

# 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 100417 Analyst CRF Start Date 12/2/15

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 ILMO Lot 02915020A2 Exp 3/5/17
- ii. 0.040g/210L Mnf ILMO Lot 02915040A3 Exp 3/5/17
- iii. 0.080g/210L Mnf ILMO Lot 01315080A2 Exp 2/5/17
- iv. 0.100g/210L Mnf ILMO Lot 02915100A1 Exp 3/5/17
- v. 0.200g/210L Mnf Guth Lot 15130 Exp 5/11/17
  - 1. Simulator S/N DR6267 Date Calibrated 1/20/15
- vi. 0.300g/210L Mnf Guth Lot 14270 Exp 12/2/16
  - 1. Simulator S/N DR4162 Date Calibrated 1/19/15

5. Functional Tests (attached)

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

- i. Acetone - Mnf Guth Lot 15050 Level 0.100 Exp 3/9/17
  - 1. Simulator S/N DR4163 Date Calibrated 1/19/15
- ii. Isopropanol - Mnf Guth Lot 15050 Level 0.100 Exp 3/9/17
  - 1. Simulator S/N SD1176 Date Calibrated 1/20/15
- iii. Negative Control - Mnf Guth Lot 15050 Level 0.100 Exp 3/9/17
  - 1. Simulator S/N DR4178 Date Calibrated 1/19/15

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 12/2/15

DIAGNOSTIC RECORD

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100417  
-----

Date: 12/02/2015  
Time: 10:13:06

VERSIONS  
DMT: 3.01  
PIC: 3.02  
Modem: 2.6  
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.8°C                    PASSED  
(44.0°C - 52.0°C)  
Breath Tube       = 48.1°C                   PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage     = 1.86 V                   PASSED  
(1.18 V - 2.76 V)  
Cooler Voltage   = 1.89 V                   PASSED  
(1.13 V - 2.65 V)  
Bias Voltage     = 80 V                     PASSED  
(48 V - 112 V)  
Chopper Freq     = 538 Hz                   PASSED  
(475 Hz - 575 Hz)  
Barometer        = 29.1 in

PUMP INFO

Flow Rate = 4.119 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 = 0.094 1.29% (0.00% - 4.00%)                    PASSED

Technician Screen

-----  
DATAMASTER dmt: 100417  
-----

Date: 12/02/2015  
Time: 10:24 AM

Temperatures (°C)  
Sample Cell: 49.8°C  
Breath Tube: 48.0°C

Current Barometer 29.2 in  
Volume (Ltr) 1.54

Settings  
Lamp: 1.86 V  
Bias: 80 V  
Cooler: 1.94 V  
Chopper: 537 Hz

Voltages (V)  
Flow: 1.03 V  
Detector: 0.057 V

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100417  
-----

Date: 06/30/2015  
Time: 11:48:29

OPERATOR NAME:

M M M

CERTIFICATE #: GUTH 2100, DR7001, 34.0C

Ca = 0.1010  
CAL = 0.981577 0.800 <= CAL < 1.200  
b1 = 0.0000 0.0000 <= b1 < 0.0040  
b2 = 0.0028 0.0010 <= b2 < 0.0100  
b3 = 0.0000 0.0000 <= b3 < 0.0040  
Xq = 0.0950 0.0500 <= Xq < 0.2000  
a21 = 1.161234 1.050 <= a21 < 1.300  
a31 = 0.518447 0.300 <= a31 < 0.800

15840 DR7001  
2-16-16 34.0 C

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100417

Date: 12/02/2015  
Time: 11:00:34

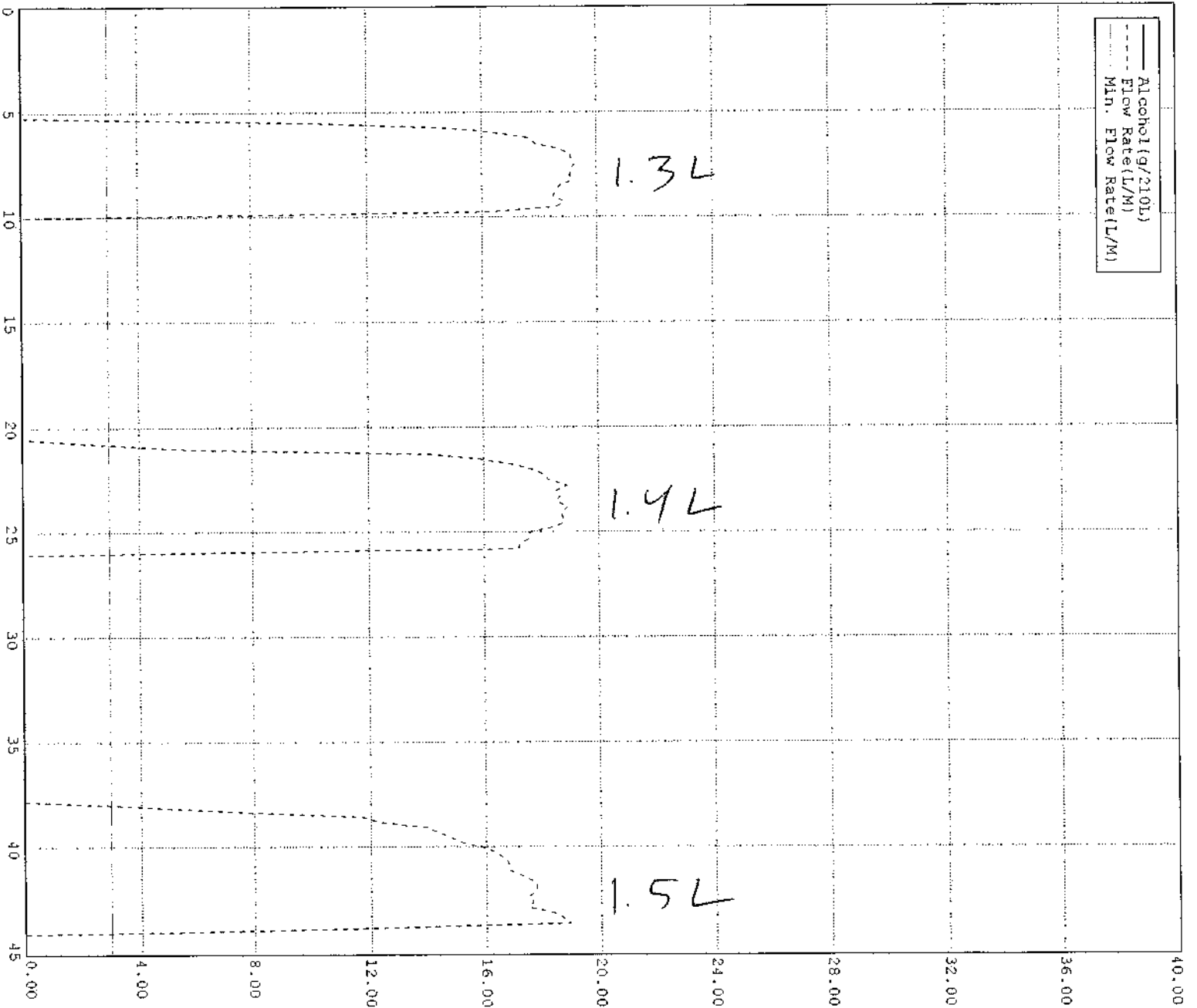
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
MINIMUM VOLUME  
OPERATOR'S #: XXXX

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AF 29.16: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

DIAGNOSTIC CHECK	PASSED	11:01
BLANK TEST	0.000	11:01
INTERNAL STANDARD	VERIFIED	11:01
EXTERNAL STANDARD	0.078	11:02
BLANK TEST	0.000	11:02
SUBJECT SAMPLE (Vol=1.53L)	0.000	11:03
BLANK TEST	0.000	11:04
EXTERNAL STANDARD	0.078	11:04
BLANK TEST	0.000	11:05



LINEARITY CHECK

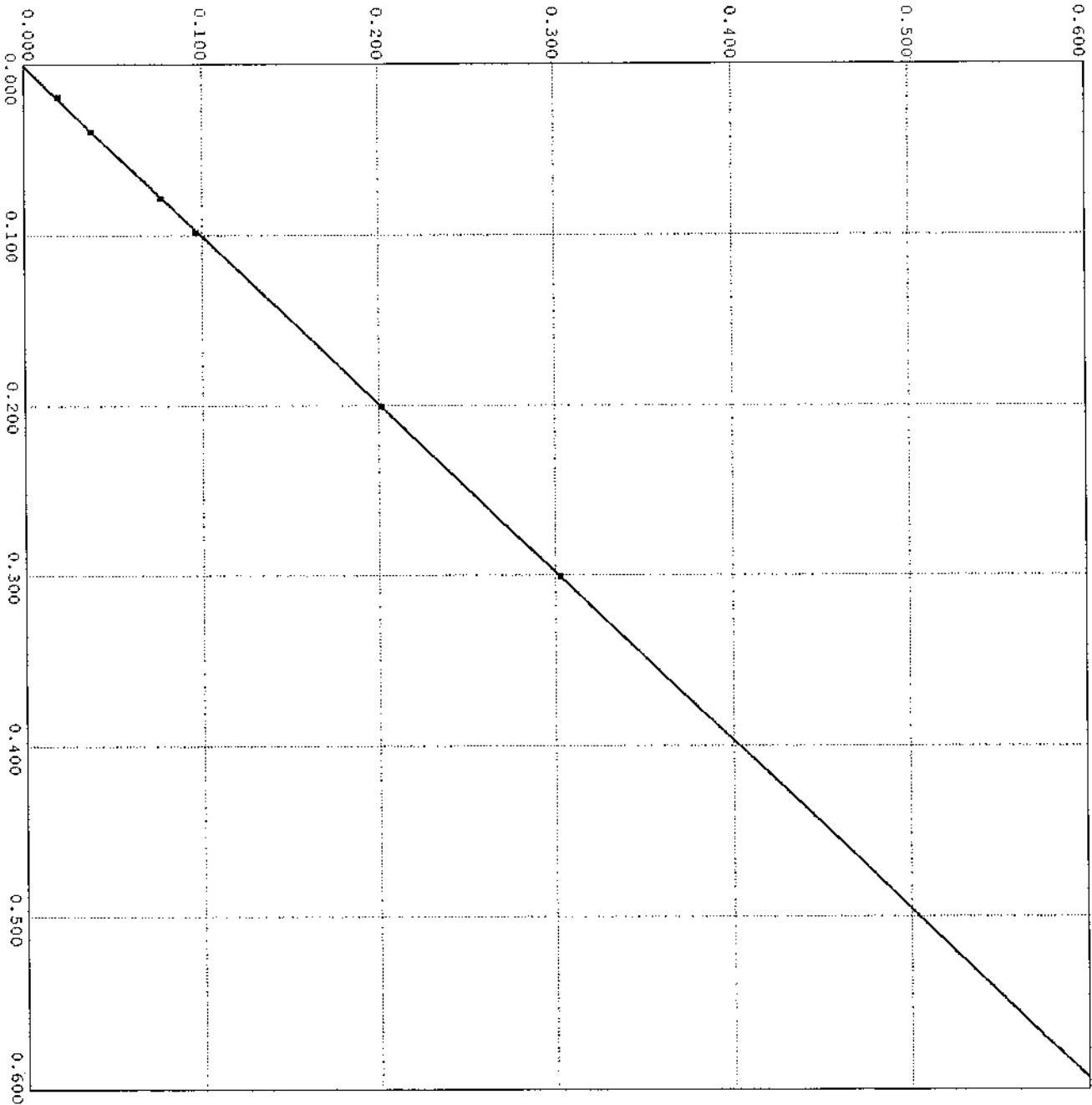
Alaska Department of Public Safety  
DATAMASTER dmt: 100417

