

# 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 1006666 Analyst Brandi Barnett Start Date 2/12/19

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 1.6 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 AG826101 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 DR4177 Date Calibrated 6/4/18
- vi. 0.300g/210L Mnf Guth Lot 17350 Exp 10/11/19
  - 1. Simulator S/N SD1176 Date Calibrated 6/1/18

5. Functional Tests (attached)

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

- i. Acetone - Mnf Guth Lot ~~0.100~~<sup>18070</sup> Level 0.100 Exp 2/26/20
  - 1. Simulator S/N SD1200 Date Calibrated 6/1/18
- ii. Isopropanol - Mnf Guth Lot 18070 Level 0.100 Exp 2/26/20
  - 1. Simulator S/N DR4176 Date Calibrated 6/4/18
- iii. Negative Control - Mnf Guth Lot 18070 Level 0.100 Exp 2/26/20
  - 1. Simulator S/N PR4163 Date Calibrated 6/4/18

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 2/14/19

DIAGNOSTIC RECORD

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/12/2019  
Time: 12:56:33

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

TEMPERATURES

Sample Chamber = 48.7°C PASSED  
(44.0°C - 52.0°C)  
Breath Tube = 45.6°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.75 V PASSED  
(0.97 V - 2.27 V)  
Cooler Voltage = 1.56 V PASSED  
(0.92 V - 2.14 V)  
Bias Voltage = 79 V PASSED  
(47 V - 111 V)  
Chopper Freq = 528 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.7 in

PUMP INFO

Flow Rate = 4.845 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 = 0.091 0.67% (0.00% - 4.00%) PASSED

Technician Screen

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DATAMASTER dmt: 100666  
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Date: 02/12/2019  
Time: 1:08 PM

Temperatures (°C)

Sample Cell: 49.4°C  
Breath Tube: 45.4°C

Current Barometer 29.6 in  
Volume (Ltr) 1.54

Settings

Lamp: 1.78 V  
Bias: 79 V  
Cooler: 1.61 V  
Chopper: 526 Hz

Voltages (V)

Flow: 1.04 V  
Detector: -0.044 V

CALIBRATION FACTORS

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Alaska Department of Public Safety  
DATAMASTER dmt: 100666  
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Date: 07/31/2018  
Time: 09:33:31

OPERATOR NAME:  
DEREK WALTON  
CERTIFICATE #: 9508

Ca = 0.1000  
CAL = 0.989892    0.800 <= CAL < 1.200  
b1 = 0.0011    0.0000 <= b1 < 0.0040  
b2 = 0.0050    0.0010 <= b2 < 0.0100  
b3 = 0.0008    0.0000 <= b3 < 0.0040  
Xq = 0.0917    0.0500 <= Xq < 0.2000  
a21 = 1.144600    1.050 <= a21 < 1.300  
a31 = 0.529690    0.300 <= a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/12/2019  
Time: 13:11:11

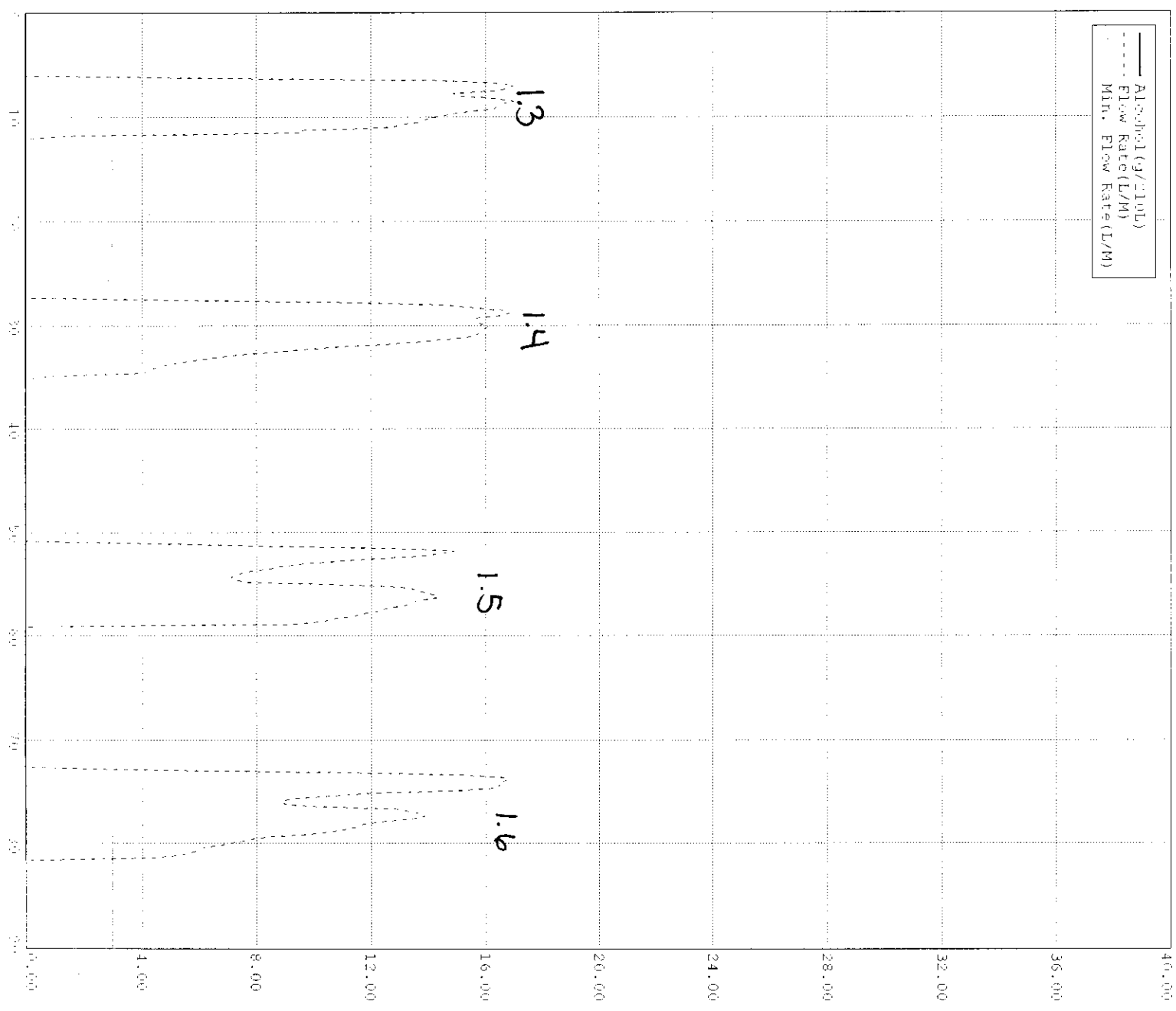
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

DEPT/AGENCY:  
AAA1  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.64: 0.079  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	13:12
BLANK TEST	0.000	13:12
INTERNAL STANDARD	VERIFIED	13:12
EXTERNAL STANDARD	0.079	13:12
BLANK TEST	0.000	13:13
SUBJECT SAMPLE (Vol=1.59L)	0.000	13:15
BLANK TEST	0.000	13:15
EXTERNAL STANDARD	0.080	13:16
BLANK TEST	0.000	13:17



LINEARITY CHECK

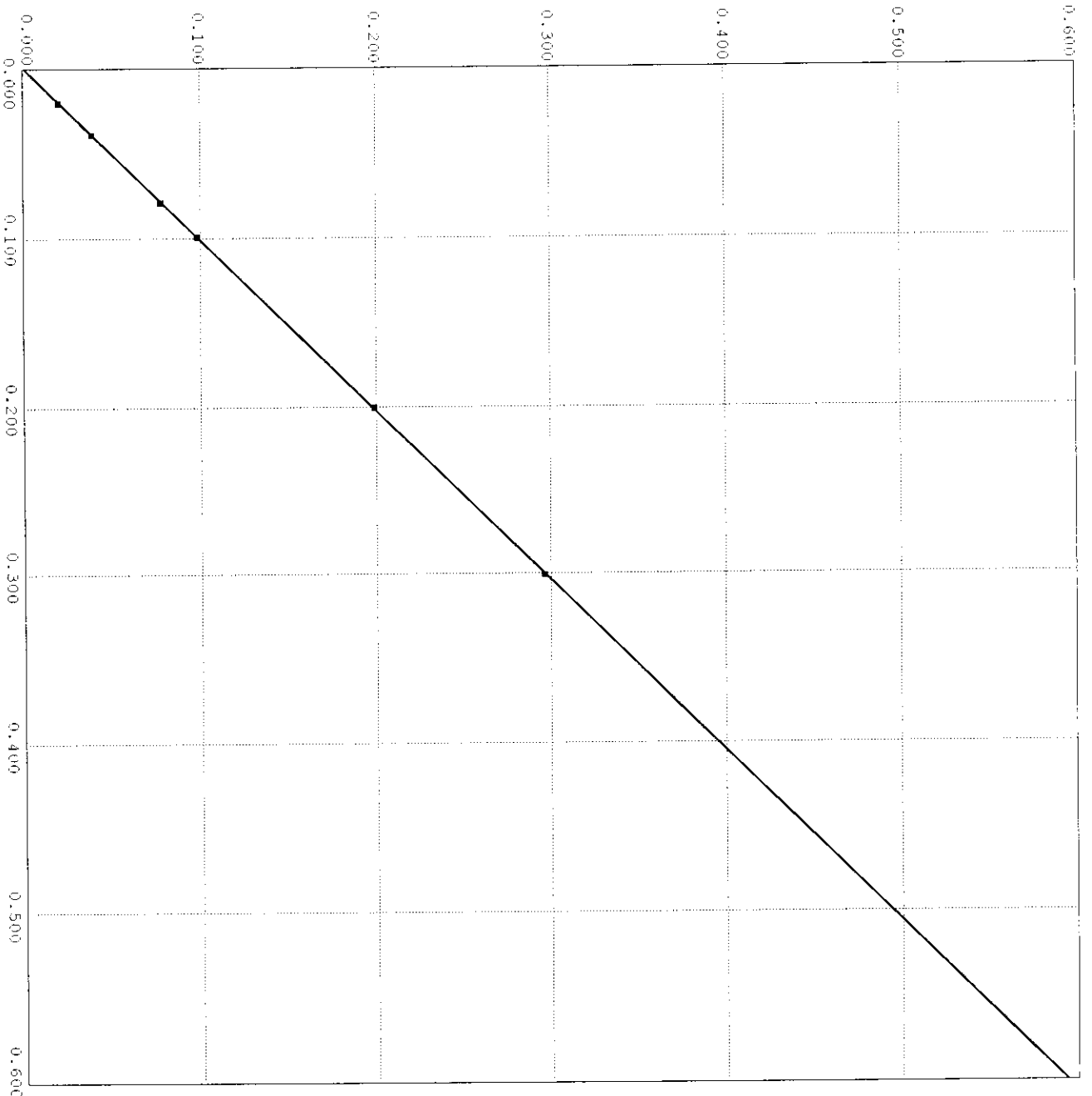
Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/13/2019  
Time: 08:39:51

SUPERVISOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

TARGET	AVERAGE	STD. DEV.
0.020	0.0206	0.0005
0.039	0.0396	0.0005
0.079	0.0786	0.0005
0.099	0.0990	0.0000
0.200	0.1996	0.0005
0.300	0.2970	0.0012

SLOPE = 0.988564  
R<sup>2</sup> = 0.999975



BOMB

LINEARITY CHECK: Control Test 1

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 Alaska Department of Public Safety  
 DATAMASTER dmt: 100666  
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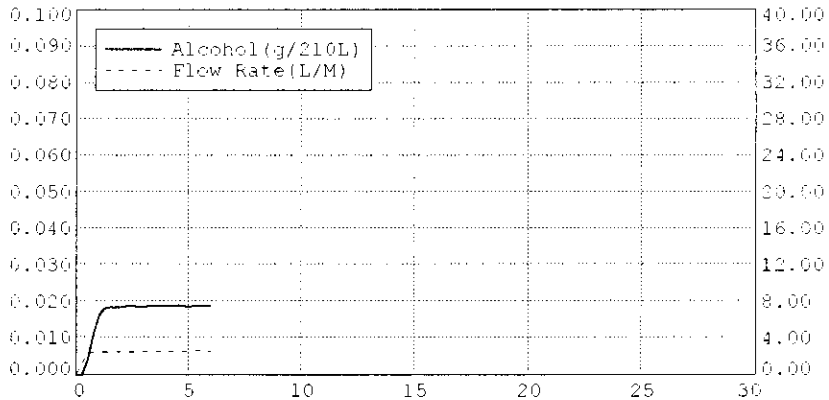
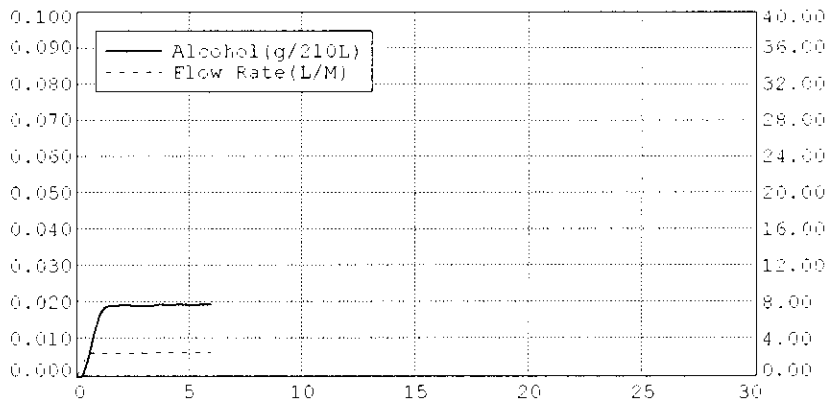
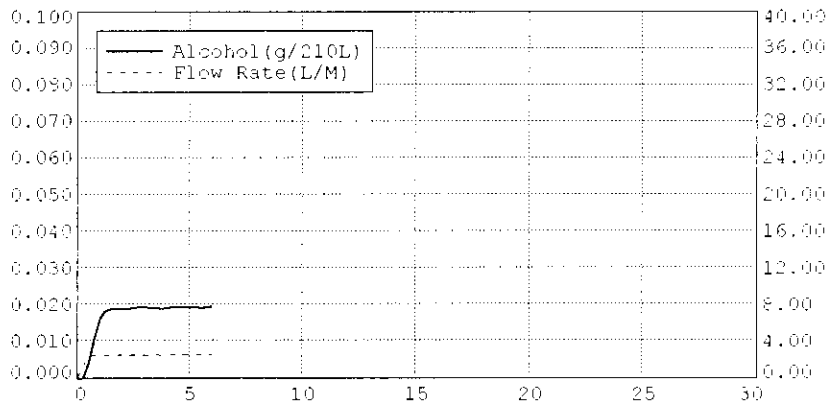
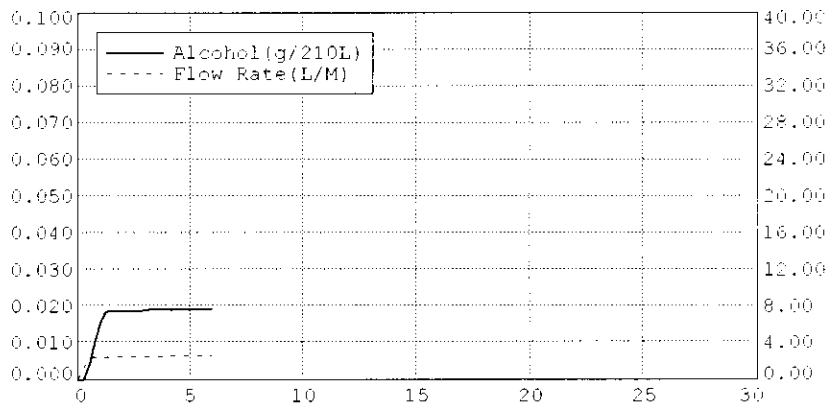
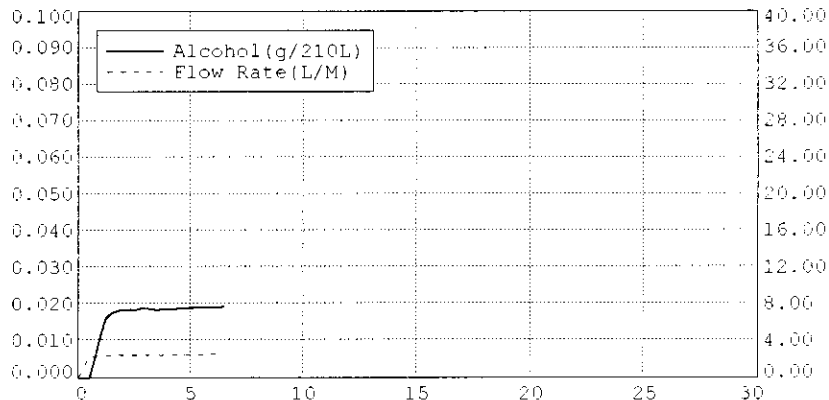
Date: 02/13/2019  
 Time: 08:41:31

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 29.55: 0.020  
 LOT #: AG805804  
 EXPIRATION: 02/27/2020  
 TANK PRESSURE: 979 psi

BLANK TEST	0.000	08:42
INTERNAL STANDARD	VERIFIED	08:42
EXTERNAL STANDARD	0.020	08:42
BLANK TEST	0.000	08:43
EXTERNAL STANDARD	0.021	08:44
BLANK TEST	0.000	08:44
EXTERNAL STANDARD	0.021	08:45
BLANK TEST	0.000	08:46
EXTERNAL STANDARD	0.021	08:46
BLANK TEST	0.000	08:47
EXTERNAL STANDARD	0.020	08:47
BLANK TEST	0.000	08:48

