

# Alaska Scientific Crime Detection Laboratory

## DataMaster Certification Form

Issued: 05/15/2020  
Effective: 05/15/2020

Version: DMCEF 2020 R0  
Status: Active

Instrument S/N 100255 Analyst Derek Walton Start Date 10/08/20

- Diagnostic Test (attached)  Internal Standard value  $\leq 3.00\%$

### Voltage Checks

- 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)
- Set RFI
- Adjust barometer reading to match NIST traceable barometer
- Adjust volume setting, if needed (1.5L +/- 0.1L)
- Print Technician Screen (attached)
- Print Calibration Factors (attached)
- Volume Test - Minimum 1.6 L (1.3L to 1.7L)

### Linearity Test (attached)

#### Levels Used

- i. 0.020g/210L Mnf Airgas Lot A6928203 Exp 10/09/21
- ii. 0.040g/210L Mnf Airgas Lot A6915607 Exp 06/05/21
- iii. 0.080g/210L Mnf Airgas Lot A6018102 Exp 06/29/22
- iv. 0.100g/210L Mnf Airgas Lot A6924701 Exp 09/04/21
- v. 0.200g/210L Mnf Autn Lot 19200 Exp 08/06/21  
Simulator S/N DR4161 Date Calibrated 05/08/20
- vi. 0.300g/210L Mnf Autn Lot 19330 Exp 11/13/21  
Simulator S/N DR5298 Date Calibrated 05/08/20

### Functional Tests (attached)

- Incomplete  Invalid
- Interference
- i. Acetone - Mnf Autn Lot 19301 Level 0.100 Exp 10/30/21  
Simulator S/N SD1202 Date Calibrated 05/08/20
  - ii. Isopropanol - Mnf Autn Lot 19301 Level 0.100 Exp \_\_\_\_\_  
Simulator S/N SD1177 Date Calibrated 05/07/20
  - iii. Negative Control - Mnf Autn Lot 19301 Level 0.100 Exp 10/30/21  
Simulator S/N SD1088 Date Calibrated 05/08/20

- Exceeded Attempts  RFI

- Verify stylus is calibrated
- Reset Options
- Clear Memory
- Remove tank prior to shut down
- Verification of Calibration
- Non-Drinking Subject Test (attached)
- Upload
- Add Linearity Data to Spreadsheet

End Date 10/09/20

DIAGNOSTIC RECORD

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100255  
-----

Date: 10/08/2020  
Time: 09:57:37

VERSIONS

DMT: 3.02  
PIC: 2.05  
Modem: 2.6  
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.7°C PASSED  
(44.0°C - 52.0°C)  
Breath Tube = 44.7°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.61 V PASSED  
(0.97 V - 2.25 V)  
Cooler Voltage = 1.59 V PASSED  
(0.95 V - 2.23 V)  
Bias Voltage = 80 V PASSED  
(48 V - 112 V)  
Chopper Freq = 543 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 29.2 in

PUMP INFO

Flow Rate = 4.342 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  
(0.001 V <= 0.010 V)

FILTER INFO

Filter 1 PASSED  
Filter 2 PASSED  
Filter 3 PASSED

INTERNAL STANDARD ✓ PASSED  
Xq = 0.077 0.34% (0.00% - 4.00%)

Technician Screen

-----  
DATAMASTER dmt: 100255  
-----

Date: 10/08/2020  
Time: 10:20 AM

Temperatures (°C)

Sample Cell: 48.7°C  
Breath Tube: 44.1°C

Current Barometer 29.2 in  
Volume (Ltr) 1.47 ✓

Settings

Lamp: 1.61 V  
Bias: 80 V  
Cooler: 1.64 V  
Chopper: 526 Hz

Voltages (V)

Flow: 1.03 V  
Detector: 0.047 V ✓

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100255  
-----

Date: 06/13/2016  
Time: 09:42:02

OPERATOR NAME:  
Q Q Q  
CERTIFICATE #: Q

Ca = 0.1500  
CAL = 1.000437    0.800 <= CAL < 1.200  
b1 = 0.0014    0.0000 <= b1 < 0.0040  
b2 = 0.0079    0.0010 <= b2 < 0.0100  
b3 = 0.0011    0.0000 <= b3 < 0.0040  
Xq = 0.0769    0.0500 <= Xq < 0.2000  
a21 = 1.209080    1.050 <= a21 < 1.300  
a31 = 0.429320    0.300 <= a31 < 0.800

SUBJECT TEST

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100255  
-----

Date: 10/08/2020  
Time: 10:21:15

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

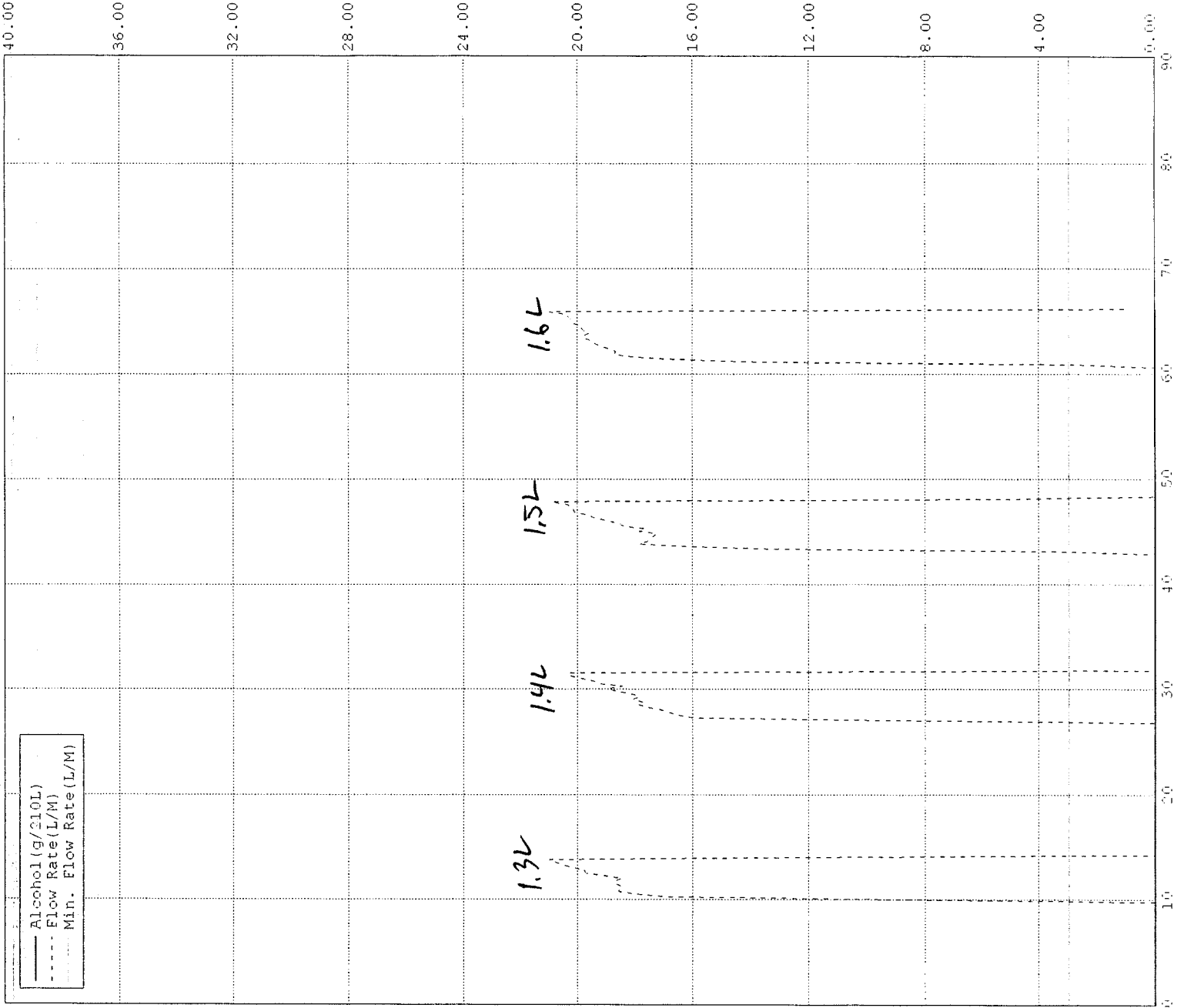
DEPT/AGENCY:  
MINIMUM VOLUME  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.23: 0.078  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	10:22
BLANK TEST	0.000	10:22
INTERNAL STANDARD	VERIFIED	10:22
EXTERNAL STANDARD	0.078	10:22
BLANK TEST	0.000	10:23
SUBJECT SAMPLE (Vol=1.60L)	0.000	10:24
BLANK TEST	0.078	10:25
EXTERNAL STANDARD	0.000	10:26

