

# 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 100418 Analyst Dereh Walton Start Date 08/08/18

1. Diagnostic Test (attached)  Internal Standard value  $\leq 3.00\%$  Yes
  1. Voltage Checks
    - a. Adjust voltages, if needed 
      - i. Lamp (2.6V Maximum)
      - ii. Bias
      - iii. Cooler (2.0V Maximum)
      - iv. Chopper Frequency
      - v. Detector Voltage (-0.100V to 0.100V)
    - b. Set RFI
    - c. Adjust barometer reading to match NIST traceable barometer
    - d. Adjust volume setting, if needed (1.5L +/- 0.1L)
    - e. Print Technician Screen (attached)
  2. Print Calibration Factors (attached)
  3. Volume Test - Minimum 1.6 L L (1.3L to 1.7L)
  4. Linearity Test (attached)
    - a. Levels Used
      - i. 0.020g/210L Mnf Airgas Lot AG805804 Exp 02/27/2020
      - ii. 0.040g/210L Mnf Airgas Lot AG630101 Exp 10/27/2018
      - iii. 0.080g/210L Mnf Airgas Lot AG634001 Exp 12/05/2018
      - iv. 0.100g/210L Mnf Airgas Lot AG629304 Exp 10/19/2018
      - v. 0.200g/210L Mnf Quth Lot 17090 Exp 02/24/2019
        1. Simulator S/N DR5298 Date Calibrated 01/24/2018
      - vi. 0.300g/210L Mnf Quth Lot 17350 Exp 10/11/2019
        1. Simulator S/N SD1198 Date Calibrated 01/23/2018
  5. Functional Tests (attached)
    - a. Incomplete
    - b. Invalid
    - c. Interference
    - d. Exceeded attempts
    - i. Acetone - Mnf Quth Lot 17280 Level 0.100 Exp 09/11/2019
      1. Simulator S/N SD1177 Date Calibrated 01/24/2018
    - ii. Isopropanol - Mnf Quth Lot 17280 Level 0.100 Exp 09/11/2019
      1. Simulator S/N SD1199 Date Calibrated 01/24/2018
    - iii. Negative Control - Mnf Quth Lot 17280 Level 0.100 Exp 09/11/2019
      1. Simulator S/N SD1088 Date Calibrated 01/24/2018
  - 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 08/09/18

DIAGNOSTIC RECORD

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Alaska Department of Public Safety  
DATAMASTER dmt: 100418  
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Date: 08/08/2018  
Time: 08:06:38

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 = 48.0°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.88 V PASSED  
(1.13 V - 2.63 V)  
Cooler Voltage = 1.81 V PASSED  
(1.09 V - 2.53 V)  
Bias Voltage = 80 V PASSED  
(48 V - 112 V)  
Chopper Freq = 540 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.4 in

PUMP INFO

Flow Rate = 4.463 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 = 0.077 0.67% (0.00% - 4.00%) PASSED

Technician Screen

-----  
DATAMASTER dmt: 100418  
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Date: 08/08/2018  
Time: 8:43 AM

Temperatures (°C)

Sample Cell: 49.1°C  
Breath Tube: 48.1°C

Current Barometer 29.4 in  
Volume (Ltr) 1.51

Settings

Lamp: 1.80 V  
Bias: 80 V  
Cooler: 1.81 V  
Chopper: 539 Hz

Voltages (V)

Flow: 1.06 V  
Detector: 0.037 V

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100418  
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Date: 07/31/2018  
Time: 09:34:18

OPERATOR NAME:  
DEREK WALTON  
CERTIFICATE #: 9508

Ca = 0.1000  
CAL = 0.968893    0.800 <= CAL < 1.200  
b1 = 0.0019    0.0000 <= b1 < 0.0040  
b2 = 0.0063    0.0010 <= b2 < 0.0100  
b3 = 0.0011    0.0000 <= b3 < 0.0040  
Xq = 0.0773    0.0500 <= Xq < 0.2000  
a21 = 1.180003    1.050 <= a21 < 1.300  
a31 = 0.467190    0.300 <= a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100418

Date: 08/08/2018  
Time: 12:09:23

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

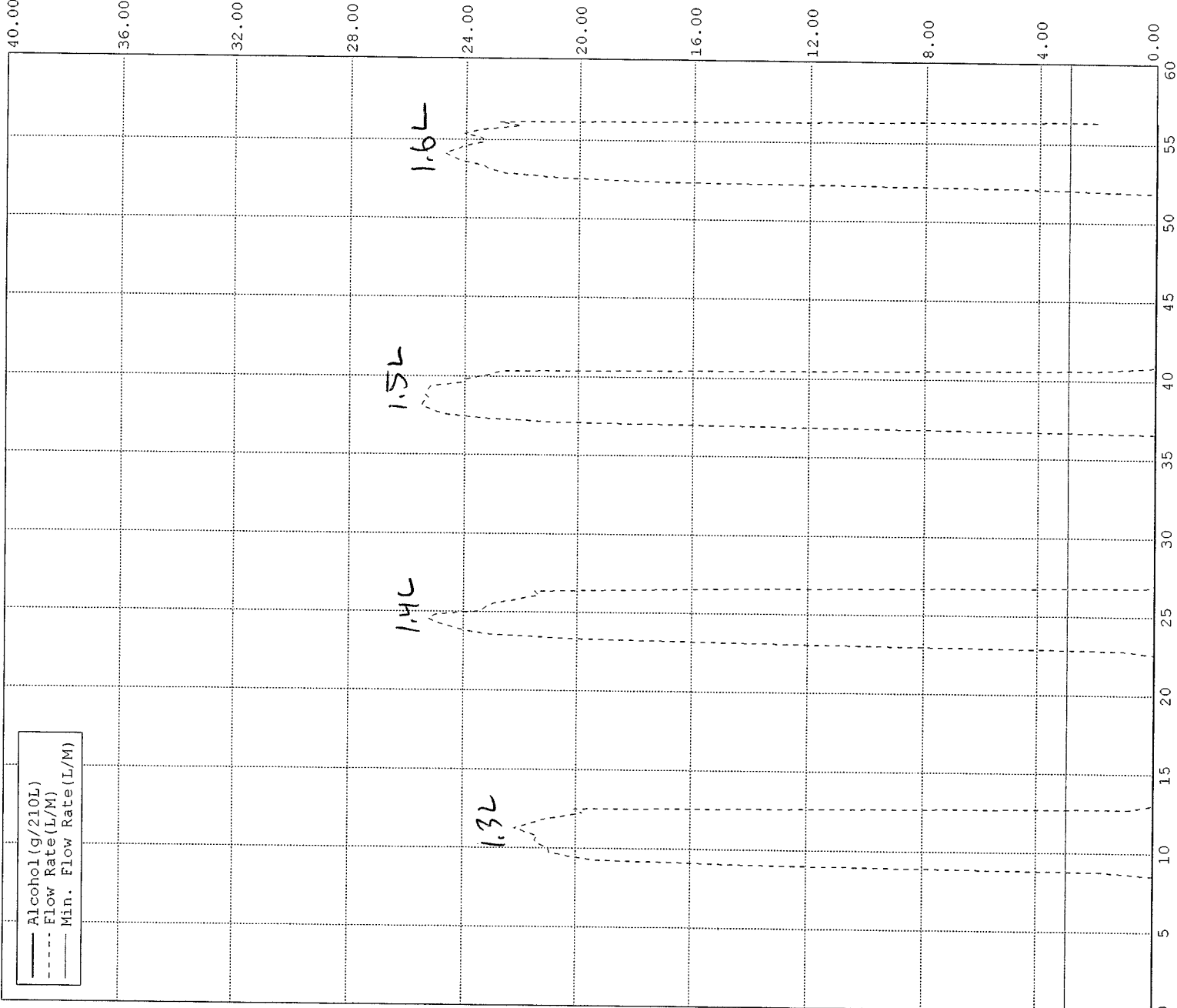
OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.39: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

DIAGNOSTIC CHECK	PASSED	12:13
BLANK TEST	0.000	12:14
INTERNAL STANDARD	VERIFIED	12:14
EXTERNAL STANDARD	0.079	12:14
BLANK TEST	0.000	12:15
SUBJECT SAMPLE (Vol=1.55L)	0.000	12:16
BLANK TEST	0.000	12:17
EXTERNAL STANDARD	0.079	12:17
BLANK TEST	0.000	12:18

*700*



LINEARITY CHECK

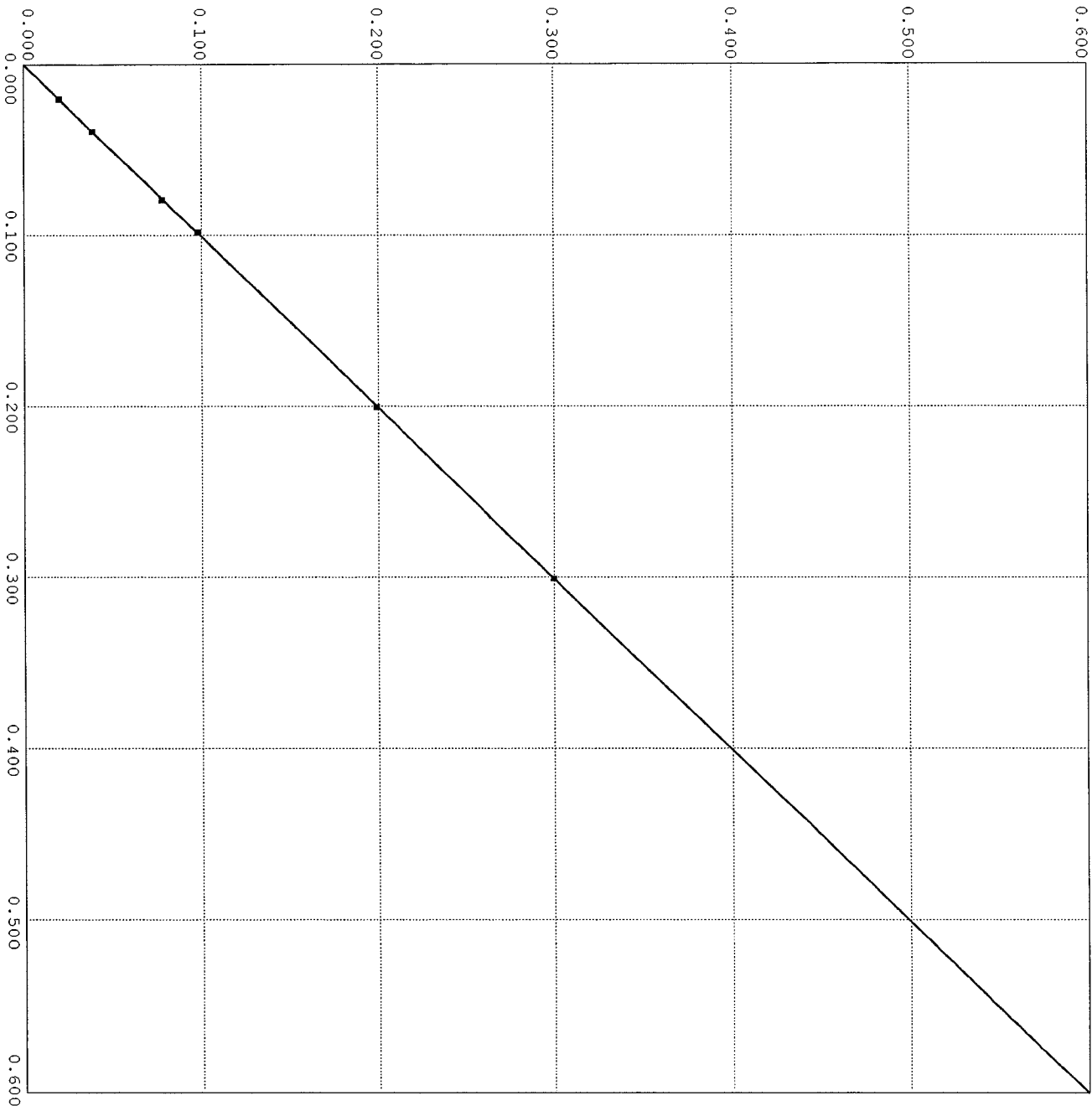
Alaska Department of Public Safety  
DATAMASTER dmt: 100418