Date: 12/02/2015  
Time: 12:24:04

SUPERVISOR NAME:  
CHARLES FOSTER  
OPERATOR'S #: 7734

TARGET	AVERAGE	STD. DEV.
0.019	0.0198	0.0004
0.039	0.0390	0.0000
0.078	0.0778	0.0004
0.098	0.0974	0.0005
0.200	0.2022	0.0004
0.300	0.3034	0.0005

SLOPE = 1.012388  
R<sup>2</sup> = 0.999943



LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100417

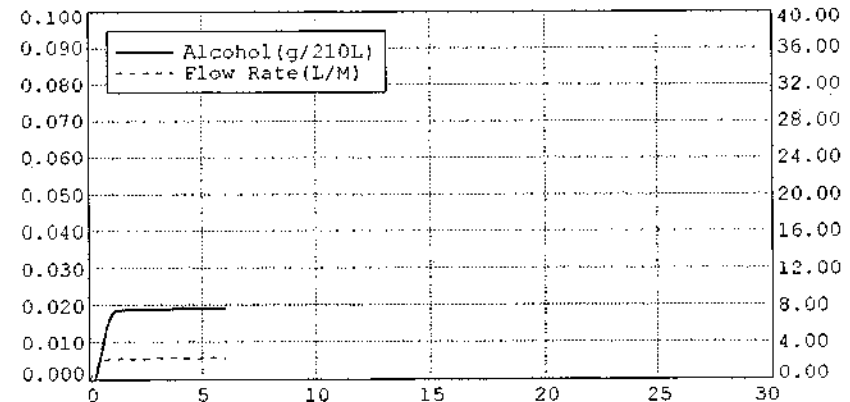
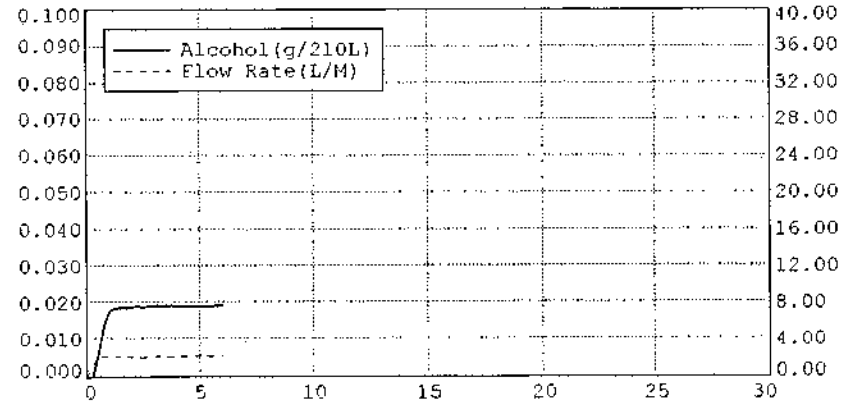
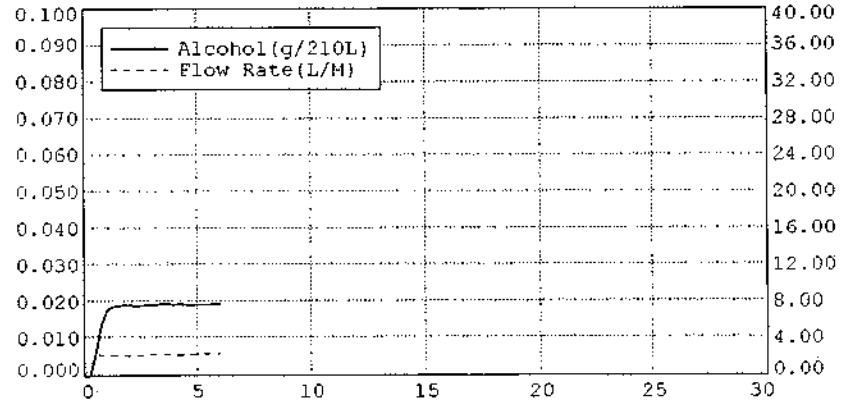
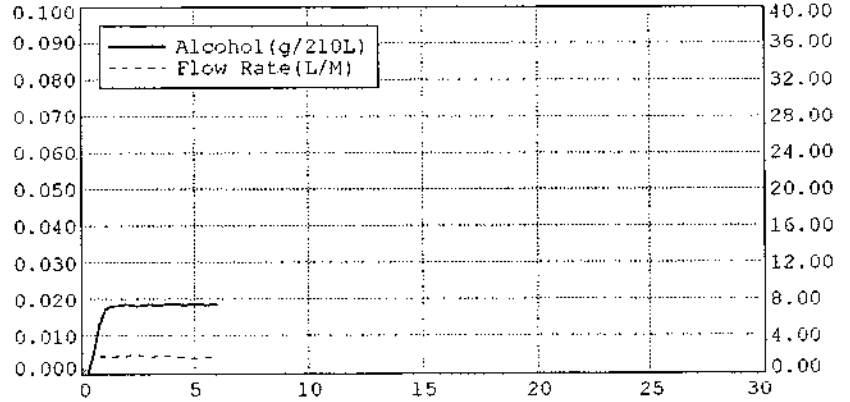
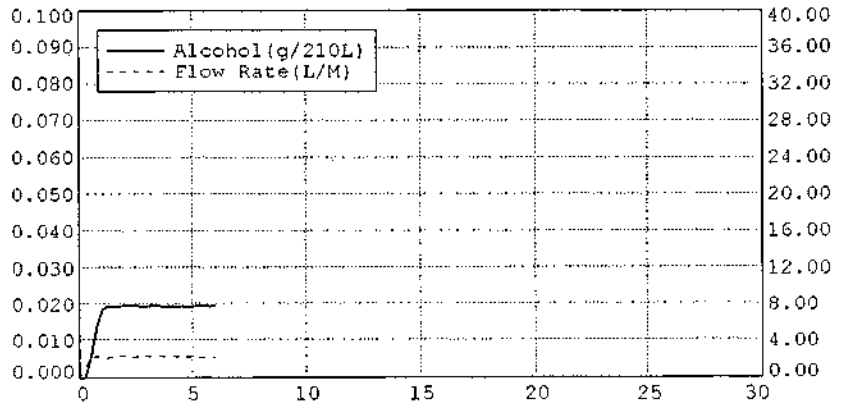
Date: 12/02/2015  
 Time: 12:24:05

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 29.17: 0.019  
 LOT #: 02915020A2  
 EXPIRATION: 03/05/2017  
 TANK PRESSURE: 722 psi

BLANK TEST	0.000	12:25
INTERNAL STANDARD	VERIFIED	12:25
EXTERNAL STANDARD	0.020	12:25
BLANK TEST	0.000	12:26
EXTERNAL STANDARD	0.019	12:26
BLANK TEST	0.000	12:27
EXTERNAL STANDARD	0.020	12:27
BLANK TEST	0.000	12:28
EXTERNAL STANDARD	0.020	12:28
BLANK TEST	0.000	12:29
EXTERNAL STANDARD	0.020	12:30
BLANK TEST	0.000	12:30

