.097	13:15
BLANK TEST	0.000	13:15
EXTERNAL STANDARD	0.096	13:16
BLANK TEST	0.000	13:17

Average = 0.0966  
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 5

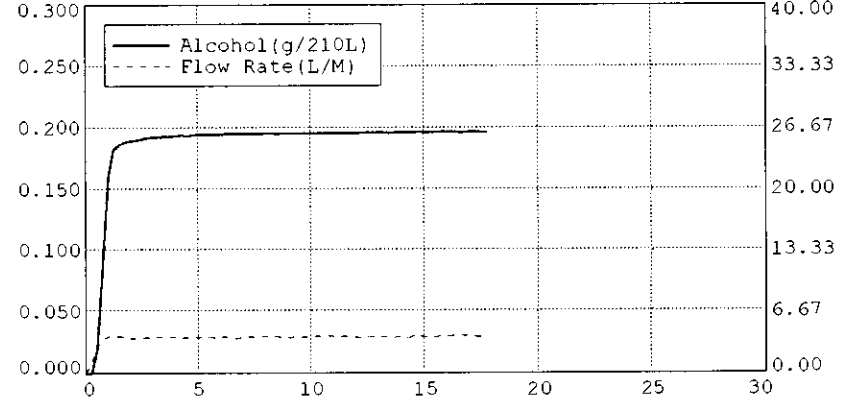
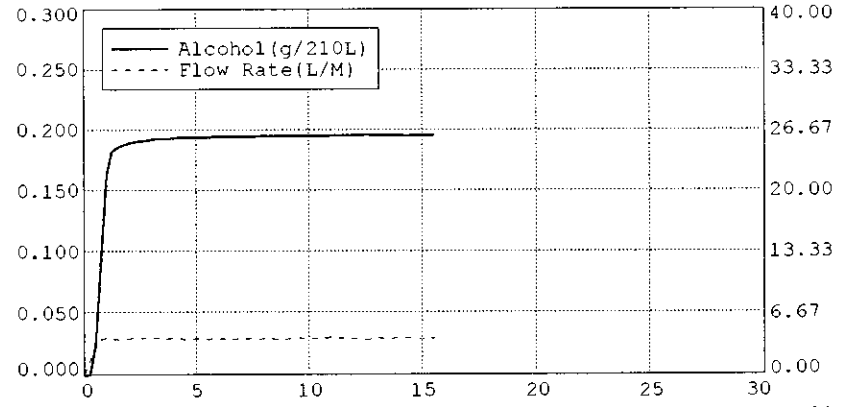
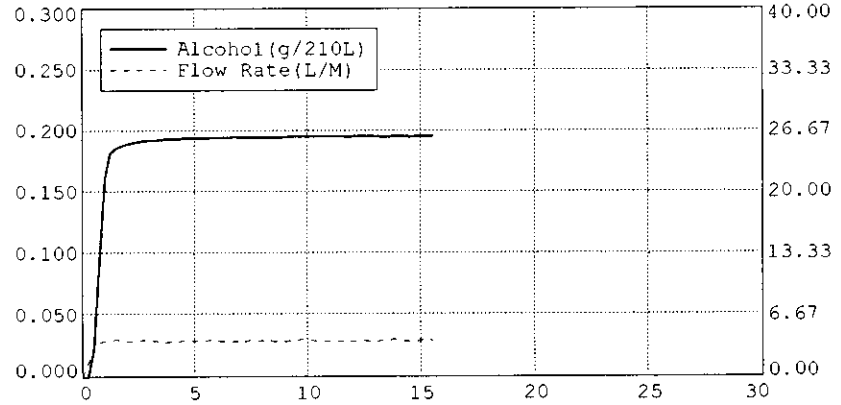
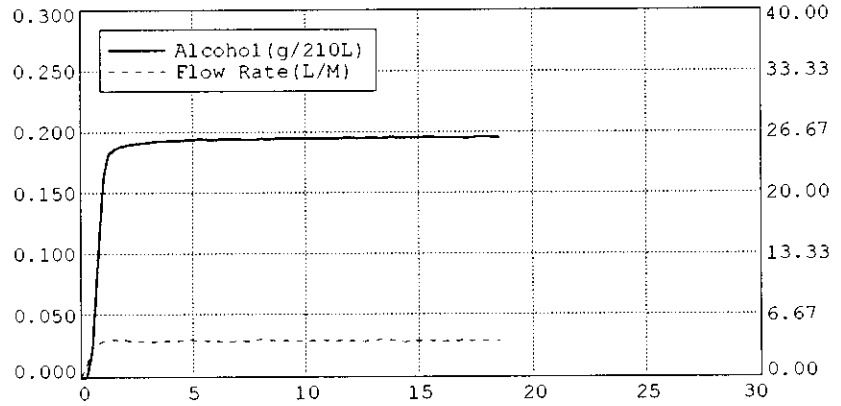
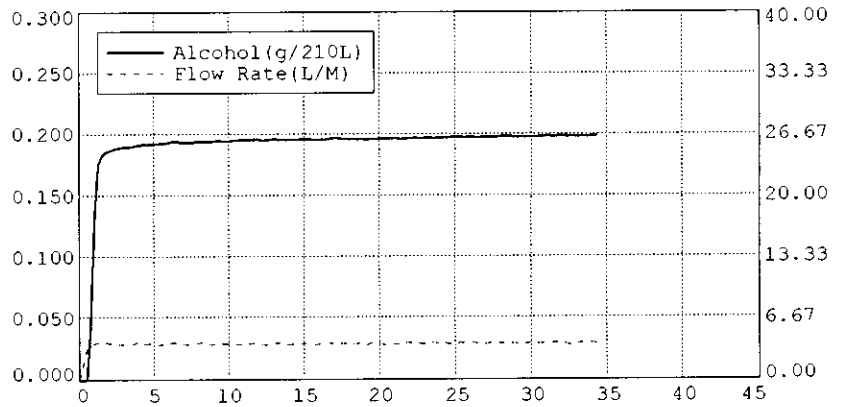
Alaska Department of Public Safety  
 DATAMASTER dmt: 100682