Date: 08/08/2018  
Time: 12:24:18

SUPERVISOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0208	0.0004
0.039	0.0398	0.0004
0.079	0.0788	0.0004
0.098	0.0990	0.0000
0.200	0.1998	0.0008
0.300	0.3006	0.0009

SLOPE = 0.998712  
R<sup>2</sup> = 0.999977



*ML*

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100418

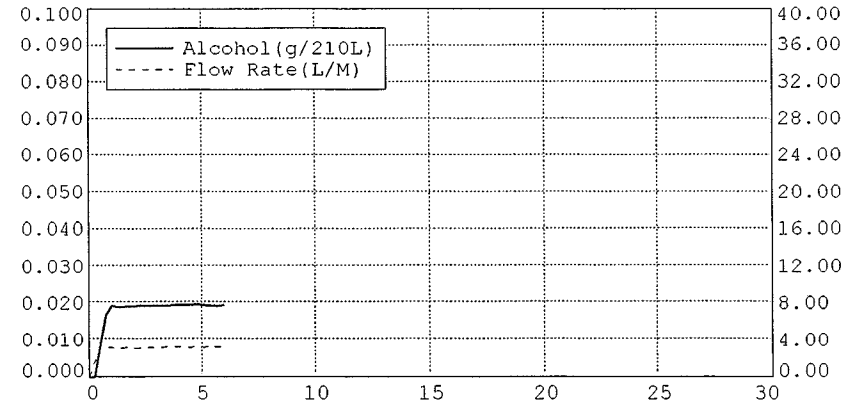
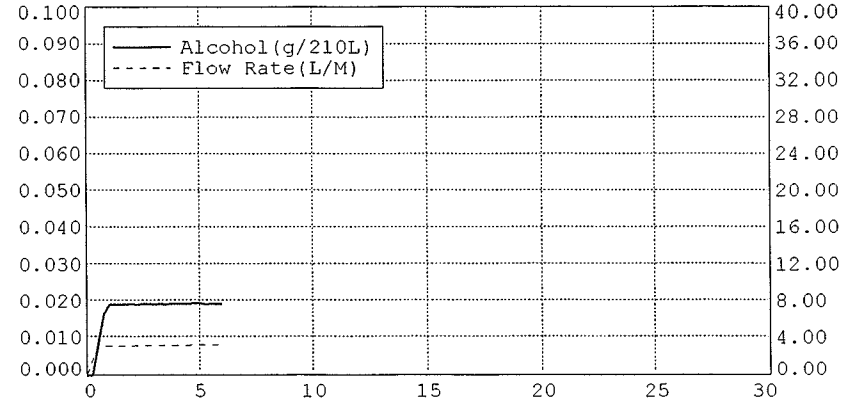
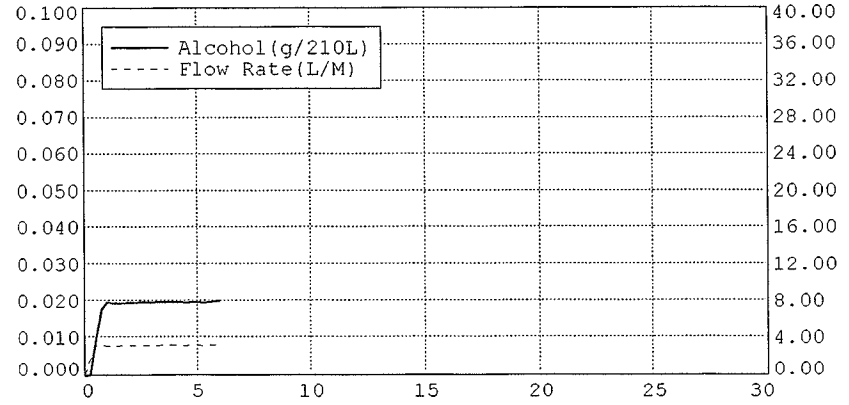
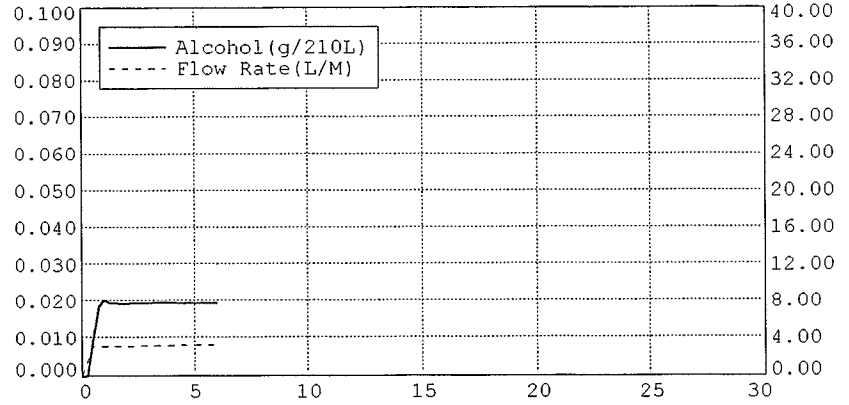
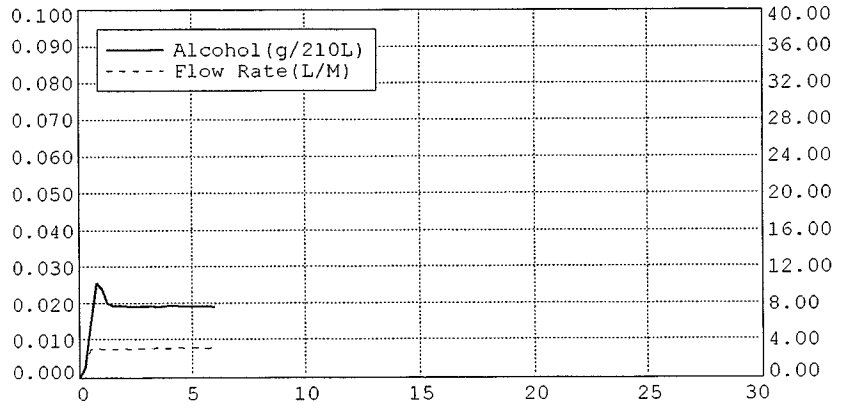
Date: 08/08/2018  
 Time: 12:24:19

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 29.39: 0.020  
 LOT #: AG805804  
 EXPIRATION: 02/27/2020  
 TANK PRESSURE: 1047 psi

BLANK TEST	0.000	12:25
INTERNAL STANDARD	VERIFIED	12:25
EXTERNAL STANDARD	0.021	12:25
BLANK TEST	0.000	12:26
EXTERNAL STANDARD	0.021	12:27
BLANK TEST	0.000	12:27
EXTERNAL STANDARD	0.021	12:28
BLANK TEST	0.000	12:29
EXTERNAL STANDARD	0.020	12:29
BLANK TEST	0.000	12:30
EXTERNAL STANDARD	0.021	12:30
BLANK TEST	0.000	12:31

