

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 100669 Analyst Carlie Bailey Start Date 4/22/2021

Diagnostic Test (attached)

Internal Standard value $\leq 3.00\%$
Derek Watten

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 10/09/2021
- ii. 0.040g/210L Mnf Airgas Lot AG915607 Exp 6/5/2021
- iii. 0.080g/210L Mnf Airgas Lot AG018102 Exp 6/29/2022
- iv. 0.100g/210L Mnf Airgas Lot AG924701 Exp 9/4/2021
- v. 0.200g/210L Mnf Guth Lot DR4161 ^{DR4161 19200} Exp 8/6/2021 ^{04/26/21}
Simulator S/N DR4161 Date Calibrated 5/8/2020
- vi. 0.300g/210L Mnf Guth Lot 19330 Exp 11/13/2021
Simulator S/N DR5298 Date Calibrated 5/8/2020

Functional Tests (attached)

Incomplete

Invalid

Interference

- i. Acetone - Mnf Guth Lot 19301 Level 0.100 Exp 10/30/2021
Simulator S/N SD1202 Date Calibrated 5/8/2020
- ii. Isopropanol - Mnf Guth Lot 19301 Level 0.100 Exp 10/30/2021
Simulator S/N SD1177 Date Calibrated 5/9/2020
- iii. Negative Control - Mnf Guth Lot 19301 Level 0.100 Exp 10/30/2021
Simulator S/N DR6267 Date Calibrated 11/17/2020

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 4/23/2021 04/26/2021 DJW 04/26/2021

DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/22/2021
Time: 12:33:55

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

TEMPERATURES

Sample Chamber = 48.7°C PASSED
(44.0°C - 52.0°C)
Breath Tube = 44.9°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.64 V PASSED
(0.98 V - 2.30 V)
Cooler Voltage = 1.63 V PASSED
(0.98 V - 2.28 V)
Bias Voltage = 80 V PASSED
(48 V - 112 V)
Chopper Freq = 526 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.9 in

PUMP INFO

Flow Rate = 4.509 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 = 0.084 0.10% (0.00% - 4.00%)

Technician Screen

DATAMASTER dmt: 100669

Date: 04/22/2021
Time: 12:42 PM

Temperatures (°C)
Sample Cell: 48.7°C
Breath Tube: 44.9°C

Current Barometer 29.9 in
Volume (Ltr) 1.50

Settings
Lamp: 1.64 V
Bias: 80 V
Cooler: 1.61 V
Chopper: 525 Hz

Voltages (V)
Flow: 1.06 V
Detector: -0.047 V

CALIBRATION FACTORS

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 03/08/2021
Time: 14:44:06

OPERATOR NAME:
DEREK WALTON
CERTIFICATE #: 9508

Ca = 0.1000
CAL = 0.961268 0.800 <= CAL < 1.200
b1 = 0.0001 0.0000 <= b1 < 0.0040
b2 = 0.0046 0.0010 <= b2 < 0.0100
b3 = 0.0005 0.0000 <= b3 < 0.0040
Xq = 0.0842 0.0500 <= Xq < 0.2000
a21 = 1.150184 1.050 <= a21 < 1.300
a31 = 0.531383 0.300 <= a31 < 0.800

SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/22/2021
Time: 12:58:52

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 29.87: 0.080

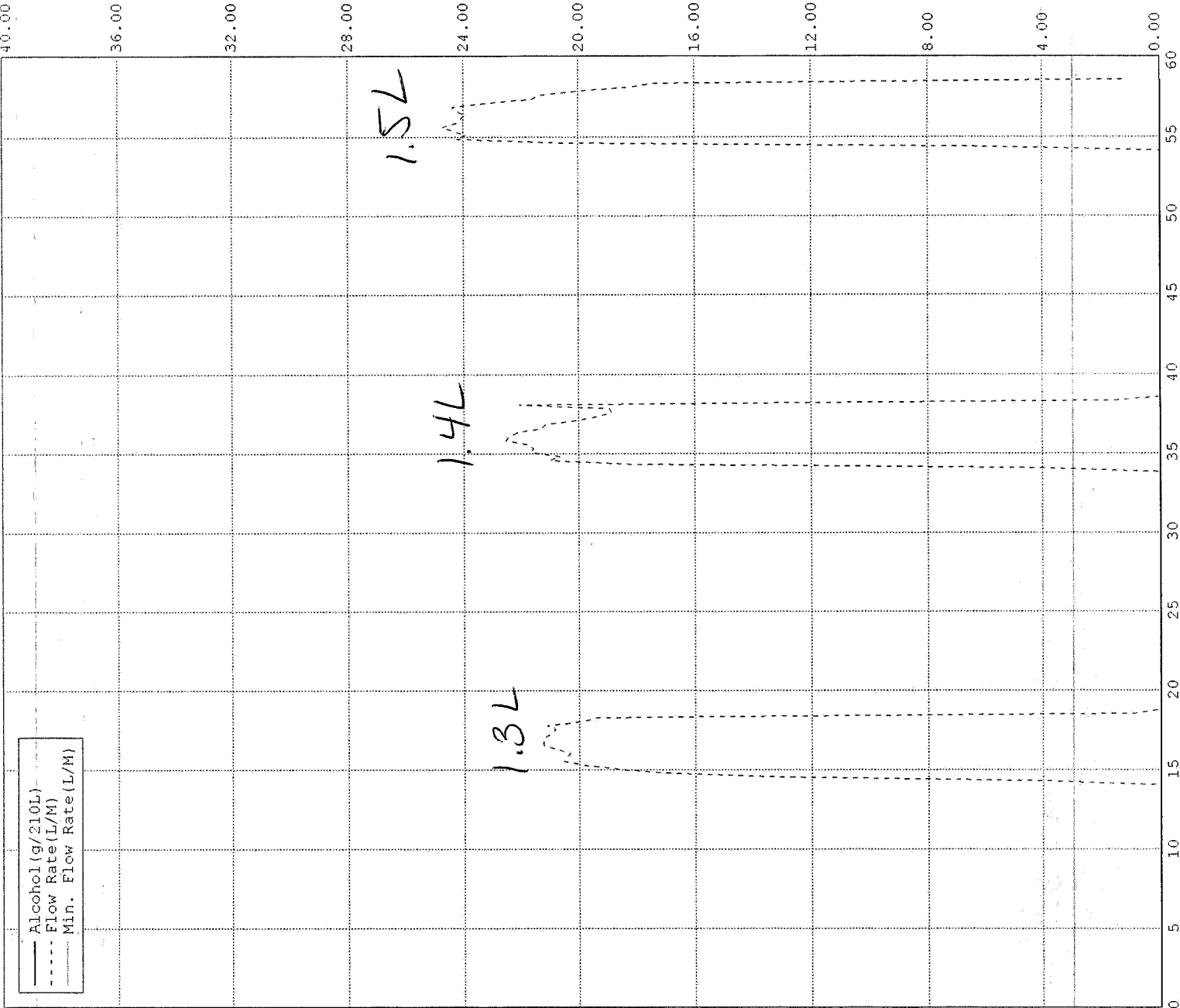
DIAGNOSTIC CHECK	PASSED	13:03
BLANK TEST	0.000	13:03
INTERNAL STANDARD	VERIFIED	13:03
EXTERNAL STANDARD	0.077	13:03
BLANK TEST	0.000	13:04
SUBJECT SAMPLE (Vol=1.53L)	0.000	13:05
BLANK TEST	0.000	13:06
EXTERNAL STANDARD	0.077	13:06
BLANK TEST	0.000	13:07