*Handwritten signature*



LINEARITY CHECK

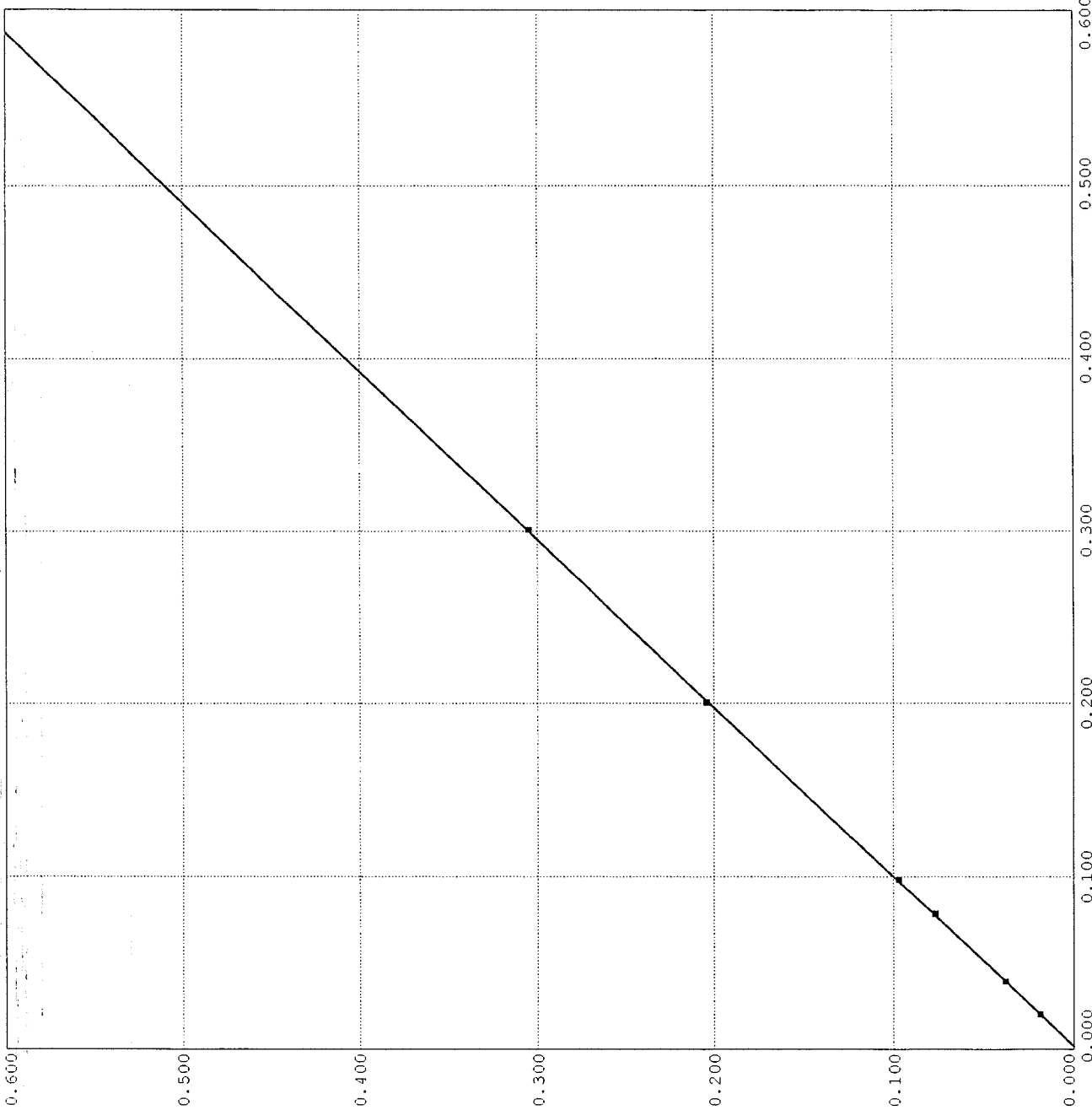
-----  
 Alaska Department of Public Safety  
 DATAMASTER dmt: 100255  
 -----

Date: 10/08/2020  
 Time: 10:31:38

SUPERVISOR NAME:  
 DEREK WALTON  
 OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0194	0.0005
0.039	0.0390	0.0000
0.078	0.0778	0.0004
0.098	0.0980	0.0000
0.200	0.2050	0.0000
0.300	0.3056	0.0005

SLOPE = 1.025219  
 R<sup>2</sup> = 0.999932



*MC*

LINEARITY CHECK: Control Test 1

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Alaska Department of Public Safety  
DATAMASTER dmt: 100255  
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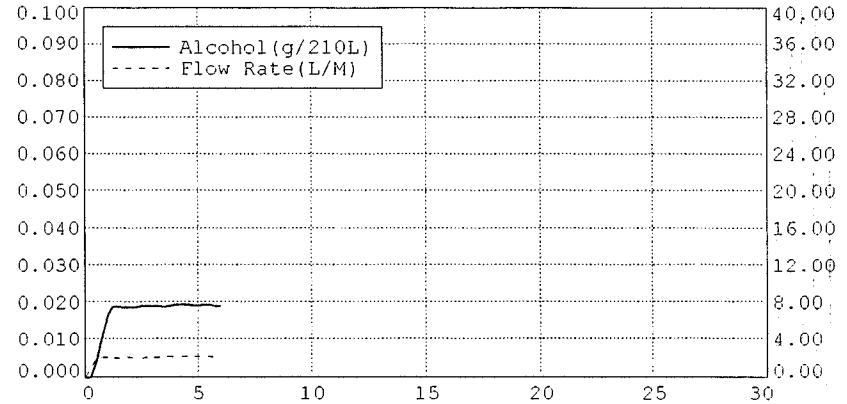
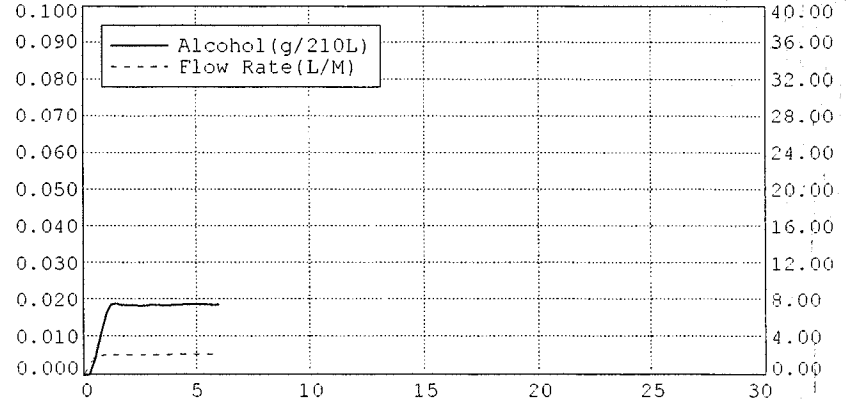
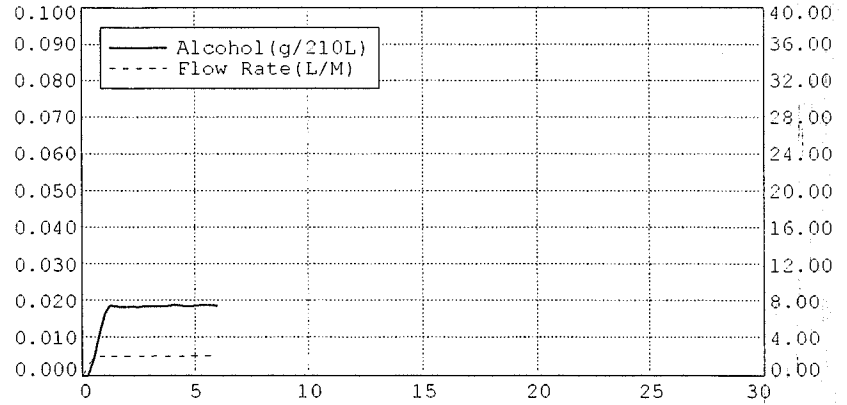
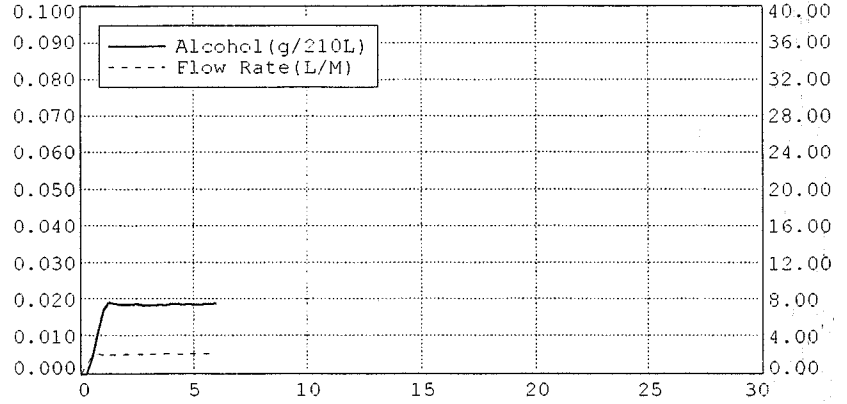
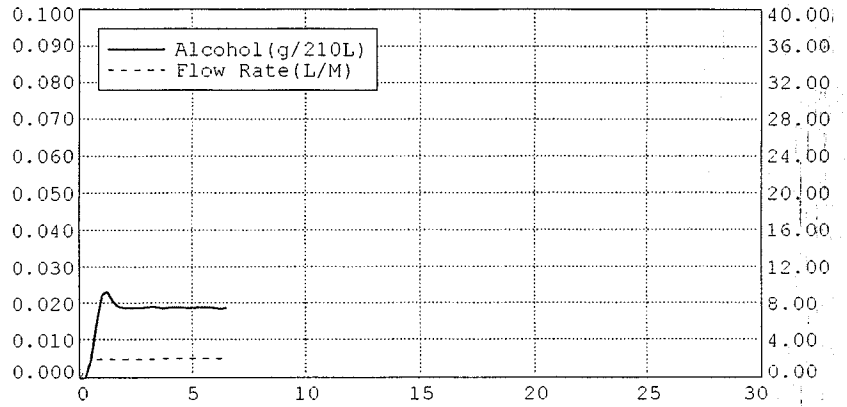
Date: 10/08/2020  
Time: 10:31:39

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
TARGET AT 29.23: 0.020  
LOT #: AG928203  
EXPIRATION: 10/09/2021  
TANK PRESSURE: 756 psi

BLANK TEST	0.000	10:33
INTERNAL STANDARD	VERIFIED	10:33
EXTERNAL STANDARD	0.020	10:33
BLANK TEST	0.000	10:34
EXTERNAL STANDARD	0.019	10:34
BLANK TEST	0.000	10:35
EXTERNAL STANDARD	0.019	10:35
BLANK TEST	0.000	10:36
EXTERNAL STANDARD	0.019	10:36
BLANK TEST	0.000	10:37
EXTERNAL STANDARD	0.020	10:37
BLANK TEST	0.000	10:38