Date: 04/04/2019  
 Time: 13:18:08

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

BLANK TEST	0.000	13:19
INTERNAL STANDARD	VERIFIED	13:19
EXTERNAL STANDARD	0.198	13:20
BLANK TEST	0.000	13:21
EXTERNAL STANDARD	0.196	13:21
BLANK TEST	0.000	13:22
EXTERNAL STANDARD	0.196	13:22
BLANK TEST	0.000	13:23
EXTERNAL STANDARD	0.196	13:23
BLANK TEST	0.000	13:24
EXTERNAL STANDARD	0.197	13:25
BLANK TEST	0.000	13:26

Average = 0.1966  
 Std Dev = 0.0009



LINEARITY CHECK: Control Test 6

Alaska Department of Public Safety  
 DATAMASTER dmt: 100682

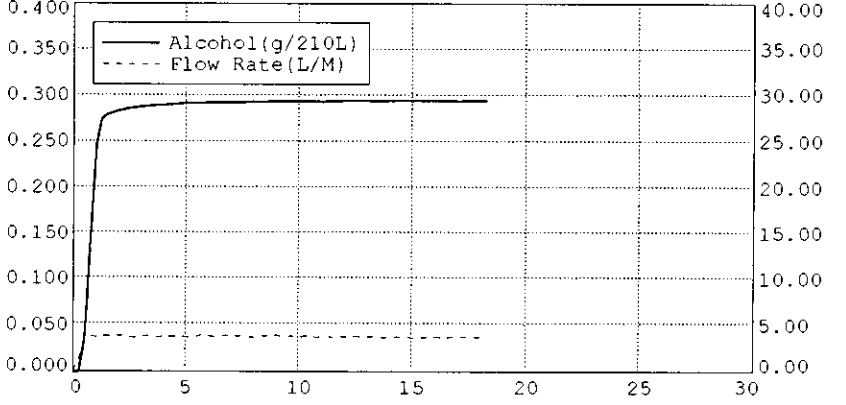
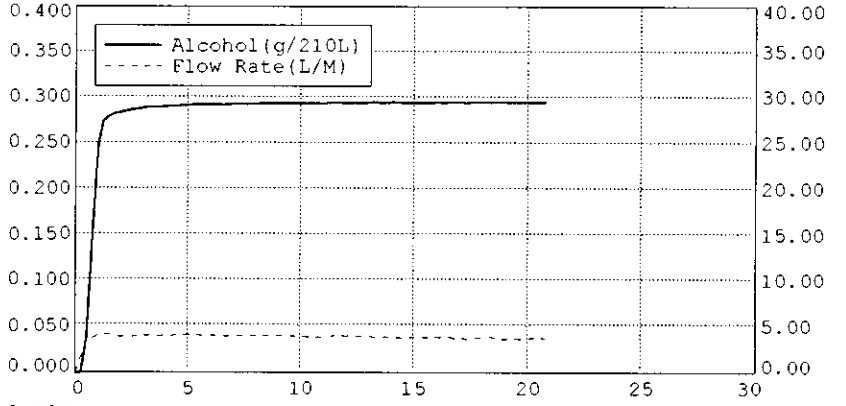
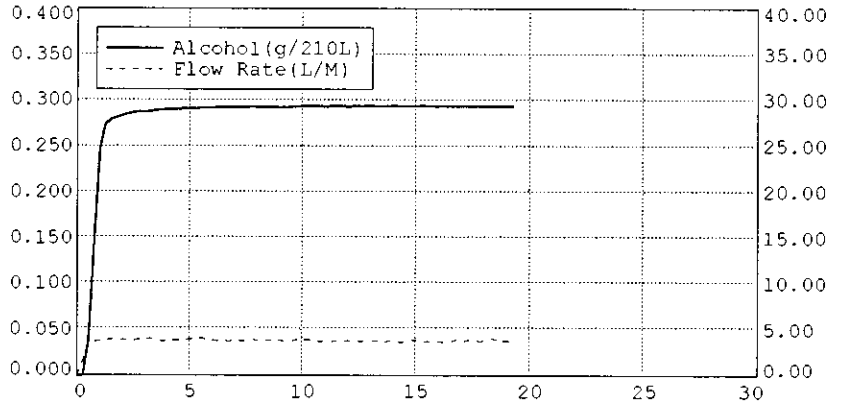
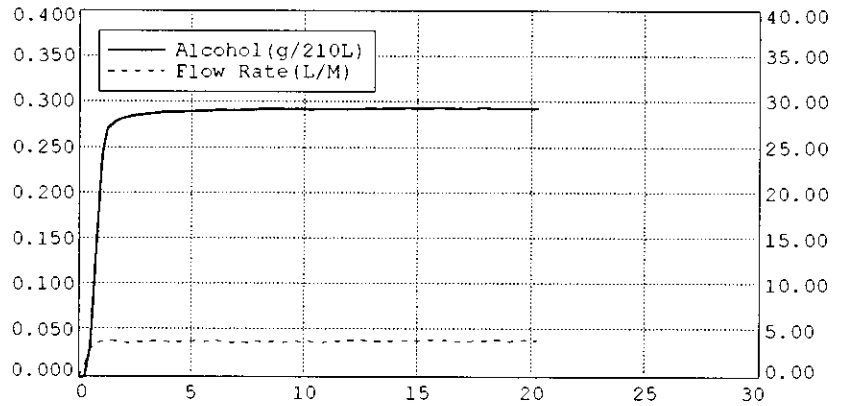
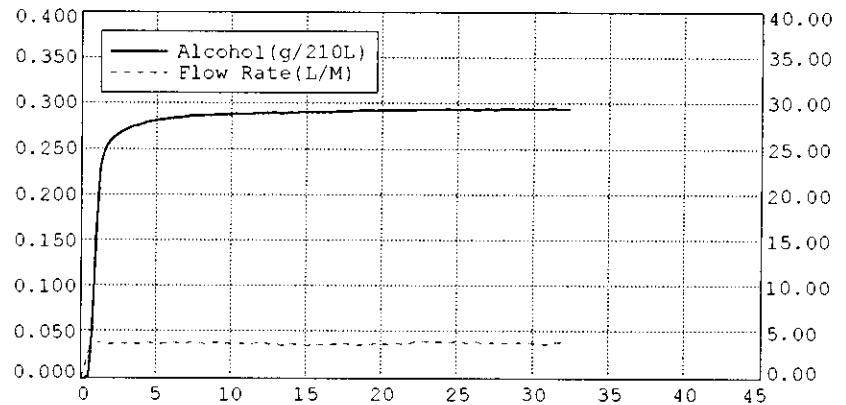
Date: 04/04/2019  
 Time: 13:32:56