Average = 0.0206  
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100666

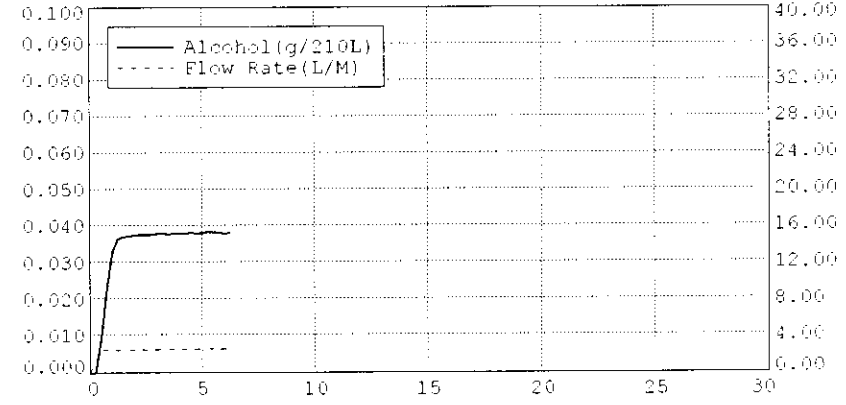
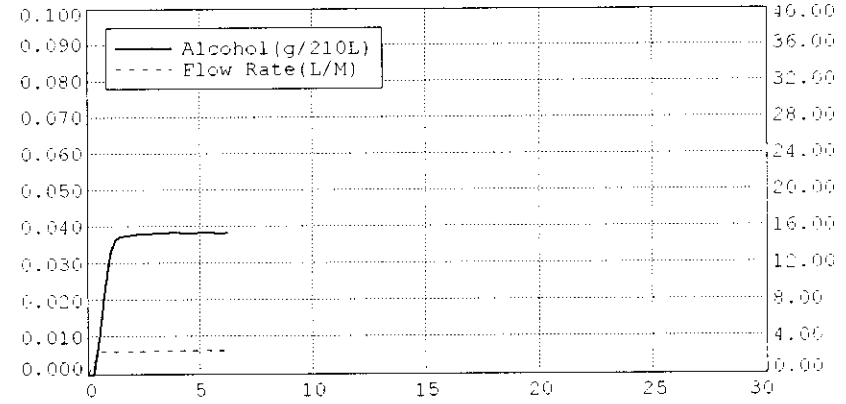
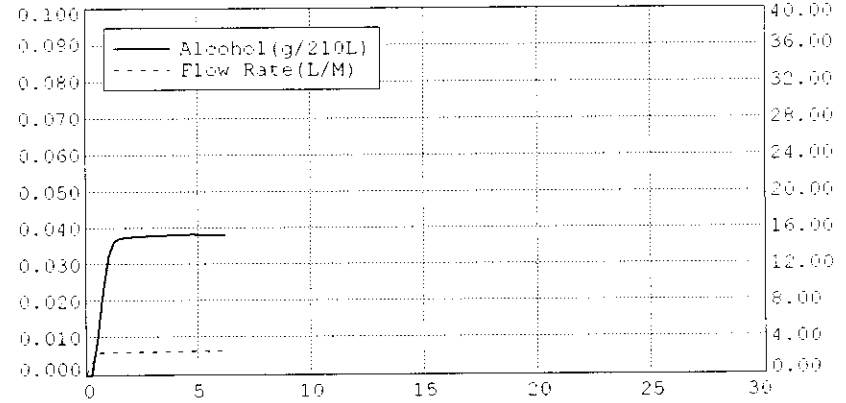
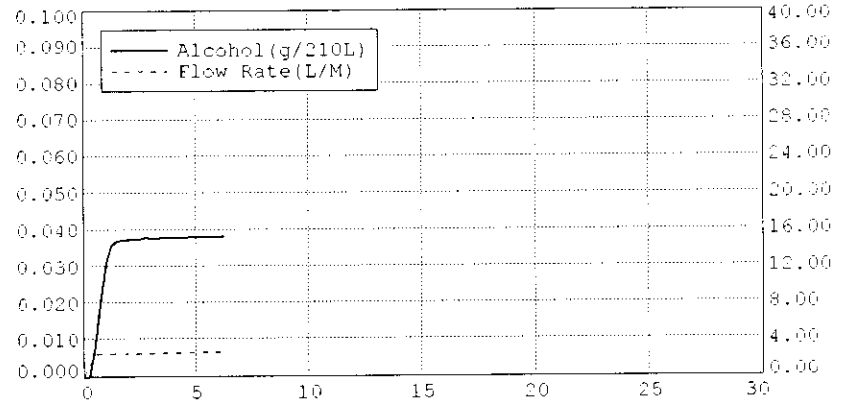
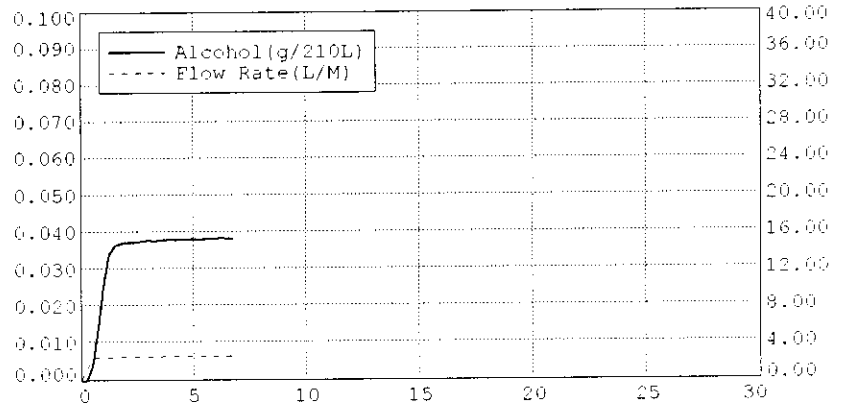
Date: 02/13/2019  
 Time: 08:48:51

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 29.54: 0.039  
 LOT #: AG733403  
 EXPIRATION: 11/30/2019  
 TANK PRESSURE: 942 psi

BLANK TEST	0.000	08:50
INTERNAL STANDARD	VERIFIED	08:50
EXTERNAL STANDARD	0.040	08:50
BLANK TEST	0.000	08:51
EXTERNAL STANDARD	0.039	08:51
BLANK TEST	0.000	08:52
EXTERNAL STANDARD	0.040	08:52
BLANK TEST	0.000	08:53
EXTERNAL STANDARD	0.040	08:53
BLANK TEST	0.000	08:54
EXTERNAL STANDARD	0.039	08:54
BLANK TEST	0.000	08:55

Average = 0.0396  
 Std Dev = 0.0005





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100666

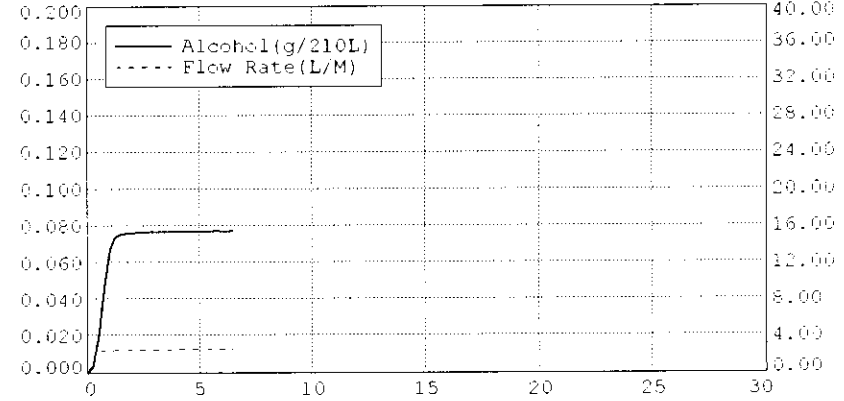
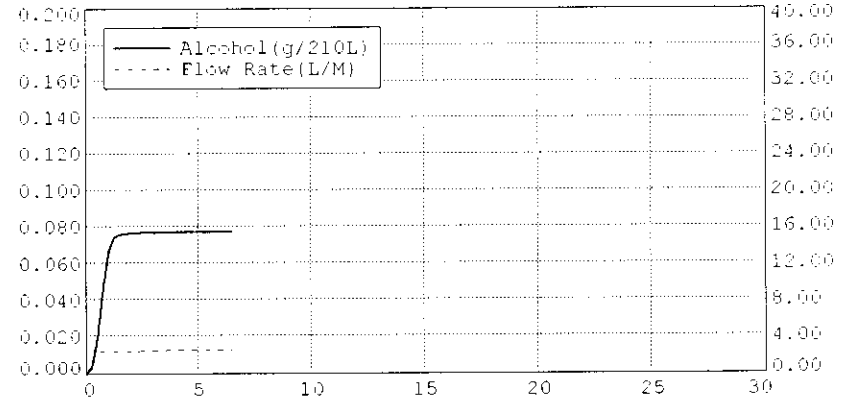
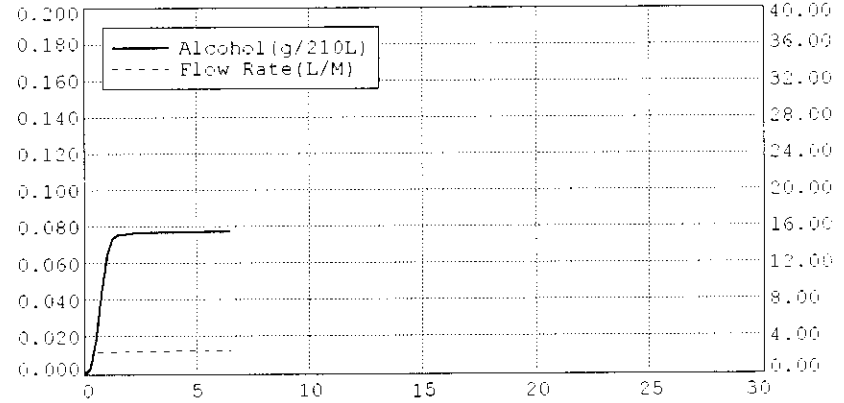
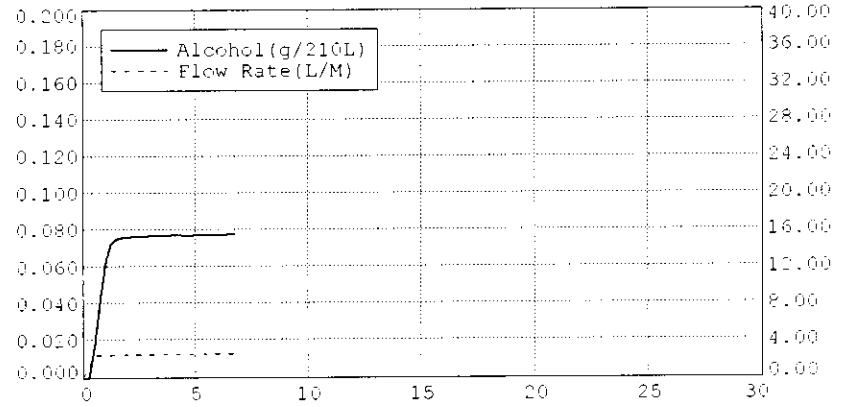
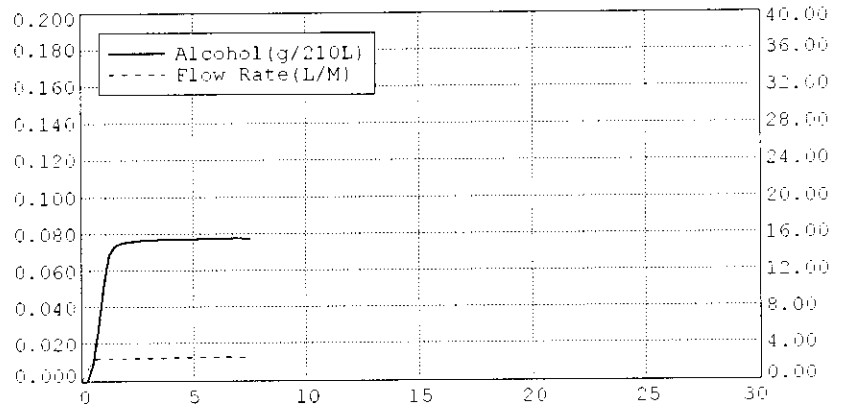
Date: 02/13/2019  
 Time: 08:56:15

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 29.54: 0.079  
 LOT #: AG826101  
 EXPIRATION: 09/18/2020  
 TANK PRESSURE: 924 psi