Average = 0.0208  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100418

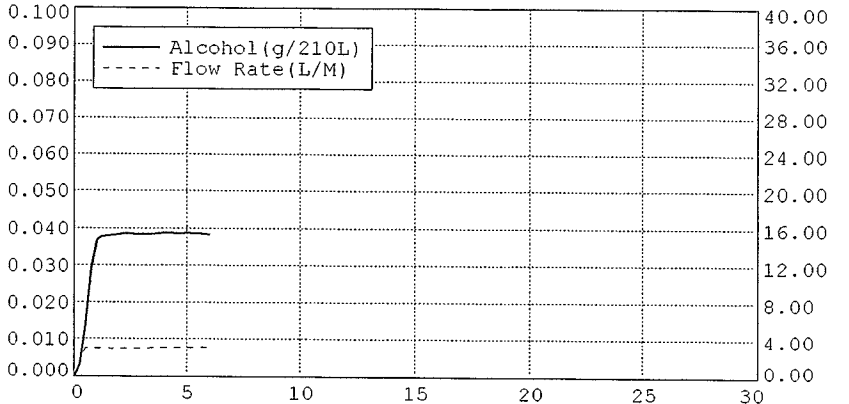
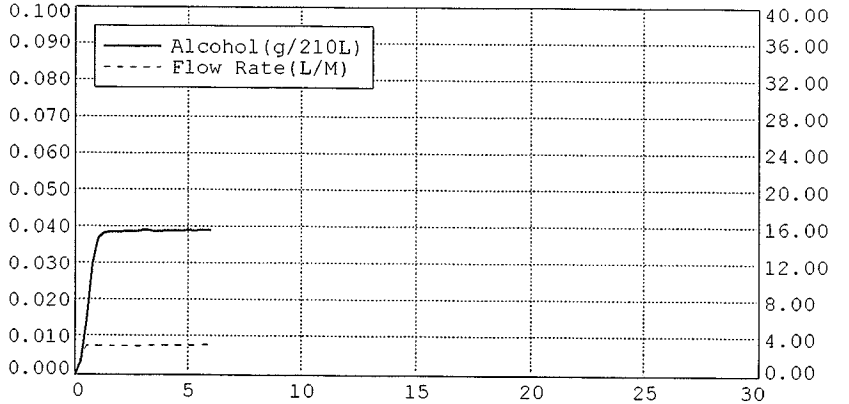
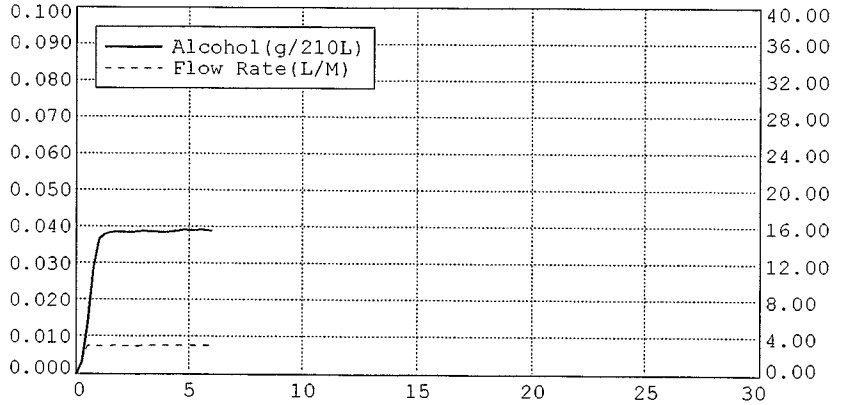
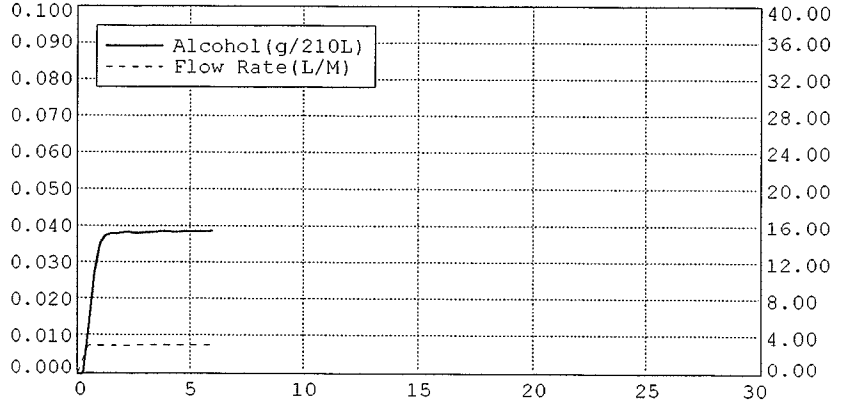
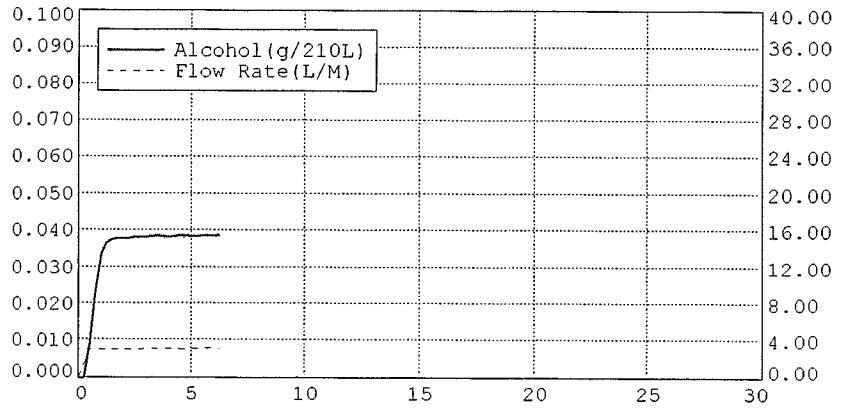
Date: 08/08/2018  
 Time: 12:32:23

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 29.39: 0.039  
 LOT #: AG630101  
 EXPIRATION: 10/27/2018  
 TANK PRESSURE: 832 psi

BLANK TEST	0.000	12:33
INTERNAL STANDARD	VERIFIED	12:33
EXTERNAL STANDARD	0.040	12:34
BLANK TEST	0.000	12:34
EXTERNAL STANDARD	0.039	12:35
BLANK TEST	0.000	12:36
EXTERNAL STANDARD	0.040	12:36
BLANK TEST	0.000	12:37
EXTERNAL STANDARD	0.040	12:37
BLANK TEST	0.000	12:38
EXTERNAL STANDARD	0.040	12:38
BLANK TEST	0.000	12:39

Average = 0.0398  
 Std Dev = 0.0004





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100418

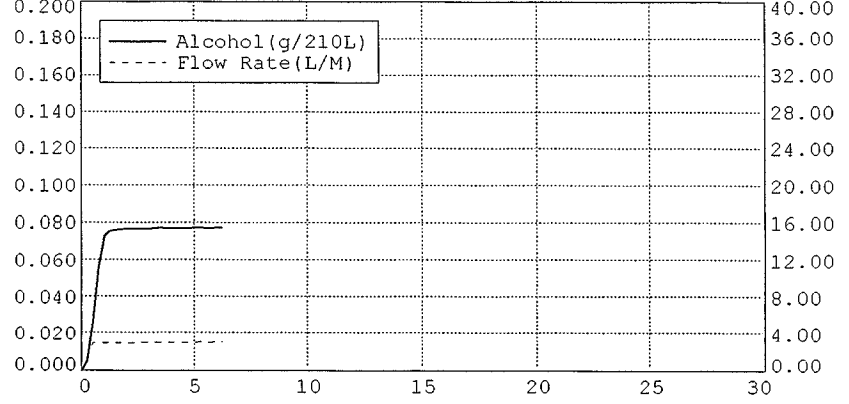
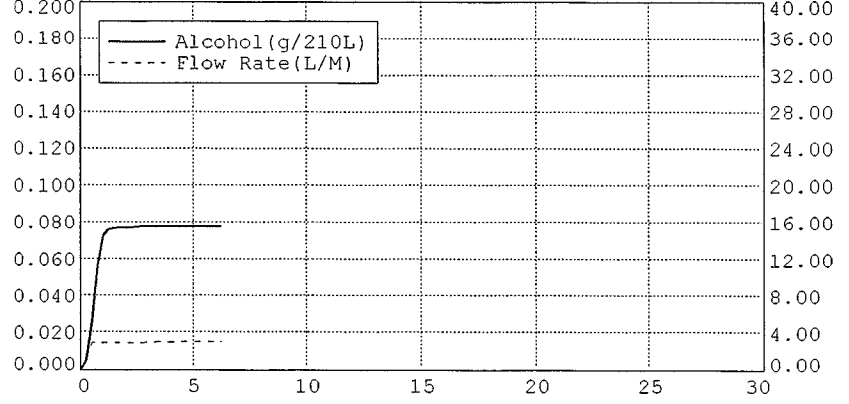
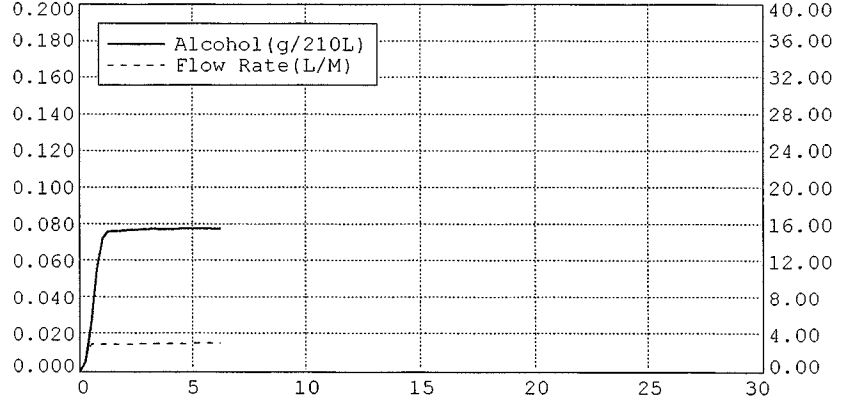
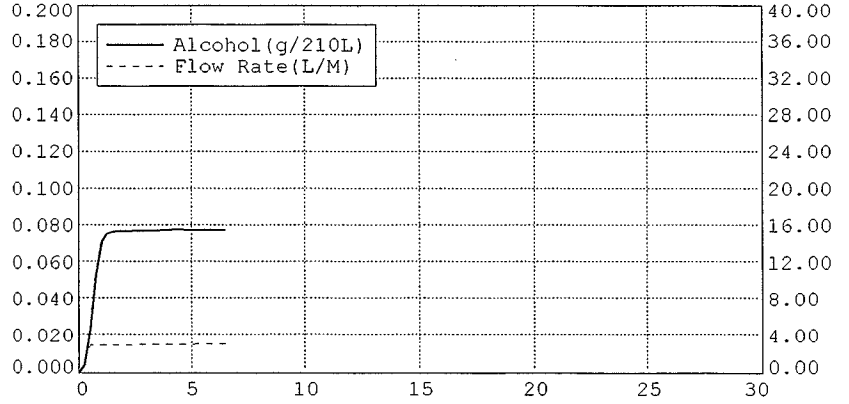
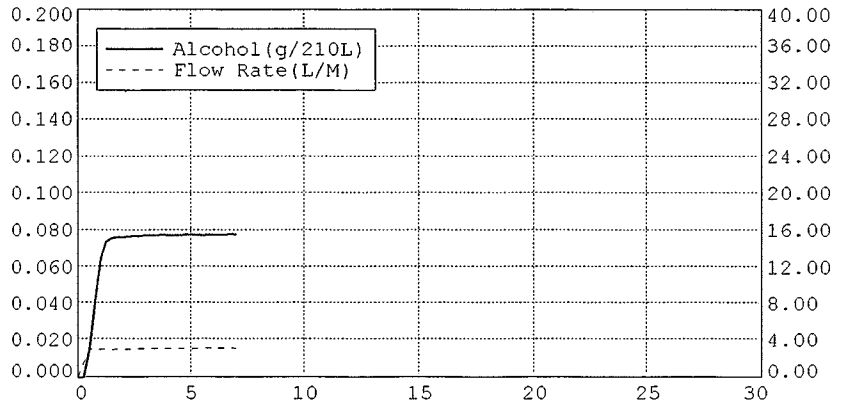
Date: 08/08/2018  
 Time: 12:41:51