Lot # AG-018102

Exp. 6/29/2022 *WEB* 4/22/2021

JM
04/26/21

WEB



LINEARITY CHECK

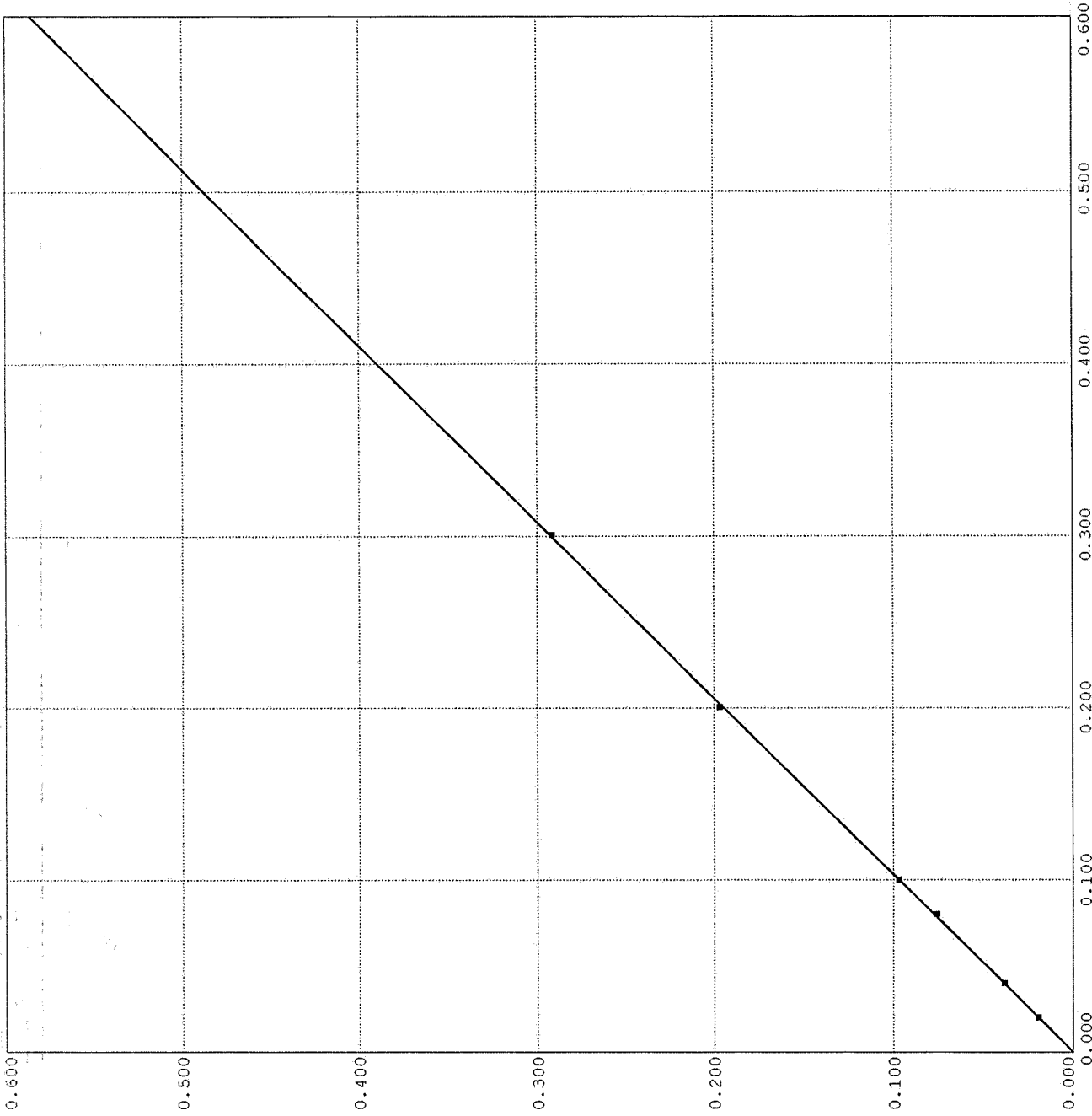
 Alaska Department of Public Safety
 DATAMASTER dmt: 100669

Date: 04/22/2021
 Time: 13:17:05

SUPERVISOR NAME:
 DEREK WALTON
 OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0200	0.0000
0.040	0.0392	0.0004
0.080	0.0770	0.0000
0.100	0.0980	0.0000
0.200	0.1976	0.0005
0.300	0.2922	0.0004