BLANK TEST	0.000	08:58
INTERNAL STANDARD	VERIFIED	08:58
EXTERNAL STANDARD	0.079	08:58
BLANK TEST	0.000	08:59
EXTERNAL STANDARD	0.079	08:59
BLANK TEST	0.000	09:00
EXTERNAL STANDARD	0.079	09:00
BLANK TEST	0.000	09:01
EXTERNAL STANDARD	0.078	09:01
BLANK TEST	0.000	09:02
EXTERNAL STANDARD	0.078	09:02
BLANK TEST	0.000	09:03

Average = 0.0786  
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100666

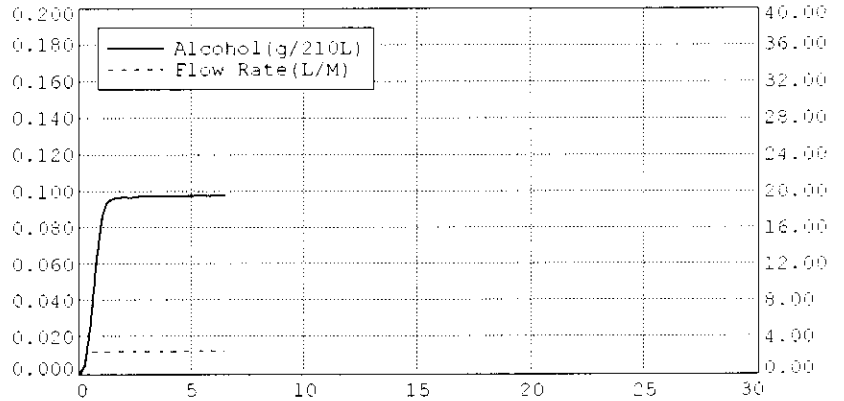
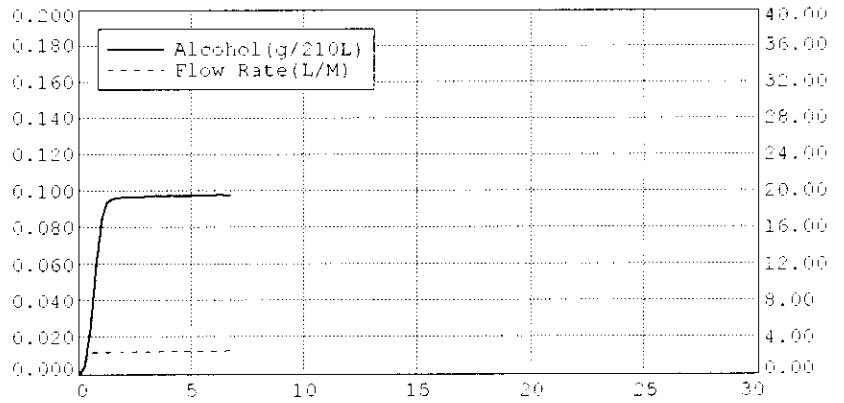
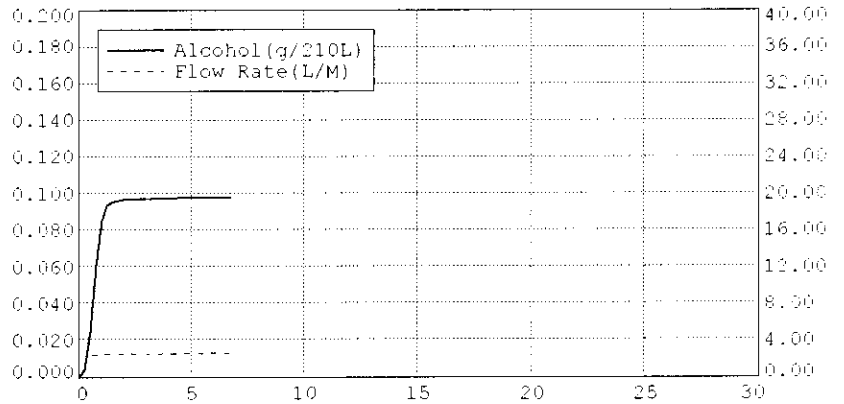
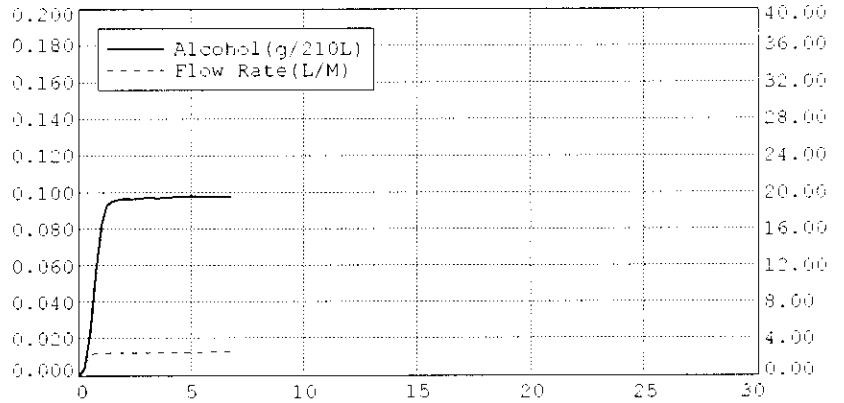
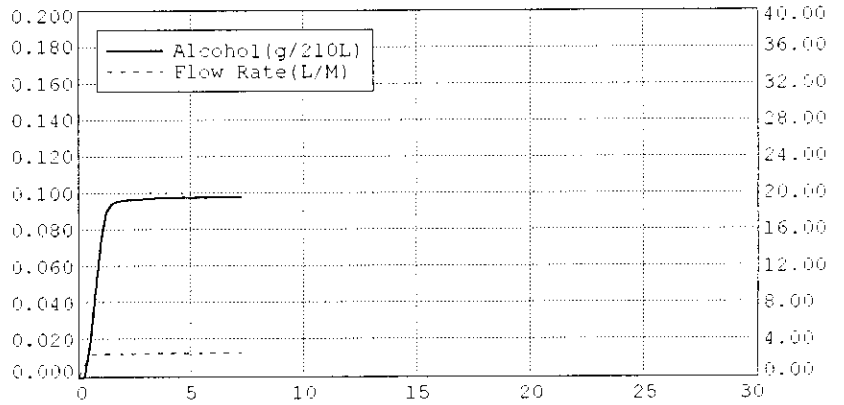
Date: 02/13/2019  
 Time: 09:04:38

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.55: 0.099  
 LOT #: AG805903  
 EXPIRATION: 02/28/2020  
 TANK PRESSURE: 943 psi

BLANK TEST	0.000	09:05
INTERNAL STANDARD	VERIFIED	09:05
EXTERNAL STANDARD	0.099	09:06
BLANK TEST	0.000	09:07
EXTERNAL STANDARD	0.099	09:07
BLANK TEST	0.000	09:08
EXTERNAL STANDARD	0.099	09:08
BLANK TEST	0.000	09:09
EXTERNAL STANDARD	0.099	09:09
BLANK TEST	0.000	09:10
EXTERNAL STANDARD	0.099	09:10
BLANK TEST	0.000	09:11

Average = 0.0990  
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 5

Alaska Department of Public Safety  
 DATAMASTER dmt: 100666

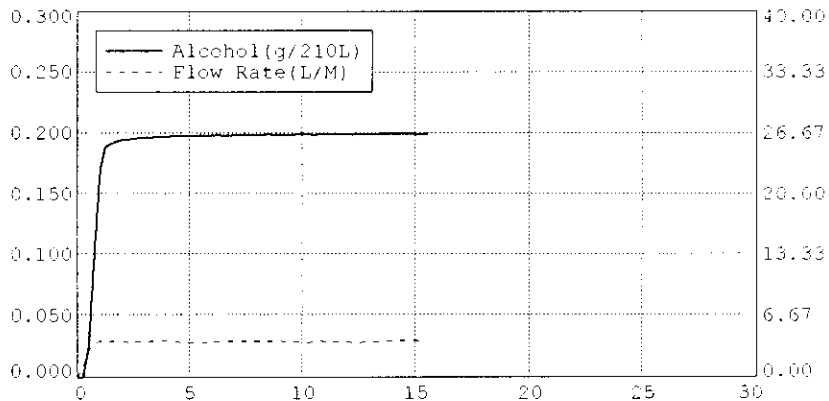
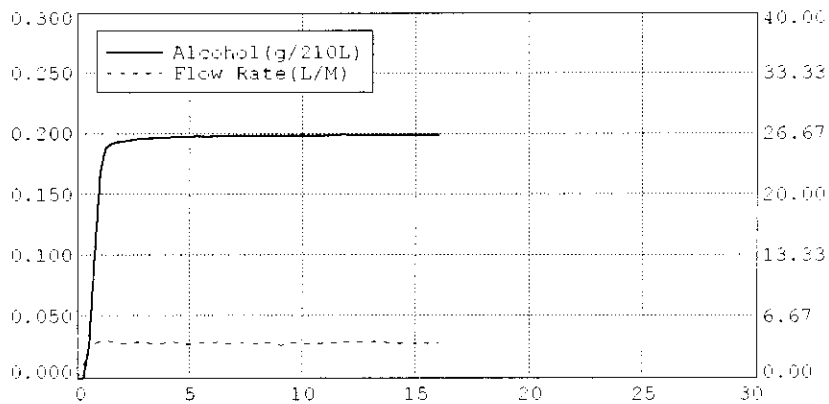
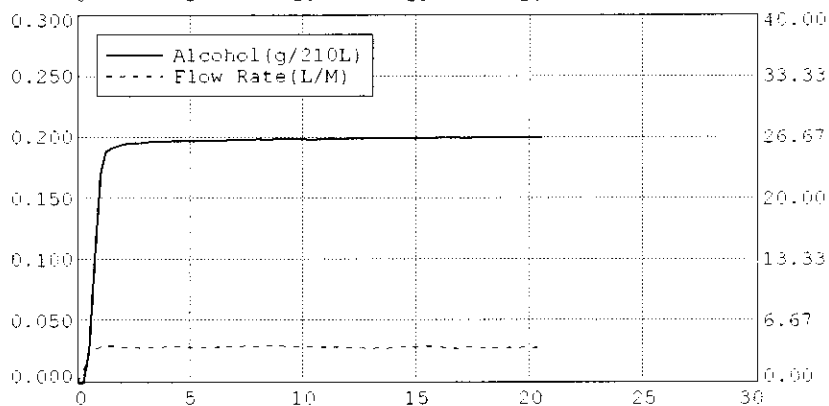
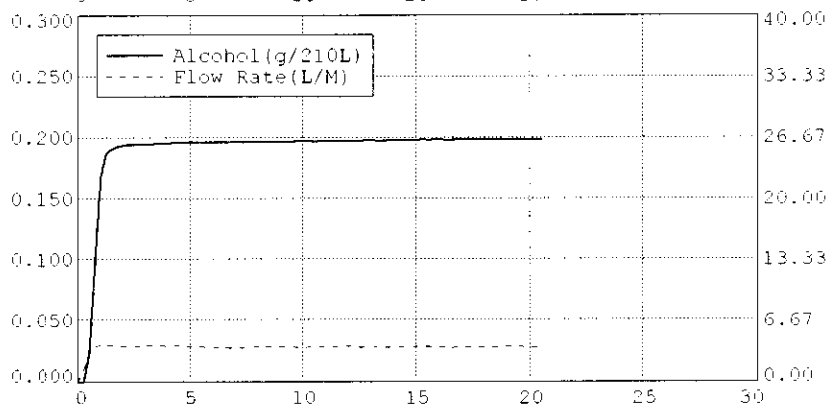
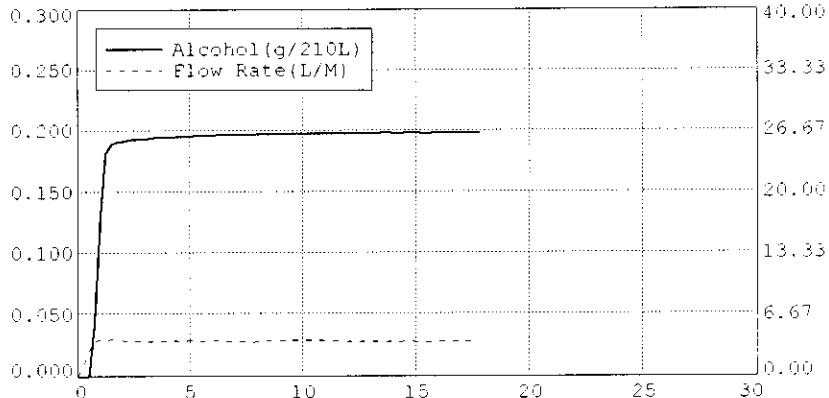
Date: 02/13/2019  
 Time: 09:21:11