Average = 0.0198  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100417

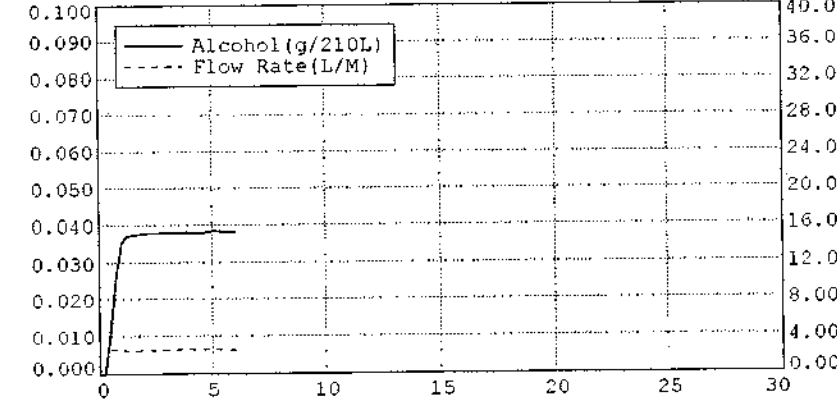
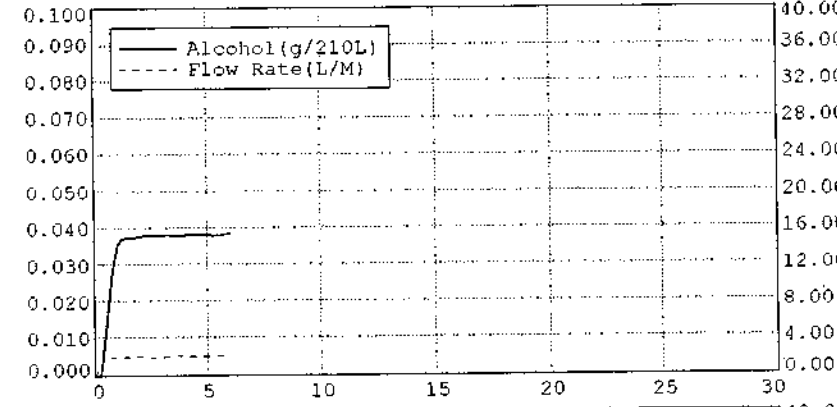
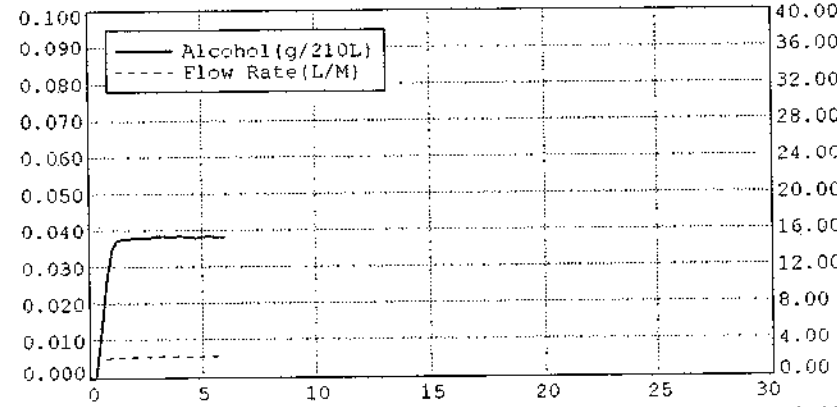
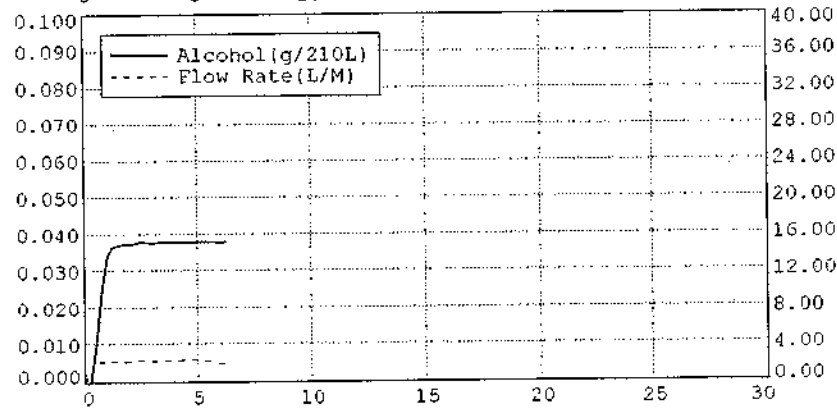
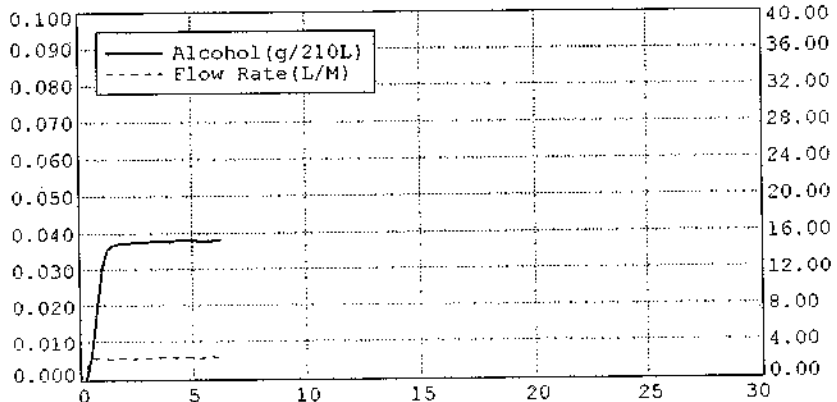
Date: 12/02/2015  
 Time: 12:32:46

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 29.16: 0.039  
 LOT #: 02915040A3  
 EXPIRATION: 03/05/2017  
 TANK PRESSURE: 758 psi

BLANK TEST	0.000	12:34
INTERNAL STANDARD	VERIFIED	12:34
EXTERNAL STANDARD	0.039	12:34
BLANK TEST	0.000	12:35
EXTERNAL STANDARD	0.039	12:35
BLANK TEST	0.000	12:36
EXTERNAL STANDARD	0.039	12:36
BLANK TEST	0.000	12:37
EXTERNAL STANDARD	0.039	12:37
BLANK TEST	0.000	12:38
EXTERNAL STANDARD	0.039	12:38
BLANK TEST	0.000	12:39

Average = 0.0390  
 Std Dev = 0.0000





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100417

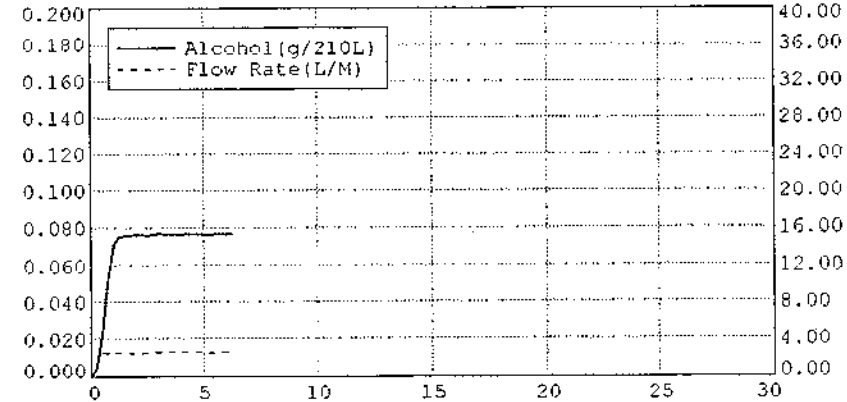
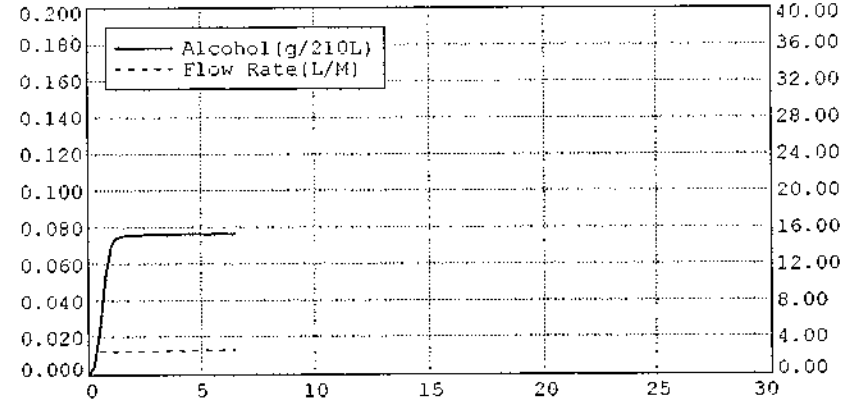
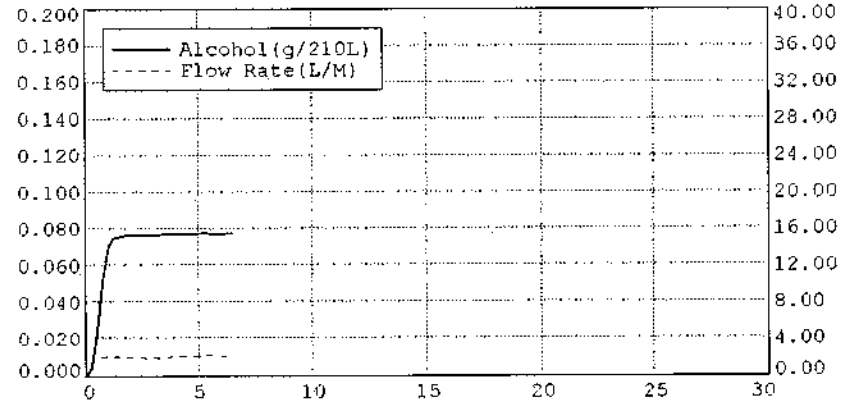
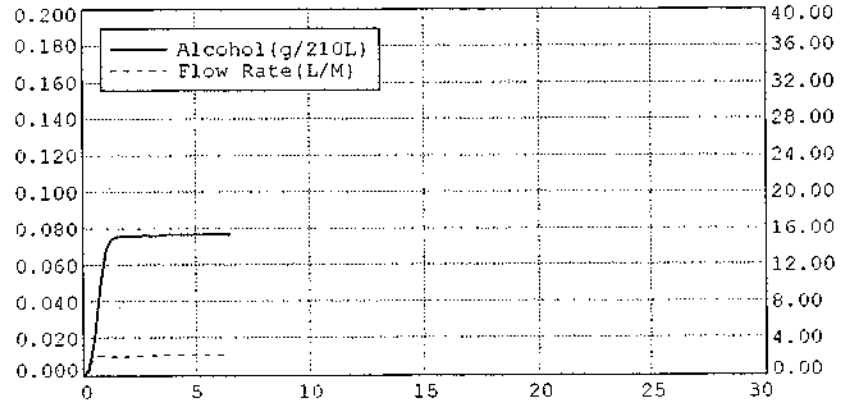
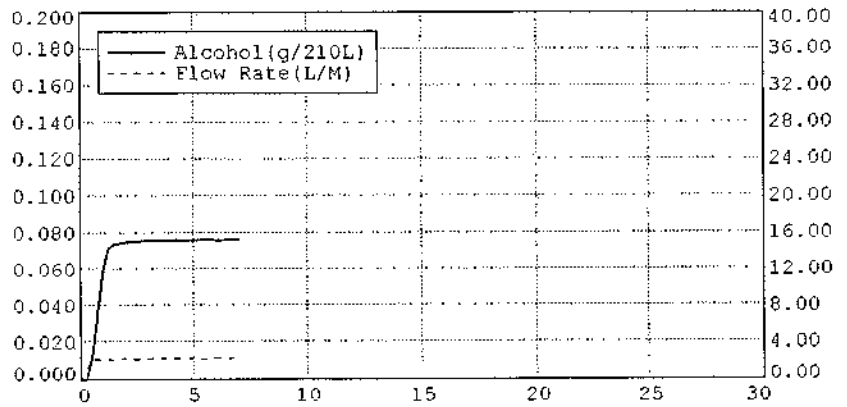
Date: 12/02/2015  
 Time: 12:40:40

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 29.17: 0.078  
 LOT #: 01315080A2  
 EXPIRATION: 02/05/2017  
 TANK PRESSURE: 682 psi