SLOPE = 0.976919
 R² = 0.999869



CXS

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety
 DATAMASTER dmt: 100669

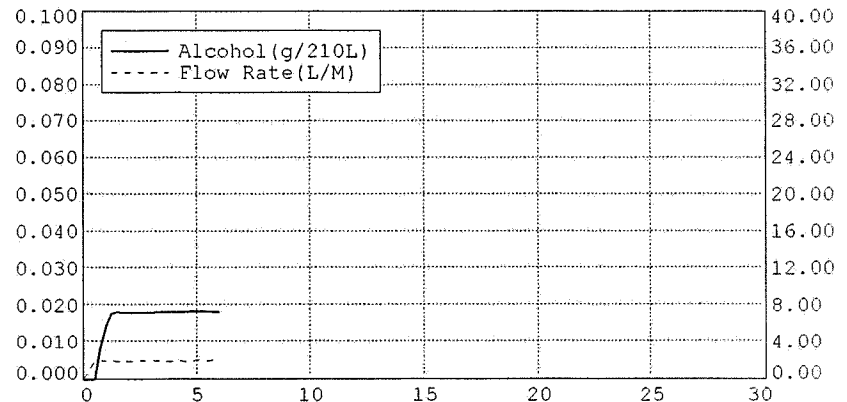
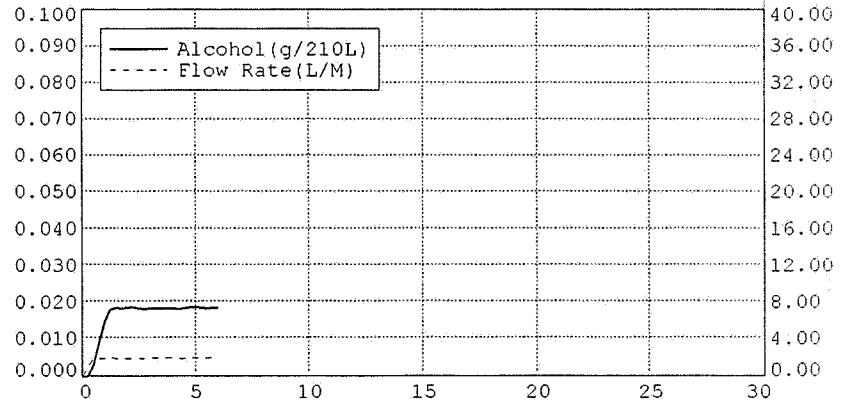
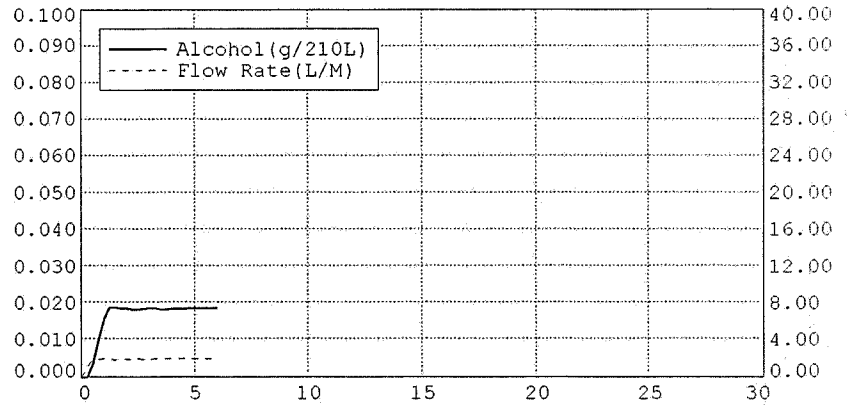
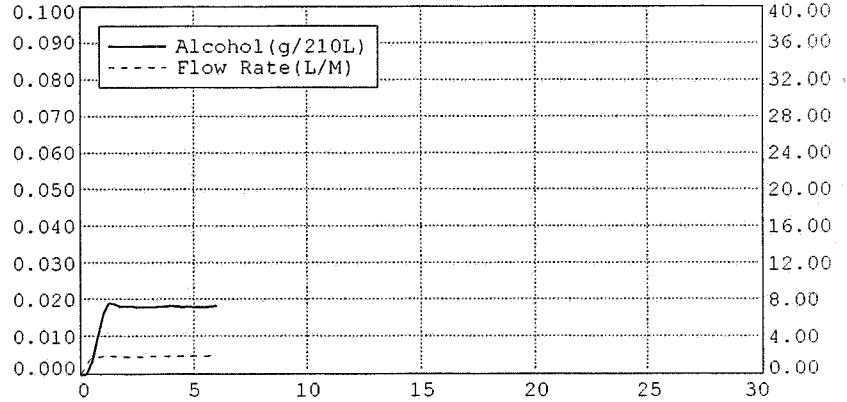
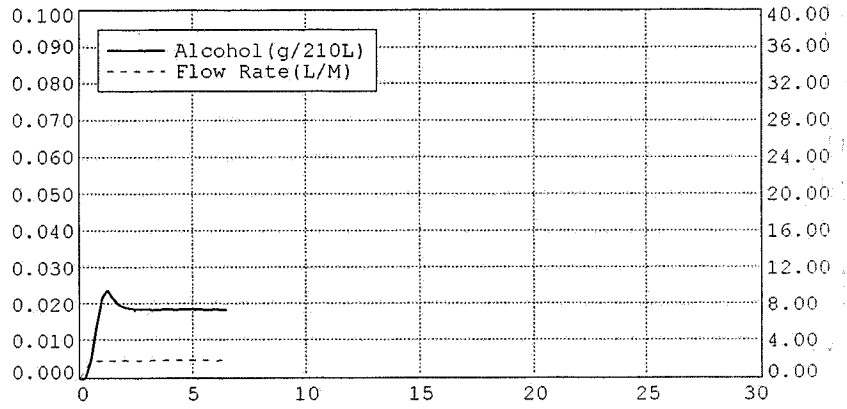
Date: 04/22/2021
 Time: 13:17:07