EXTERNAL STANDARD INFORMATION

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

BLANK TEST	0.000	13:34
INTERNAL STANDARD	VERIFIED	13:34
EXTERNAL STANDARD	0.294	13:34
BLANK TEST	0.000	13:35
EXTERNAL STANDARD	0.293	13:36
BLANK TEST	0.000	13:37
EXTERNAL STANDARD	0.294	13:37
BLANK TEST	0.000	13:38
EXTERNAL STANDARD	0.294	13:38
BLANK TEST	0.000	13:39
EXTERNAL STANDARD	0.293	13:40
BLANK TEST	0.000	13:41

Average = 0.2936  
 Std Dev = 0.0005



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

Date: 04/05/2019  
Time: 10:47:53

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

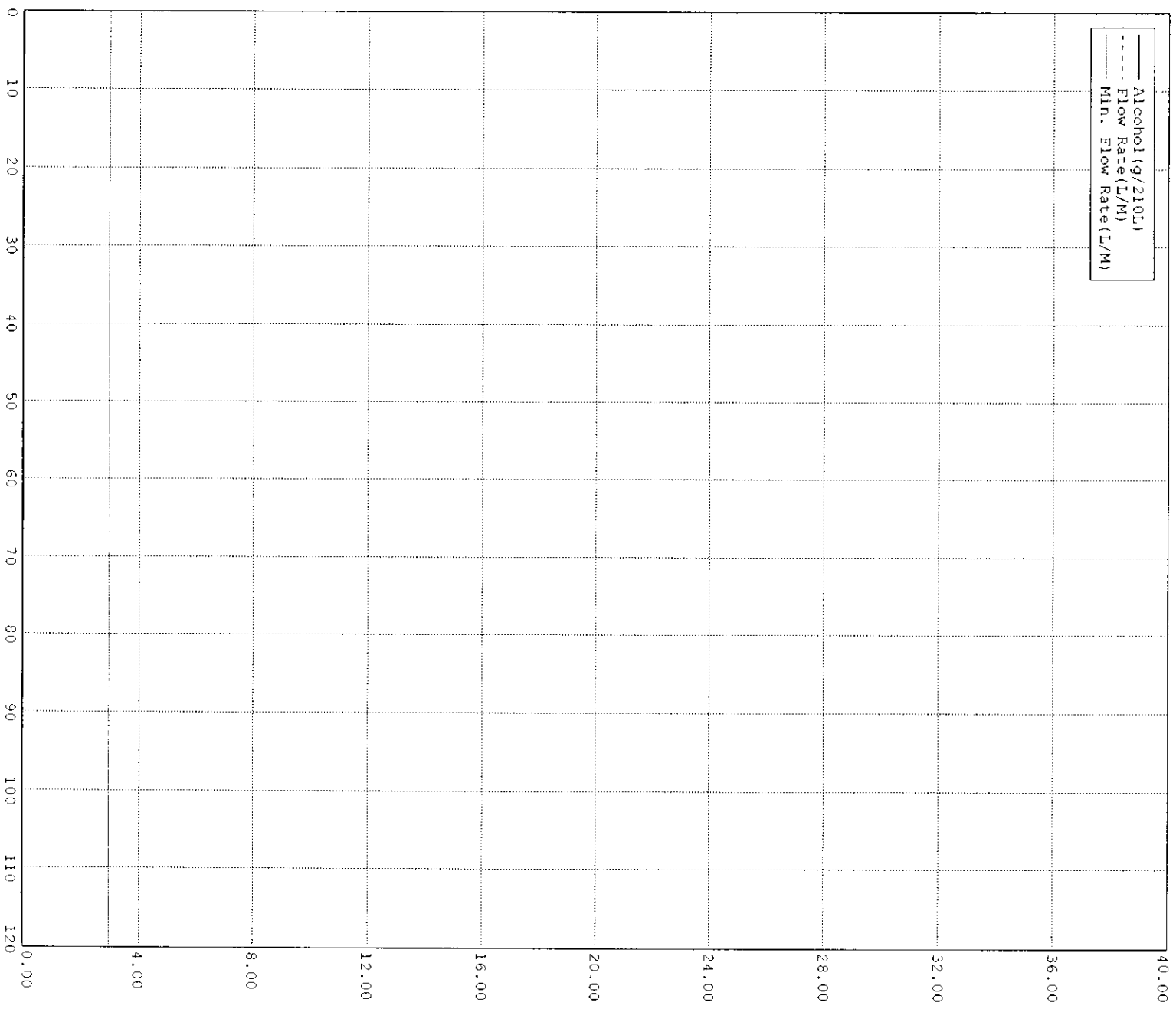
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.21: 0.078  
LOT #: AG735001  
EXPIRATION: 12/16/2019