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 29.39: 0.079  
 LOT #: AG634001  
 EXPIRATION: 12/05/2018  
 TANK PRESSURE: 708 psi

BLANK TEST	0.000	12:43
INTERNAL STANDARD	VERIFIED	12:43
EXTERNAL STANDARD	0.079	12:43
BLANK TEST	0.000	12:44
EXTERNAL STANDARD	0.078	12:44
BLANK TEST	0.000	12:45
EXTERNAL STANDARD	0.079	12:45
BLANK TEST	0.000	12:46
EXTERNAL STANDARD	0.079	12:46
BLANK TEST	0.000	12:47
EXTERNAL STANDARD	0.079	12:47
BLANK TEST	0.000	12:48

Average = 0.0788  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100418

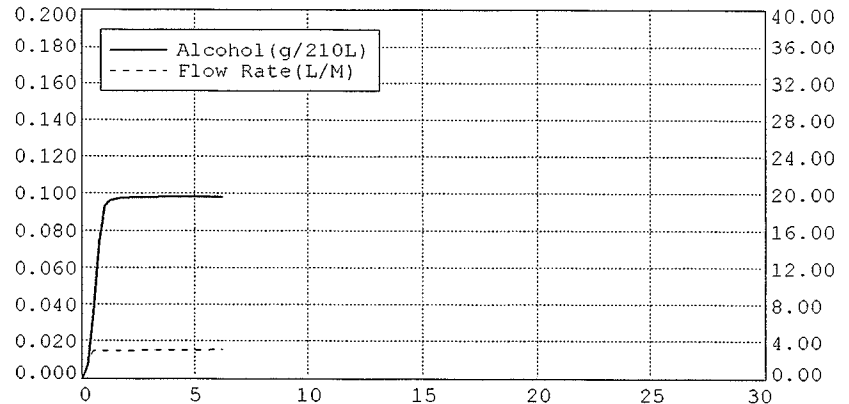
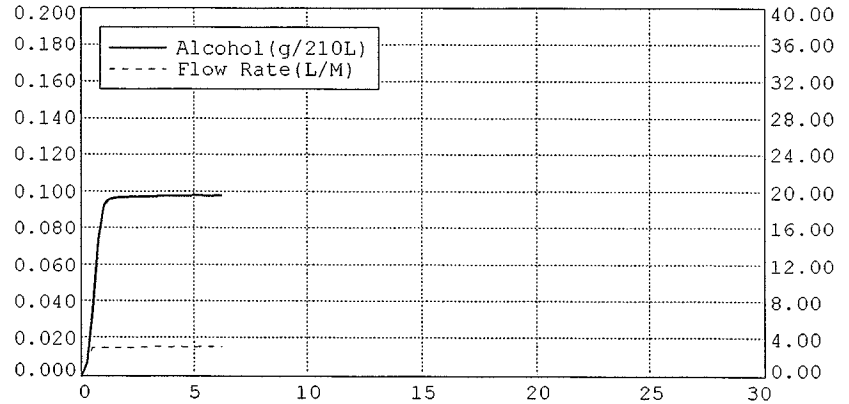
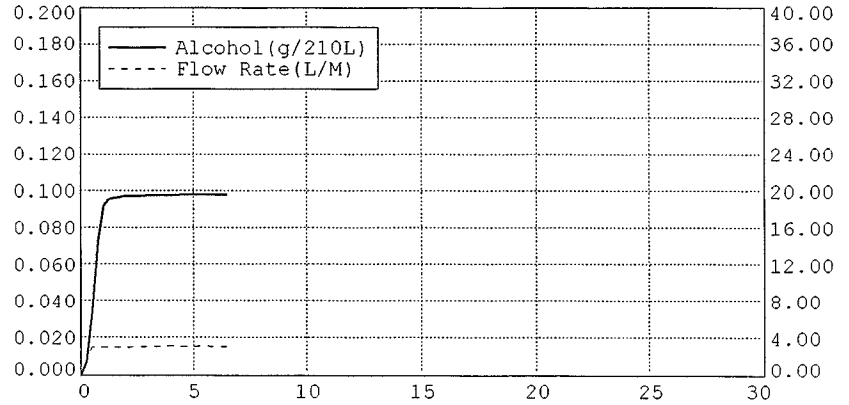
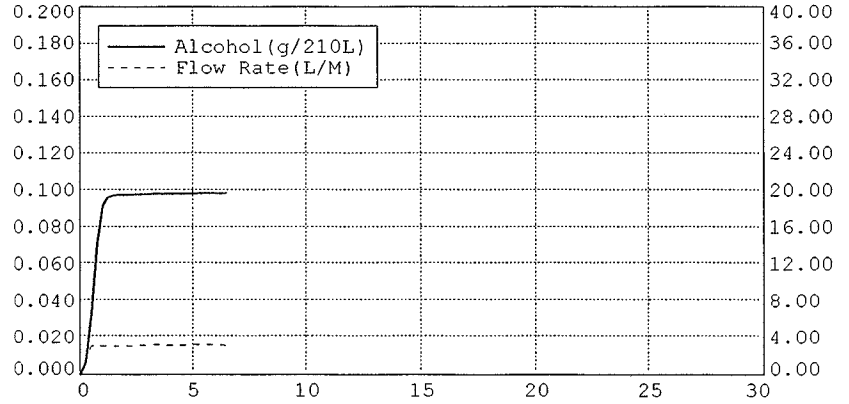
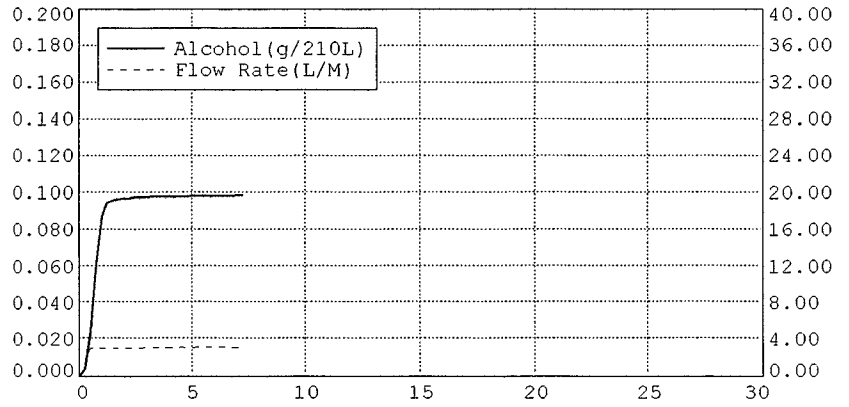
Date: 08/08/2018  
 Time: 12:50:42

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.39: 0.098  
 LOT #: AG629304  
 EXPIRATION: 10/19/2018  
 TANK PRESSURE: 863 psi

BLANK TEST	0.000	12:52
INTERNAL STANDARD	VERIFIED	12:52
EXTERNAL STANDARD	0.099	12:52
BLANK TEST	0.000	12:53
EXTERNAL STANDARD	0.099	12:53
BLANK TEST	0.000	12:54
EXTERNAL STANDARD	0.099	12:54
BLANK TEST	0.000	12:55
EXTERNAL STANDARD	0.099	12:55
BLANK TEST	0.000	12:56
EXTERNAL STANDARD	0.099	12:56
BLANK TEST	0.000	12:57