Average = 0.0194  
Std Dev = 0.0005



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
DATAMASTER dmt: 100255

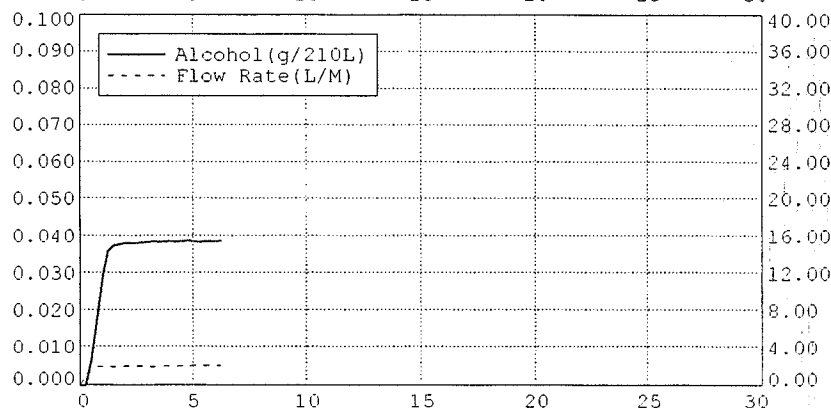
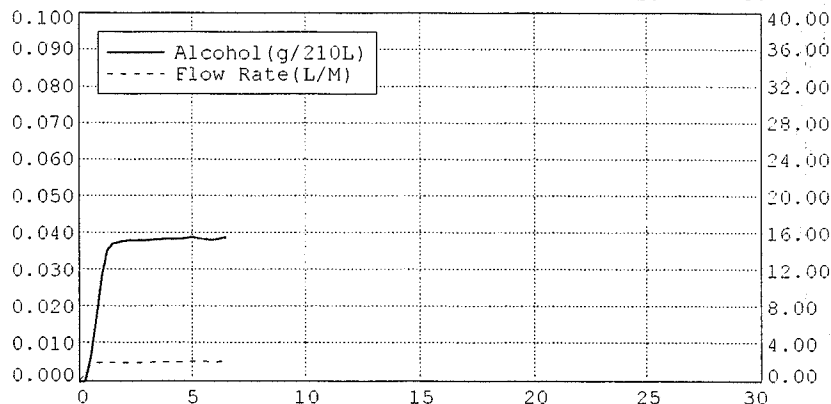
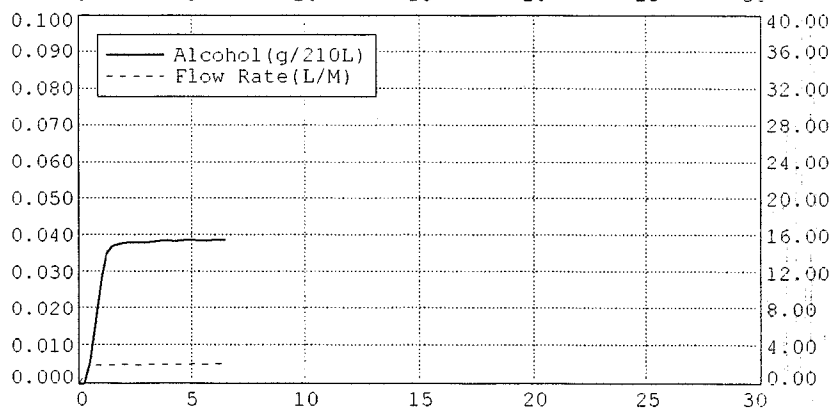
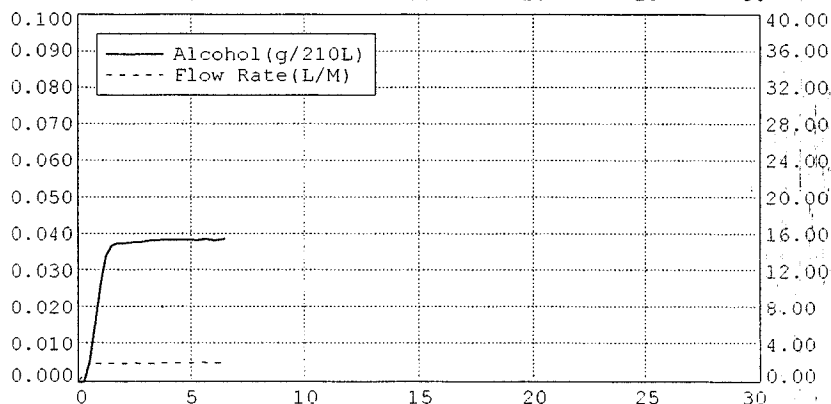
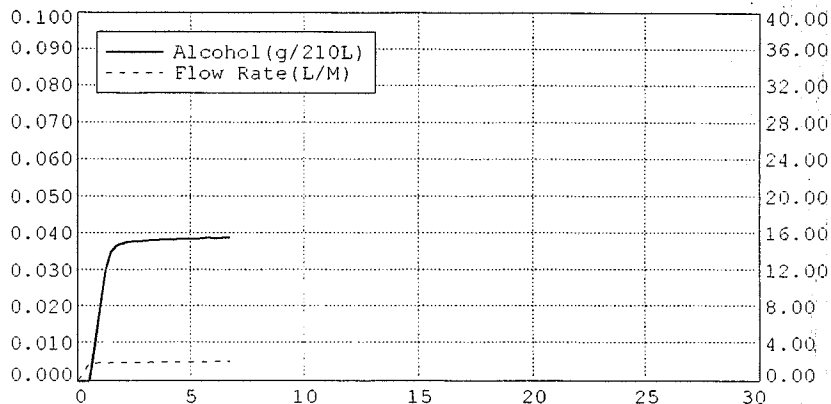
Date: 10/08/2020  
Time: 10:42:16

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
TARGET AT 29.23: 0.039  
LOT #: AG915607  
EXPIRATION: 06/05/2021  
TANK PRESSURE: 521 psi

BLANK TEST	0.000	10:43
INTERNAL STANDARD	VERIFIED	10:43
EXTERNAL STANDARD	0.039	10:44
BLANK TEST	0.000	10:44
EXTERNAL STANDARD	0.039	10:45
BLANK TEST	0.000	10:46
EXTERNAL STANDARD	0.039	10:46
BLANK TEST	0.000	10:47
EXTERNAL STANDARD	0.039	10:47
BLANK TEST	0.000	10:48
EXTERNAL STANDARD	0.039	10:48
BLANK TEST	0.000	10:49

Average = 0.0390  
Std Dev = 0.0000





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100255

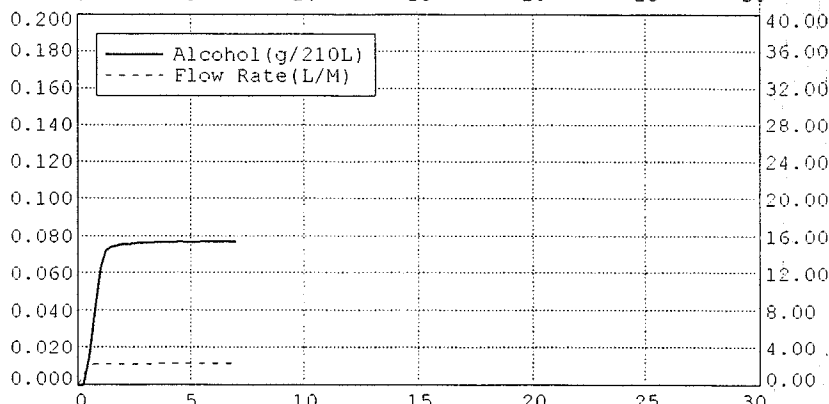
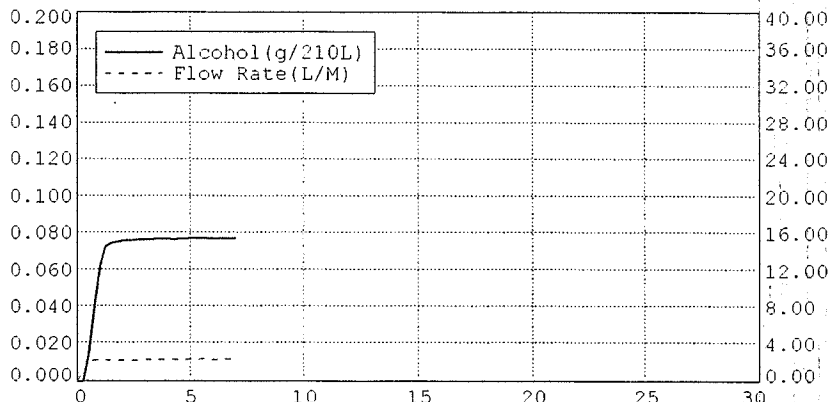
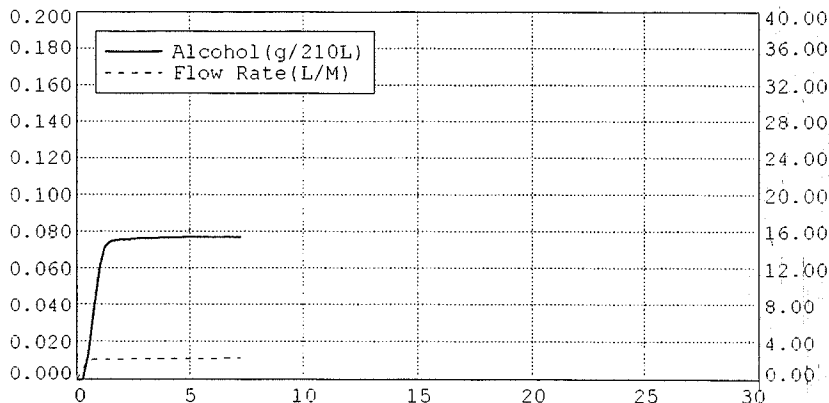
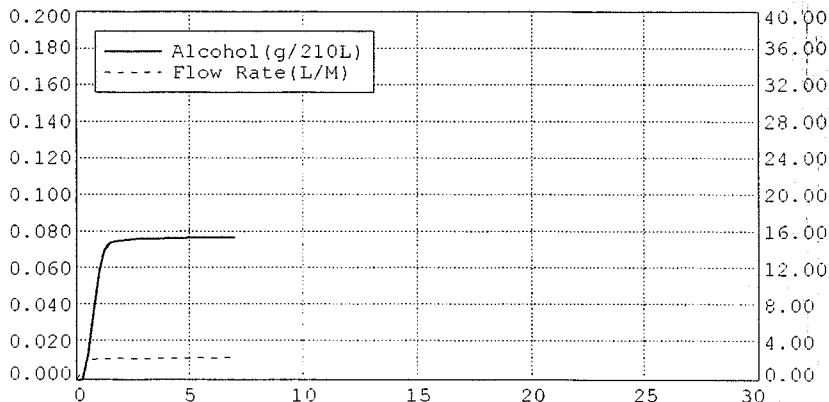
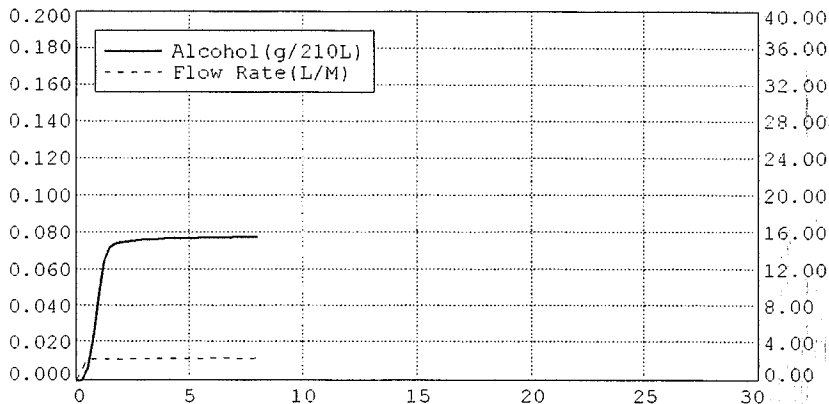
Date: 10/08/2020  
 Time: 10:51:18

