

# 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 100364 Analyst Derrek Walton Start Date <sup>DM 02/04/21</sup> 02/04/2021

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 1.5 L (1.3L to 1.7L)

### Linearity Test (attached)

#### Levels Used

i. 0.020g/210L Mnf Airgas Lot AG928203 Exp 11/09/21

ii. 0.040g/210L Mnf Airgas Lot AG915607 Exp 06/05/21

iii. 0.080g/210L Mnf Airgas Lot AG923401 Exp 08/22/21

iv. 0.100g/210L Mnf Airgas Lot AG924701 Exp 09/04/21

v. 0.200g/210L Mnf Wttn Lot 19200 Exp 08/06/21

Simulator S/N DR4161 Date Calibrated 05/08/20

vi. 0.300g/210L Mnf Wttn Lot 19330 Exp 11/13/21

Simulator S/N DR5298 Date Calibrated 05/08/20

### Functional Tests (attached)

Incomplete

Invalid

Interference

i. Acetone - Mnf Wttn Lot 19301 Level 0.100 Exp 10/30/21

Simulator S/N SD1202 Date Calibrated 05/08/20

ii. Isopropanol - Mnf Wttn Lot 19301 Level 0.100 Exp 10/30/21

Simulator S/N SD1177 Date Calibrated 05/07/20

iii. Negative Control - Mnf Wttn 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

Verification of Calibration

Reset Options

Non-Drinking Subject Test (attached)

Clear Memory

Upload

Remove tank prior to shut down

Add Linearity Data to Spreadsheet

End Date 02/05/21

DIAGNOSTIC RECORD

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
-----

Date: 02/04/2021  
Time: 14:04:25

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

TEMPERATURES

Sample Chamber = 48.9°C PASSED  
(44.0°C - 52.0°C)  
Breath Tube = 40.6°C PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 2.07 V PASSED  
(1.16 V - 2.72 V)  
Cooler Voltage = 1.94 V PASSED  
(1.18 V - 2.76 V)  
Bias Voltage = 78 V PASSED  
(48 V - 112 V)  
Chopper Freq = 525 Hz PASSED  
(475 Hz - 575 Hz)  
Barometer = 30.1 in

PUMP INFO

Flow Rate = 5.580 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 ✓ PASSED  
Xq = 0.100 2.41% (0.00% - 4.00%)

Technician Screen

-----  
DATAMASTER dmt: 100364  
-----

Date: 02/04/2021  
Time: 2:15 PM

Temperatures (°C)  
Sample Cell: 48.7°C  
Breath Tube: 41.2°C

Current Barometer 30.1 in  
Volume (Ltr) 1.56 ✓

Settings  
Lamp: 2.20 V  
Bias: 78 V  
Cooler: 1.81 V  
Chopper: 526 Hz

Voltages (V)  
Flow: 1.03 V ✓  
Detector: -0.014 V ✓

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
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Date: 10/02/2015  
Time: 09:52:21

Ca = 0.1010  
CAL = 0.997233    0.800 <= CAL < 1.200  
b1 = 0.0012    0.0000 <= b1 < 0.0040  
b2 = 0.0058    0.0010 <= b2 < 0.0100  
b3 = 0.0005    0.0000 <= b3 < 0.0040  
Xq = 0.0980    0.0500 <= Xq < 0.2000  
a21 = 1.177996    1.050 <= a21 < 1.300  
a31 = 0.602952    0.300 <= a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 02/04/2021  
Time: 14:18:45

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

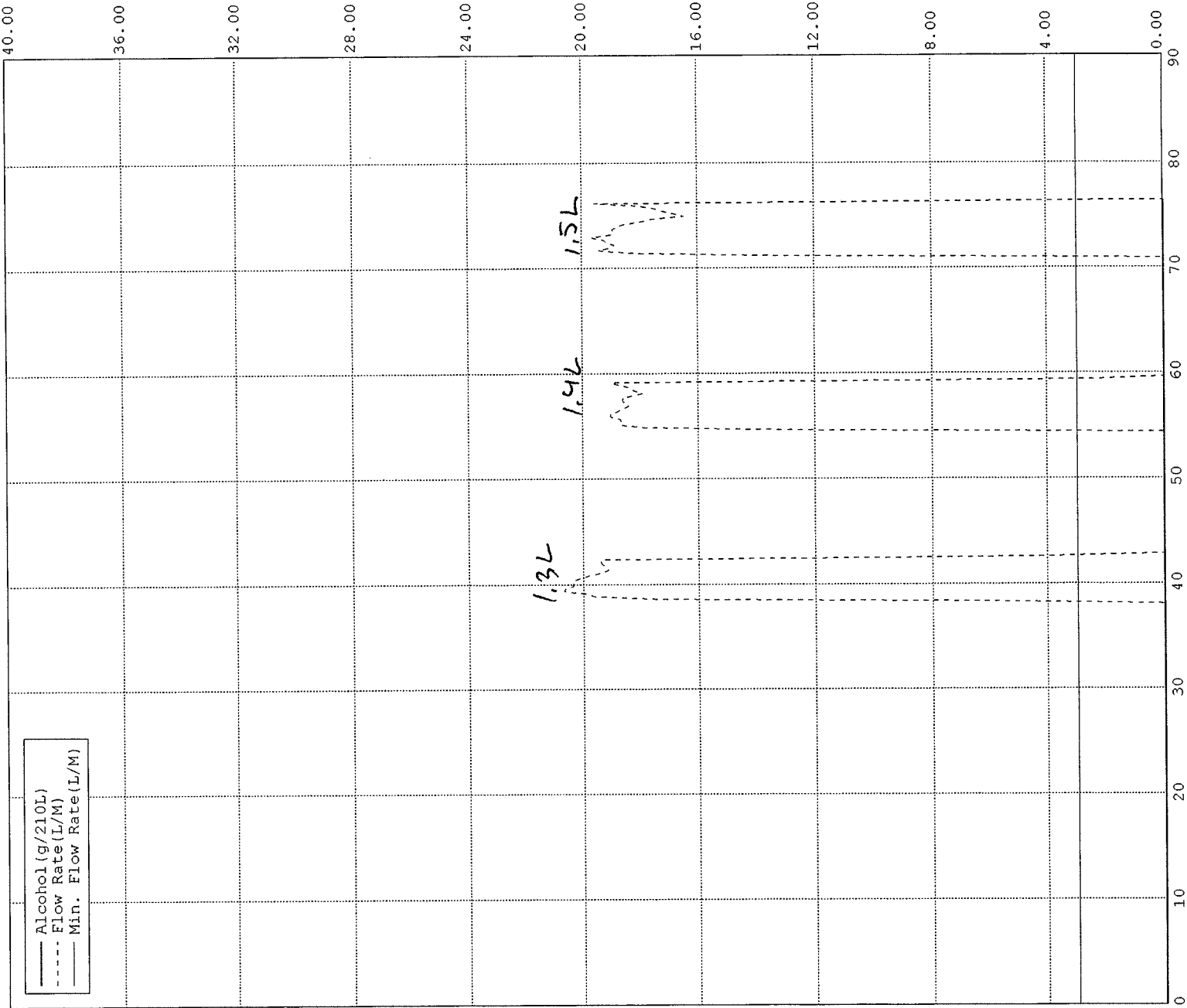
DEPT/AGENCY:  
MINIMUM VOLUME  
CASE/REPORT: XXXX  
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 30.09: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK	PASSED	14:19
BLANK TEST	0.000	14:19
INTERNAL STANDARD	VERIFIED	14:20
INTERNAL STANDARD	0.081	14:20
BLANK TEST	0.000	14:21
SUBJECT SAMPLE (Vol=1.59L)	0.000	14:22
BLANK TEST	0.000	14:23
EXTERNAL STANDARD	0.082	14:23
BLANK TEST	0.000	14:24