EXTERNAL STANDARD INFORMATION

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

BLANK TEST	0.000	09:22
INTERNAL STANDARD	VERIFIED	09:22
EXTERNAL STANDARD	0.199	09:22
BLANK TEST	0.000	09:23
EXTERNAL STANDARD	0.199	09:24
BLANK TEST	0.000	09:25
EXTERNAL STANDARD	0.200	09:25
BLANK TEST	0.000	09:26
EXTERNAL STANDARD	0.200	09:26
BLANK TEST	0.000	09:27
EXTERNAL STANDARD	0.200	09:28
BLANK TEST	0.000	09:29

Average = 0.1996  
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 6

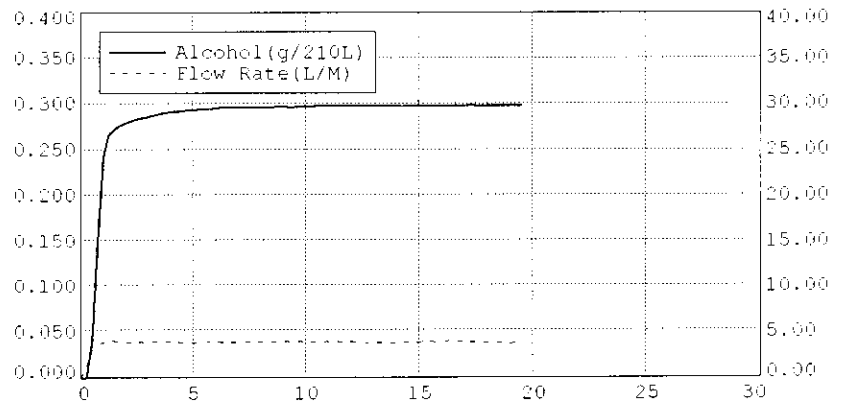
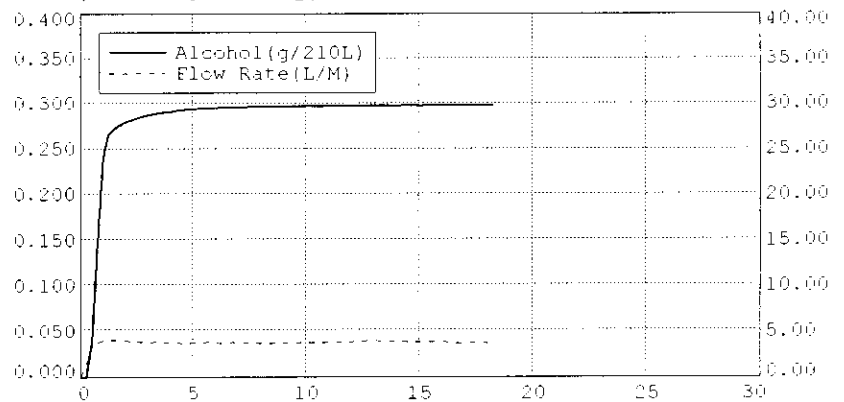
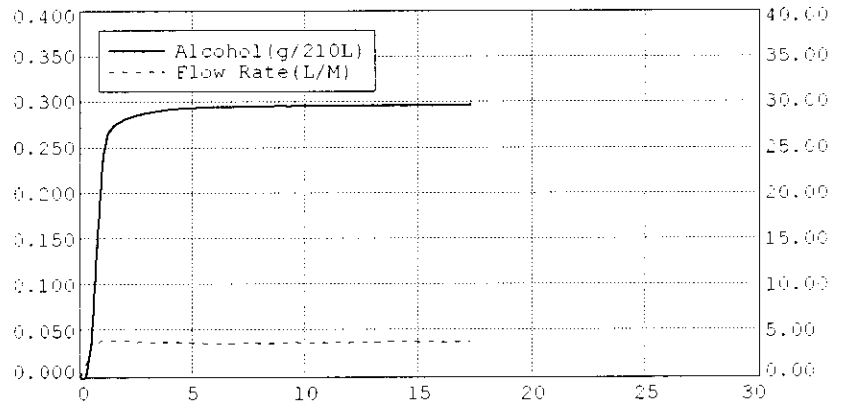
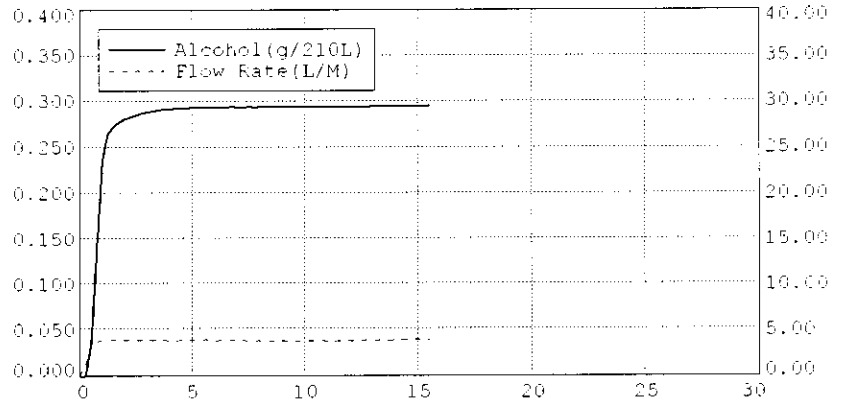
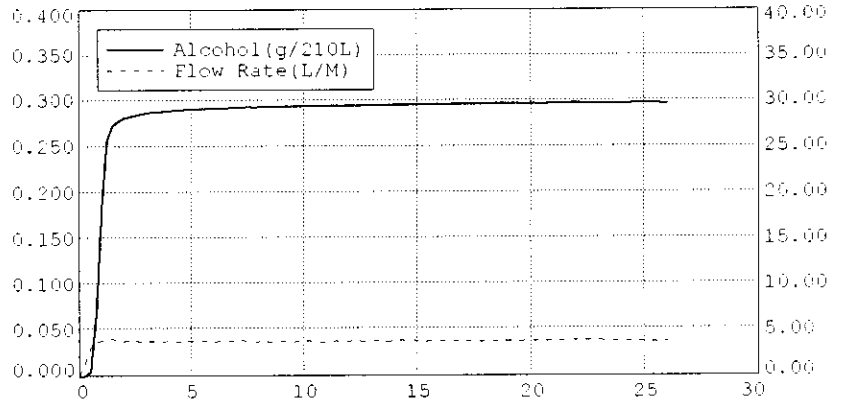
Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/13/2019  
Time: 09:34:47

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

BLANK TEST	0.000	09:35
INTERNAL STANDARD	VERIFIED	09:36
EXTERNAL STANDARD	0.297	09:36
BLANK TEST	0.000	09:37
EXTERNAL STANDARD	0.295	09:37
BLANK TEST	0.000	09:38
EXTERNAL STANDARD	0.297	09:39
BLANK TEST	0.000	09:40
EXTERNAL STANDARD	0.298	09:40
BLANK TEST	0.000	09:41
EXTERNAL STANDARD	0.298	09:41
BLANK TEST	0.000	09:42