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

*BBMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

Date: 04/05/2019  
Time: 10:54:45

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

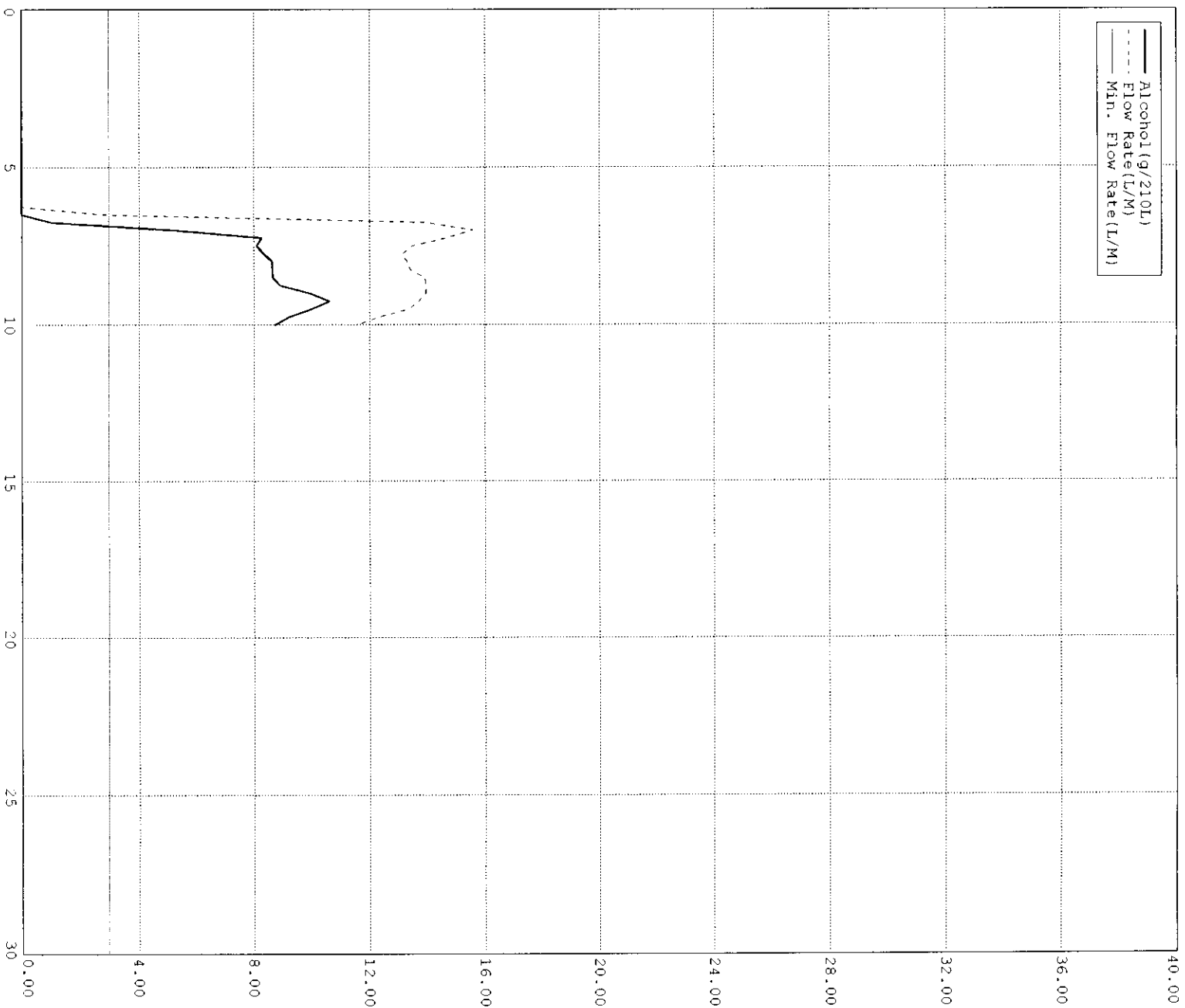
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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	10:57
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  
DATAMASTER dmt: 100682