*DWK*



LINEARITY CHECK

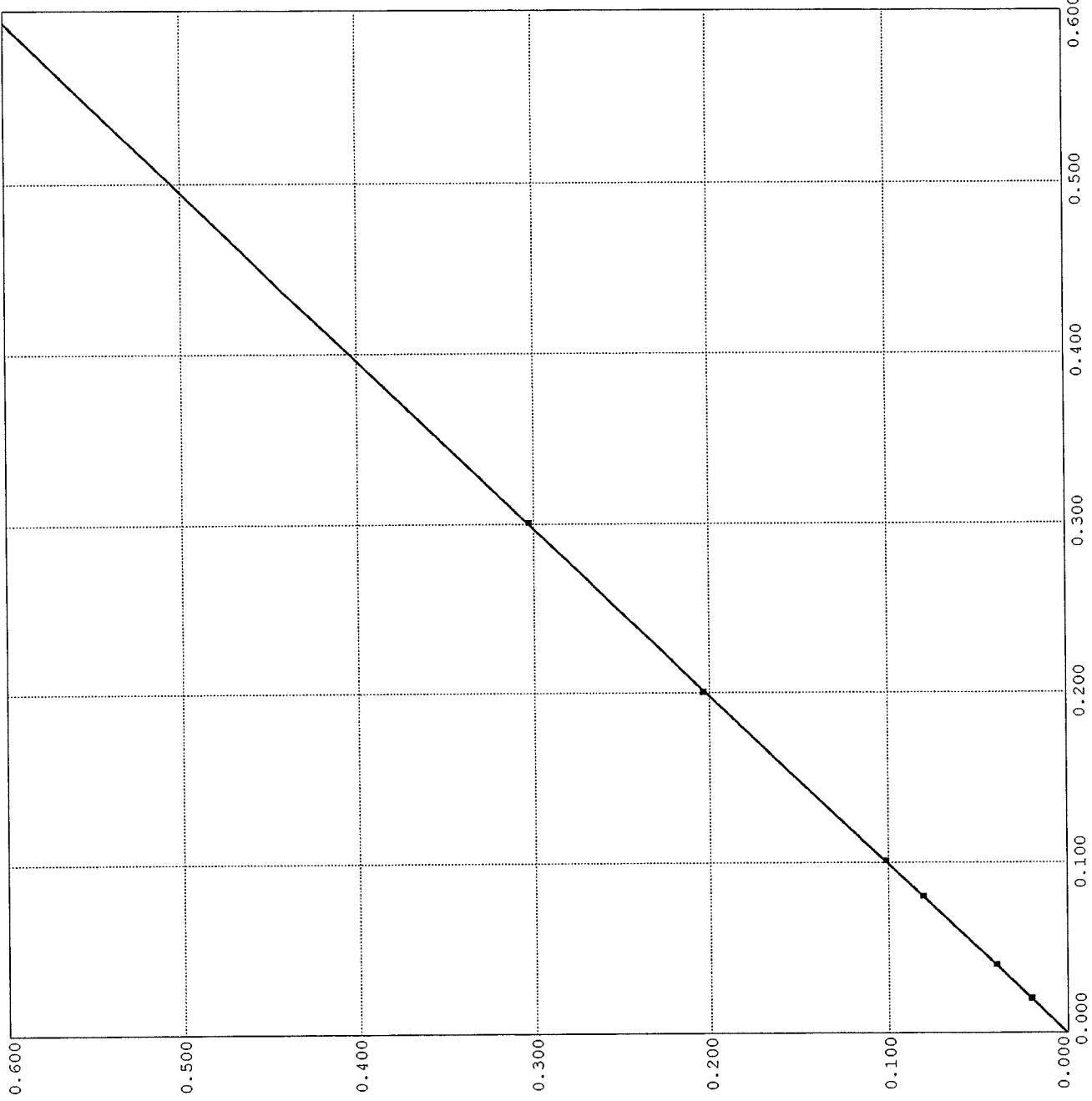
-----  
 Alaska Department of Public Safety  
 DATAMASTER dmt: 100364  
 -----

Date: 02/04/2021  
 Time: 14:27:05

SUPERVISOR NAME:  
 DEREK WALTON  
 OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0210	0.0000
0.040	0.0410	0.0000
0.080	0.0816	0.0005
0.101	0.1022	0.0004
0.200	0.2044	0.0005
0.300	0.3034	0.0005

SLOPE = 1.011440  
 R<sup>2</sup> = 0.999949



*DM*

LINEARITY CHECK: Control Test 1

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Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
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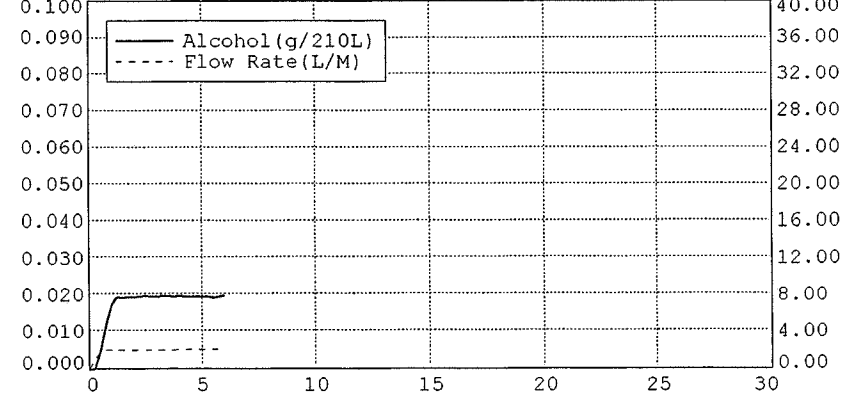
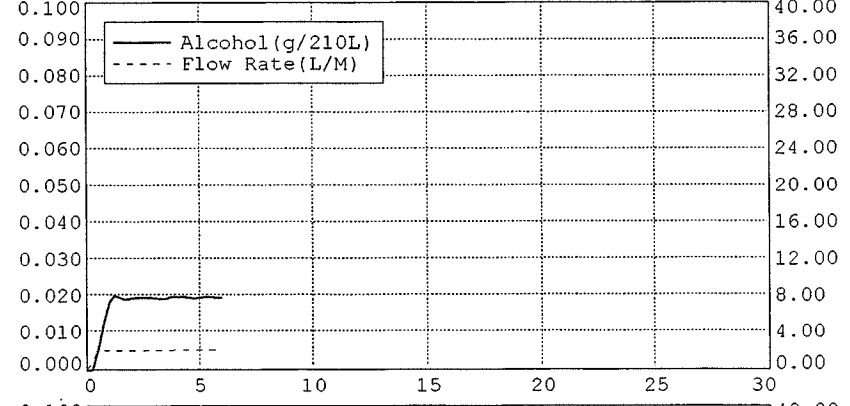
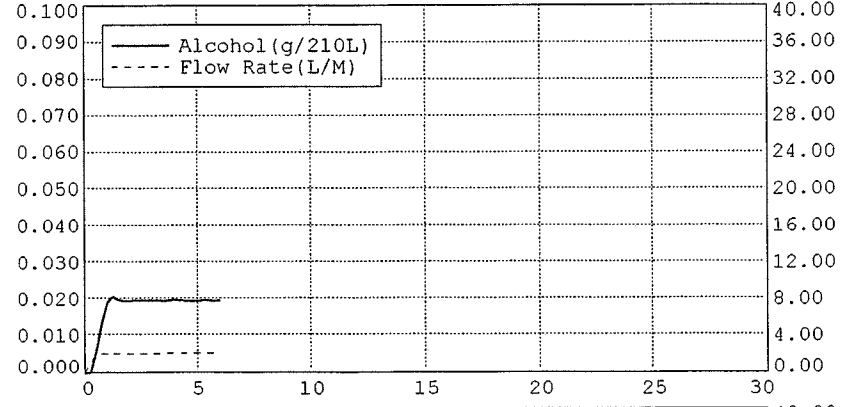
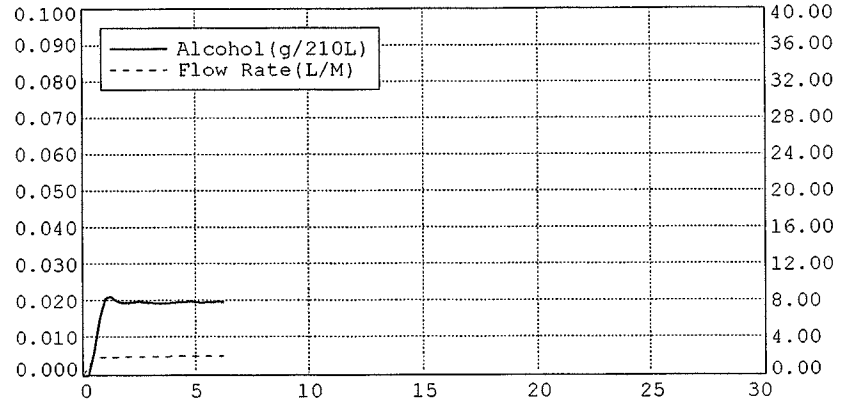
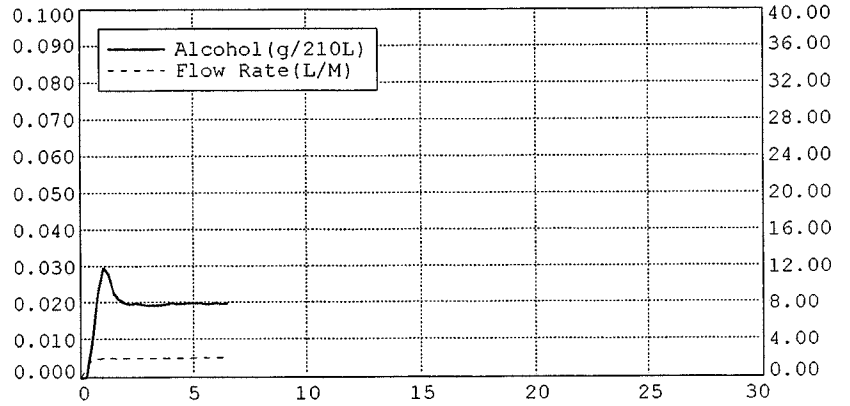
Date: 02/04/2021  
Time: 14:27:07

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
TARGET AT 30.08: 0.020  
LOT #: AG928203  
EXPIRATION: 10/09/2021  
TANK PRESSURE: 674 psi

BLANK TEST	0.000	14:28
INTERNAL STANDARD	VERIFIED	14:28
EXTERNAL STANDARD	0.021	14:28
BLANK TEST	0.000	14:29
EXTERNAL STANDARD	0.021	14:29
BLANK TEST	0.000	14:30
EXTERNAL STANDARD	0.021	14:30
BLANK TEST	0.000	14:31
EXTERNAL STANDARD	0.021	14:31
BLANK TEST	0.000	14:32
EXTERNAL STANDARD	0.021	14:33
BLANK TEST	0.000	14:33