BLANK TEST	0.000	12:41
INTERNAL STANDARD	VERIFIED	12:42
EXTERNAL STANDARD	0.077	12:42
BLANK TEST	0.000	12:43
EXTERNAL STANDARD	0.078	12:43
BLANK TEST	0.000	12:44
EXTERNAL STANDARD	0.078	12:44
BLANK TEST	0.000	12:45
EXTERNAL STANDARD	0.078	12:45
BLANK TEST	0.000	12:46
EXTERNAL STANDARD	0.078	12:46
BLANK TEST	0.000	12:47

Average = 0.0778  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100417

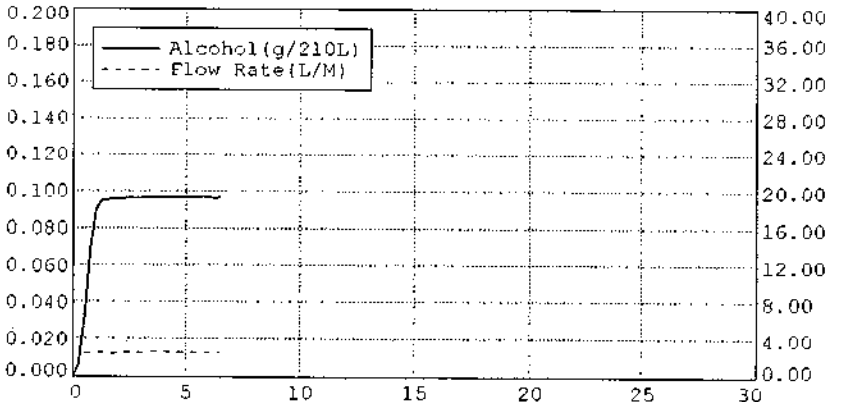
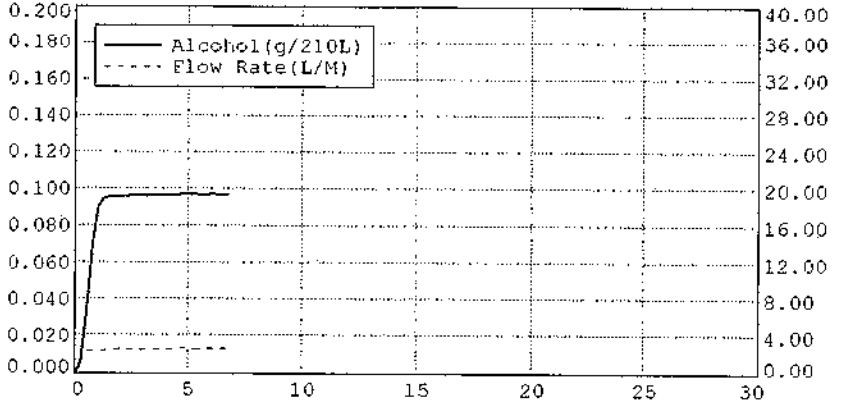
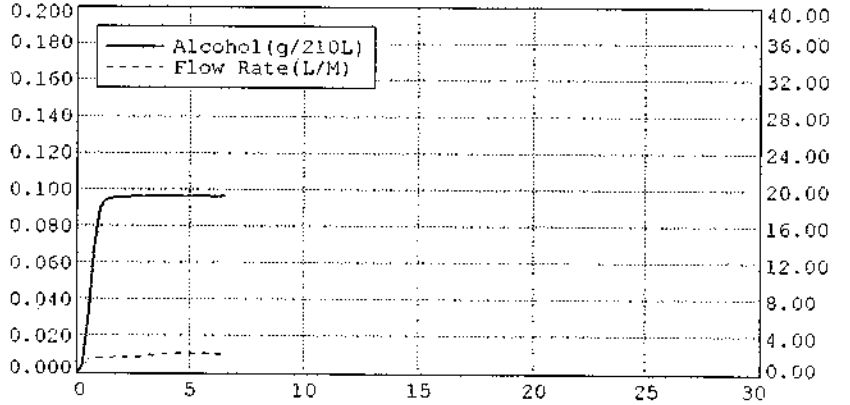
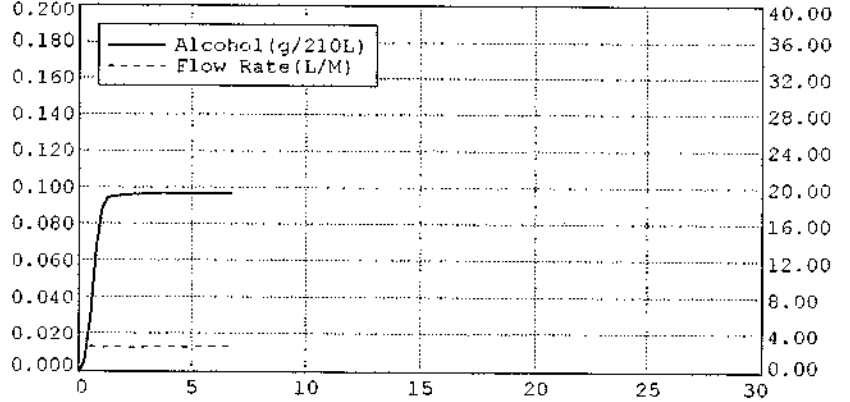
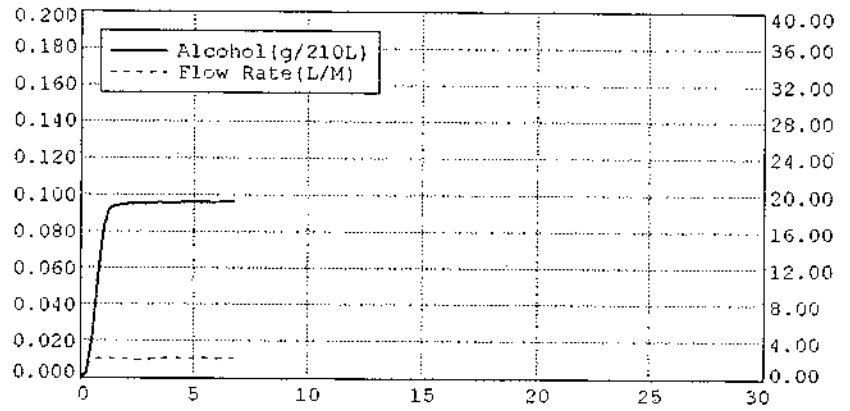
Date: 12/02/2015  
 Time: 12:49:17

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.18: 0.098  
 LOT #: 02915100A1  
 EXPIRATION: 03/05/2017  
 TANK PRESSURE: 1044 psi

BLANK TEST	0.000	12:50
INTERNAL STANDARD	VERIFIED	12:50
EXTERNAL STANDARD	0.097	12:50
BLANK TEST	0.000	12:51
EXTERNAL STANDARD	0.098	12:52
BLANK TEST	0.000	12:52
EXTERNAL STANDARD	0.097	12:53
BLANK TEST	0.000	12:54
EXTERNAL STANDARD	0.098	12:54
BLANK TEST	0.000	12:55
EXTERNAL STANDARD	0.097	12:55
BLANK TEST	0.000	12:56

Average = 0.0974  
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 5

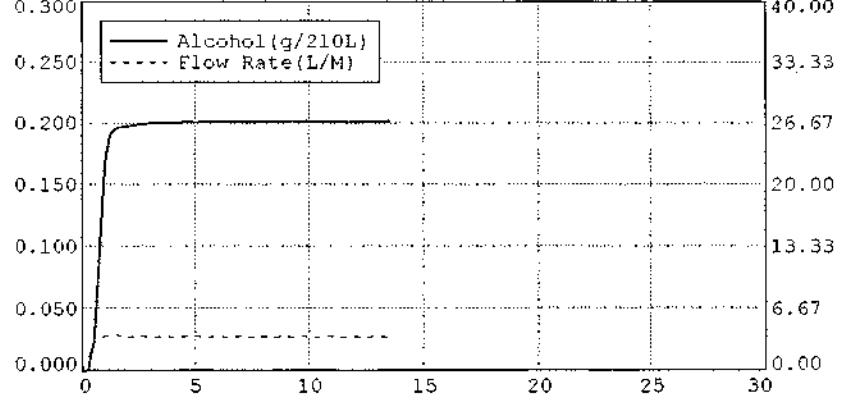
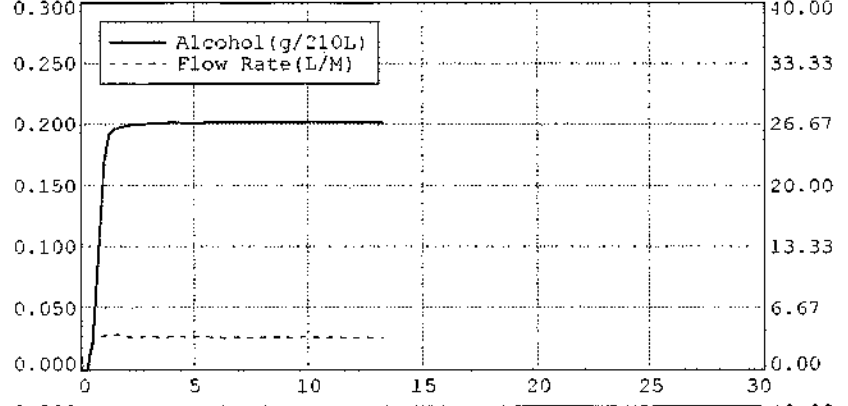
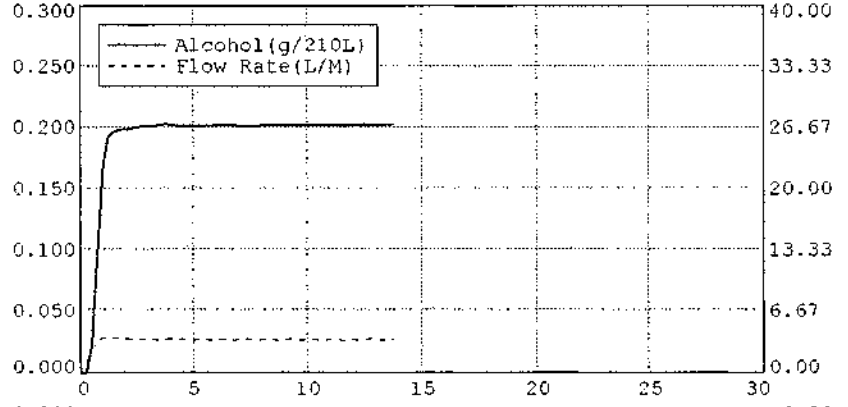
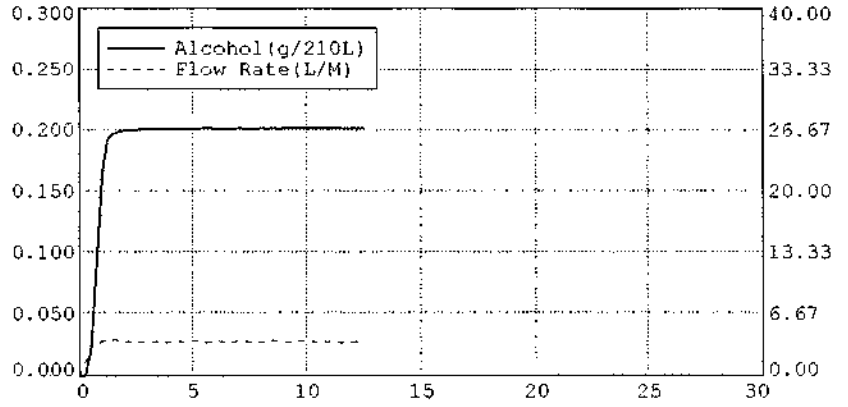
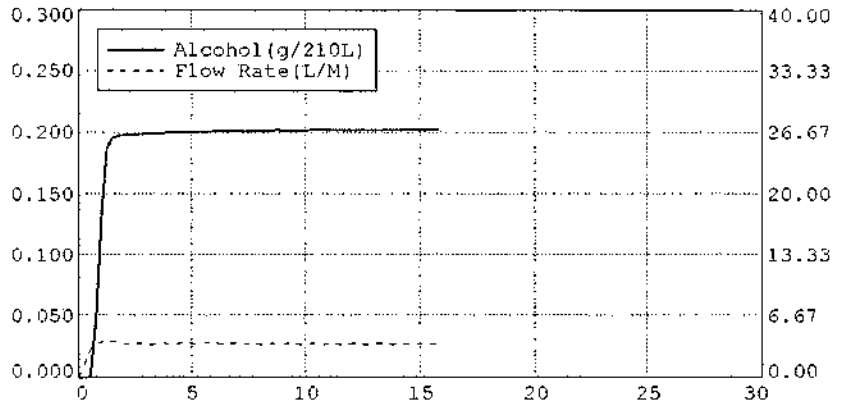
Alaska Department of Public Safety  
 DATAMASTER dmt: 100417