Average = 0.0990  
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 5

Alaska Department of Public Safety  
 DATAMASTER dmt: 100418

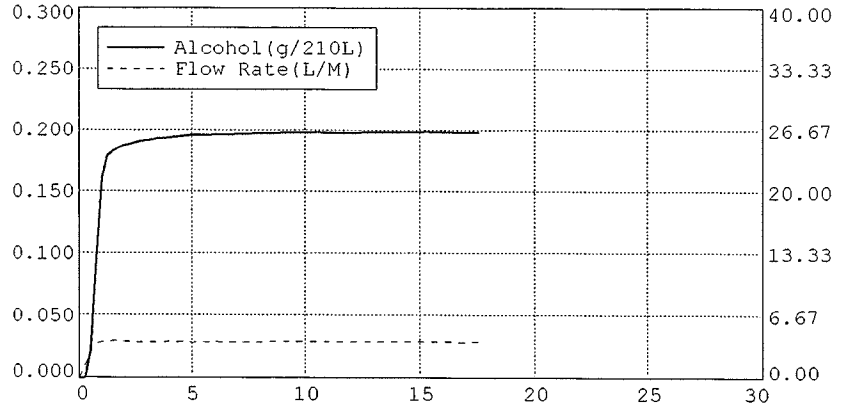
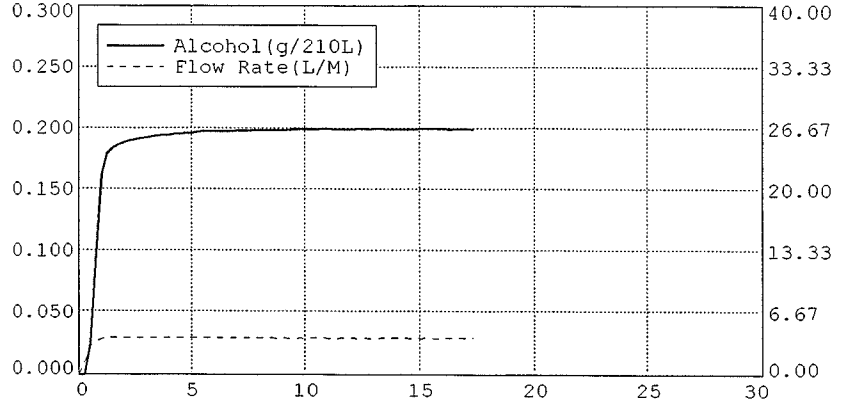
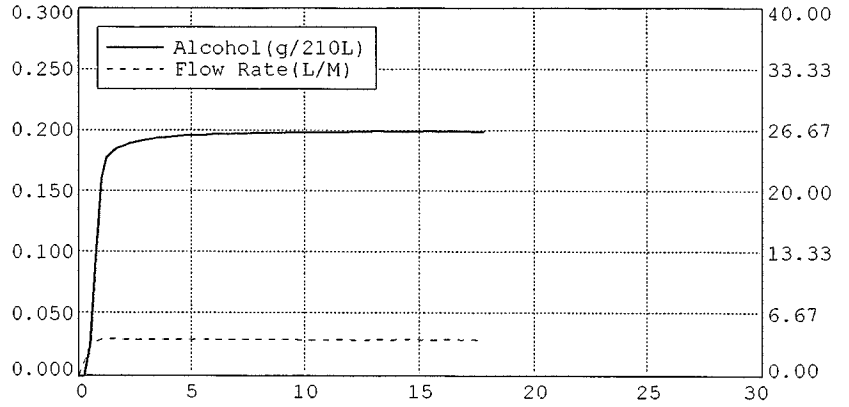
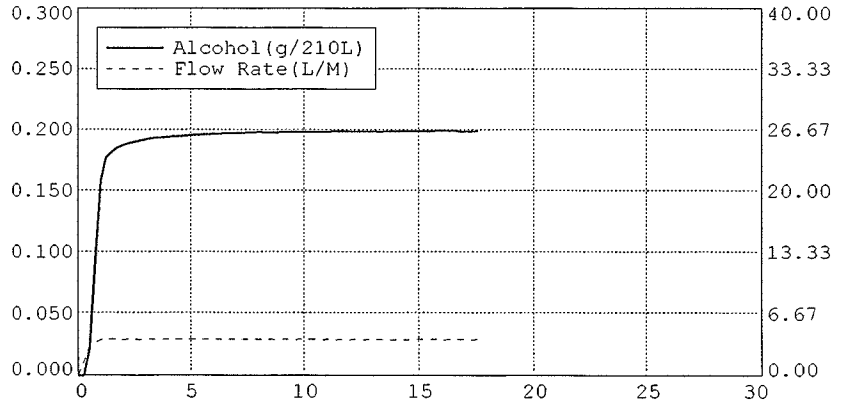
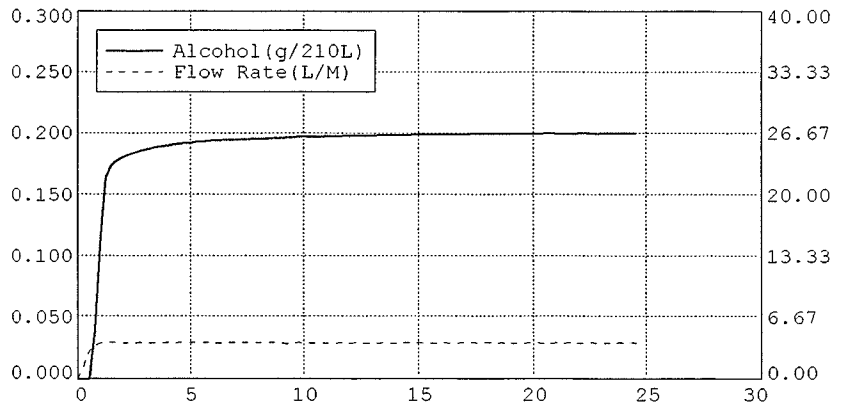
Date: 08/08/2018  
 Time: 13:06:53

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.200  
 LOT #: 17090  
 EXPIRATION: 02/24/2019

BLANK TEST	0.000	13:08
INTERNAL STANDARD	VERIFIED	13:08
EXTERNAL STANDARD	0.201	13:08
BLANK TEST	0.000	13:09
EXTERNAL STANDARD	0.199	13:10
BLANK TEST	0.000	13:11
EXTERNAL STANDARD	0.200	13:11
BLANK TEST	0.000	13:12
EXTERNAL STANDARD	0.200	13:12
BLANK TEST	0.000	13:13
EXTERNAL STANDARD	0.199	13:14
BLANK TEST	0.000	13:14

Average = 0.1998  
 Std Dev = 0.0008



LINEARITY CHECK: Control Test 6

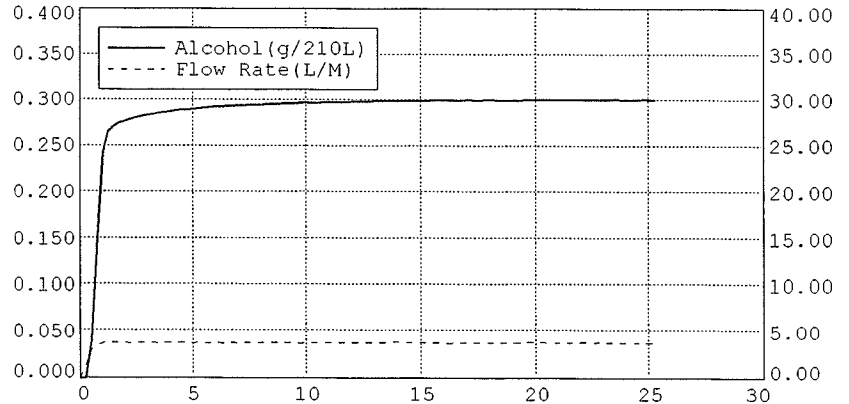
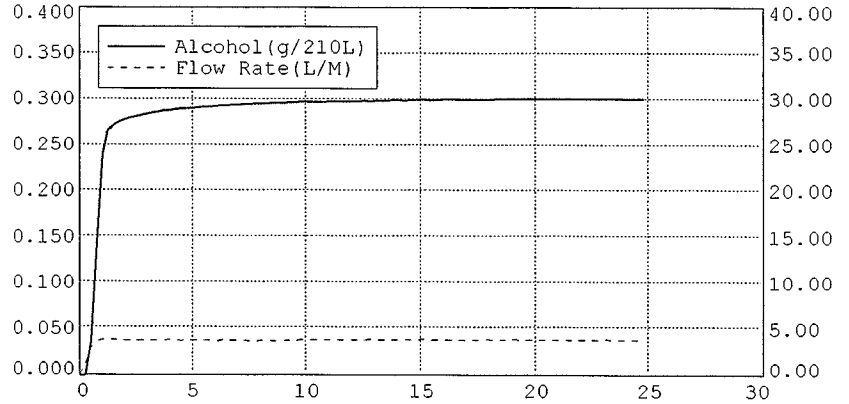
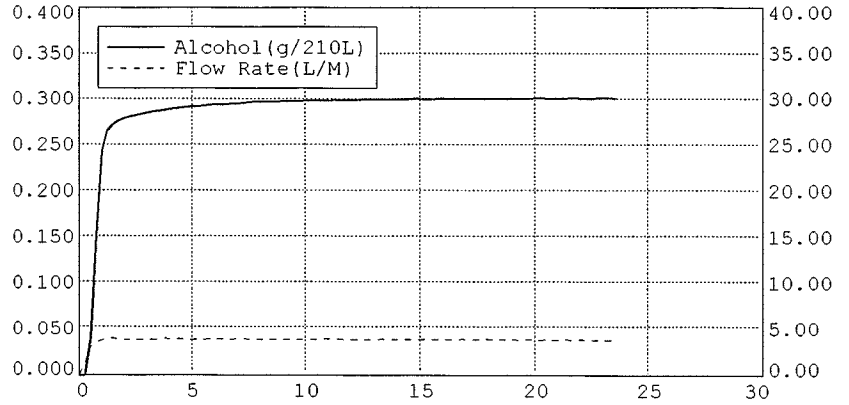
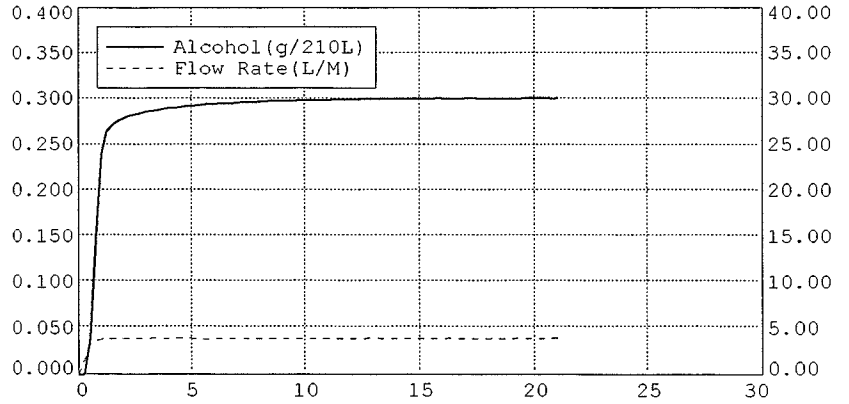
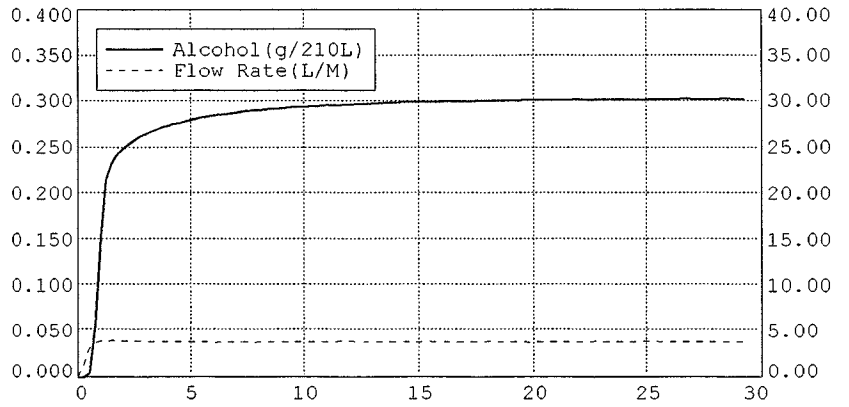
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 Alaska Department of Public Safety  
 DATAMASTER dmt: 100418  
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Date: 08/08/2018  
 Time: 13:17:15

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

BLANK TEST	0.000	13:18
INTERNAL STANDARD	VERIFIED	13:18
EXTERNAL STANDARD	0.302	13:19
BLANK TEST	0.000	13:20
EXTERNAL STANDARD	0.300	13:20
BLANK TEST	0.000	13:21
EXTERNAL STANDARD	0.300	13:21
BLANK TEST	0.000	13:22
EXTERNAL STANDARD	0.300	13:23
BLANK TEST	0.000	13:24
EXTERNAL STANDARD	0.301	13:24
BLANK TEST	0.000	13:25