Average = 0.0210  
Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

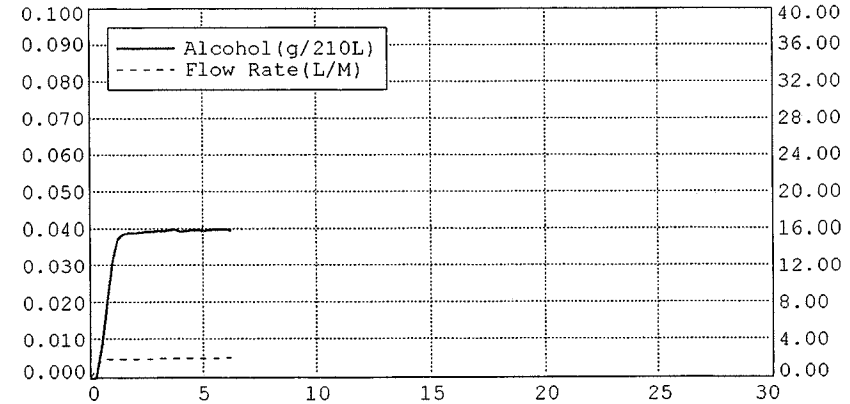
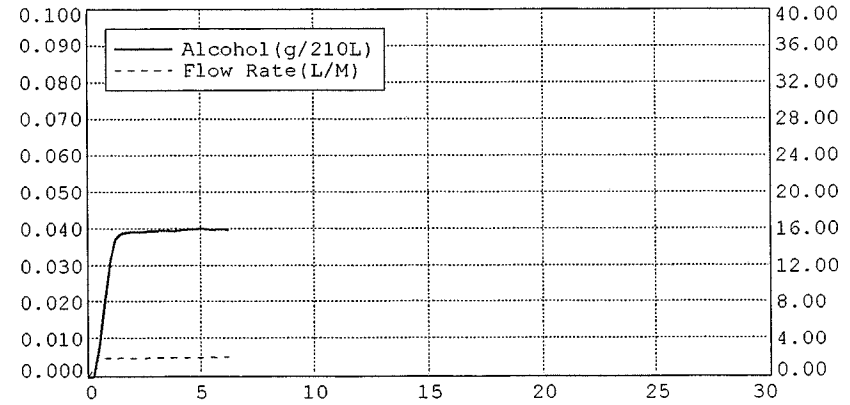
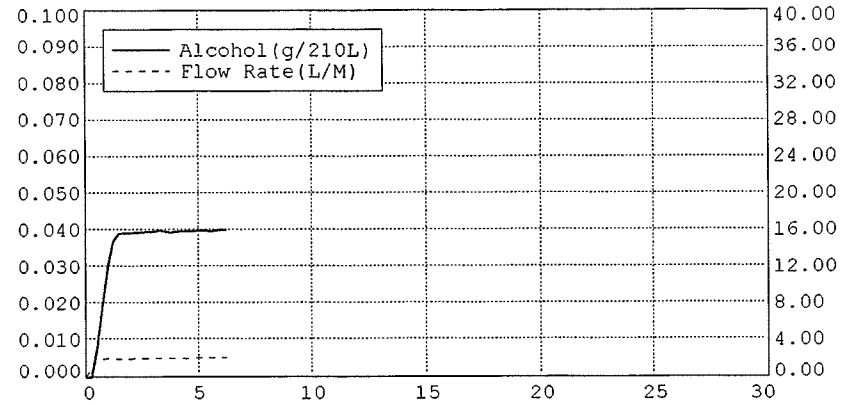
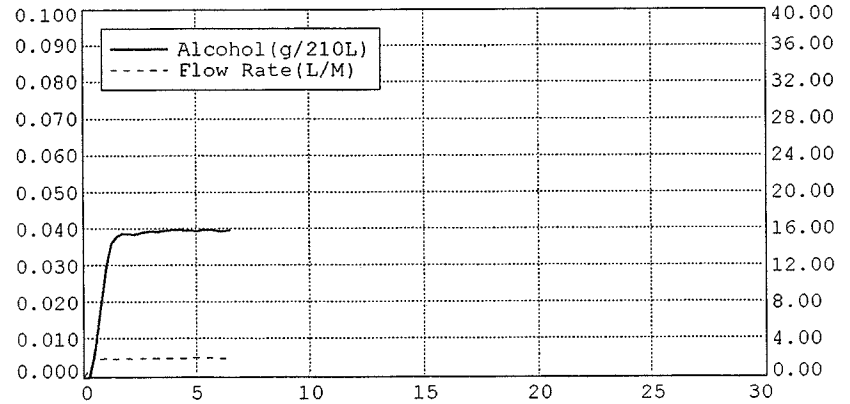
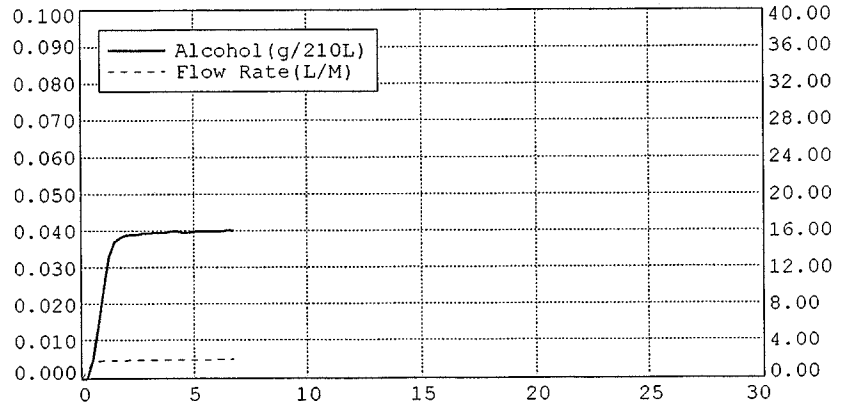
Date: 02/04/2021  
Time: 14:34:15

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
TARGET AT 30.09: 0.040  
LOT #: AG915607  
EXPIRATION: 06/05/2021  
TANK PRESSURE: 613 psi

BLANK TEST	0.000	14:35
INTERNAL STANDARD	VERIFIED	14:35
EXTERNAL STANDARD	0.041	14:35
BLANK TEST	0.000	14:36
EXTERNAL STANDARD	0.041	14:36
BLANK TEST	0.000	14:37
EXTERNAL STANDARD	0.041	14:38
BLANK TEST	0.000	14:38
EXTERNAL STANDARD	0.041	14:39
BLANK TEST	0.000	14:40
EXTERNAL STANDARD	0.041	14:40
BLANK TEST	0.000	14:41