Average = 0.2970  
Std Dev = 0.0012



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/14/2019  
Time: 08:48:04

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

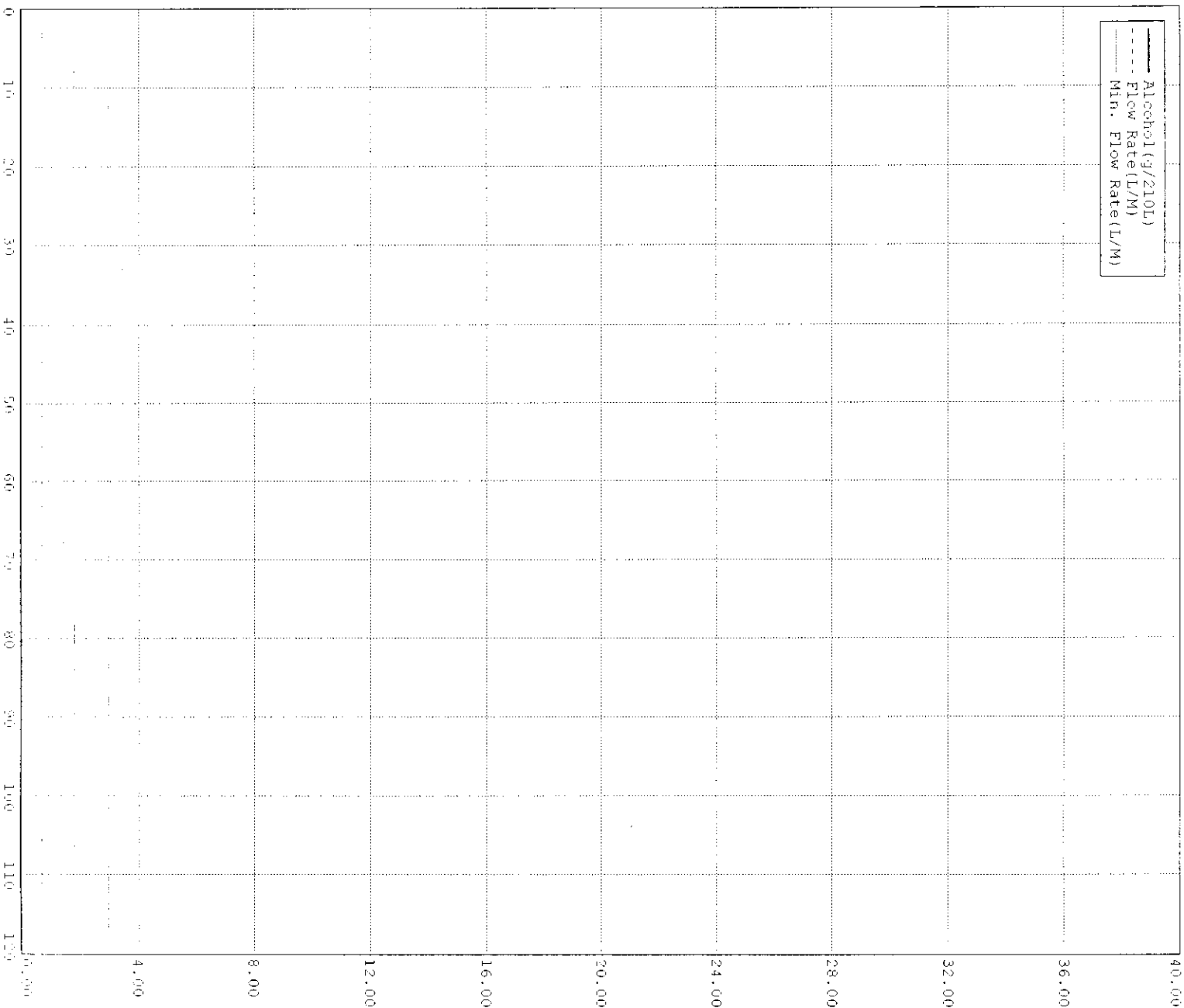
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.80: 0.080  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	08:49
BLANK TEST	0.000	08:49
INTERNAL STANDARD	VERIFIED	08:49
EXTERNAL STANDARD	0.080	08:49
BLANK TEST	0.000	08:50
SUBJECT SAMPLE	INCOMPLETE	08:52

*BMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/14/2019  
Time: 08:55:10

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

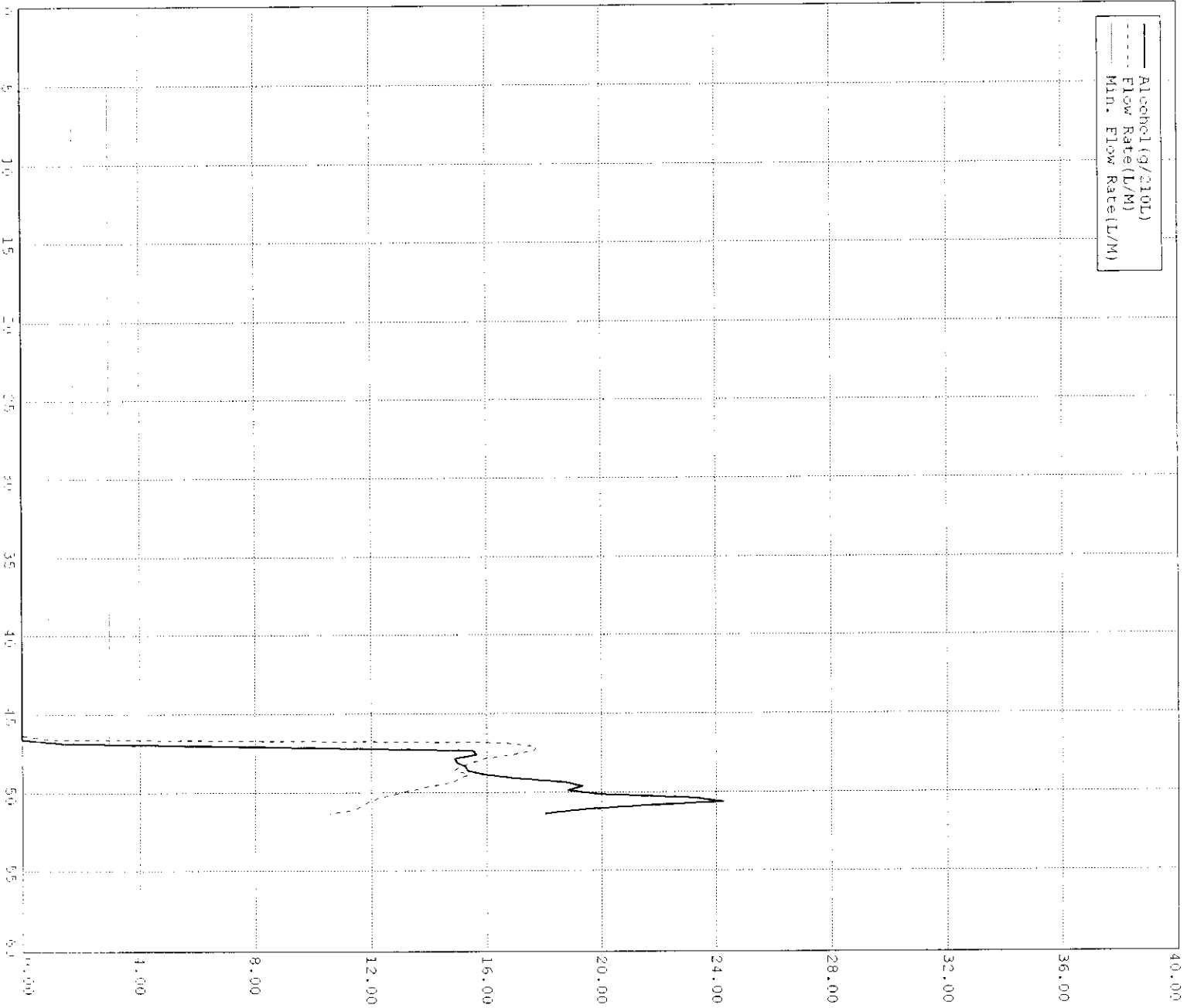
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.81: 0.080  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	08:56
BLANK TEST	0.000	08:57
INTERNAL STANDARD	VERIFIED	08:57
EXTERNAL STANDARD	0.079	08:57
BLANK TEST	0.000	08:58
SUBJECT SAMPLE	INVALID	08:59

*BNB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/14/2019  
Time: 09:02:31

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 #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK  
BLANK TEST PASSED 09:03  
INTERNAL STANDARD VERIFIED 09:03