Date: 12/02/2015  
 Time: 12:58:58

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.200  
 LOT #: 15130  
 EXPIRATION: 05/11/2017

BLANK TEST	0.000	13:00
INTERNAL STANDARD	VERIFIED	13:00
EXTERNAL STANDARD	0.203	13:00
BLANK TEST	0.000	13:01
EXTERNAL STANDARD	0.202	13:02
BLANK TEST	0.000	13:03
EXTERNAL STANDARD	0.202	13:03
BLANK TEST	0.000	13:04
EXTERNAL STANDARD	0.202	13:04
BLANK TEST	0.000	13:05
EXTERNAL STANDARD	0.202	13:06
BLANK TEST	0.000	13:06

Average = 0.2022  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 6

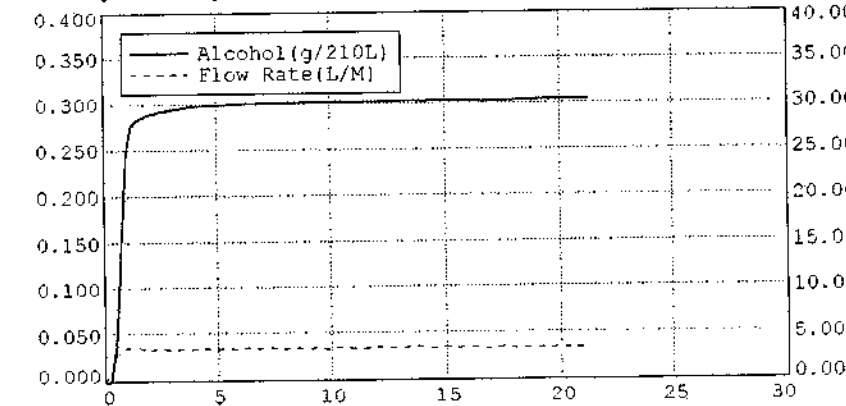
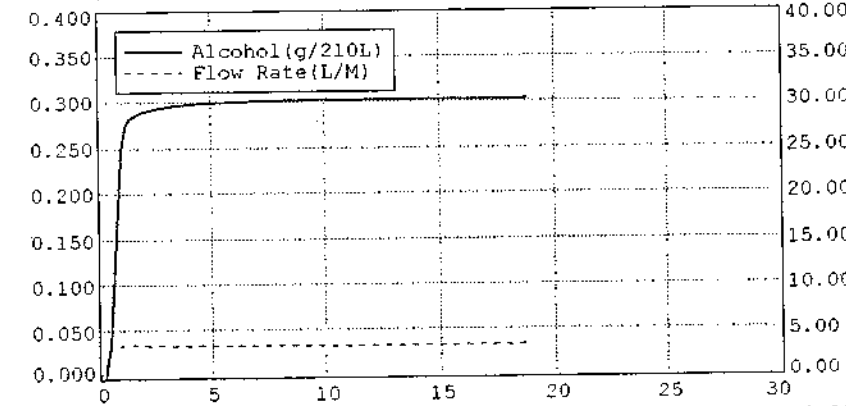
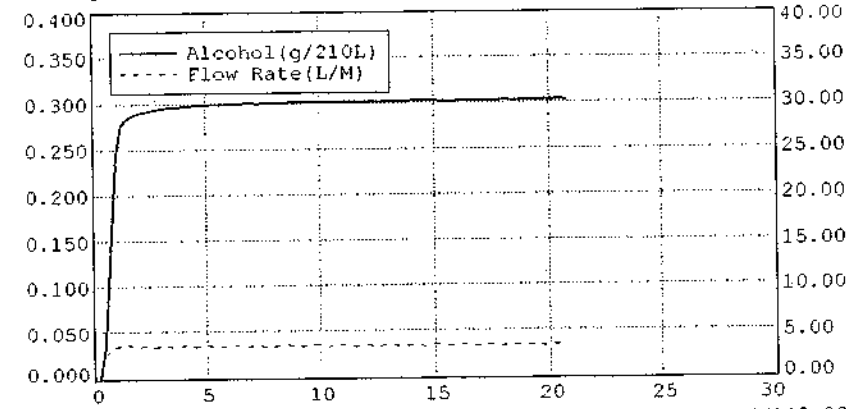
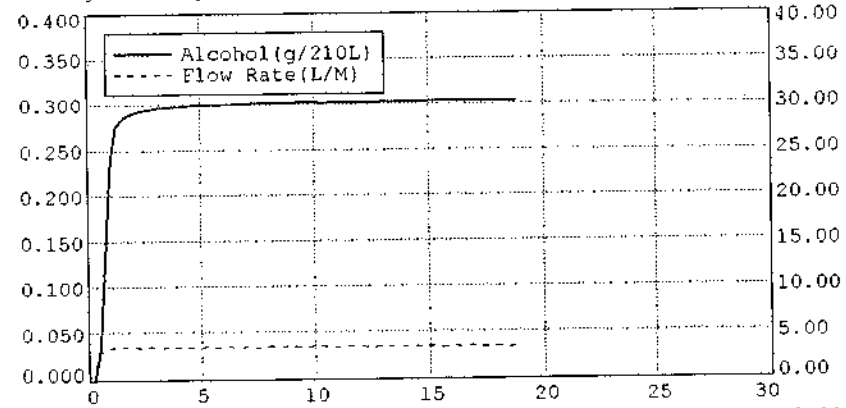
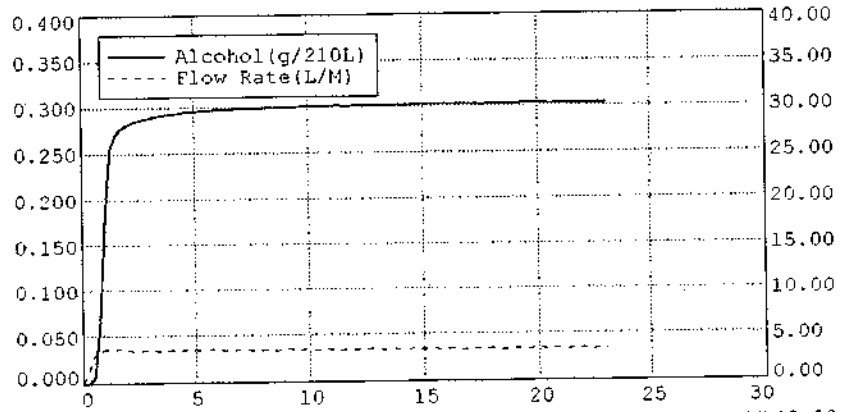
Alaska Department of Public Safety  
 DATAMASTER dmt: 100417

Date: 12/02/2015  
 Time: 13:08:16

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.300  
 LOT #: 14270  
 EXPIRATION: 12/02/2016

BLANK TEST	0.000	13:09
INTERNAL STANDARD	VERIFIED	13:09
EXTERNAL STANDARD	0.304	13:09
BLANK TEST	0.000	13:11
EXTERNAL STANDARD	0.303	13:11
BLANK TEST	0.000	13:12
EXTERNAL STANDARD	0.303	13:12
BLANK TEST	0.000	13:13
EXTERNAL STANDARD	0.303	13:14
BLANK TEST	0.000	13:15
EXTERNAL STANDARD	0.304	13:15
BLANK TEST	0.000	13:16