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 29.21: 0.078  
 LOT #: AG018102  
 EXPIRATION: 06/29/2022  
 TANK PRESSURE: 1186 psi

BLANK TEST	0.000	10:52
INTERNAL STANDARD	VERIFIED	10:52
EXTERNAL STANDARD	0.078	10:52
BLANK TEST	0.000	10:53
EXTERNAL STANDARD	0.077	10:53
BLANK TEST	0.000	10:54
EXTERNAL STANDARD	0.078	10:55
BLANK TEST	0.000	10:55
EXTERNAL STANDARD	0.078	10:56
BLANK TEST	0.000	10:56
EXTERNAL STANDARD	0.078	10:57
BLANK TEST	0.000	10:57

Average = 0.0778  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 4

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 Alaska Department of Public Safety  
 DATAMASTER dmt: 100255  
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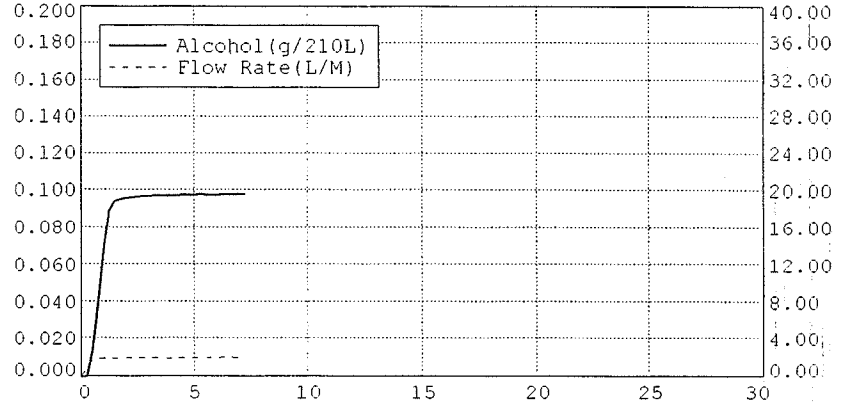
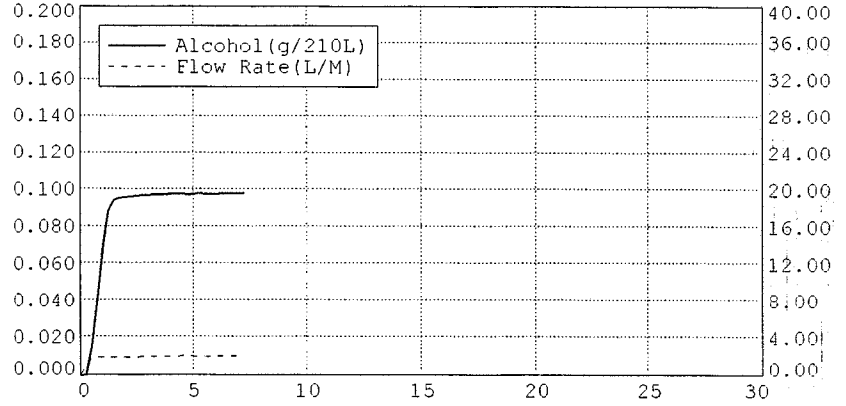
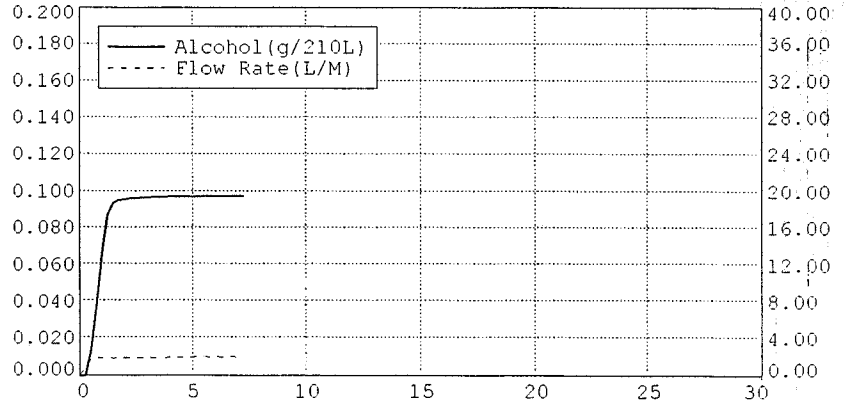
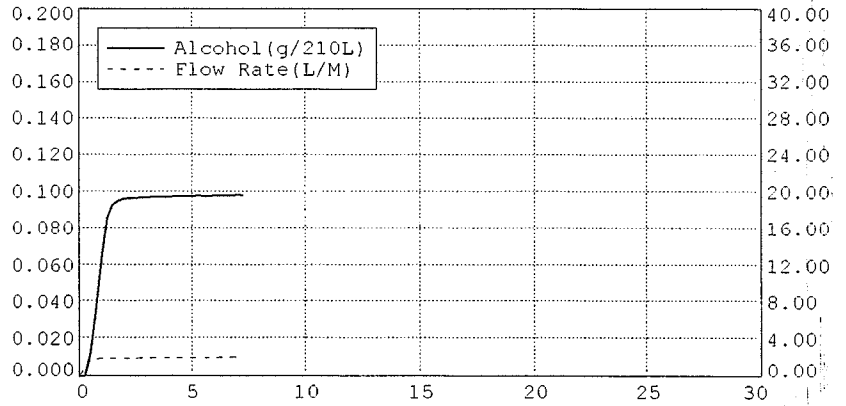
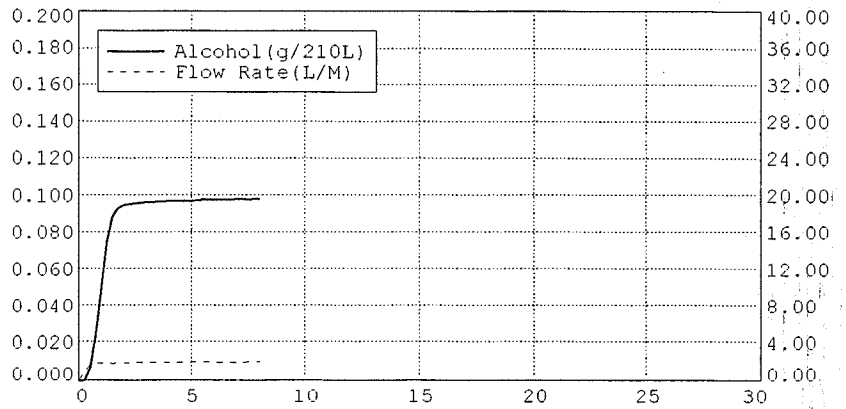
Date: 10/08/2020  
 Time: 11:00:05

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.23: 0.098  
 LOT #: AG924701  
 EXPIRATION: 09/04/2021  
 TANK PRESSURE: 318 psi

BLANK TEST	0.000	11:01
INTERNAL STANDARD	VERIFIED	11:01
EXTERNAL STANDARD	0.098	11:02
BLANK TEST	0.000	11:02
EXTERNAL STANDARD	0.098	11:03
BLANK TEST	0.000	11:03
EXTERNAL STANDARD	0.098	11:04
BLANK TEST	0.000	11:04
EXTERNAL STANDARD	0.098	11:05
BLANK TEST	0.000	11:05
EXTERNAL STANDARD	0.098	11:06
BLANK TEST	0.000	11:07