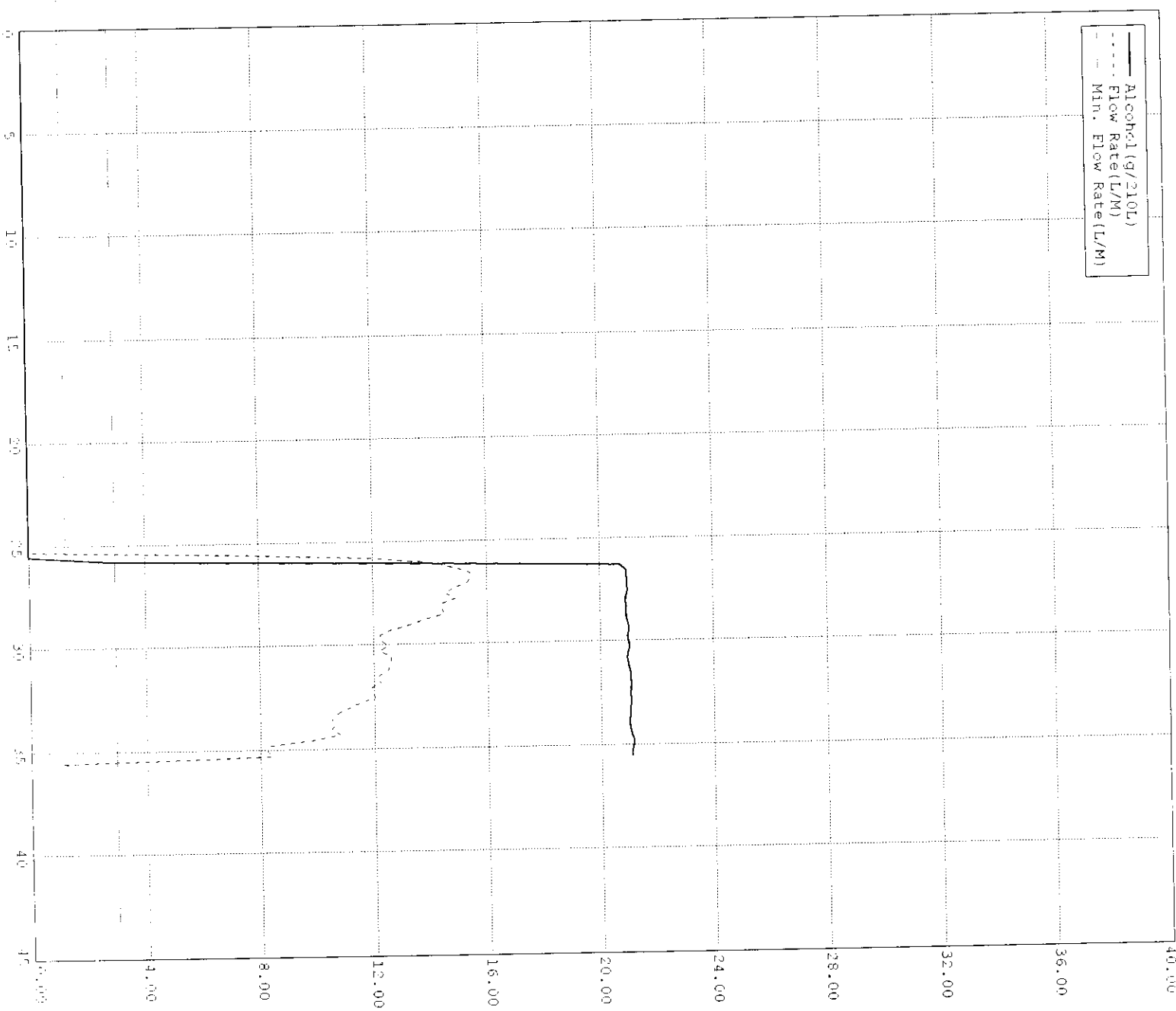
Xq = 0.092 (0.10%)  
EXTERNAL STANDARD 0.079 09:04  
X[1] = 0.0791 (-0.0012) (0.0017)  
BLANK TEST 0.000 09:05  
SUBJECT SAMPLE XXX 09:05  
X[1] = 0.1062 (-0.0192) (-0.0001)

Interference Detected

Filter 2 Avg: ~~0.0009~~  
Filter 3 Avg: 0.0018  
BMB 2/15/19

-0.0013  
BMB 2/21/19

BMB



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/14/2019  
Time: 09:10:35

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

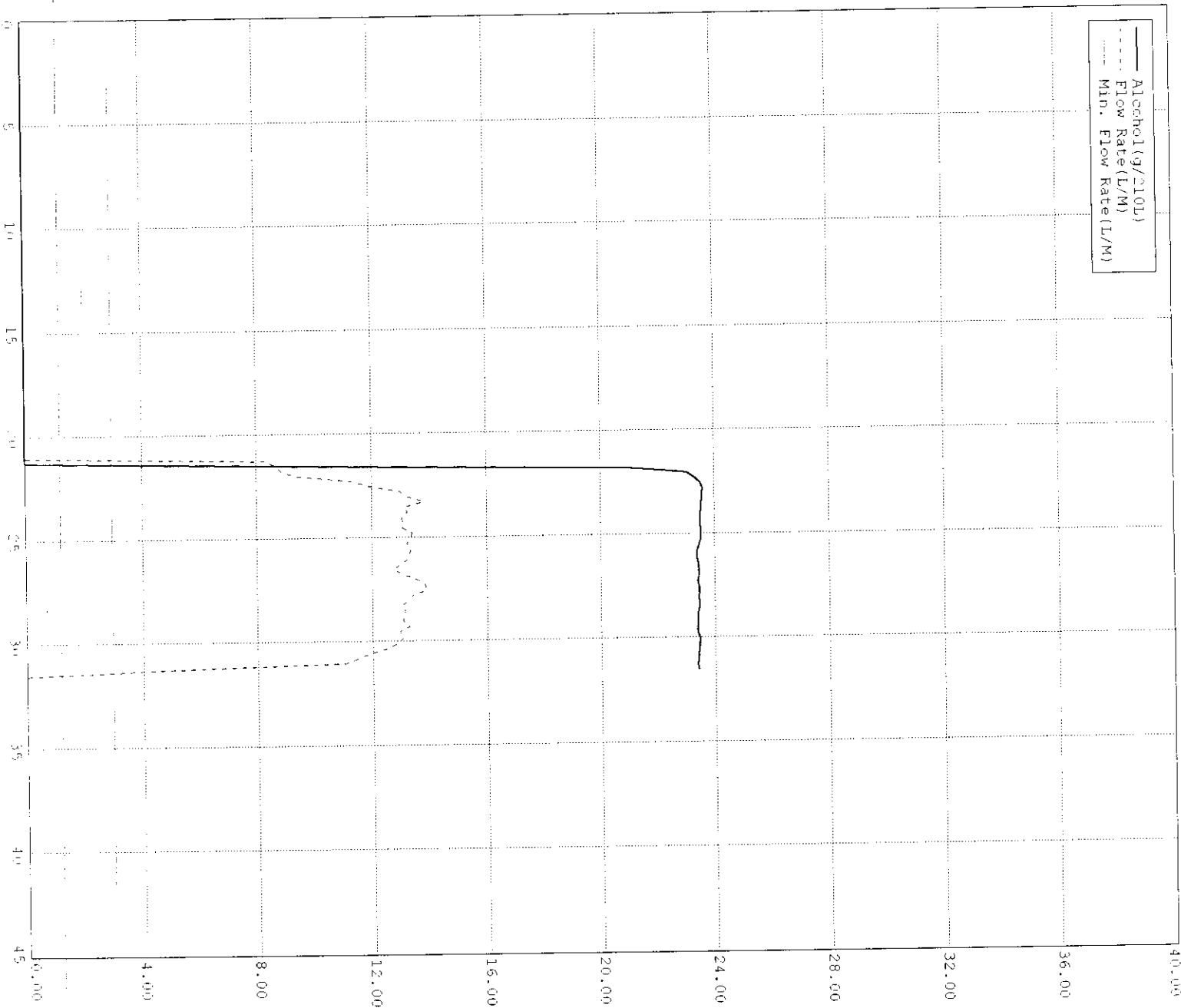
DEPT/AGENCY:  
INTERFERENCE ISOPROPANOL  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.82: 0.080  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	09:11
BLANK TEST	0.000	09:12
INTERNAL STANDARD	VERIFIED	09:12
Xq = 0.092 (0.00%)	0.079	09:12
EXTERNAL STANDARD	X[1] = 0.0794 (-0.0009)	(0.0017)
BLANK TEST	0.000	09:13
SUBJECT SAMPLE	XXX	09:13
X[1] = 0.1178 (-0.0233)	(0.0006)	

Interference Detected





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/14/2019  
Time: 09:19:01

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

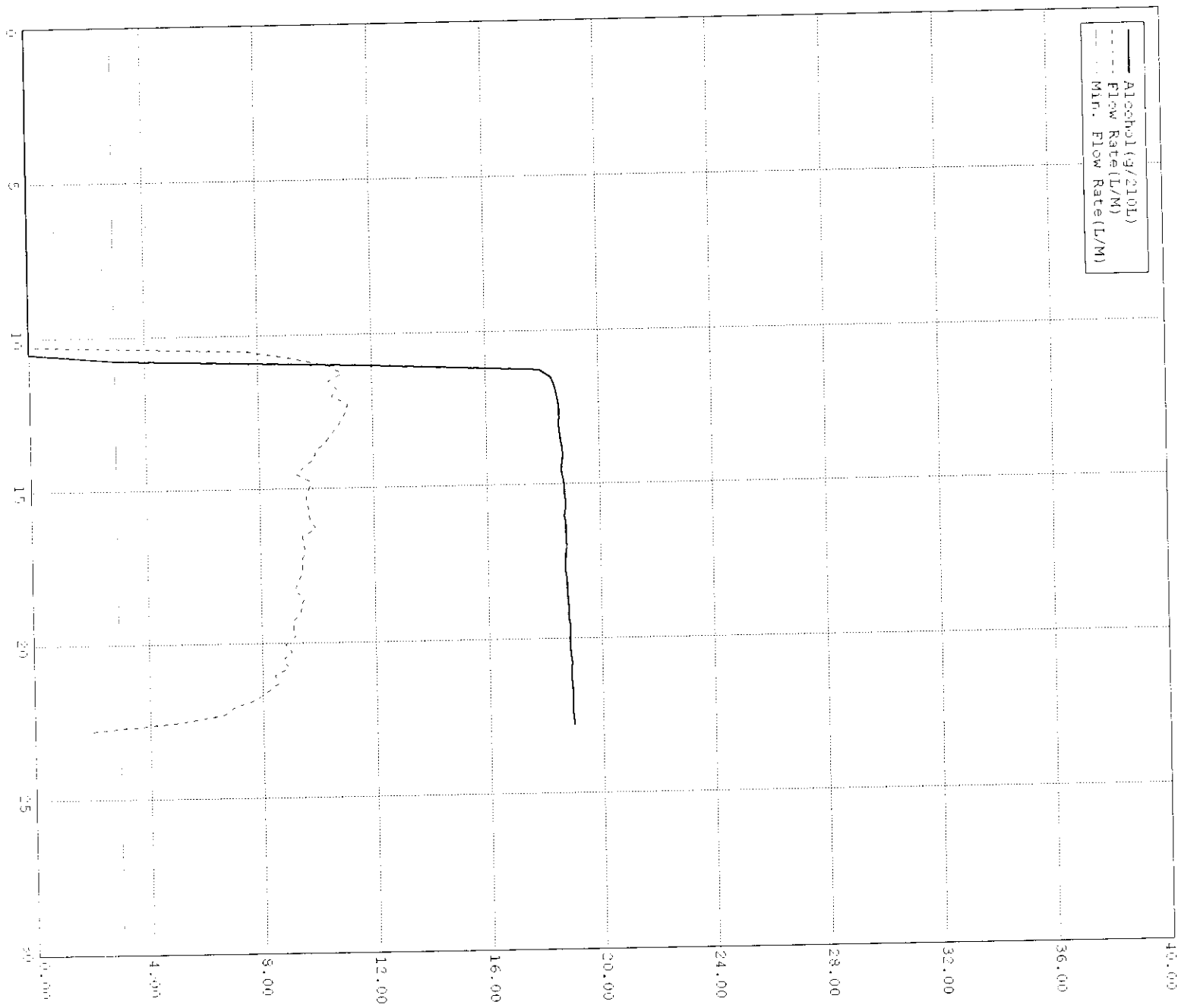
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.82: 0.080  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	09:20
INTERNAL STANDARD	0.000	09:20
INTERNAL STANDARD	VERIFIED	09:20
EXTERNAL STANDARD	0.079	09:20
Xq = 0.091 (0.38%)		
X[1] = 0.0792 (-0.0016)	(0.0022)	
BLANK TEST	0.000	09:21
SUBJECT SAMPLE (Vol=1.93L)	0.095	09:21
X[1] = 0.0958 (-0.0006)	(0.0003)	
BLANK TEST	0.000	09:22
EXTERNAL STANDARD	0.079	09:23
X[1] = 0.0787 (-0.0014)	(0.0015)	
BLANK TEST	0.000	09:24

*BBMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/14/2019  
Time: 09:30:57

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

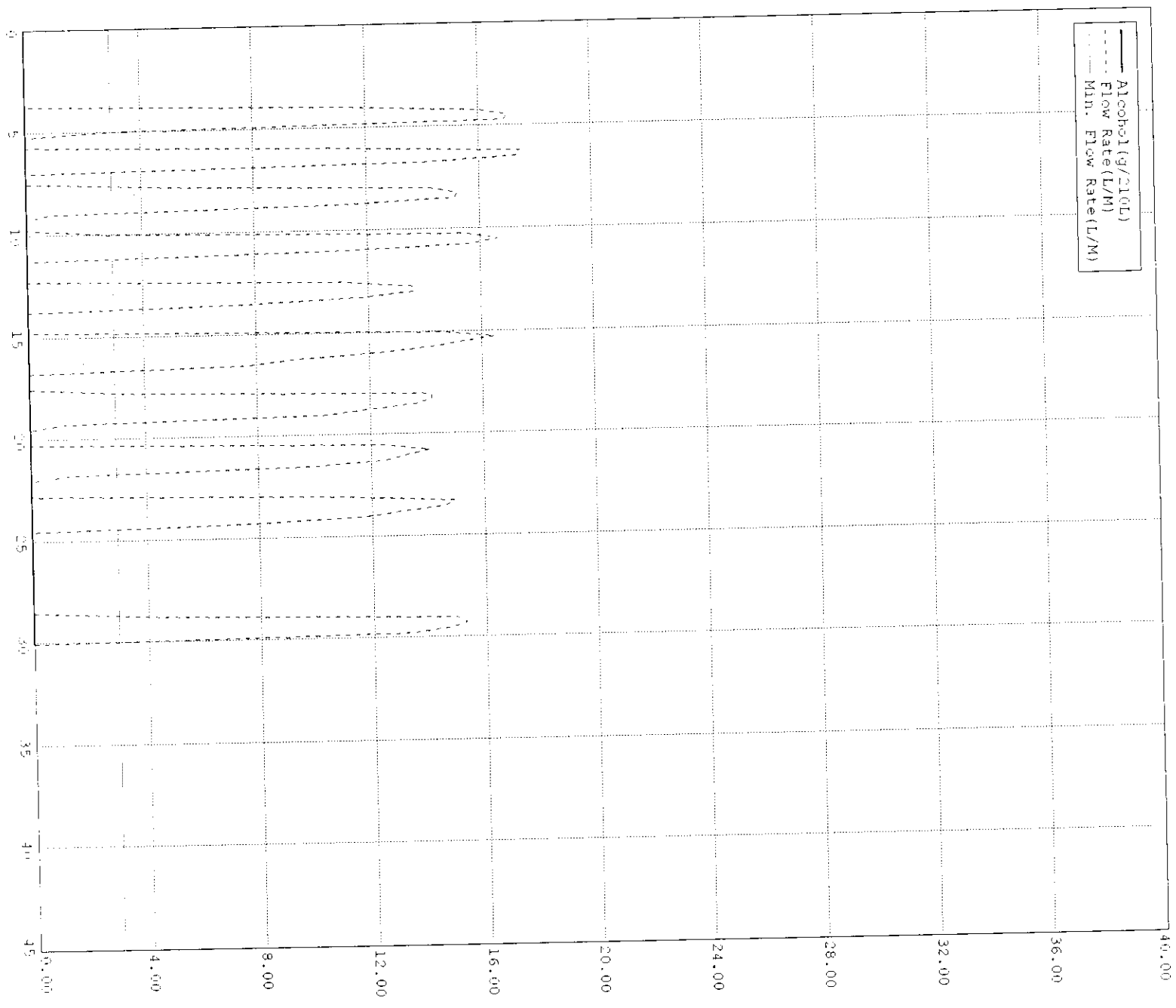
DEPT/AGENCY:  
EXCEEDED ATTEMPTS  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.82: 0.080  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	09:33
BLANK TEST	0.000	09:33
INTERNAL STANDARD	VERIFIED	09:33
EXTERNAL STANDARD	0.079	09:33
BLANK TEST	0.000	09:34
SUBJECT SAMPLE	XXX	09:35

Maximum Attempts Exceeded

*BRMB*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dnt: 100666

Date: 02/14/2019  
Time: 09:39:34

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

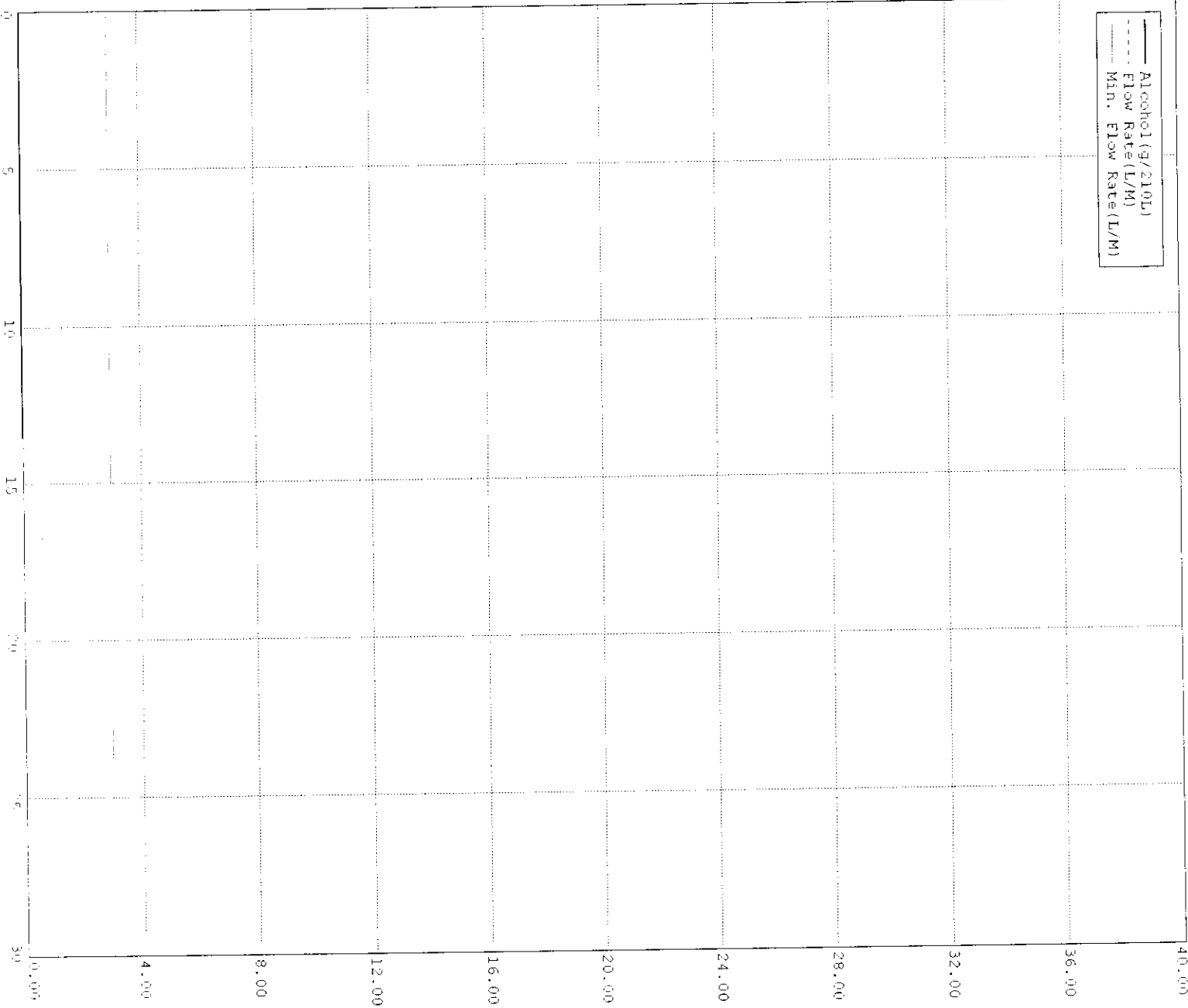
EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.82: 0.080  
LOT #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	09:41
BLANK TEST	0.000	09:41
INTERNAL STANDARD	VERIFIED	09:41
EXTERNAL STANDARD	0.080	09:41
BLANK TEST	0.000	09:42

RFI DETECTED

*BMB*

Alcohol (g/210L)  
Flow Rate(L/M)  
Min. Flow Rate(L/M)



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100666

Date: 02/14/2019  
Time: 09:56:28

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 #: AG826101  
EXPIRATION: 09/18/2020

DIAGNOSTIC CHECK	PASSED	09:57
BLANK TEST	0.000	09:57
INTERNAL STANDARD	VERIFIED	09:57
EXTERNAL STANDARD	0.080	09:58
BLANK TEST	0.000	09:58
SUBJECT SAMPLE (Vol=1.84L)	0.000	09:59
BLANK TEST	0.000	10:00
EXTERNAL STANDARD	0.080	10:01
BLANK TEST	0.000	10:01

*BMB*