Average = 0.0410  
Std Dev = 0.0000





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

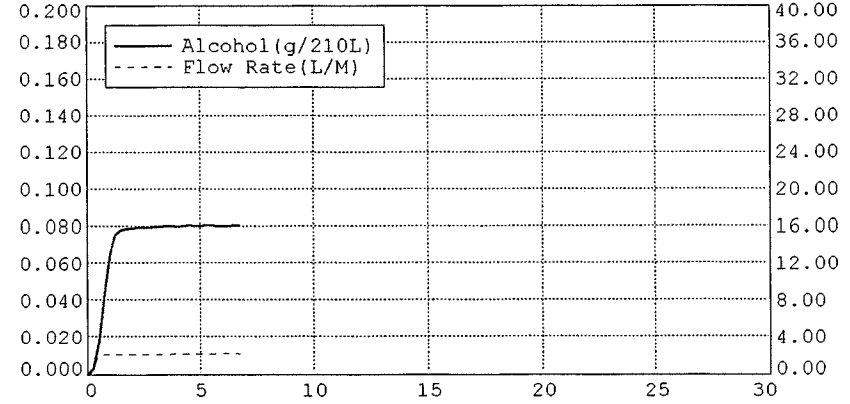
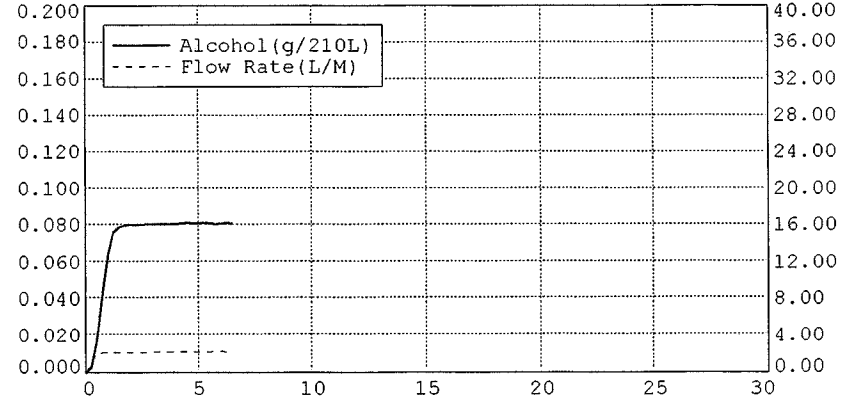
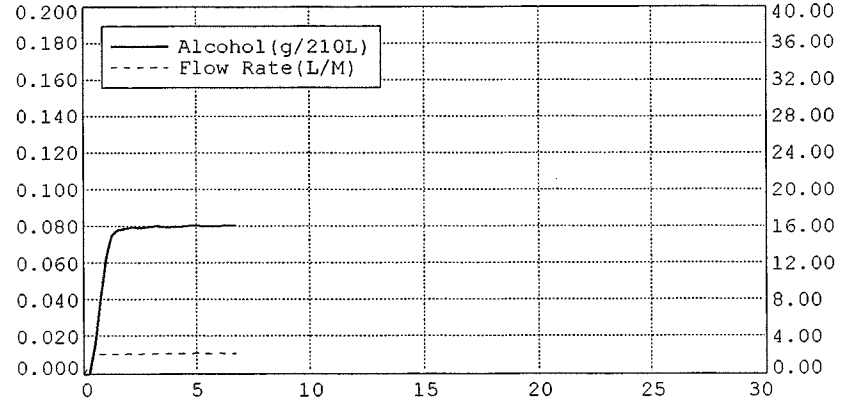
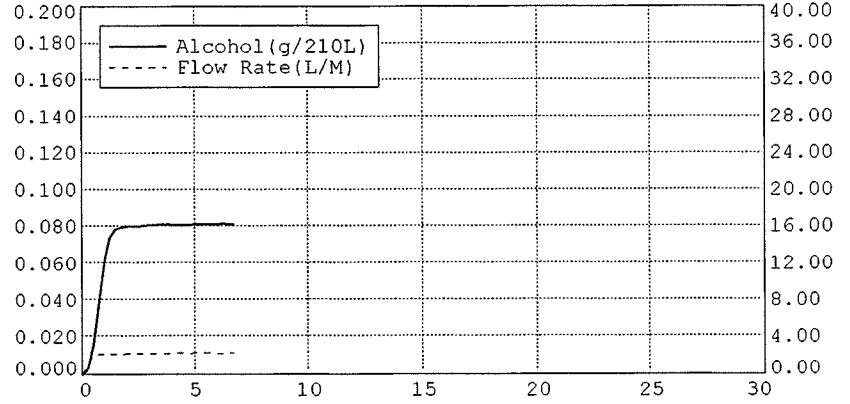
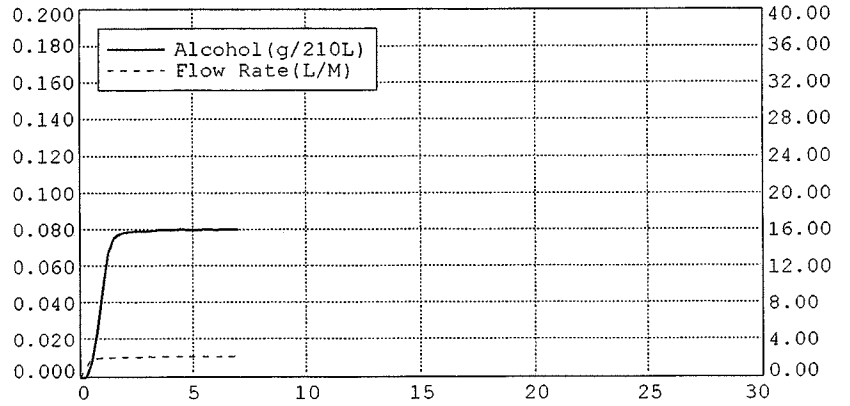
Date: 02/04/2021  
 Time: 14:47:27

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 30.09: 0.080  
 LOT #: AG923401  
 EXPIRATION: 08/22/2021  
 TANK PRESSURE: 969 psi

BLANK TEST	0.000	14:48
INTERNAL STANDARD	VERIFIED	14:48
EXTERNAL STANDARD	0.081	14:49
BLANK TEST	0.000	14:49
EXTERNAL STANDARD	0.082	14:50
BLANK TEST	0.000	14:51
EXTERNAL STANDARD	0.081	14:51
BLANK TEST	0.000	14:52
EXTERNAL STANDARD	0.082	14:52
BLANK TEST	0.000	14:53
EXTERNAL STANDARD	0.082	14:53
BLANK TEST	0.000	14:54

Average = 0.0816  
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

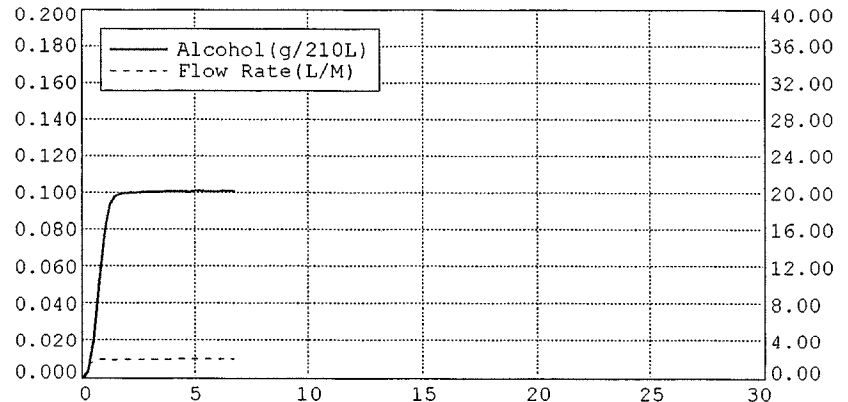
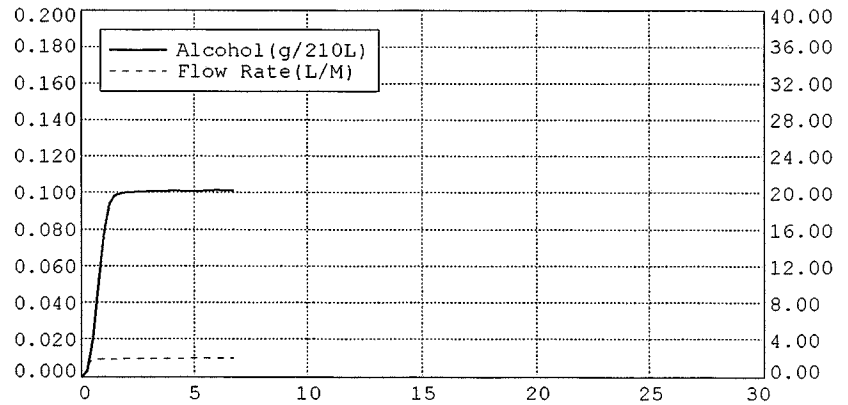
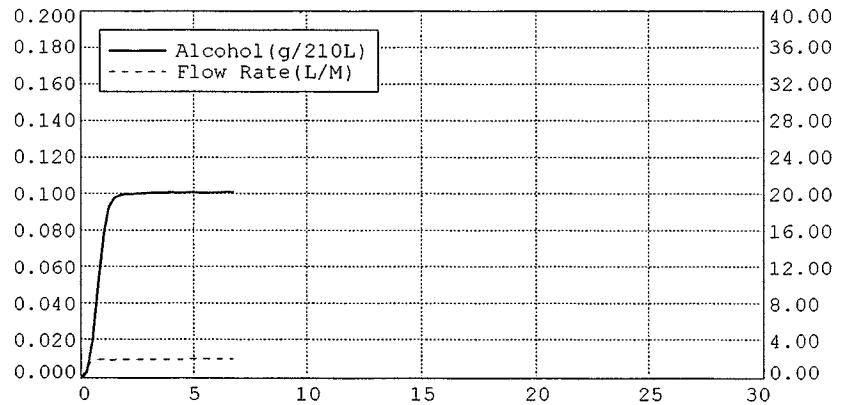
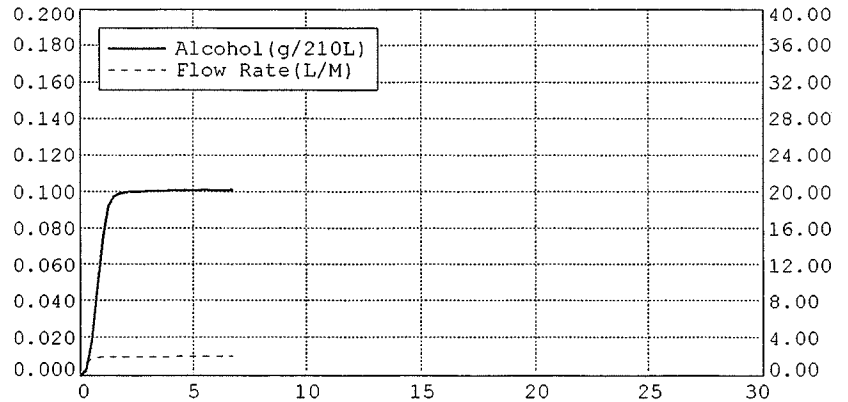
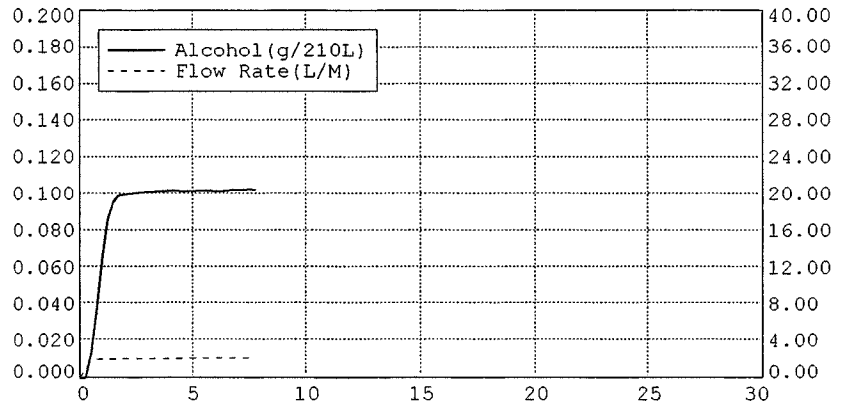
Date: 02/04/2021  
 Time: 14:55:22