Average = 0.0980  
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 5

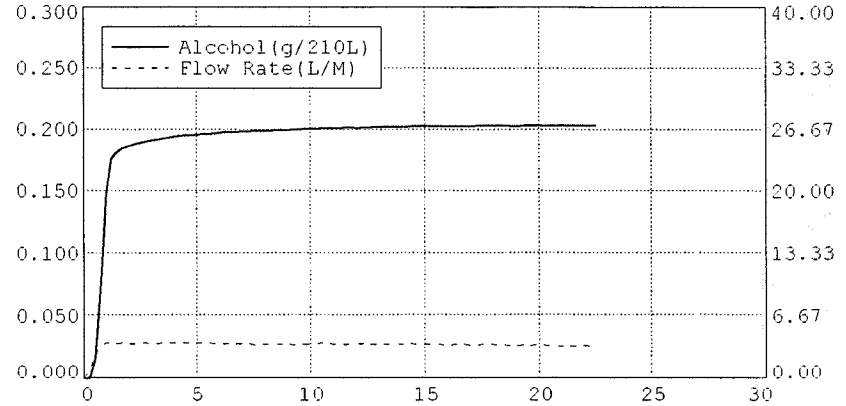
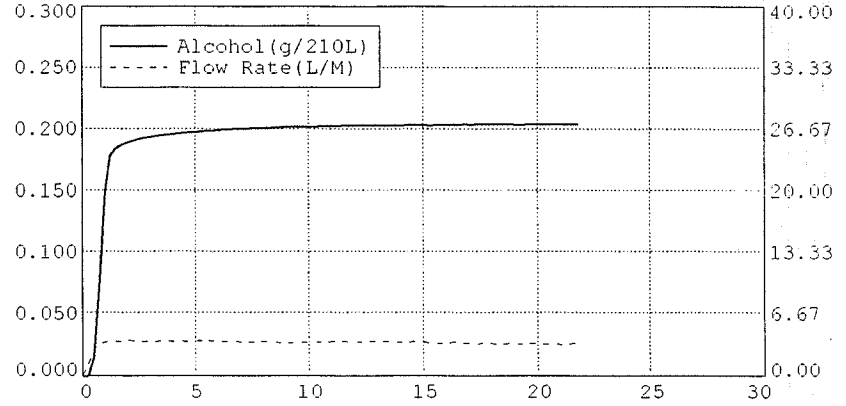
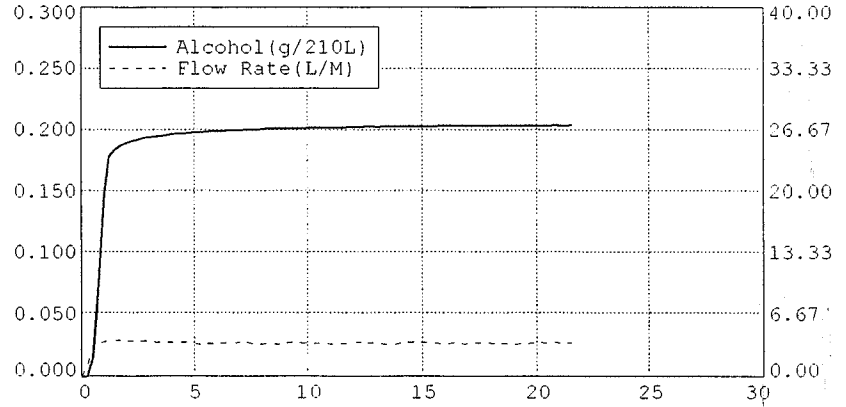
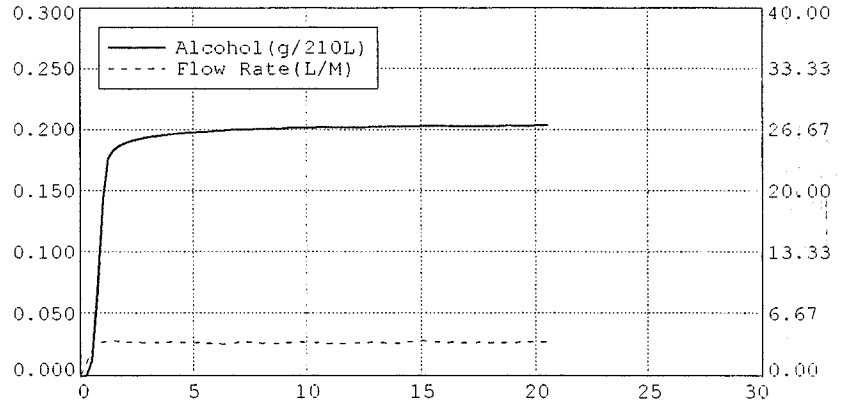
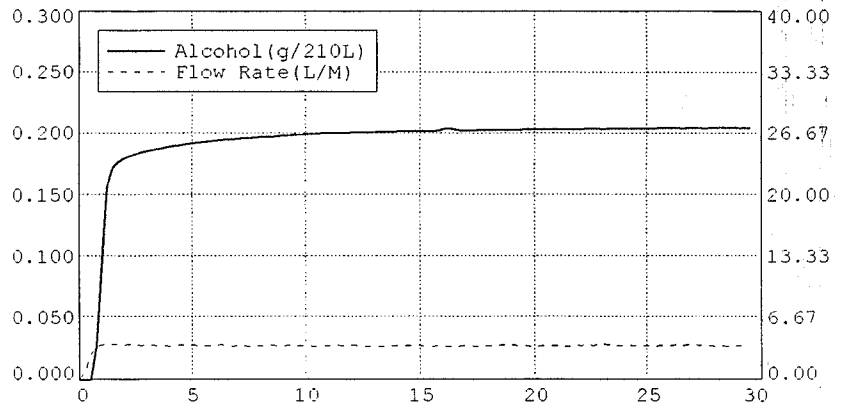
Alaska Department of Public Safety  
DATAMASTER dmt: 100255

Date: 10/08/2020  
Time: 11:15:46

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.200  
LOT #: 19200  
EXPIRATION: 08/06/2021

BLANK TEST	0.000	11:16
INTERNAL STANDARD	VERIFIED	11:16
EXTERNAL STANDARD	0.205	11:17
BLANK TEST	0.000	11:18
EXTERNAL STANDARD	0.205	11:18
BLANK TEST	0.000	11:19
EXTERNAL STANDARD	0.205	11:20
BLANK TEST	0.000	11:20
EXTERNAL STANDARD	0.205	11:21
BLANK TEST	0.000	11:22
EXTERNAL STANDARD	0.205	11:22
BLANK TEST	0.000	11:23

Average = 0.2050  
Std Dev = 0.0000



LINEARITY CHECK: Control Test 6

Alaska Department of Public Safety  
 DATAMASTER dmt: 100255

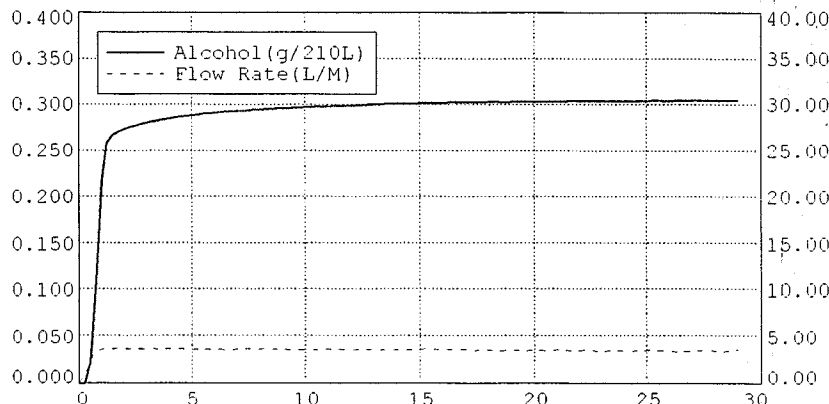
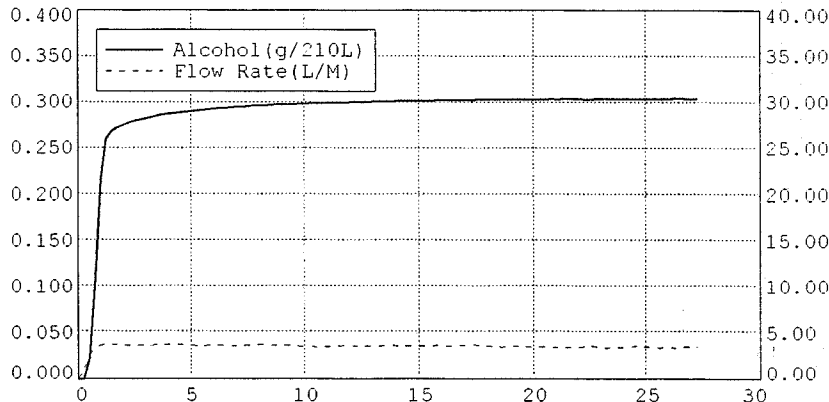
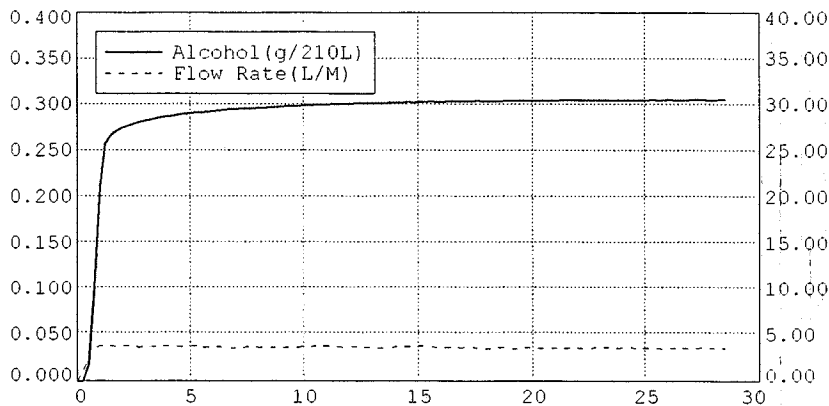
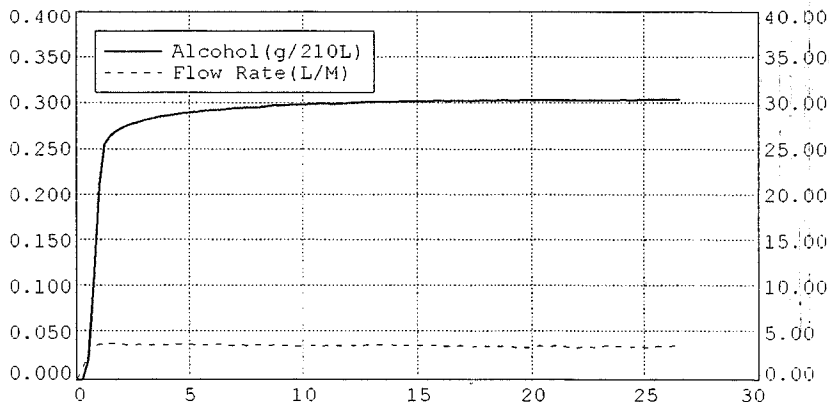
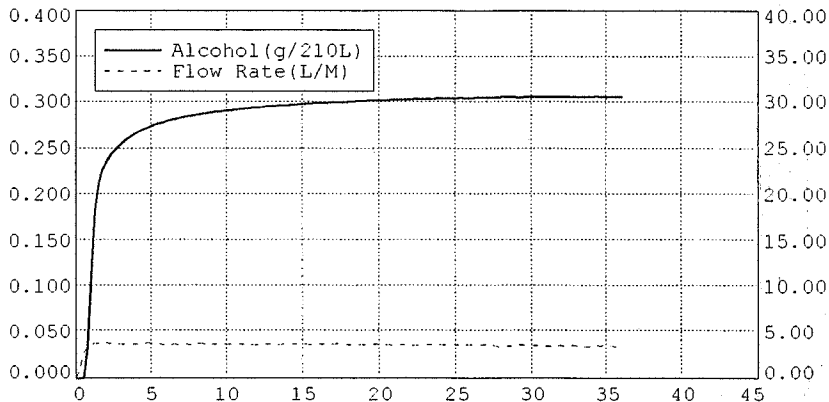
Date: 10/08/2020  
 Time: 11:27:11

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.300  
 LOT #: 19330  
 EXPIRATION: 11/13/2021

BLANK TEST	0.000	11:28
INTERNAL STANDARD	VERIFIED	11:28
EXTERNAL STANDARD	0.306	11:28
BLANK TEST	0.000	11:29
EXTERNAL STANDARD	0.305	11:30
BLANK TEST	0.000	11:31
EXTERNAL STANDARD	0.306	11:31
BLANK TEST	0.000	11:32
EXTERNAL STANDARD	0.305	11:33
BLANK TEST	0.000	11:34
EXTERNAL STANDARD	0.306	11:34
BLANK TEST	0.000	11:35