Date: 04/05/2019  
Time: 12:27:43

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

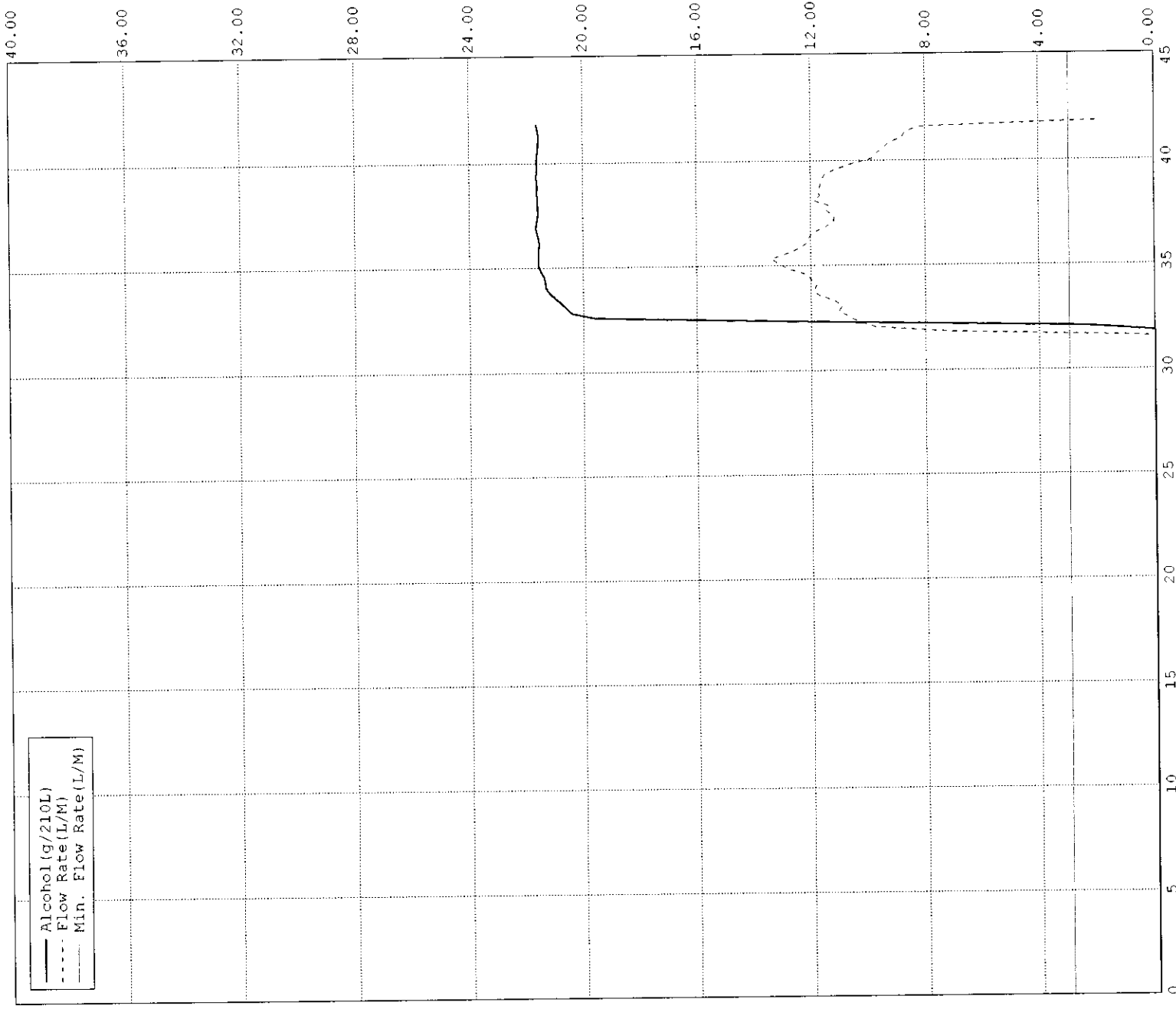
EXTERNAL STANDARD INFORMATION

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

DIAGNOSTIC CHECK	PASSED	12:28
BLANK TEST	0.000	12:28
INTERNAL STANDARD	VERIFIED	12:28
Xq = 0.090 (2.55%)		
EXTERNAL STANDARD	0.076	12:29
X[1] = 0.0759 (-0.0003) (0.0025)		
BLANK TEST	0.000	12:30
SUBJECT SAMPLE	XXX	12:30
X[1] = 0.1087 (-0.0145) (0.0007)		