Average = 0.3006  
 Std Dev = 0.0009



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100418

Date: 08/08/2018  
Time: 13:33:06

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

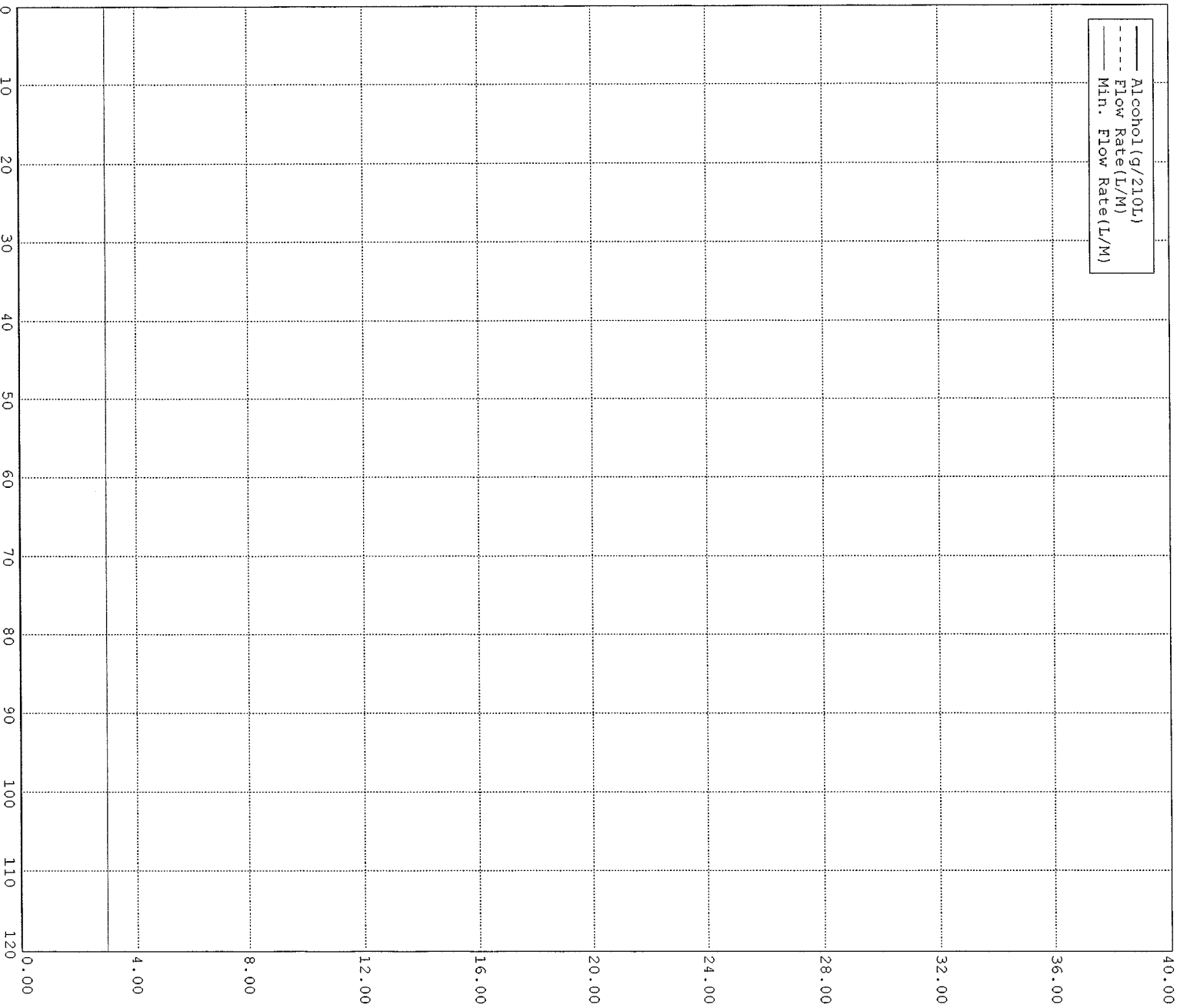
OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.40: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

TEST TYPE	RESULT	TIME
DIAGNOSTIC CHECK	PASSED	13:34
BLANK TEST	0.000	13:34
INTERNAL STANDARD	VERIFIED	13:34
EXTERNAL STANDARD	0.078	13:34
BLANK TEST	0.000	13:35
SUBJECT SAMPLE	INCOMPLETE	13:37

DMV



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100418

Date: 08/08/2018  
Time: 13:45:42

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

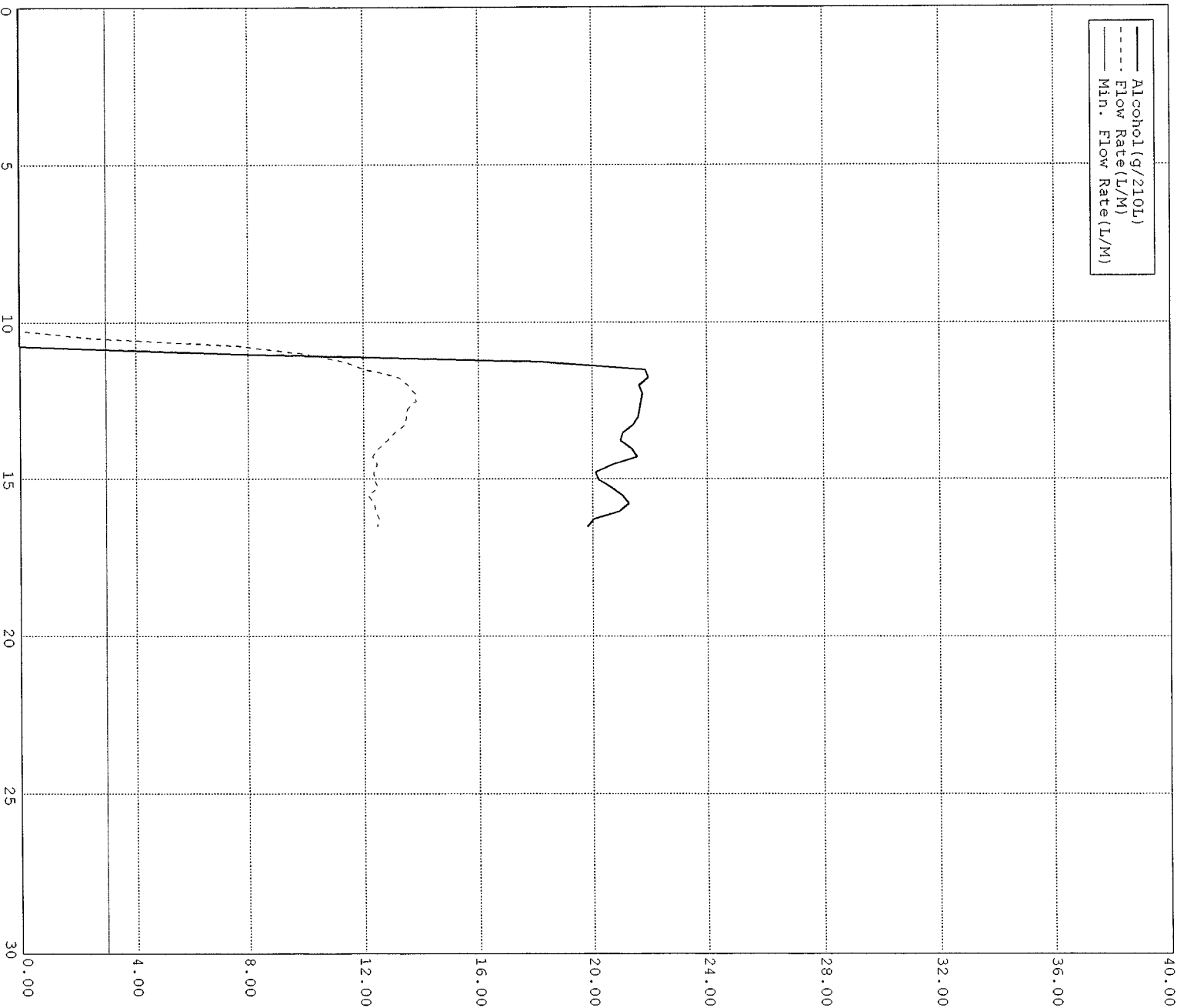
OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.41: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

DIAGNOSTIC CHECK	PASSED	13:51
BLANK TEST	0.000	13:51
INTERNAL STANDARD	VERIFIED	13:51
EXTERNAL STANDARD	0.079	13:51
BLANK TEST	0.000	13:52
SUBJECT SAMPLE	INVALID	13:53

*DM*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100418

Date: 08/08/2018  
Time: 14:00:09

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.39: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