Average = 0.3056  
 Std Dev = 0.0005



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100255

Date: 10/08/2020  
Time: 11:41:24

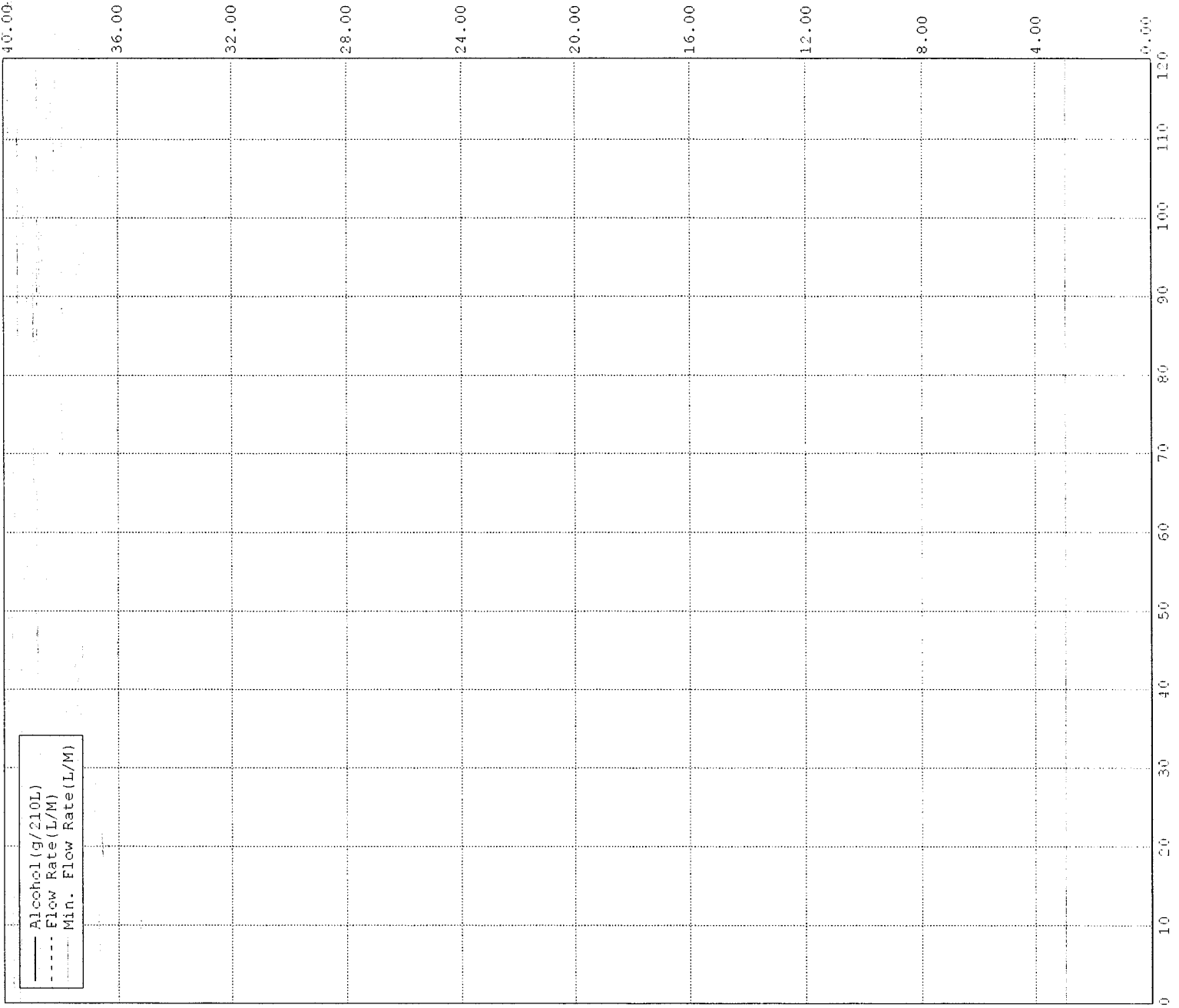
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.23: 0.078  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK PASSED 11:43  
BLANK TEST 0.000 11:43  
INTERNAL STANDARD VERIFIED 11:43  
EXTERNAL STANDARD 0.078 11:43  
BLANK TEST 0.000 11:44  
SUBJECT SAMPLE INCOMPLETE 11:46