Interference Detected

Filter 2 Avg: -0.0007  
Filter 3 Avg: 0.0021  
BMB 4/5/19



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

Date: 04/05/2019  
Time: 12:35:29

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

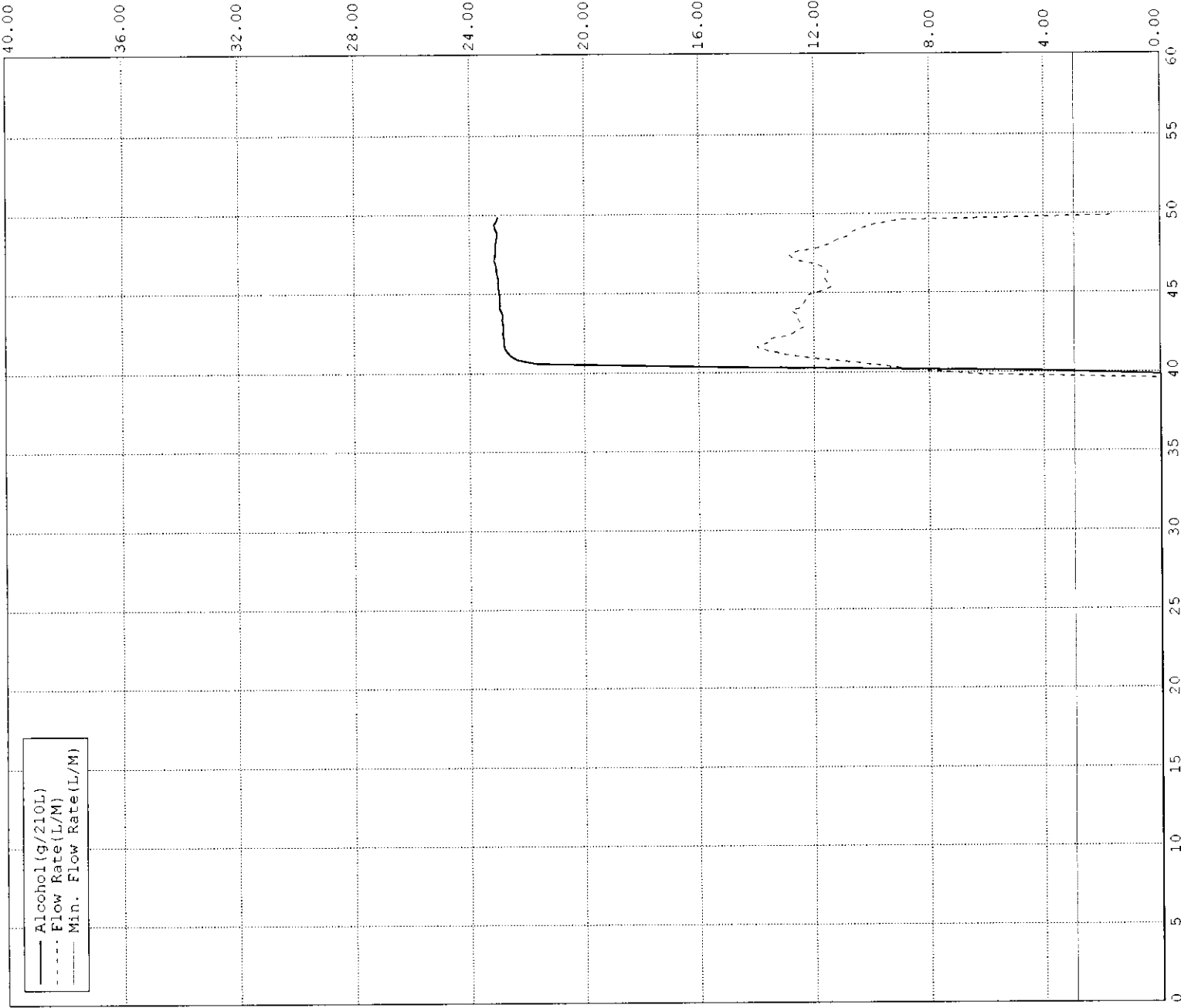
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

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

DIAGNOSTIC CHECK PASSED 12:37  
BLANK TEST 0.000 12:37  
INTERNAL STANDARD VERIFIED 12:38  
Xq = 0.089 (3.31%)  
EXTERNAL STANDARD 0.075 12:38  
X[1] = 0.0746 (-0.0013) (0.0016)  
BLANK TEST 0.000 12:39  
SUBJECT SAMPLE XXX 12:40  
X[1] = 0.1155 (-0.0200) (0.0005)

Interference Detected





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

Date: 04/05/2019  
Time: 12:43:05

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

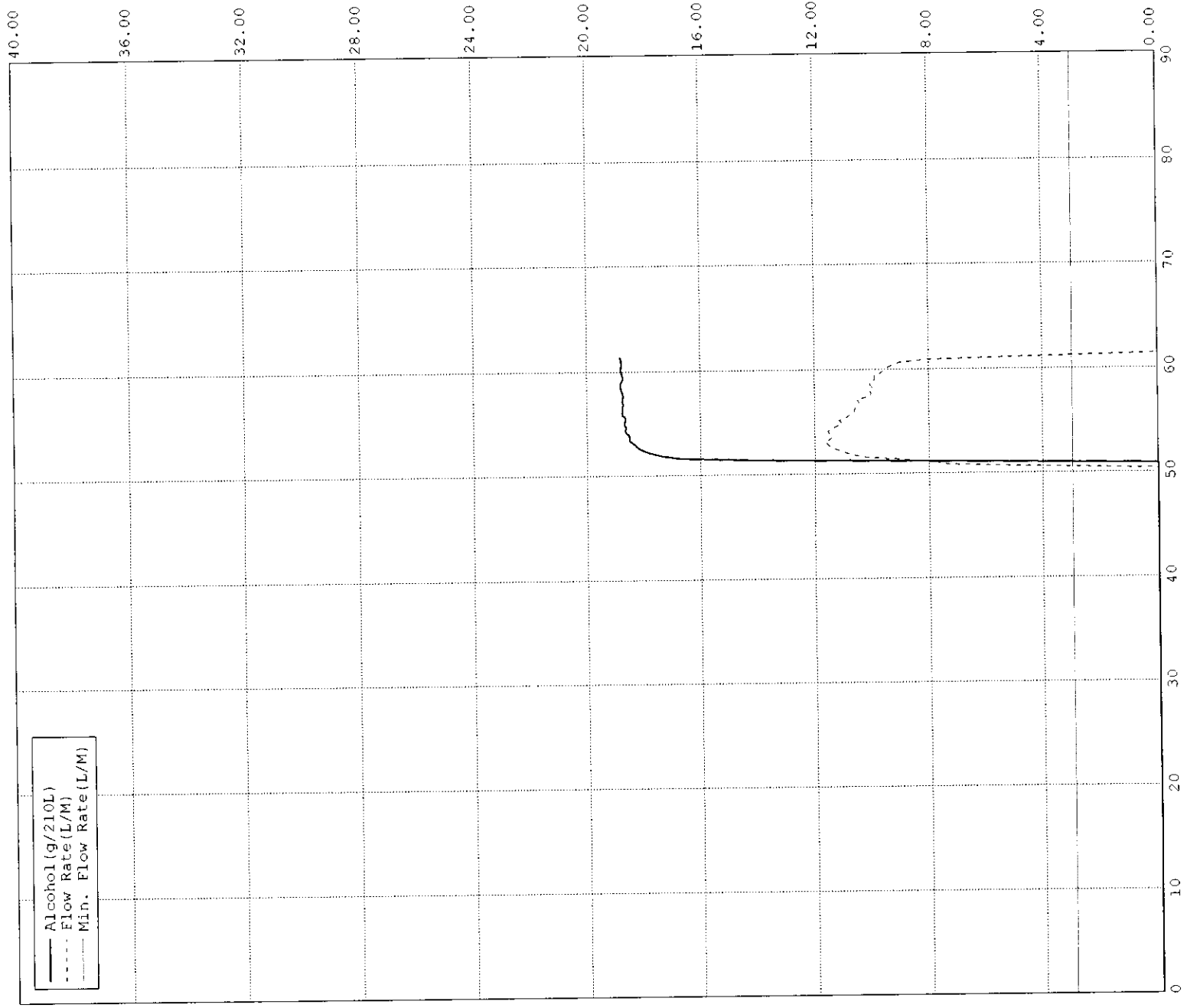
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