Average = 0.3034  
 Std Dev = 0.0005



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmc: 100417

Date: 12/02/2015  
Time: 13:31:38

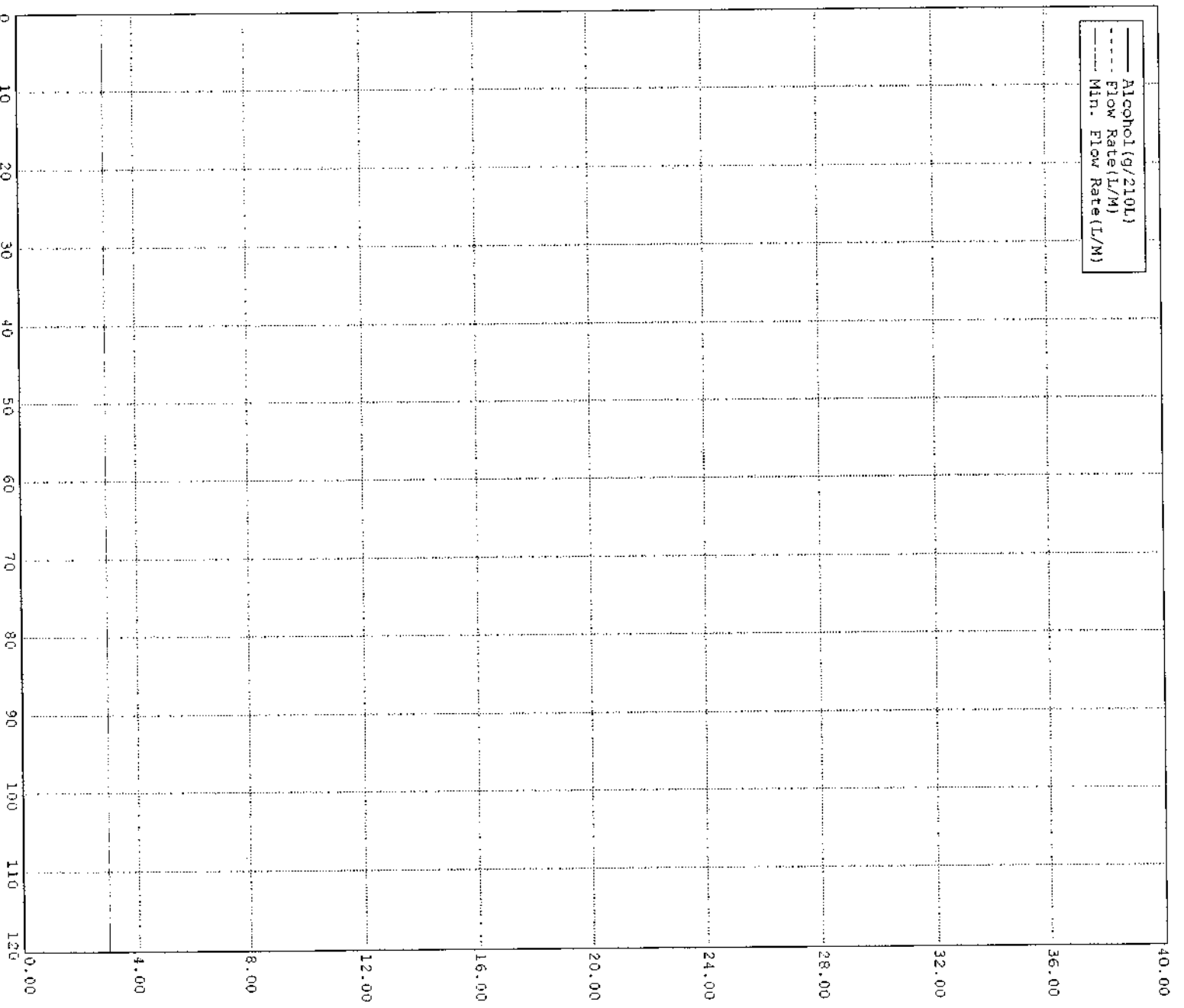
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
INCOMPLETE XXXX  
OPERATOR'S #: XXXX

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

DIAGNOSTIC CHECK	PASSED	13:32
BLANK TEST	0.000	13:33
INTERNAL STANDARD	VERIFIED	13:33
EXTERNAL STANDARD	0.077	13:33
BLANK TEST	0.000	13:34
SUBJECT SAMPLE	INCOMPLETE	13:36



SUBJECT TEST

Alaska Department of Public Safety  
DATA MASTER dmt: 100417

Date: 12/02/2015  
Time: 13:58:42

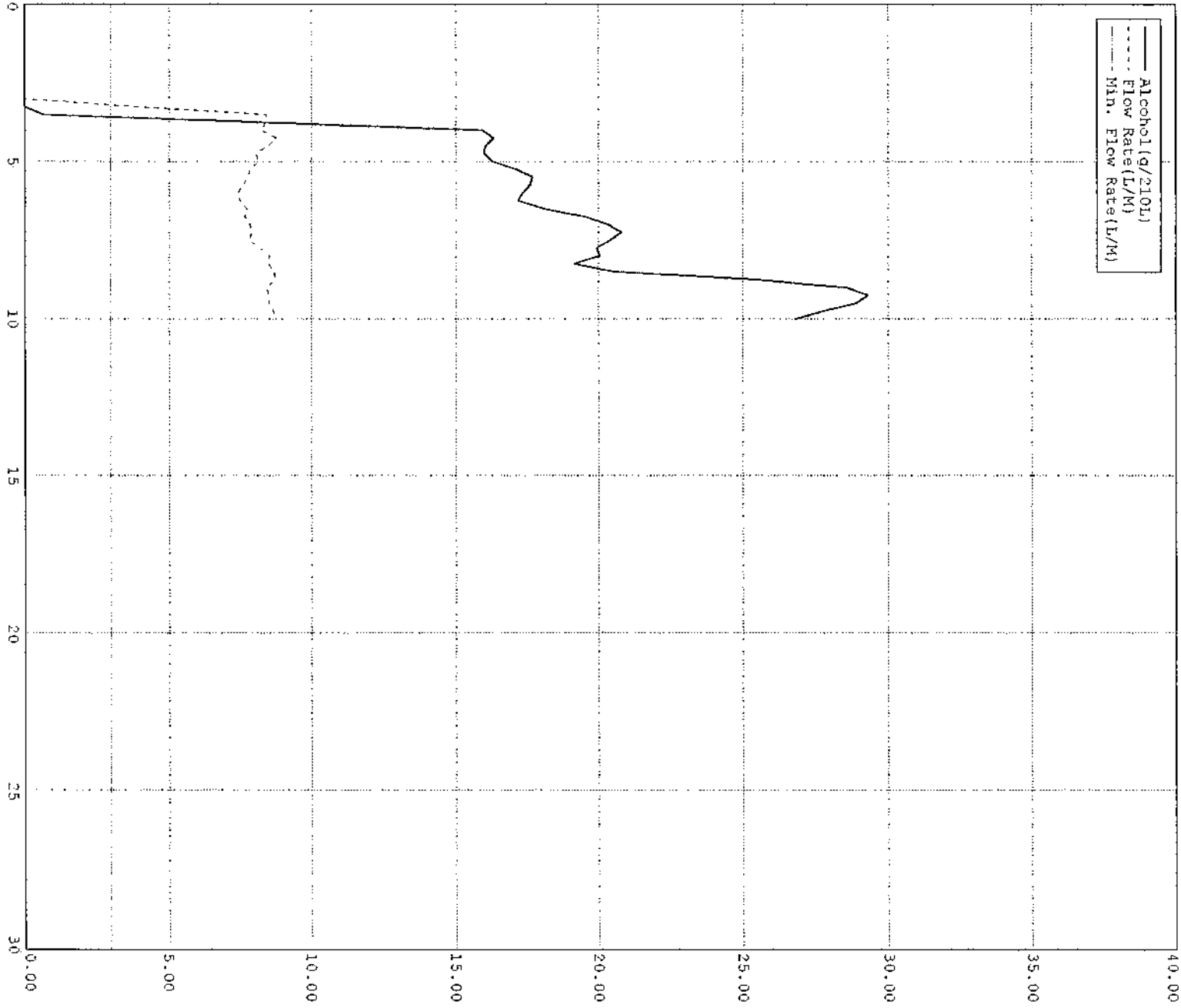
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
MOUTH ETOH  
OPERATOR'S #: XXXX

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.17: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

DIAGNOSTIC CHECK	PASSED	14:01
BLANK TEST	0.000	14:02
INTERNAL STANDARD	VERIFIED	14:02
EXTERNAL STANDARD	0.077	14:02
BLANK TEST	0.000	14:03
SUBJECT SAMPLE	INVALID	14:03



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100417

Date: 12/02/2015  
Time: 14:07:29

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
INTERFERENCE ACETONE  
OPERATOR'S #: XXXX