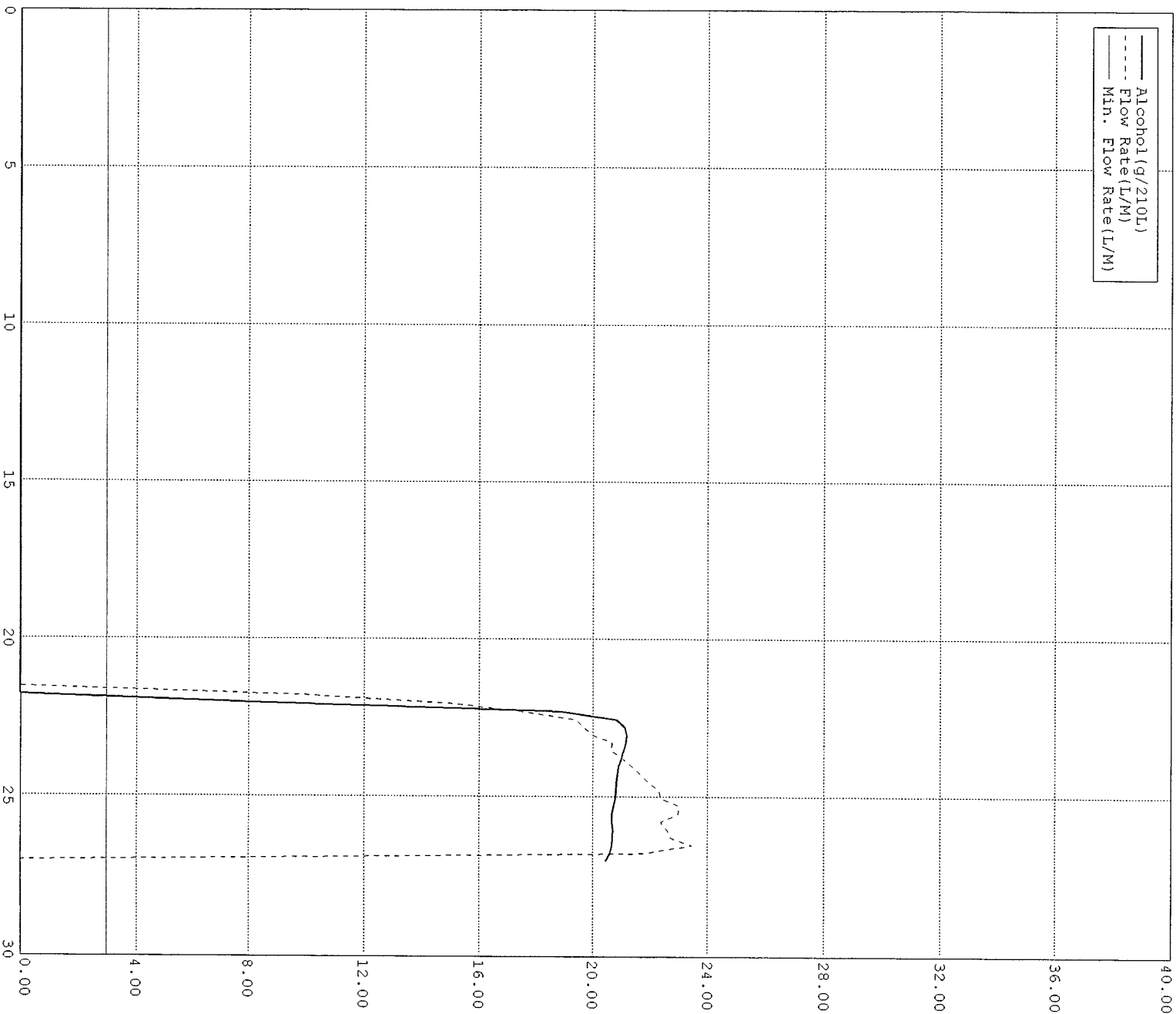
DIAGNOSTIC CHECK	PASSED	14:01
BLANK TEST	0.000	14:01
INTERNAL STANDARD	VERIFIED	14:01
Xq = 0.078 (0.56%)		
EXTERNAL STANDARD	0.079	14:01
X[1] = 0.0788 (0.0006)	(0.0033)	
BLANK TEST	0.000	14:02
SUBJECT SAMPLE	XXX	14:03
X[1] = 0.1025 (-0.0182)	(0.0016)	

Interference Detected

Filter 2 Avg : 0.0002  
Filter 3 Avg : 0.0025

DW 08/09/18

DW



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100418

Date: 08/08/2018  
Time: 14:05:27

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

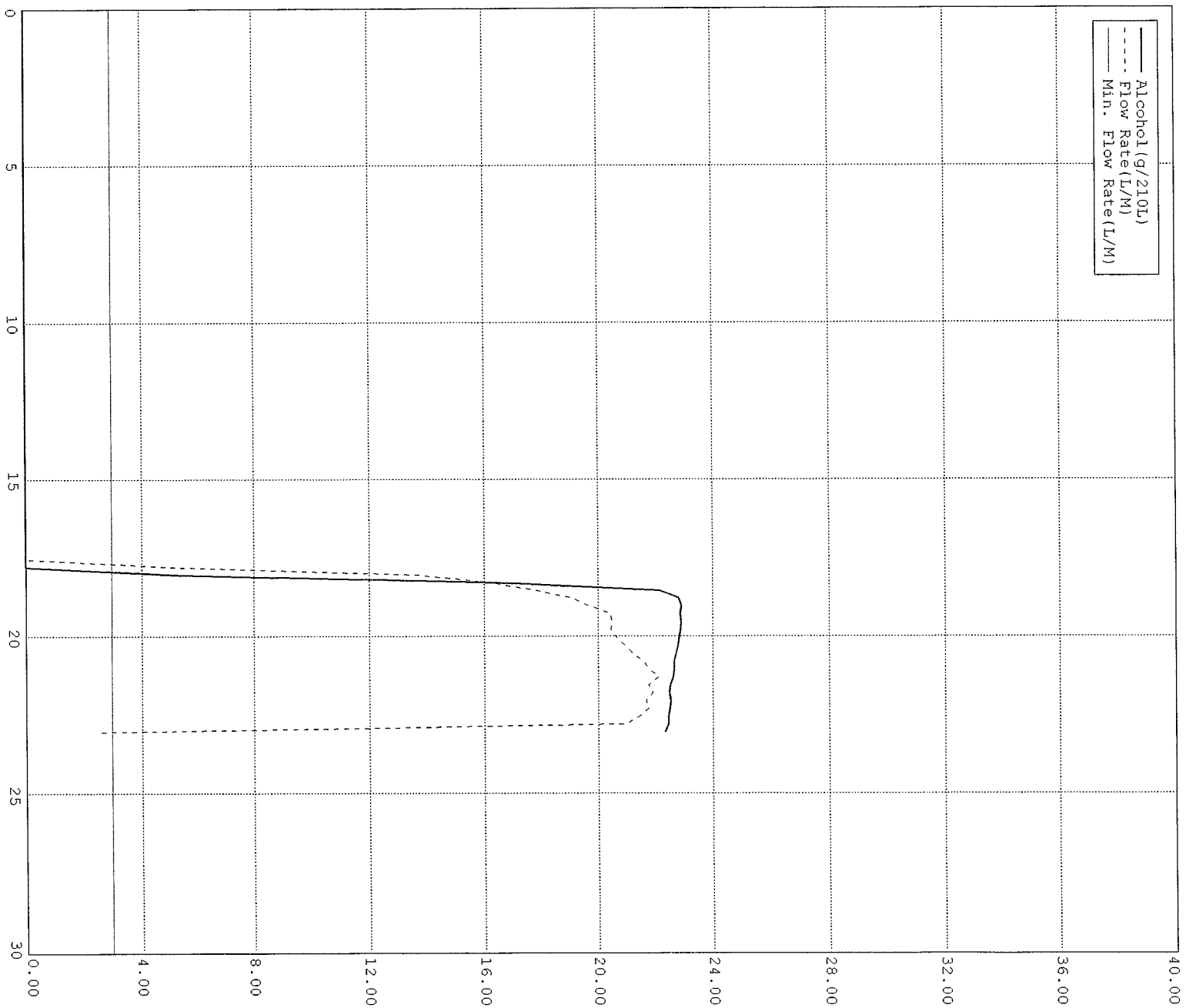
EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.40: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

DIAGNOSTIC CHECK	PASSED	14:07
BLANK TEST	0.000	14:07
INTERNAL STANDARD	VERIFIED	14:07
Xq = 0.078 (0.45%)		
EXTERNAL STANDARD	0.079	14:07
X[1] = 0.0789 (0.0007)	(0.0025)	
BLANK TEST	0.000	14:08
SUBJECT SAMPLE	XXX	14:09
X[1] = 0.1122 (-0.0262)	(0.0019)	

Interference Detected

*DM*





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dnt: 100418

Date: 08/08/2018  
Time: 14:13:16

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

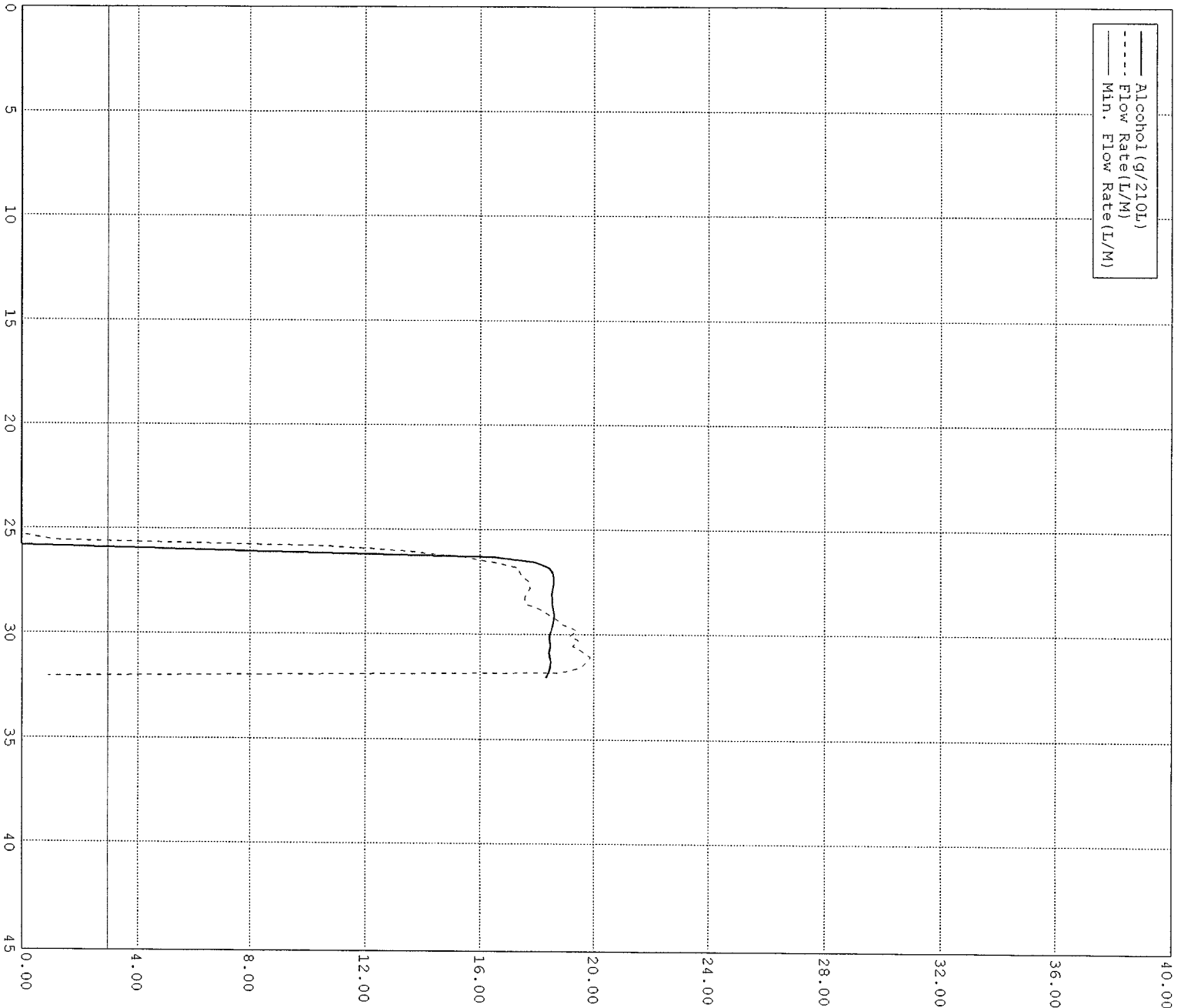
OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.40: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