SUBJECT TEST

Alaska Department of Public Safety

DATA MASTER dmt: 100255

Date: 10/08/2020

Time: 14:13:49

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 29.18: 0.078

LOT #: AG018102

EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK

BLANK TEST

INTERNAL STANDARD

EXTERNAL STANDARD

BLANK TEST

SUBJECT SAMPLE

PASSED 14:15

0.000 14:15

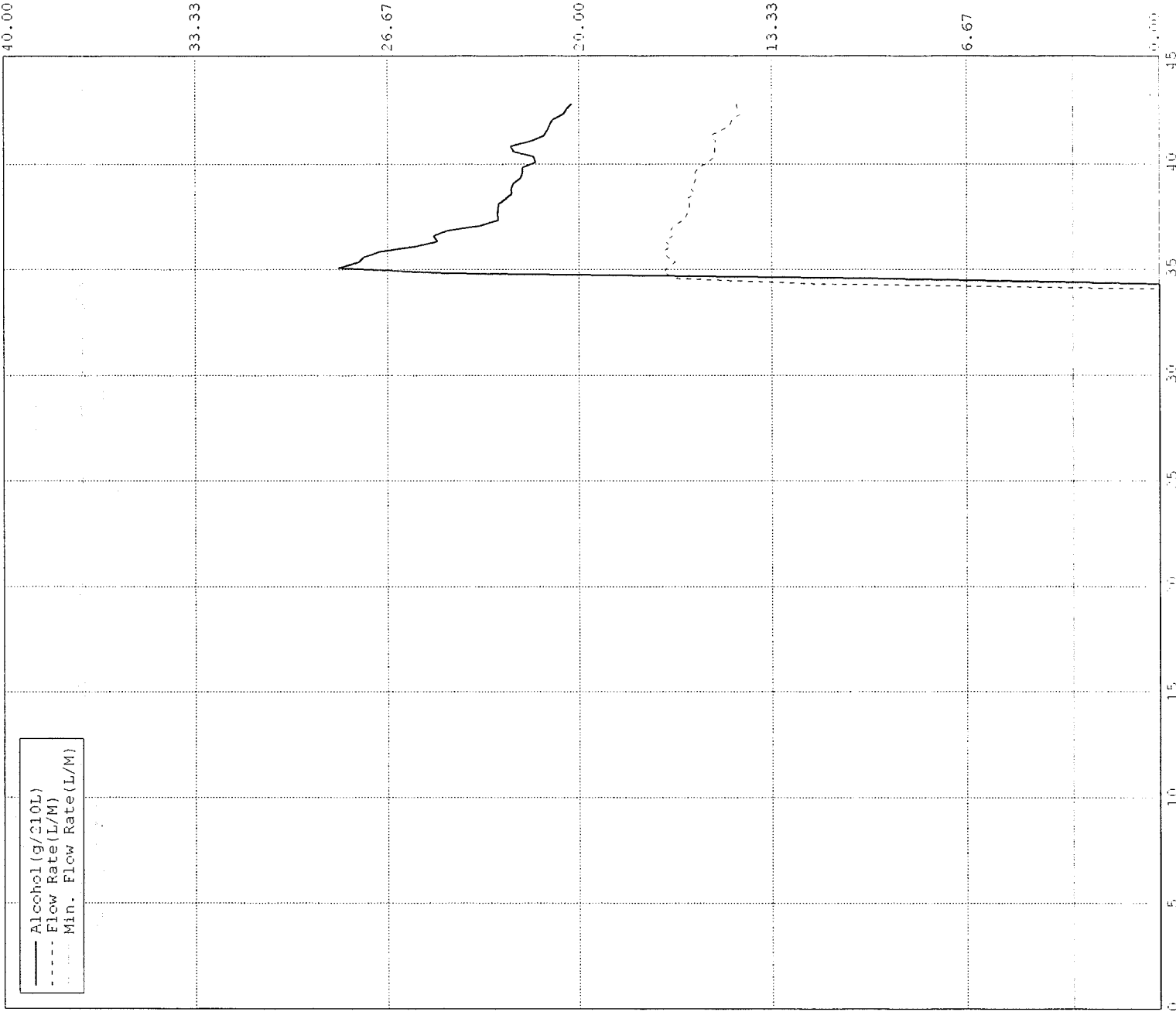
VERIFIED 14:15

0.077 14:16

0.000 14:17

INVALID 14:18

*DWR*



SUBJECT TEST

Alaska Department of Public Safety

DATAMASTER dmt: 100255

Date: 10/08/2020  
Time: 14:29:34

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

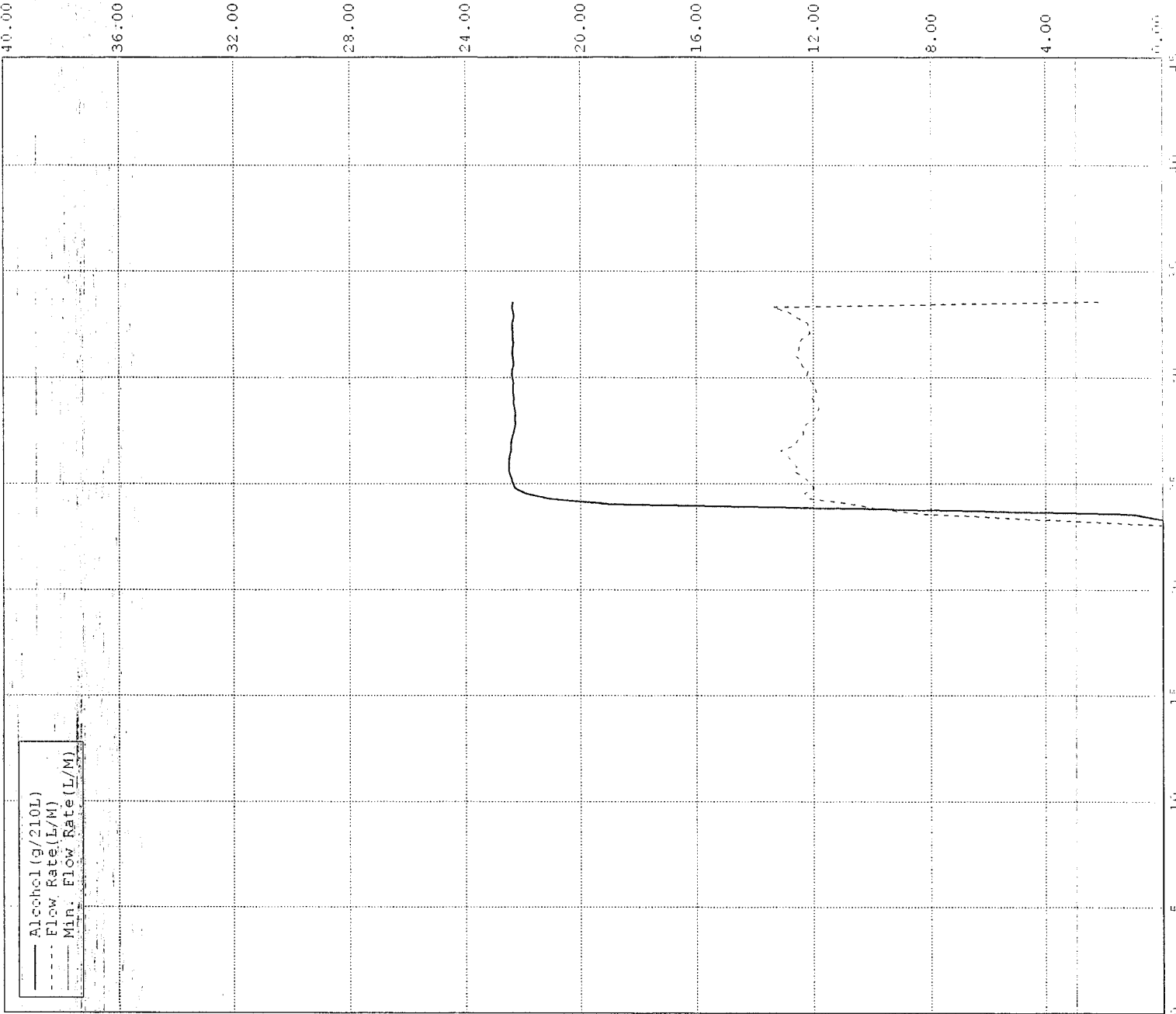
NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	14:31
BLANK TEST	0.000	14:31
INTERNAL STANDARD	VERIFIED	14:31
Xq = 0.079 (2.03%)		
EXTERNAL STANDARD	0.077	14:31
X[1] = 0.0768 (-0.0012) (0.0027)		
BLANK TEST	0.000	14:32
SUBJECT SAMPLE	XXX	14:33
X[1] = 0.1120 (-0.0217) (-0.0008)		

Interference Detected

Filter 2 average: -0.0009

Filter 3 average: 0.0024



SUBJECT TEST

Alaska Department of Public Safety

DATAMASTER dmt: 100255

Date: 10/08/2020  
Time: 14:35:36

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

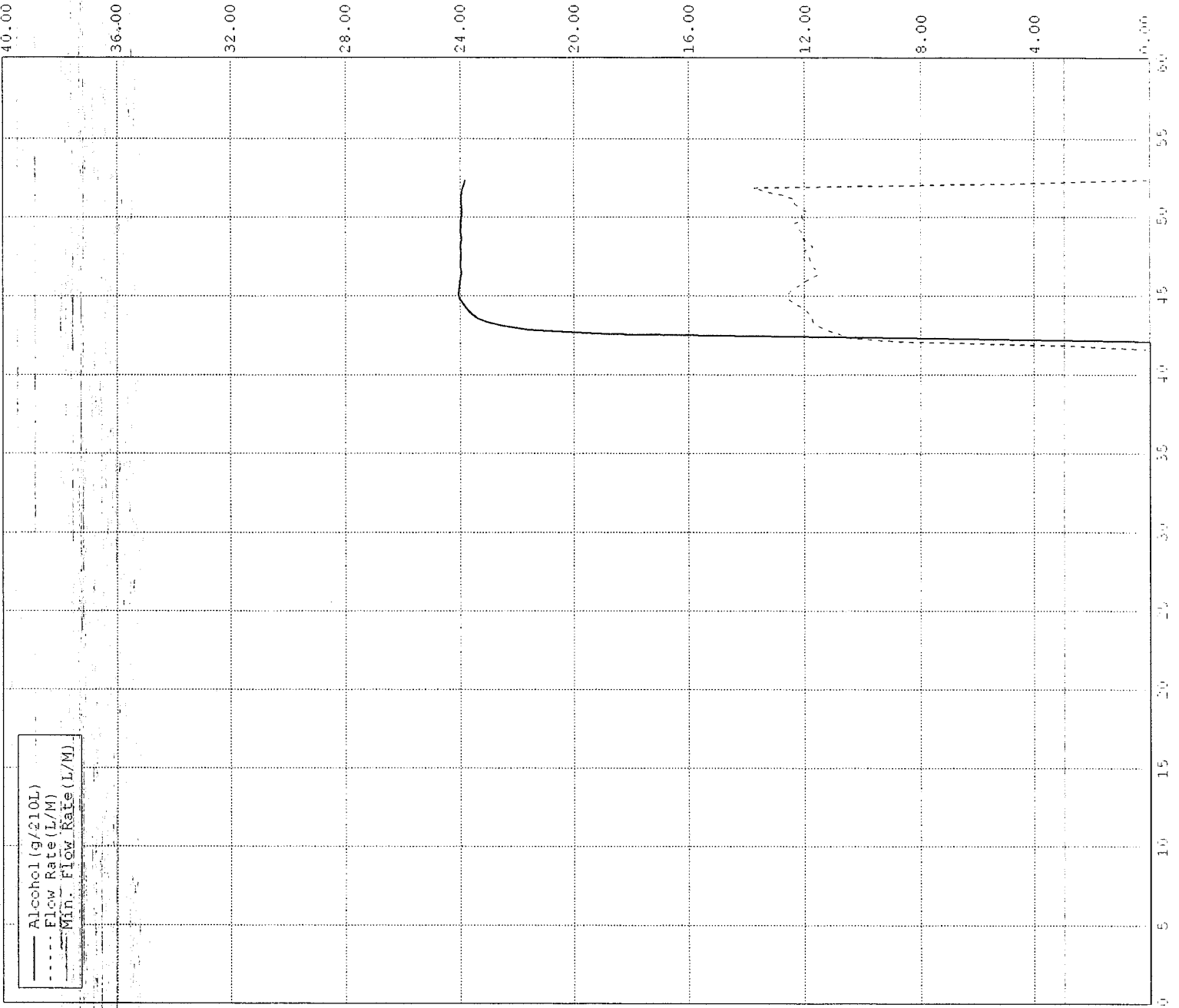
OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.16: 0.078  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	14:36
BLANK TEST	0.000	14:36
INTERNAL STANDARD	VERIFIED	14:36
Xq = 0.078 (1.24%)		
EXTERNAL STANDARD	0.077	14:37
X[1] = 0.0773 (-0.0010) (0.0021)		
BLANK TEST	0.000	14:37
SUBJECT SAMPLE	XXX	14:38
X[1] = 0.1198 (-0.0291) (0.0004)		

Interference Detected





SUBJECT TEST

Alaska Department of Public Safety

DATAMASTER dmt: 100255

Date: 10/08/2020  
Time: 14:45:13

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

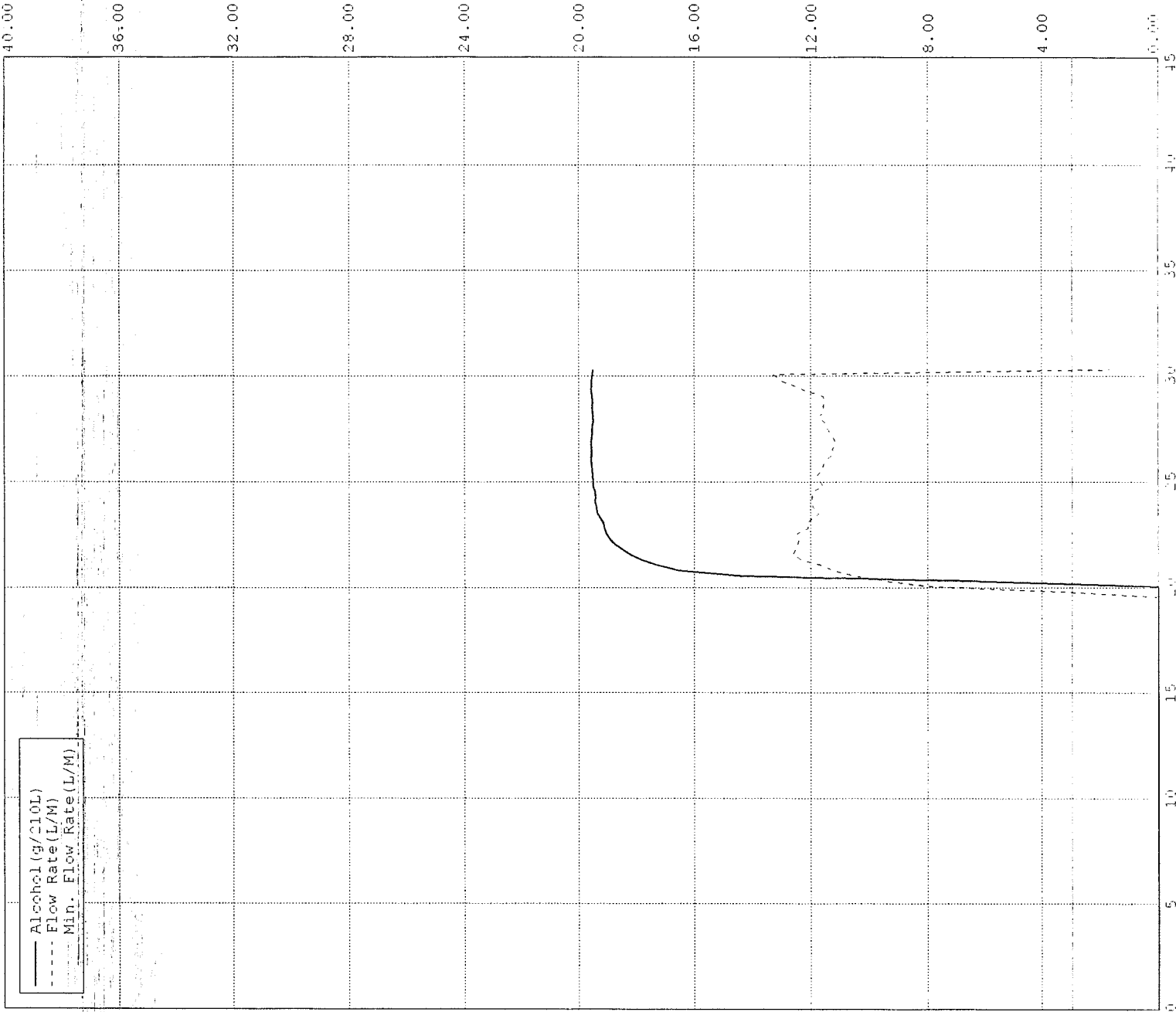
DEPT/AGENCY:  
INTERFERENCE NEGATIVE  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.16: 0.078  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	14:46
BLANK TEST	0.000	14:46
INTERNAL STANDARD	VERIFIED	14:46
Xq = 0.078 (1.58%)		
EXTERNAL STANDARD	0.077	14:46
X[1] = 0.0772 (-0.0005) (0.0026)		
BLANK TEST	0.000	14:47
SUBJECT SAMPLE (Vol=2.02l)	0.098	14:48
X[1] = 0.0980 (-0.0001) (0.0002)		
BLANK TEST	0.000	14:49
EXTERNAL STANDARD	0.077	14:49
X[1] = 0.0770 (-0.0008) (0.0020)		
BLANK TEST	0.000	14:50