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

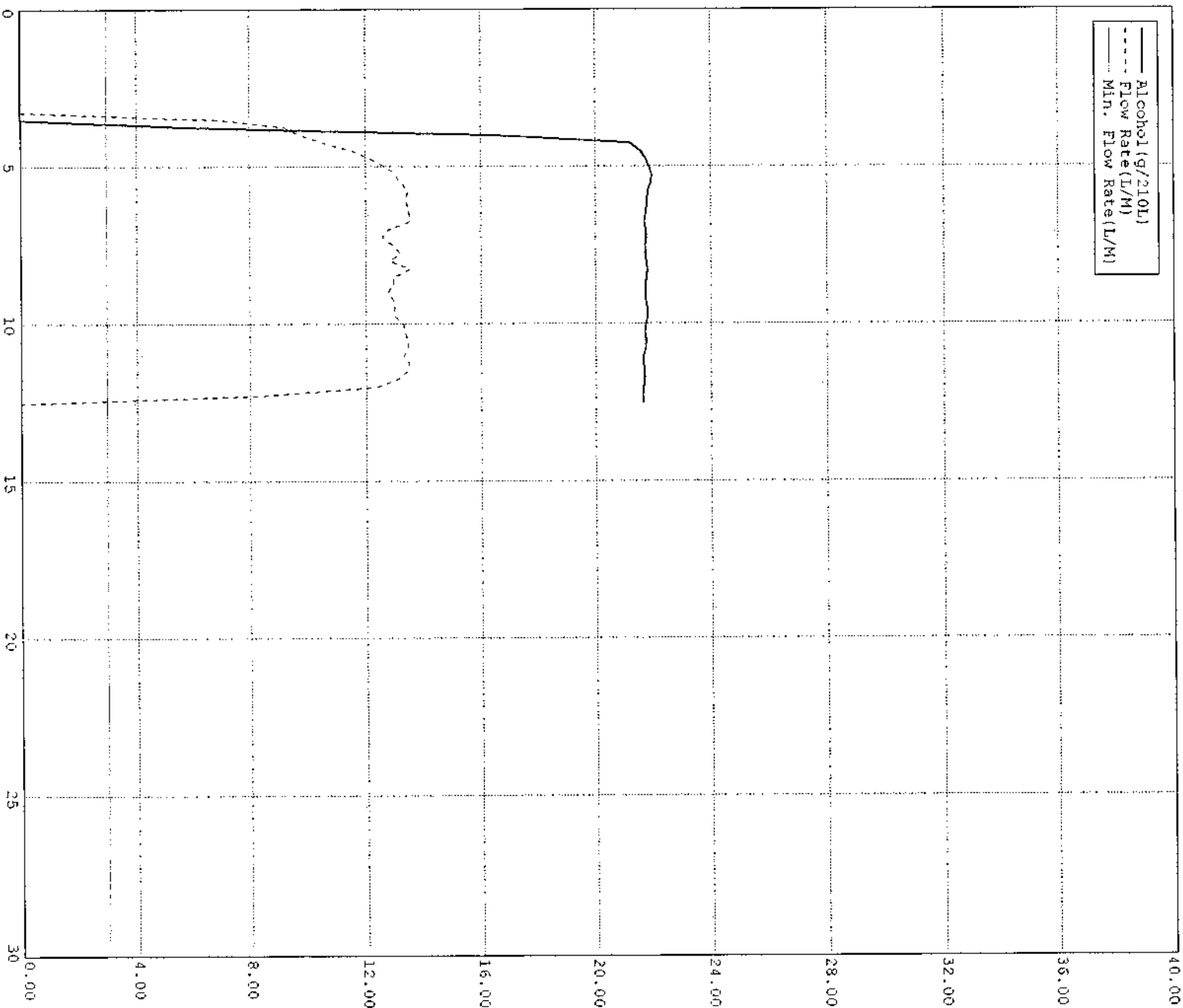
DIAGNOSTIC CHECK	PASSED	14:14
BLANK TEST	0.000	14:14
INTERNAL STANDARD	VERIFIED	14:14
Xq = 0.096 (0.748)	0.078	14:14
EXTERNAL STANDARD	X[1] = 0.0782 (0.0010)	(0.0013)
BLANK TEST	0.000	14:15
SUBJECT SAMPLE	X[1] = 0.1088 (-0.0177)	(0.0007)

Interference Detected

Filter 2 Avg = 0.0011

Filter 3 Avg = 0.0018

CWF 12/2/15



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100417

Date: 12/02/2015  
Time: 14:19:58

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

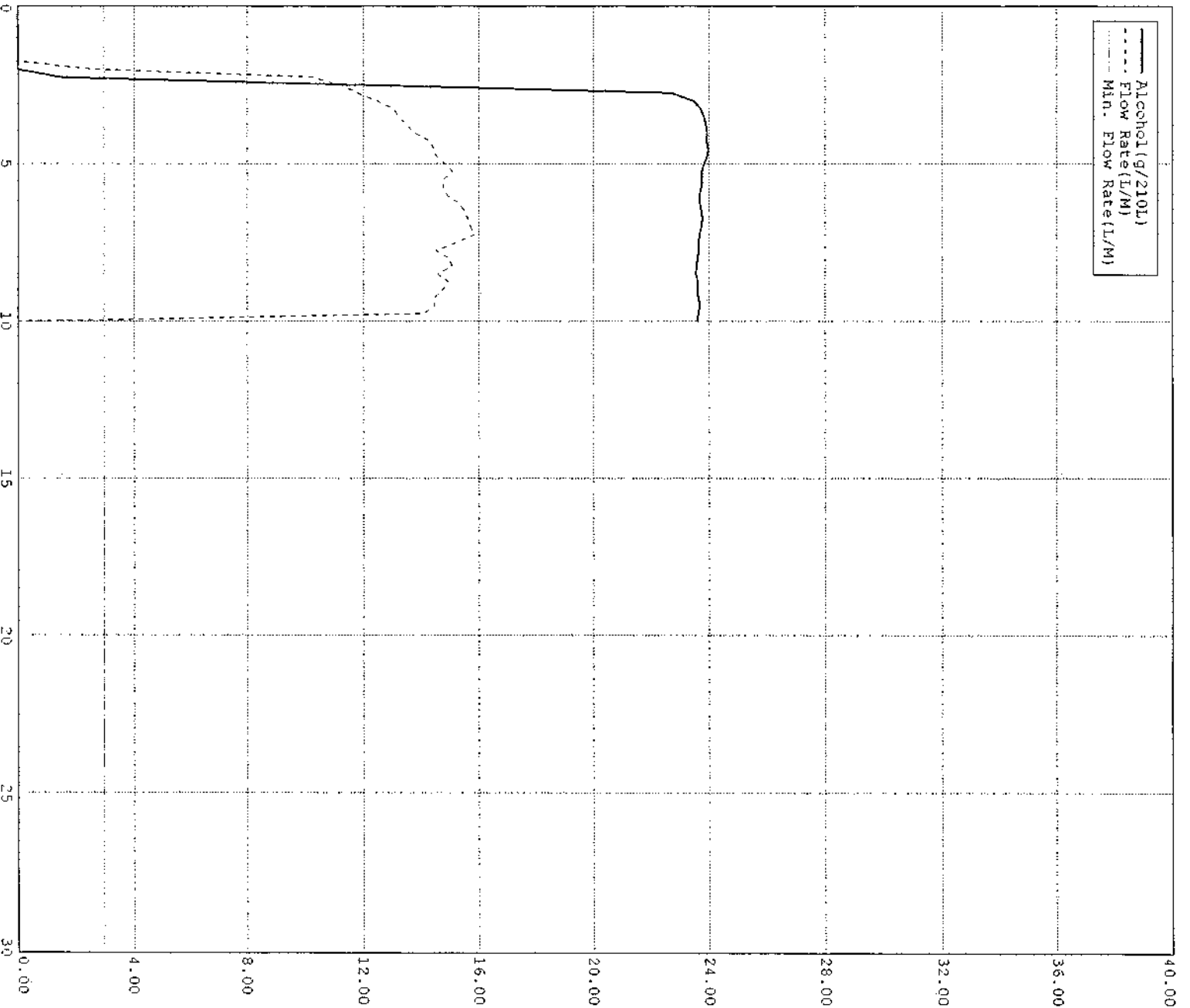
OPERATOR NAME:  
INTERFERENCE IPA  
OPERATOR'S #: XXXX

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

DIAGNOSTIC CHECK	PASSED	14:24
BLANK TEST	0.000	14:24
INTERNAL STANDARD	VERIFIED	14:24
Xq = 0.094 (0.648)	0.077	14:24
EXTERNAL STANDARD	X[1] = 0.0773 (0.0010)	(0.0016)
BLANK TEST	0.000	14:25
SUBJECT SAMPLE	X[1] = 0.1183 (-0.0224)	(0.0013)

Interference Detected





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100417

Date: 12/02/2015  
Time: 14:30:11

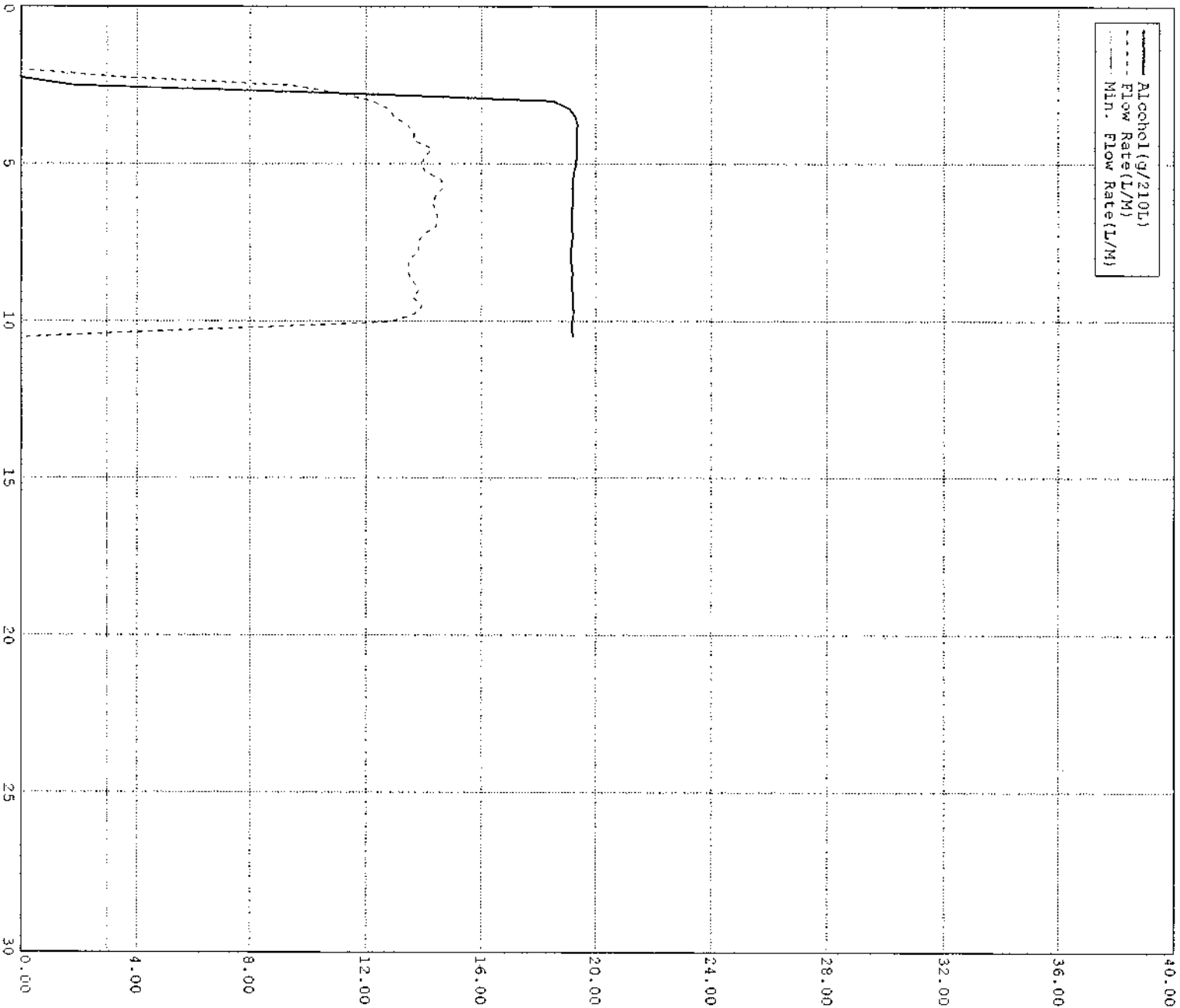
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
INTERFERENCE NEGATIVE  
OPERATOR'S #: XXXX