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 30.09: 0.101  
 LOT #: AG924701  
 EXPIRATION: 09/04/2021  
 TANK PRESSURE: 707 psi

BLANK TEST	0.000	14:56
INTERNAL STANDARD	VERIFIED	14:56
EXTERNAL STANDARD	0.103	14:56
BLANK TEST	0.000	14:57
EXTERNAL STANDARD	0.102	14:58
BLANK TEST	0.000	14:58
EXTERNAL STANDARD	0.102	14:59
BLANK TEST	0.000	15:00
EXTERNAL STANDARD	0.102	15:00
BLANK TEST	0.000	15:01
EXTERNAL STANDARD	0.102	15:01
BLANK TEST	0.000	15:02

Average = 0.1022  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 5

Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

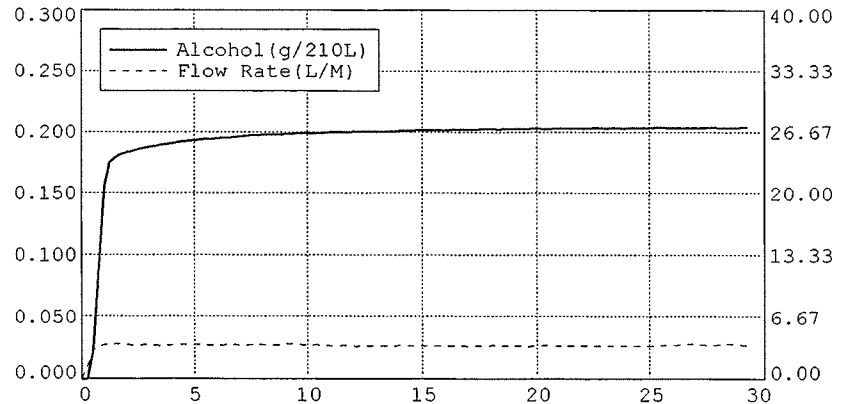
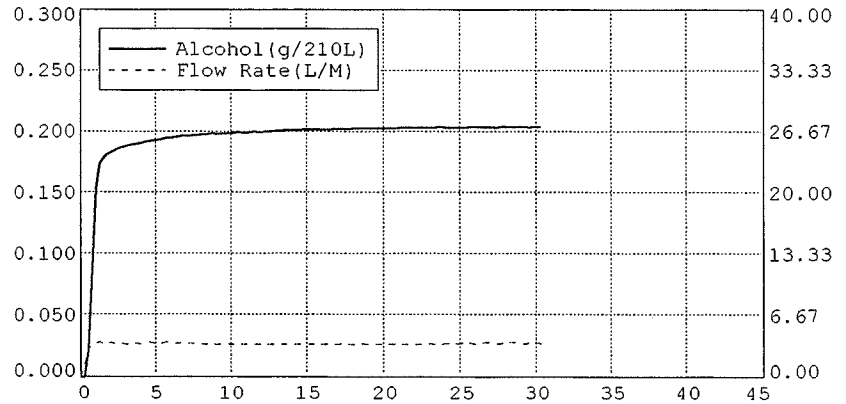
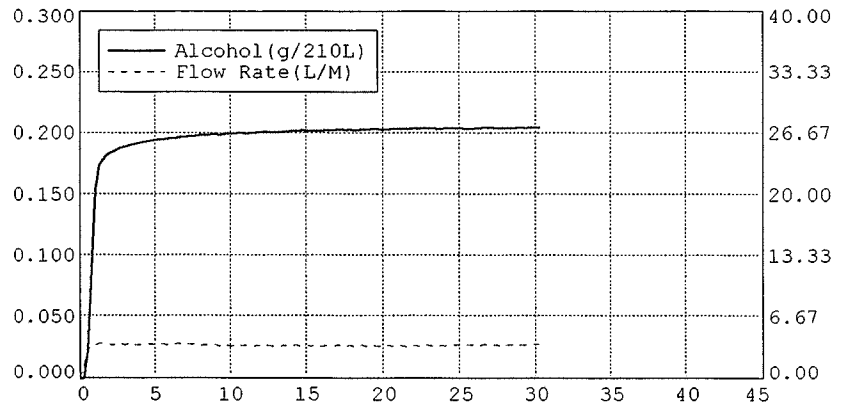
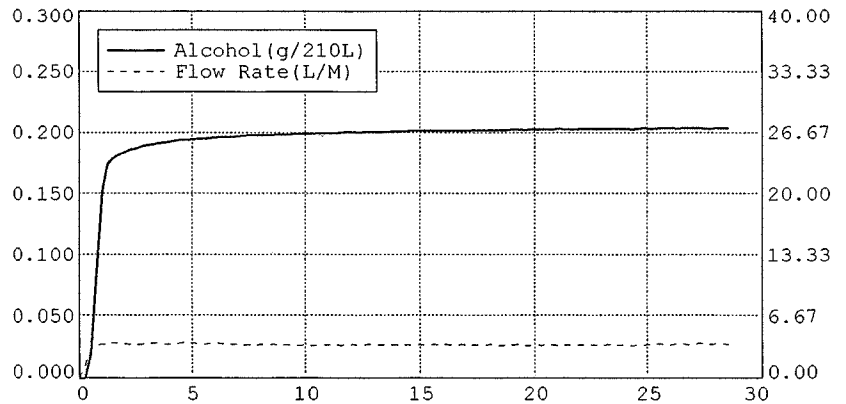
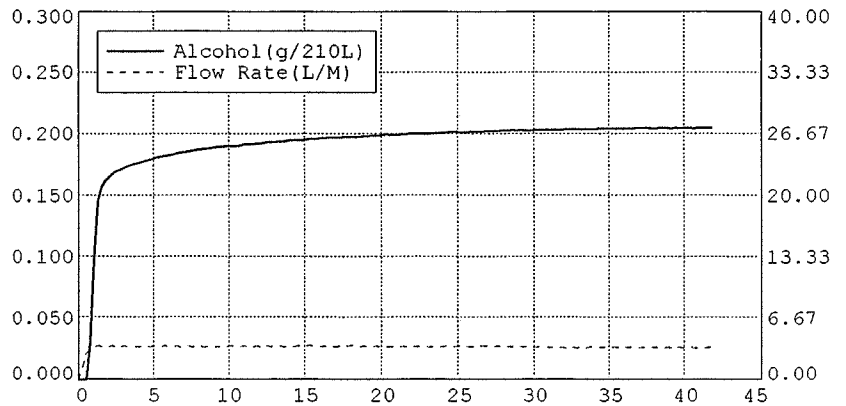
Date: 02/04/2021  
 Time: 15:13:21

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.200  
 LOT #: 19200  
 EXPIRATION: 08/06/2021

BLANK TEST	0.000	15:15
INTERNAL STANDARD	VERIFIED	15:16
EXTERNAL STANDARD	0.205	15:16
BLANK TEST	0.000	15:17
EXTERNAL STANDARD	0.204	15:18
BLANK TEST	0.000	15:19
EXTERNAL STANDARD	0.204	15:19
BLANK TEST	0.000	15:20
EXTERNAL STANDARD	0.205	15:21
BLANK TEST	0.000	15:22
EXTERNAL STANDARD	0.204	15:22
BLANK TEST	0.000	15:23