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

DIAGNOSTIC CHECK	PASSED	12:44
BLANK TEST	0.000	12:44
INTERNAL STANDARD	VERIFIED	12:44
$x_q = 0.090$ (2.65%)		
EXTERNAL STANDARD	0.075	12:44
$x[1] = 0.0749$ (-0.0009) (0.0024)		
BLANK TEST	0.000	12:45
SUBJECT SAMPLE (Vol=1.80L)	0.094	12:46
$x[1] = 0.0944$ (0.0007) (0.0004)		
BLANK TEST	0.000	12:47
EXTERNAL STANDARD	0.076	12:47
$x[1] = 0.0756$ (-0.0004) (0.0019)		
BLANK TEST	0.000	12:48

*BMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

Date: 04/05/2019  
Time: 11:02:46

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

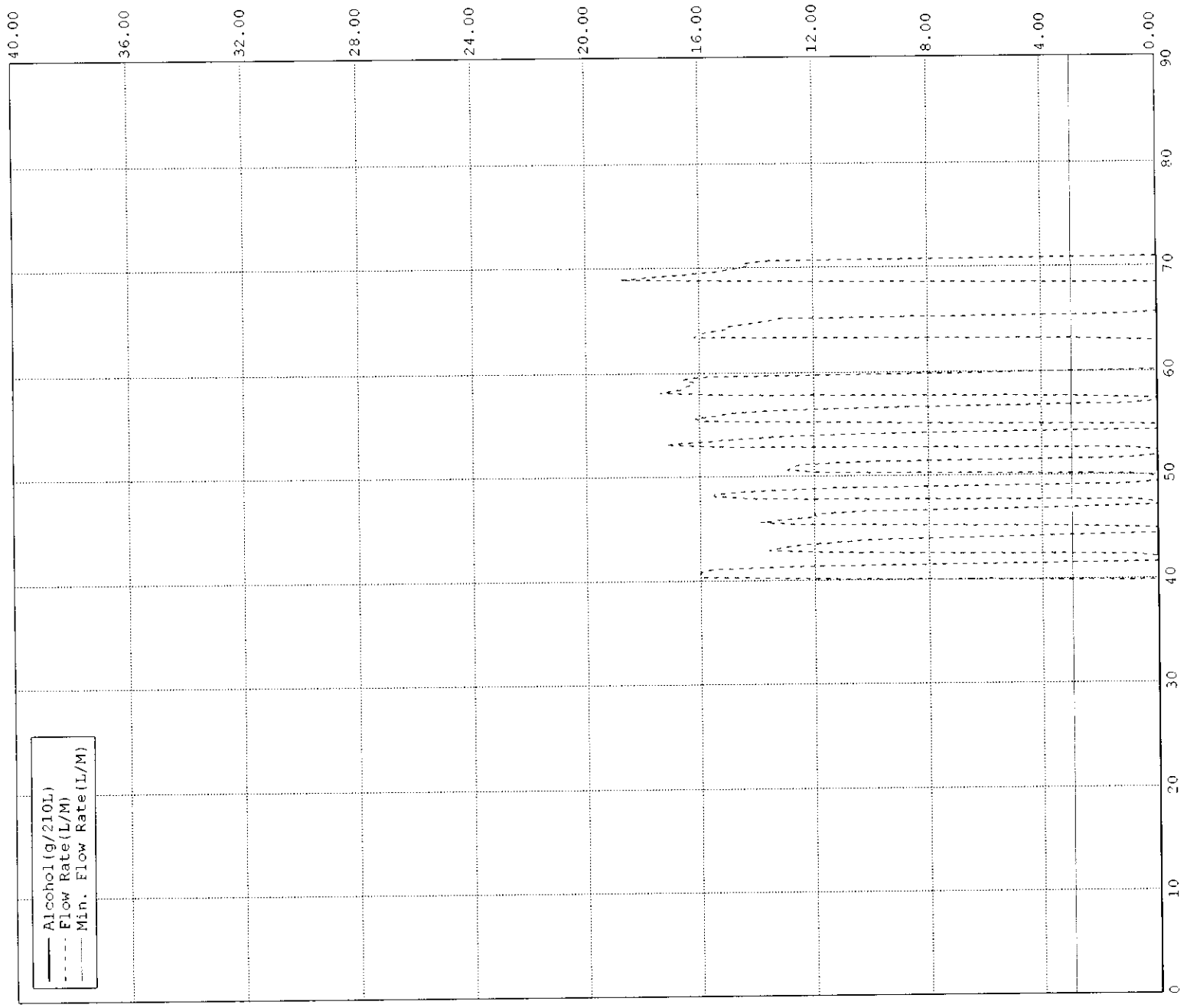
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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 11:05  
BLANK TEST 0.000 11:05  
INTERNAL STANDARD VERIFIED 11:06  
EXTERNAL STANDARD 0.076 11:06  
BLANK TEST 0.000 11:07  
SUBJECT SAMPLE XXX 11:08