*DM*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100255

Date: 10/08/2020  
Time: 11:49:39

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

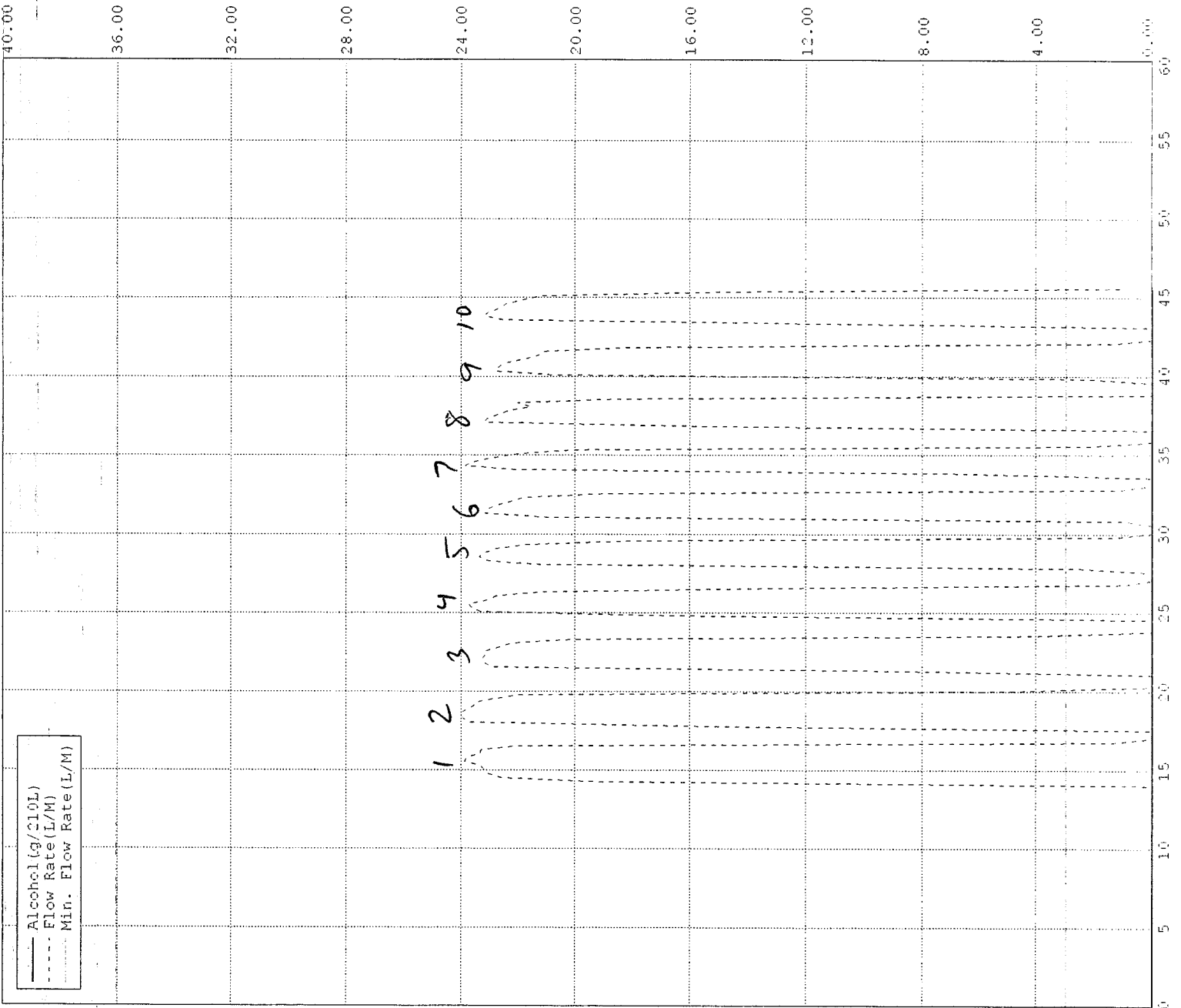
OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.23: 0.078  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK PASSED 11:51  
BLANK TEST 0.000 11:51  
INTERNAL STANDARD VERIFIED 11:51  
EXTERNAL STANDARD 0.078 11:51  
BLANK TEST 0.000 11:52  
SUBJECT SAMPLE XXX 11:53

Maximum Attempts Exceeded



SUBJECT TEST

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100255  
-----

Date: 10/08/2020  
Time: 13:56:25

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

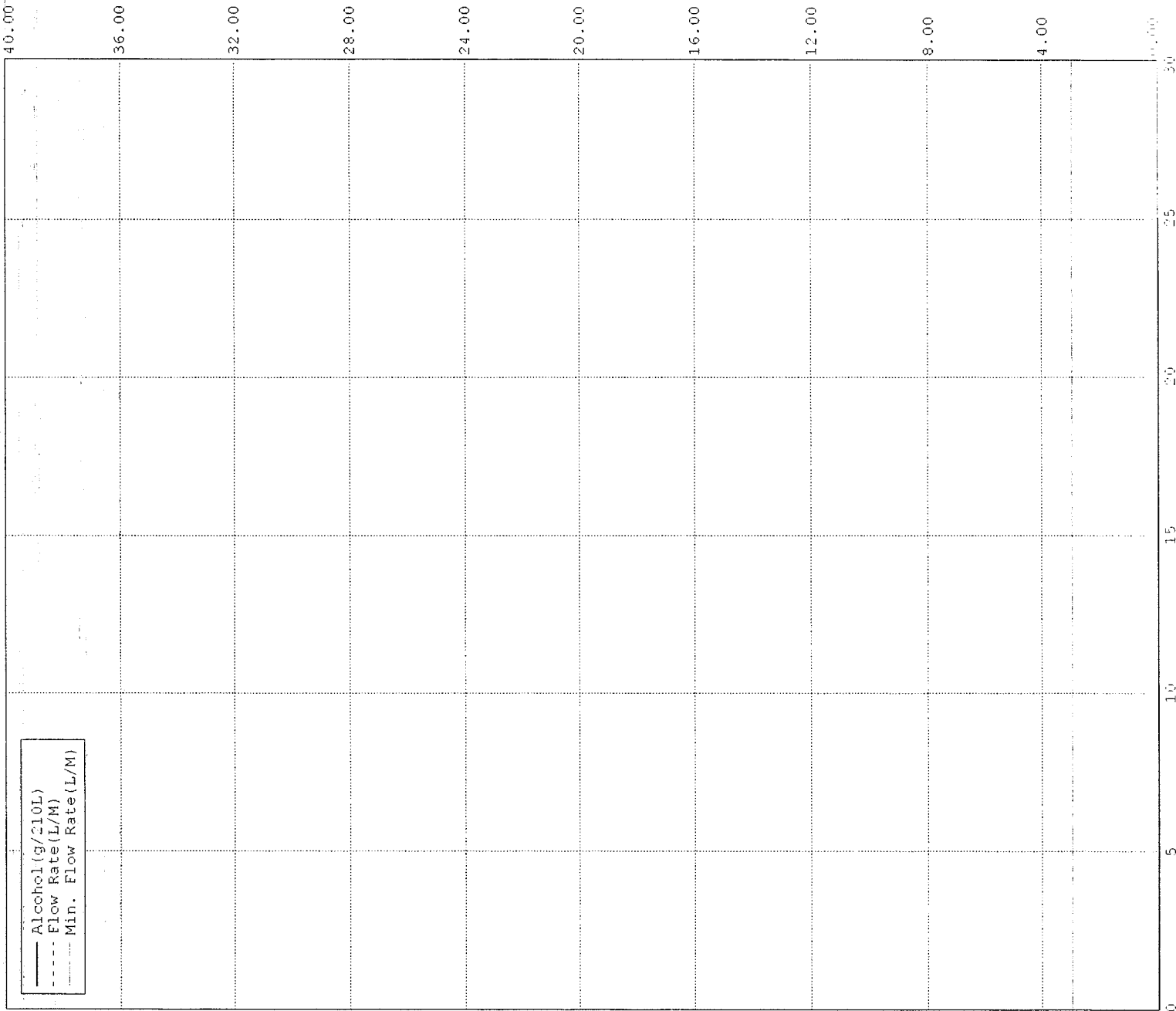
DEPT/AGENCY:  
RADIO FREQUENCY  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 29.18: 0.078  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK PASSED 13:58  
BLANK TEST 0.000 13:58  
INTERNAL STANDARD VERIFIED 13:58  
EXTERNAL STANDARD 0.078 13:58  
BLANK TEST 0.000 13:59

RFI DETECTED



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100255

Date: 10/09/2020  
Time: 10:24:06

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 29.00: 0.078  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	10:26
BLANK TEST	0.000	10:26
INTERNAL STANDARD	VERIFIED	10:26
EXTERNAL STANDARD	0.078	10:26
BLANK TEST	0.000	10:27
SUBJECT SAMPLE (Vol=2.82L)	0.000	10:27
BLANK TEST	0.000	10:28
EXTERNAL STANDARD	0.077	10:28
BLANK TEST	0.000	10:29

*JW*