Average = 0.2044  
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 6

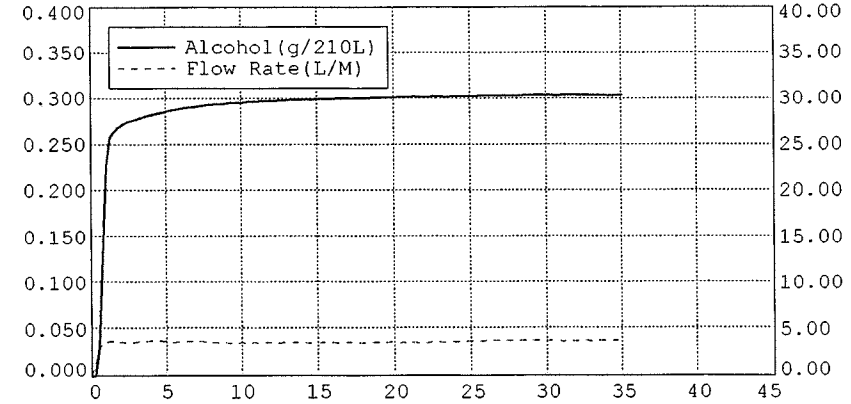
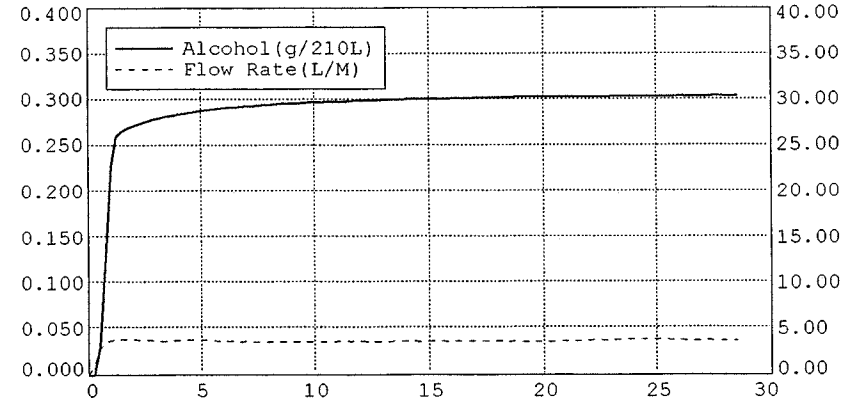
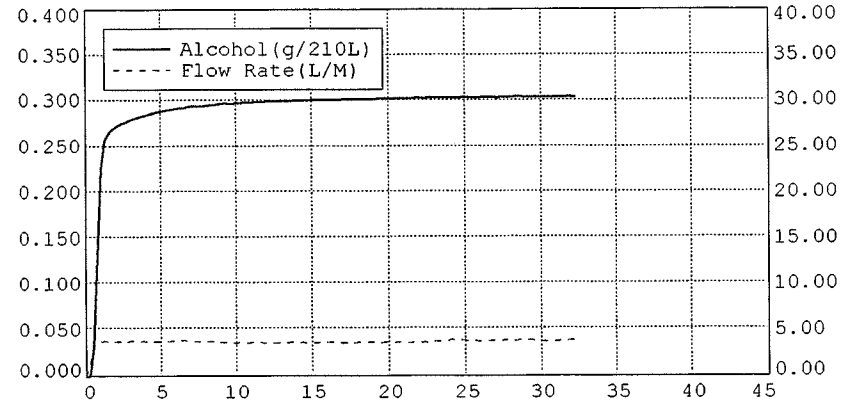
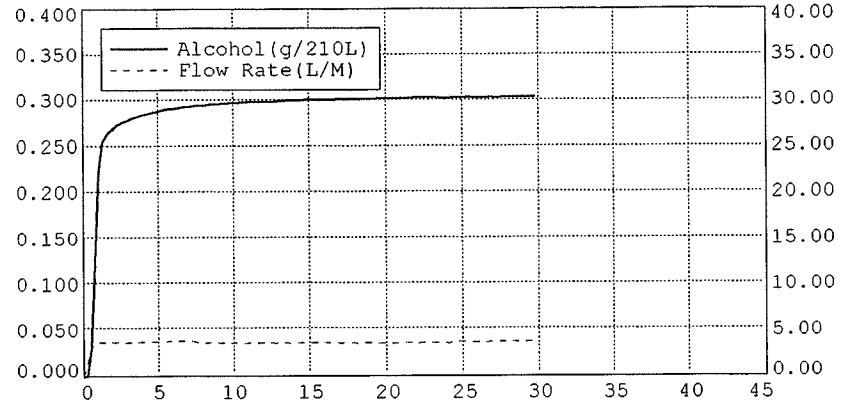
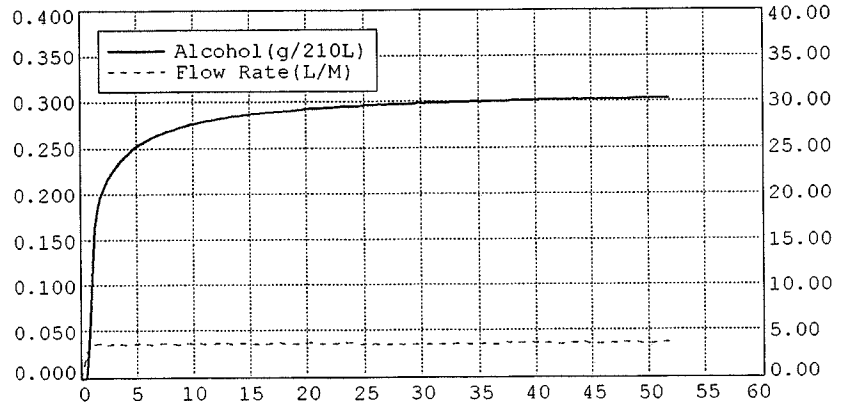
Alaska Department of Public Safety  
 DATAMASTER dmt: 100364

Date: 02/04/2021  
 Time: 15:28:04

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.300  
 LOT #: 19330  
 EXPIRATION: 11/13/2021

BLANK TEST	0.000	15:31
INTERNAL STANDARD	VERIFIED	15:31
EXTERNAL STANDARD	0.303	15:32
BLANK TEST	0.000	15:33
EXTERNAL STANDARD	0.303	15:34
BLANK TEST	0.000	15:35
EXTERNAL STANDARD	0.303	15:35
BLANK TEST	0.000	15:36
EXTERNAL STANDARD	0.304	15:37
BLANK TEST	0.000	15:38
EXTERNAL STANDARD	0.304	15:38
BLANK TEST	0.000	15:39

Average = 0.3034  
 Std Dev = 0.0005



SUBJECT TEST

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
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Date: 02/05/2021  
Time: 08:46:27

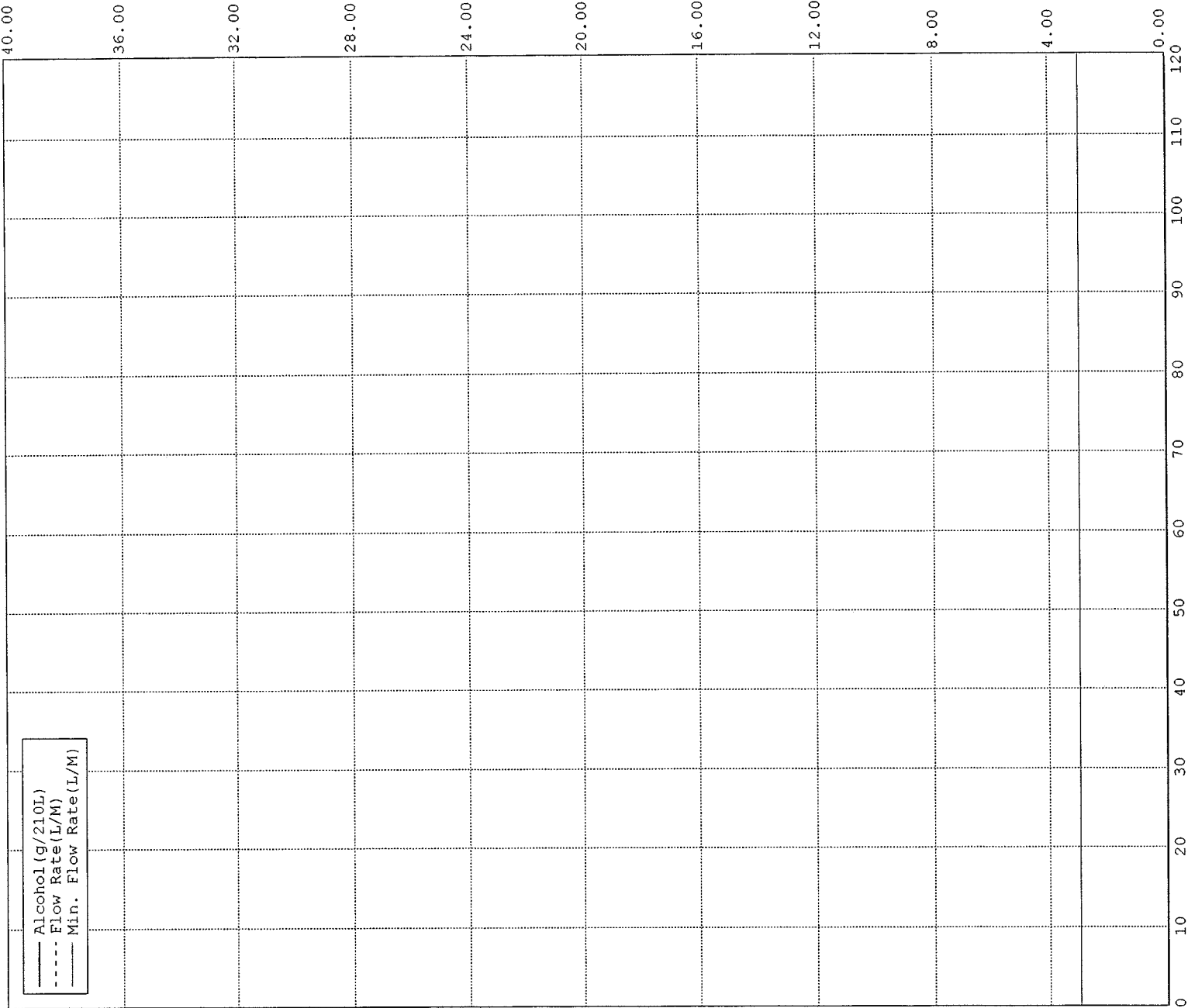
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 30.00: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK PASSED 08:47  
BLANK TEST 0.000 08:47  
INTERNAL STANDARD VERIFIED 08:47  
EXTERNAL STANDARD 0.081 08:47  
BLANK TEST 0.000 08:48  
SUBJECT SAMPLE INCOMPLETE 08:50



SUBJECT TEST

Alaska Department of Public Safety  
DATA MASTER dmt: 100364

Date: 02/05/2021  
Time: 08:39:04

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 30.00: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK PASSED 08:40  
BLANK TEST 0.000 08:40  
INTERNAL STANDARD VERIFIED 08:40  
INTERNAL STANDARD 0.081 08:40  
BLANK TEST 0.000 08:41  
SUBJECT SAMPLE INVALID 08:42