Maximum Attempts Exceeded



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100682

Date: 04/05/2019  
Time: 12:03:52

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

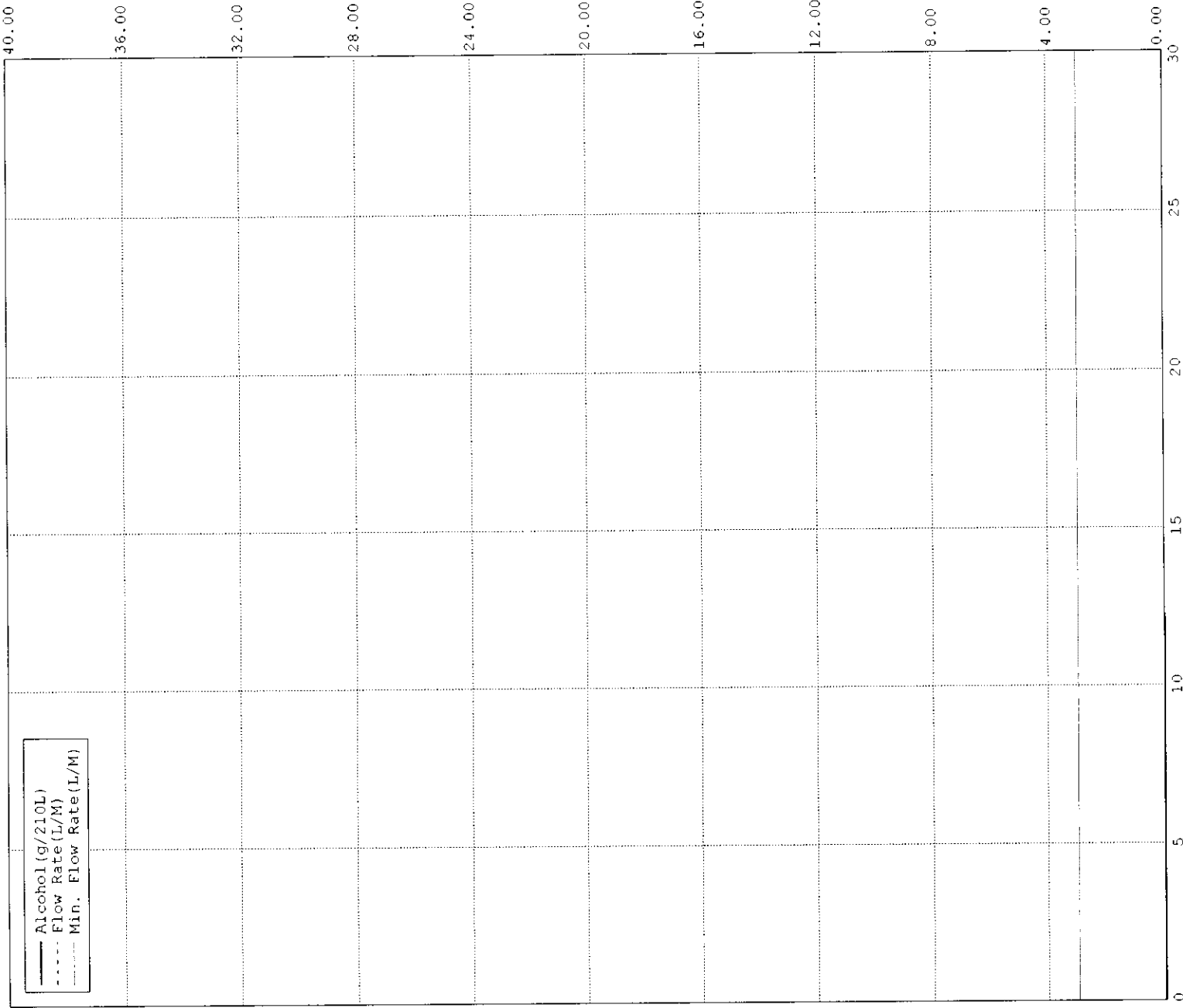
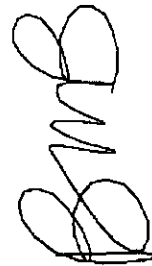
DEPT/AGENCY:  
RFI  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

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

DIAGNOSTIC CHECK PASSED 12:04  
BLANK TEST 0.000 12:05  
INTERNAL STANDARD VERIFIED 12:05  
EXTERNAL STANDARD 0.075 12:05  
BLANK TEST 0.000 12:06

RFI DETECTED



**SUBJECT TEST**

Alaska Department of Public Safety  
 DATAMASTER dmt: 100682

Date: 04/05/2019  
 Time: 13:06:12

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 #: AG735001  
 EXPIRATION: 12/16/2019

DIAGNOSTIC CHECK	PASSED	13:08
BLANK TEST	0.000	13:09
INTERNAL STANDARD	VERIFIED	13:09
EXTERNAL STANDARD	0.076	13:09
BLANK TEST	0.000	13:10
SUBJECT SAMPLE (Vol=2.05L)	0.000	13:10
BLANK TEST	0.000	13:11
EXTERNAL STANDARD	0.076	13:11
BLANK TEST	0.000	13:12

*BMB*