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

DIAGNOSTIC CHECK	PASSED	14:34
BLANK TEST	0.000	14:34
INTERNAL STANDARD	VERIFIED	14:34
Xq = 0.095 (0.37%)		
EXTERNAL STANDARD	0.078	14:35
X[1] = 0.0777 (0.0018)	(0.0025)	
BLANK TEST	0.000	14:36
SUBJECT SAMPLE (Vc1=1.80L)	0.096	14:36
X[1] = 0.0965 (-0.0019)	(0.0003)	
BLANK TEST	0.000	14:37
EXTERNAL STANDARD	0.077	14:37
X[1] = 0.0775 (0.0007)	(0.0017)	
BLANK TEST	0.000	14:38



SUBJECT TEST

Alaska Department of Public Safety  
DATA MASTER dmt: 100417

Date: 12/02/2015  
Time: 15:05:57

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

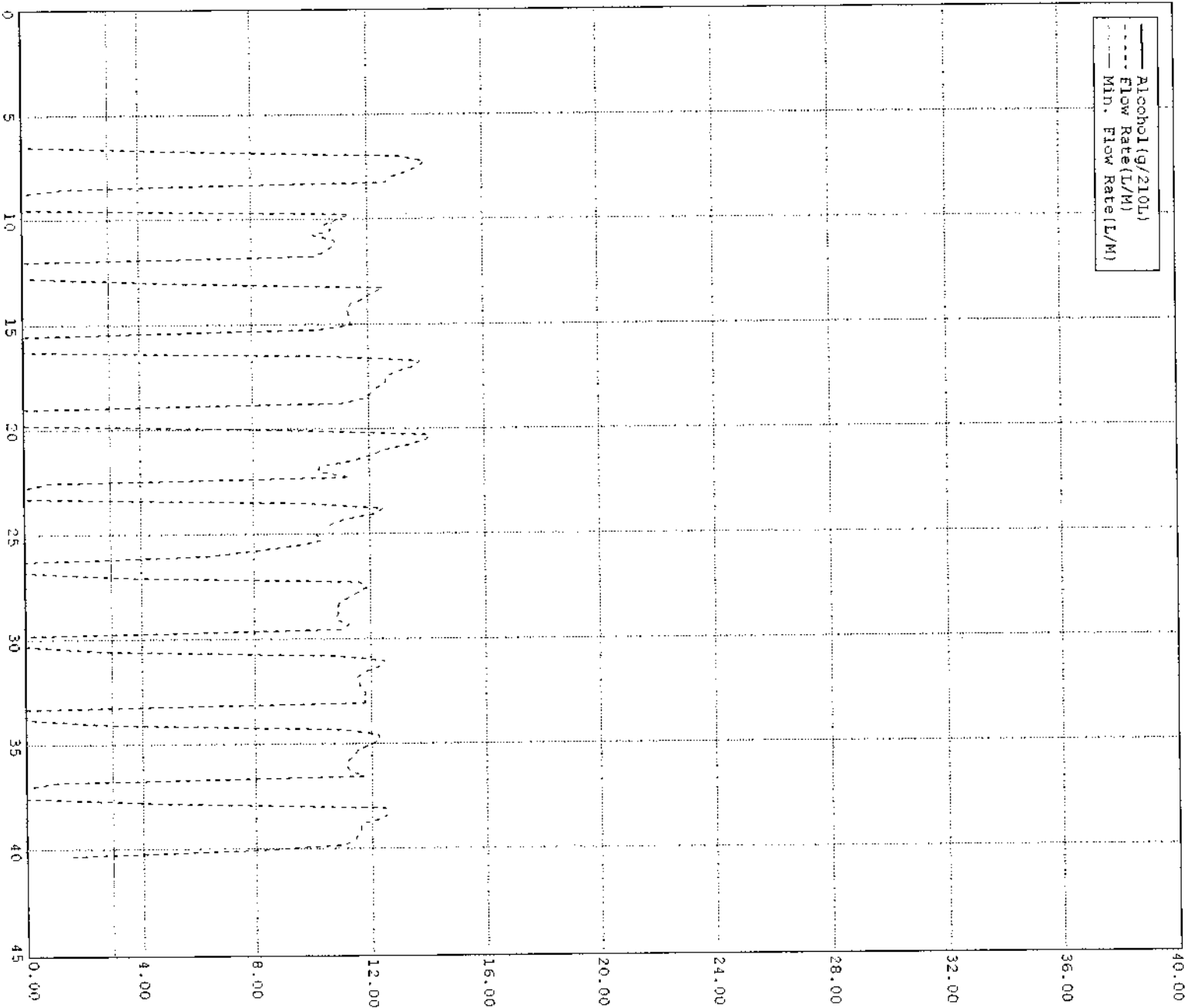
OPERATOR NAME:  
EXCEEDED ATTEMPTS  
OPERATOR'S #: XXXX

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.17: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

DIAGNOSTIC CHECK	PASSED	15:10
BLANK TEST	0.000	15:10
INTERNAL STANDARD	VERIFIED	15:10
EXTERNAL STANDARD	0.077	15:11
BLANK TEST	0.000	15:11
SUBJECT SAMPLE	XXX	15:12

Maximum Attempts Exceeded



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100417

Date: 12/02/2015  
Time: 15:28:02

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

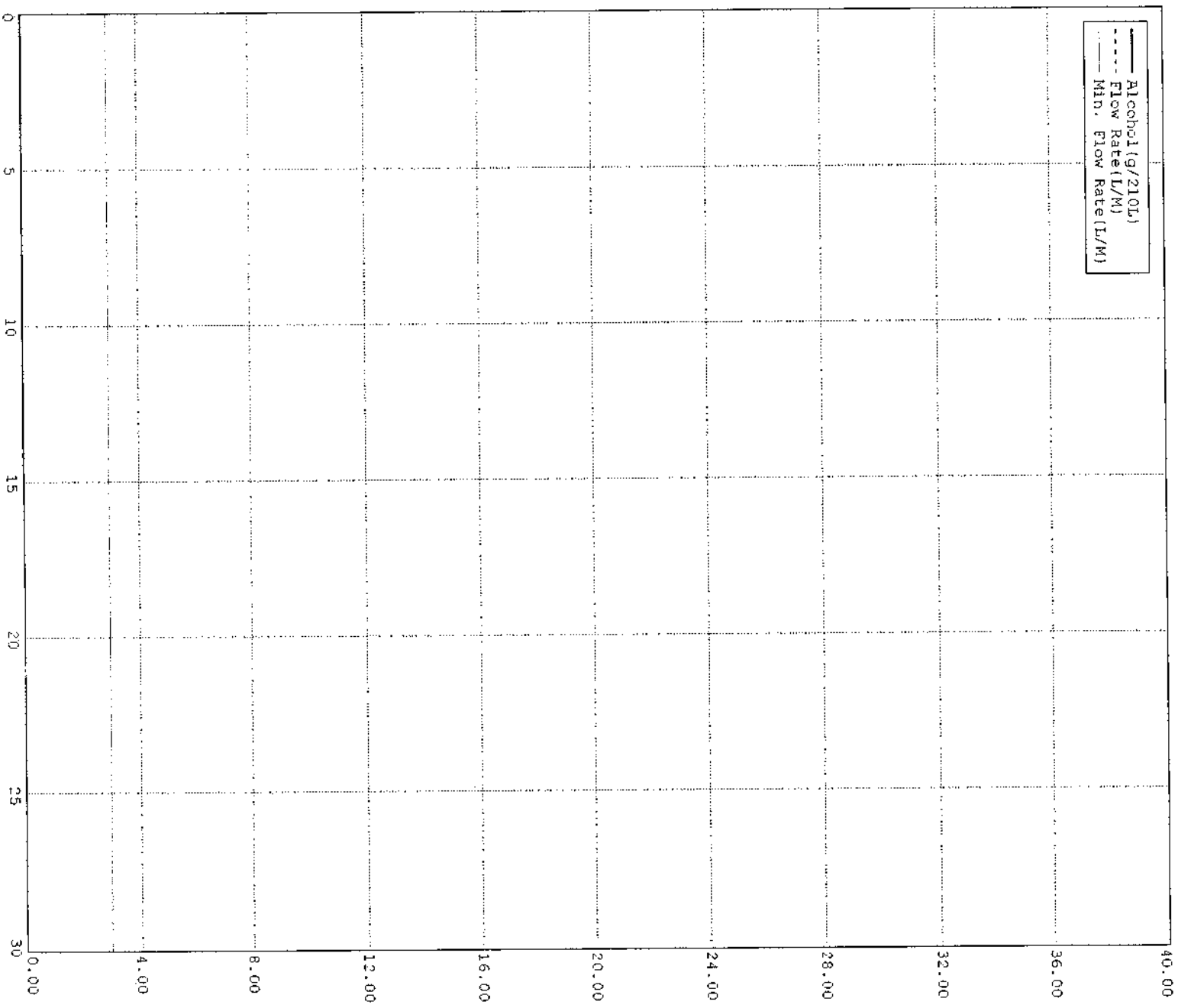
OPERATOR NAME:  
RFI XXXX  
OPERATOR'S #: XXXX

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

DIAGNOSTIC CHECK	PASSED	15:29
BLANK TEST	0.000	15:29
INTERNAL STANDARD	VERIFIED	15:29
EXTERNAL STANDARD	0.077	15:29
BLANK TEST	0.000	15:30

RFI DETECTED



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100417

Date: 12/02/2015  
Time: 15:44:48

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
CHARLES FOSTER  
OPERATOR'S #: 7734

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: 01315080A2  
EXPIRATION: 02/05/2017

DIAGNOSTIC CHECK	PASSED	15:48
BLANK TEST	0.000	15:48
INTERNAL STANDARD	VERIFIED	15:48
EXTERNAL STANDARD	0.078	15:48
BLANK TEST	0.000	15:49
SUBJECT SAMPLE (Vol=2.01L)	0.000	15:49
BLANK TEST	0.000	15:50
EXTERNAL STANDARD	0.078	15:51
BLANK TEST	0.000	15:52