*DW*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 02/05/2021  
Time: 09:16:17

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

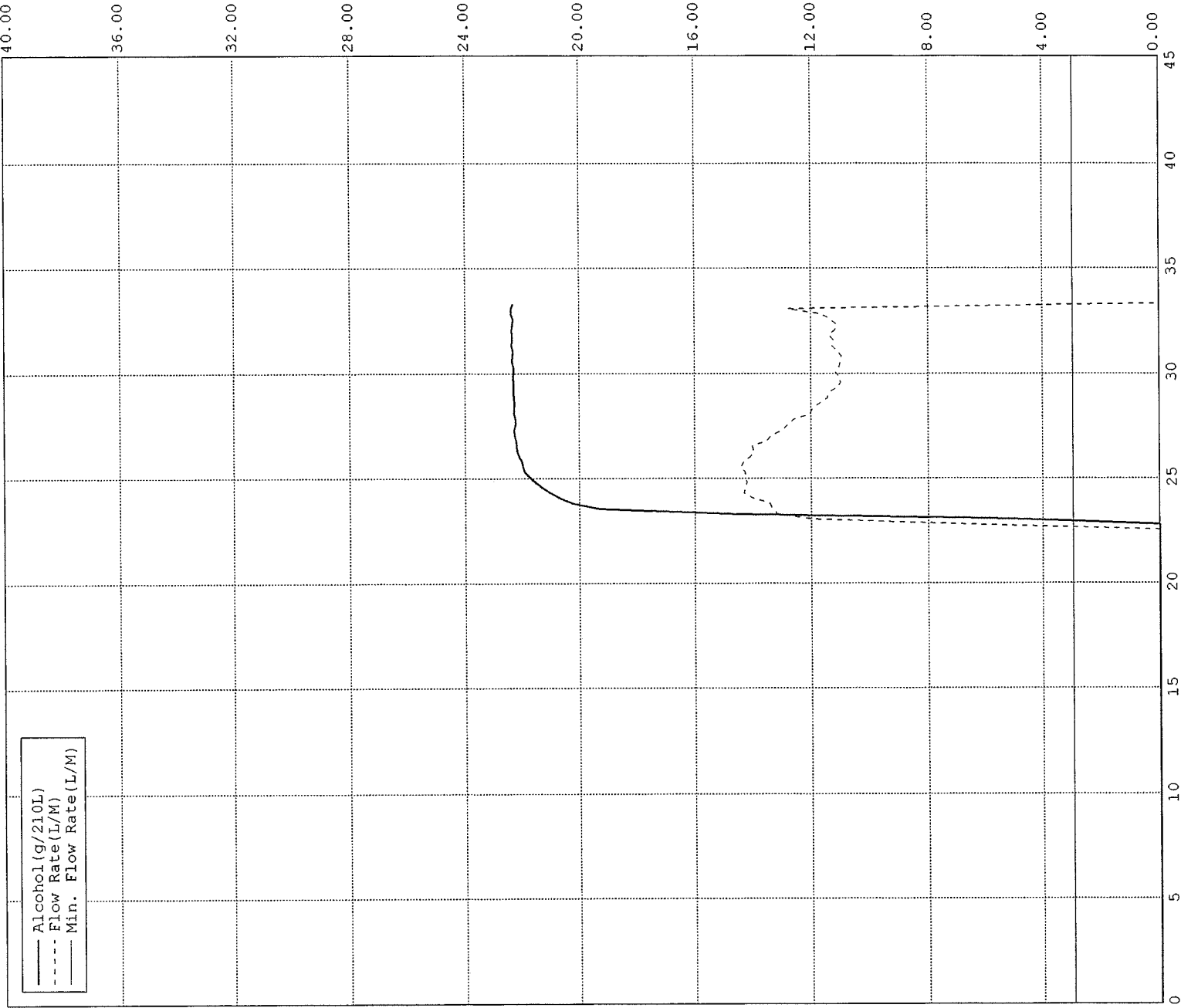
EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 30.01: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK PASSED 09:17  
BLANK TEST 0.000 09:17  
INTERNAL STANDARD VERIFIED 09:17  
Xq = 0.100 (2.24%)  
EXTERNAL STANDARD 0.081 09:17  
X[1] = 0.0810 (-0.0013) (0.0024)  
BLANK TEST 0.000 09:18  
SUBJECT SAMPLE XXX 09:19  
X[1] = 0.1129 (-0.0199) (0.0020)

Interference Detected

Filter 2 average: -0.0014

Filter 3 average: 0.0022



SUBJECT TEST

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100364  
-----

Date: 02/05/2021  
Time: 08:59:53

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

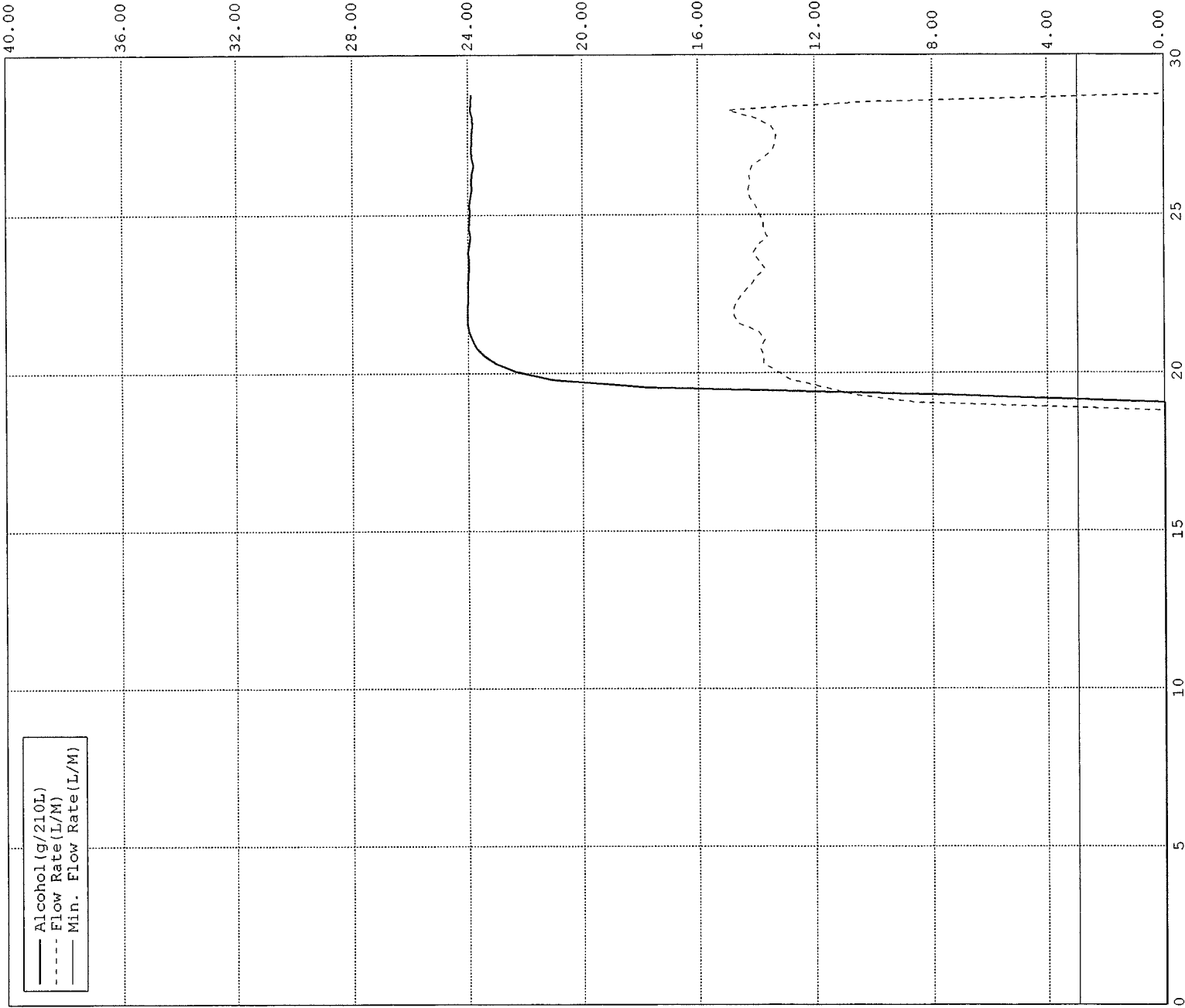
OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 30.01: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK PASSED 09:05  
BLANK TEST 0.000 09:05  
INTERNAL STANDARD VERIFIED 09:05  
Xq = 0.101 (2.68%)  
EXTERNAL STANDARD 0.082 09:06  
X[1] = 0.0815 (-0.0015) (0.0023)  
BLANK TEST 0.000 09:07  
SUBJECT SAMPLE XXX 09:07  
X[1] = 0.1203 (-0.0282) (-0.0003)

Interference Detected





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 02/05/2021  
Time: 09:09:41

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 30.01: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK PASSED 09:10  
BLANK TEST 0.000 09:10  
INTERNAL STANDARD VERIFIED 09:10  
Xq = 0.100 (2.41%)  
EXTERNAL STANDARD 0.081 09:11  
X[1] = 0.0811 (-0.0017) (0.0024)  
BLANK TEST 0.000 09:12  
SUBJECT SAMPLE (Vol=2.16L) 0.097 09:12  
X[1] = 0.0973 (-0.0007) (-0.0001)  
BLANK TEST 0.000 09:13  
EXTERNAL STANDARD 0.082 09:13  
X[1] = 0.0815 (-0.0012) (0.0016)  
BLANK TEST 0.000 09:14