DIAGNOSTIC CHECK PASSED 14:14  
BLANK TEST 0.000 14:15  
INTERNAL STANDARD VERIFIED 14:15  
Xq = 0.077 (0.00%)  
EXTERNAL STANDARD 0.079 14:15  
X[1] = 0.0786 (-0.0005) (0.0022)  
BLANK TEST 0.000 14:16  
SUBJECT SAMPLE (Vol=1.86L) 0.091 14:16  
X[1] = 0.0918 (-0.0006) (0.0012)  
BLANK TEST 0.000 14:17  
EXTERNAL STANDARD 0.078 14:18  
X[1] = 0.0785 (0.0001) (0.0019)  
BLANK TEST 0.000 14:18

MM



SUBJECT TEST

Alaska Department of Public Safety  
DATA MASTER dnt: 100418

Date: 08/08/2018  
Time: 14:23:04

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

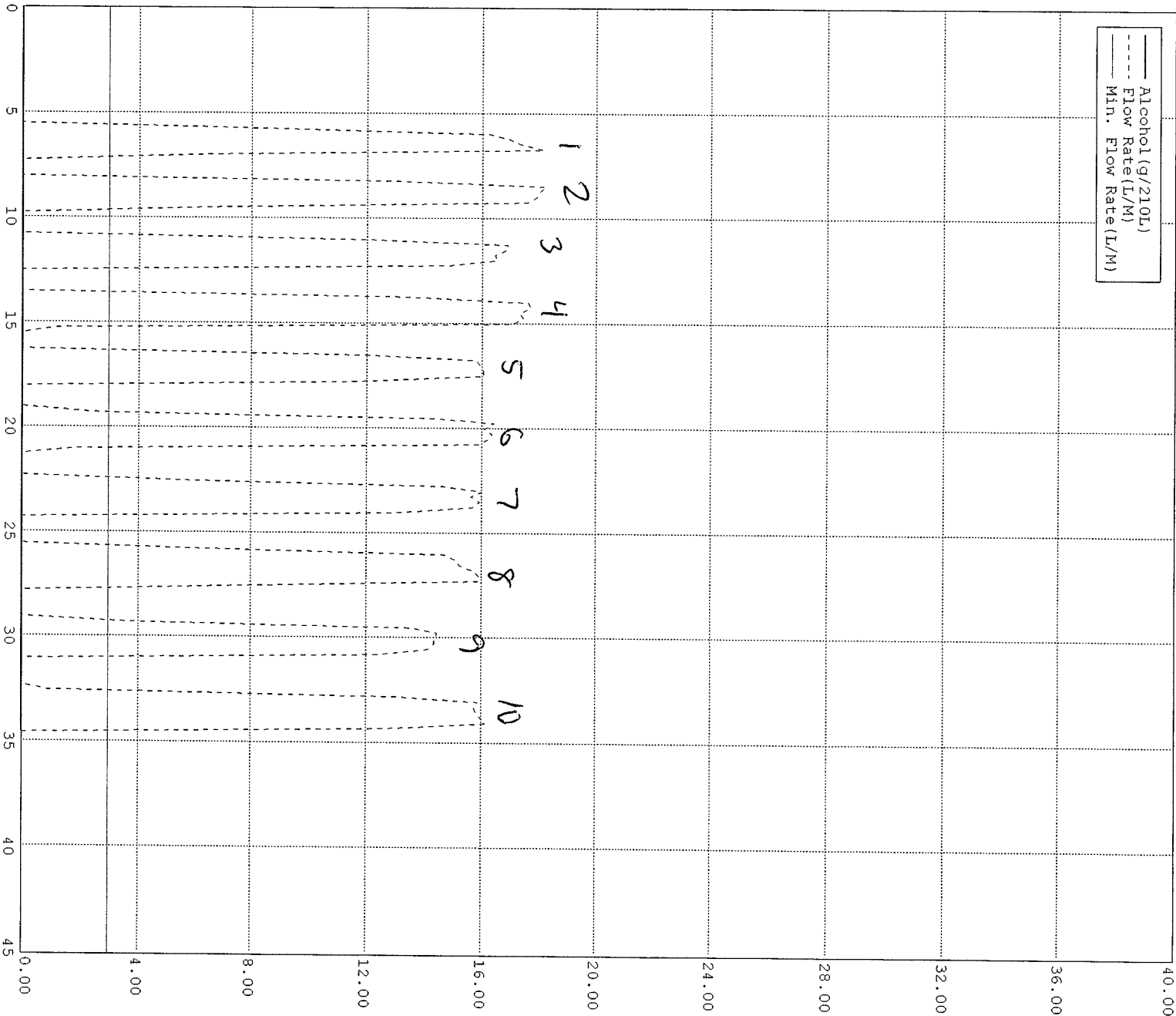
DEPT/AGENCY:  
MAXIMUM ATTEMPTS  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.40: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

DIAGNOSTIC CHECK	PASSED	14:24
BLANK TEST	0.000	14:24
INTERNAL STANDARD	VERIFIED	14:24
EXTERNAL STANDARD	0.079	14:25
BLANK TEST	0.000	14:26
SUBJECT SAMPLE	XXX	14:26

Maximum Attempts Exceeded

DM



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100418

Date: 08/08/2018  
Time: 14:29:44

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

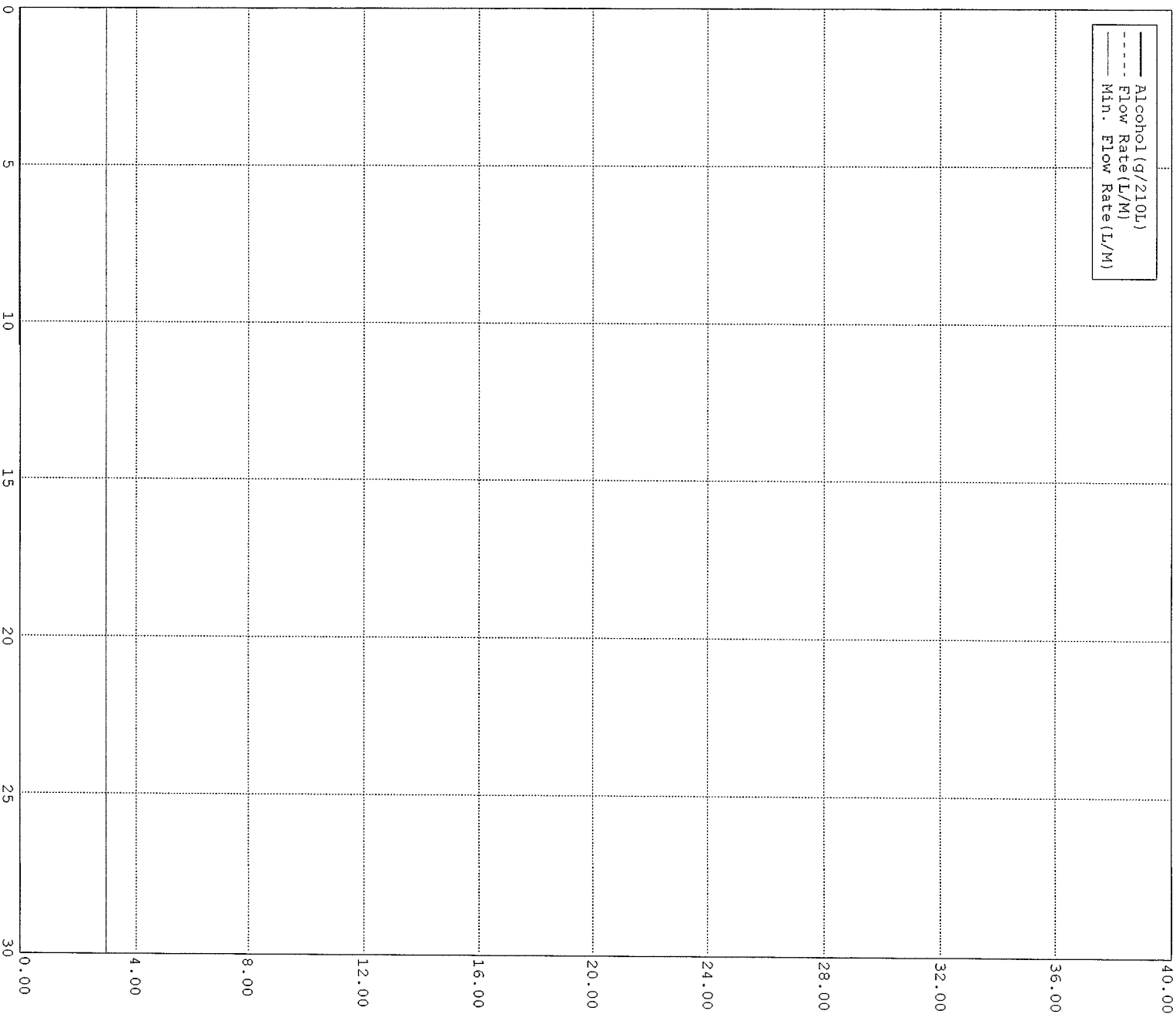
DEPT/AGENCY:  
RFI  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.40: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

DIAGNOSTIC CHECK PASSED 14:32  
BLANK TEST 0.000 14:32  
INTERNAL STANDARD VERIFIED 14:32  
EXTERNAL STANDARD 0.079 14:32  
BLANK TEST 0.000 14:33

RFI DETECTED

*my*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dnt: 100418

Date: 08/09/2018  
Time: 09:53:55

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

DEPT/AGENCY:  
NON-DRINKING SUBJECT  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.48: 0.079  
LOT #: AG634001  
EXPIRATION: 12/05/2018

DIAGNOSTIC CHECK	PASSED	09:55
BLANK TEST	0.000	09:55
INTERNAL STANDARD	VERIFIED	09:55
EXTERNAL STANDARD	0.079	09:55
BLANK TEST	0.000	09:56
BLANK TEST	0.000	09:56
SUBJECT SAMPLE (Vol=2.57L)	0.000	09:56
BLANK TEST	0.000	09:57
EXTERNAL STANDARD	0.079	09:58
BLANK TEST	0.000	09:58

*MM*