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 02/05/2021  
Time: 08:53:24

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

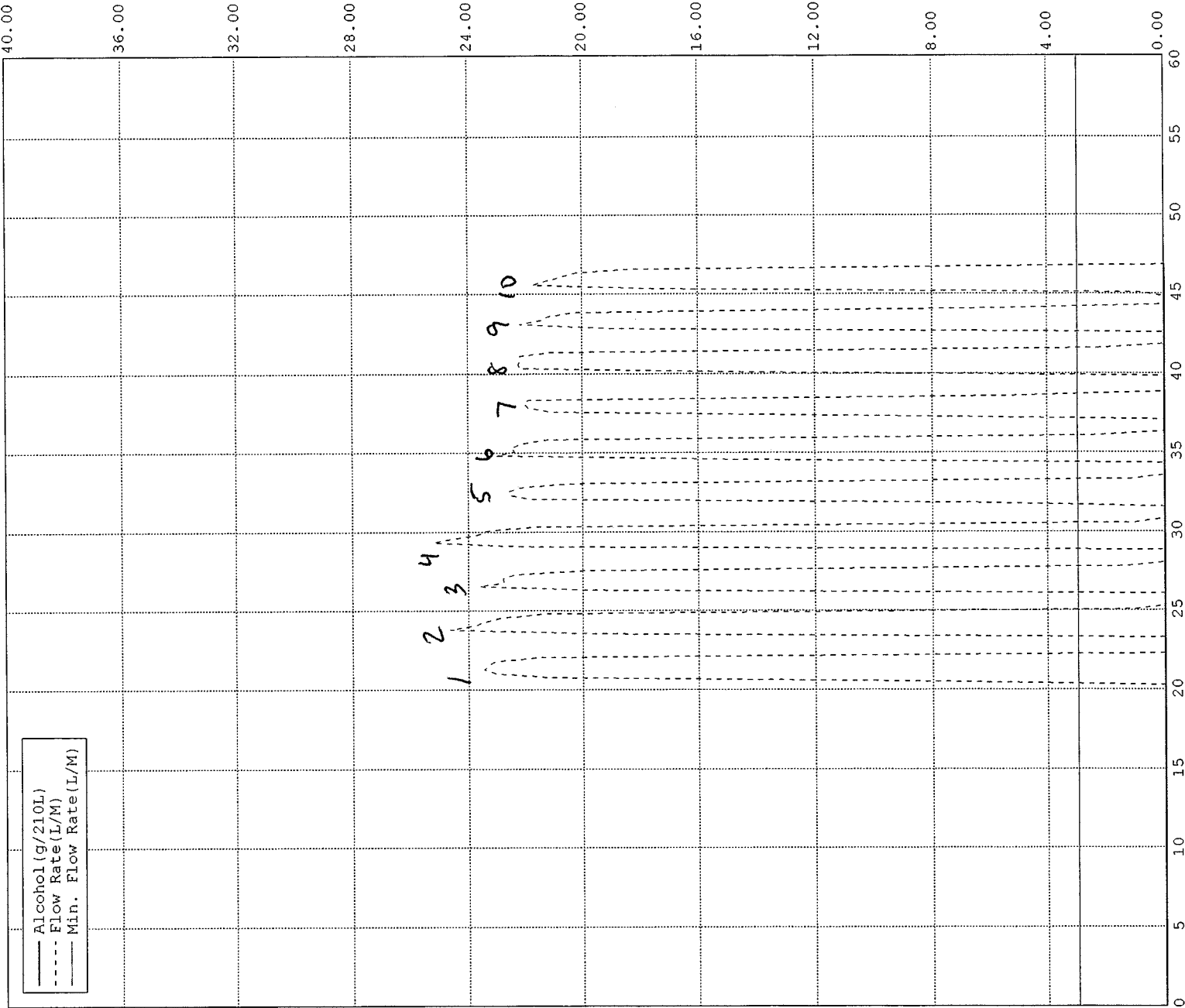
OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 30.01: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK PASSED 08:54  
BLANK TEST 0.000 08:54  
INTERNAL STANDARD VERIFIED 08:54  
EXTERNAL STANDARD 0.081 08:54  
BLANK TEST 0.000 08:55  
SUBJECT SAMPLE XXX 08:56

Maximum Attempts Exceeded



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 02/05/2021  
Time: 08:30:26

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

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

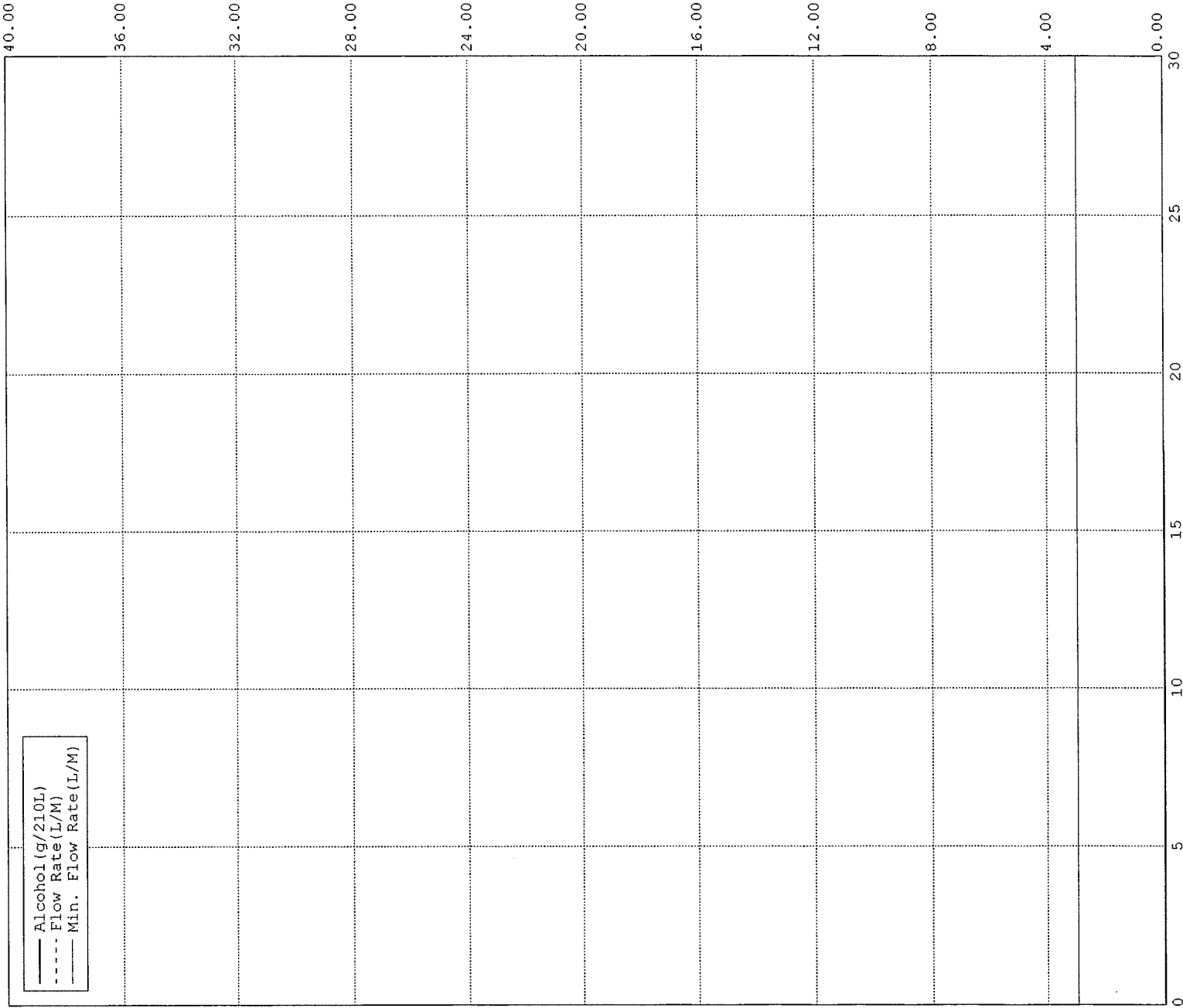
EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
TARGET AT 30.00: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK PASSED 08:32  
BLANK TEST 0.000 08:32  
INTERNAL STANDARD VERIFIED 08:32  
EXTERNAL STANDARD 0.081 08:33  
BLANK TEST 0.000 08:33

RFI DETECTED

*DM*



SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100364

Date: 02/05/2021  
Time: 10:00:24

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 30.01: 0.080  
LOT #: AG923401  
EXPIRATION: 08/22/2021

DIAGNOSTIC CHECK PASSED 10:03  
BLANK TEST 0.000 10:03  
INTERNAL STANDARD VERIFIED 10:03  
EXTERNAL STANDARD 0.082 10:03  
BLANK TEST 0.000 10:04  
SUBJECT SAMPLE (Vol=2.19L) 0.000 10:04  
BLANK TEST 0.000 10:05  
EXTERNAL STANDARD 0.082 10:05  
BLANK TEST 0.000 10:06

*DWR*