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
 TARGET AT 29.87: 0.020
 LOT #: AG928203
 EXPIRATION: 10/09/2021
 TANK PRESSURE: 556 psi

BLANK TEST	0.000	13:18
INTERNAL STANDARD	VERIFIED	13:18
EXTERNAL STANDARD	0.020	13:19
BLANK TEST	0.000	13:19
EXTERNAL STANDARD	0.020	13:20
BLANK TEST	0.000	13:21
EXTERNAL STANDARD	0.020	13:21
BLANK TEST	0.000	13:22
EXTERNAL STANDARD	0.020	13:22
BLANK TEST	0.000	13:23
EXTERNAL STANDARD	0.020	13:23
BLANK TEST	0.000	13:24

Average = 0.0200
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
 DATAMASTER dmt: 100669

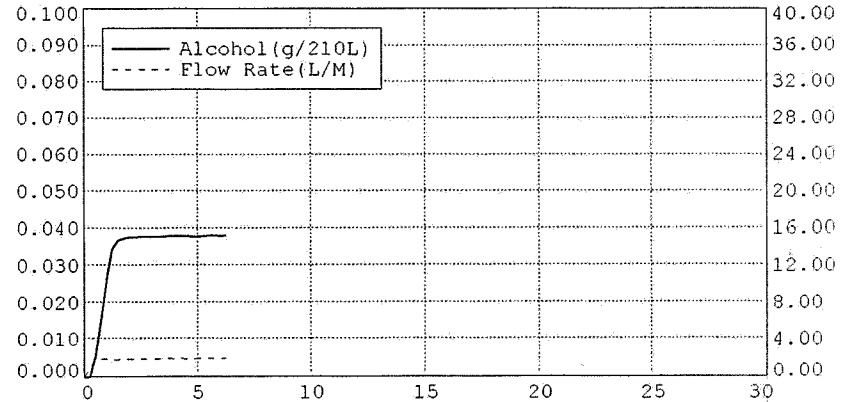
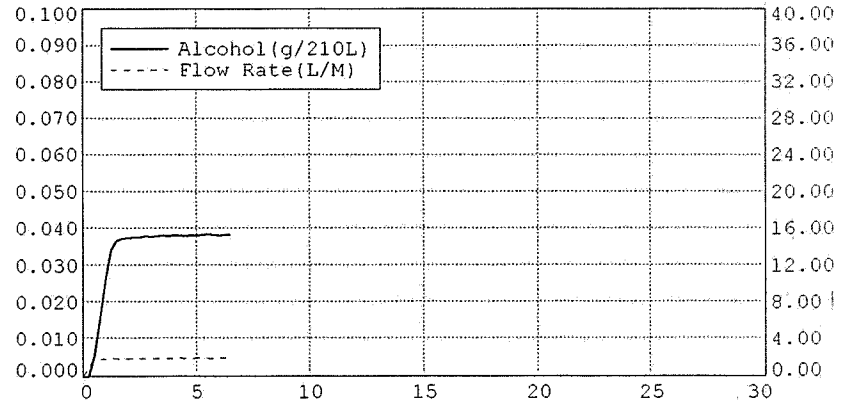
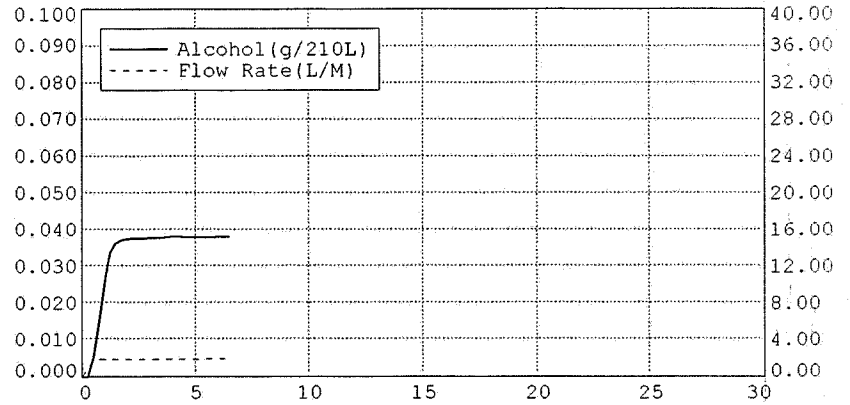
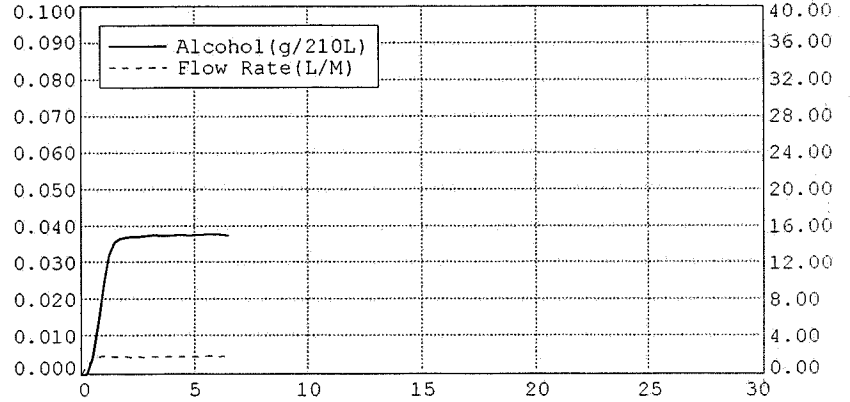
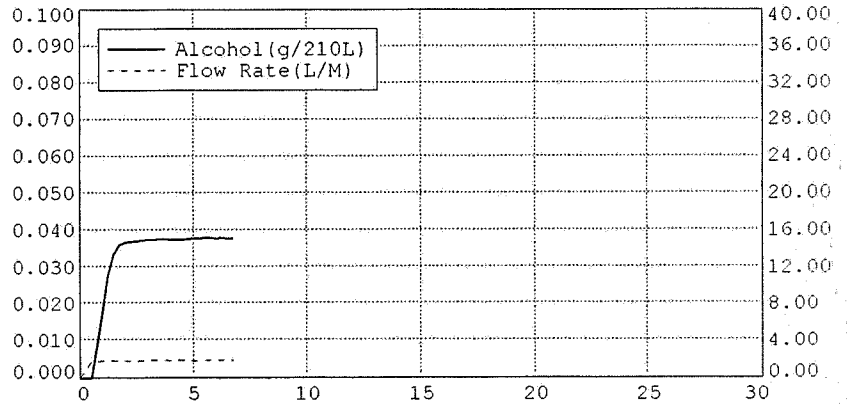
Date: 04/22/2021
 Time: 13:25:42

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040
 TARGET AT 29.87: 0.040
 LOT #: AG915607
 EXPIRATION: 06/05/2021
 TANK PRESSURE: 308 psi

BLANK TEST	0.000	13:27
INTERNAL STANDARD	VERIFIED	13:27
EXTERNAL STANDARD	0.039	13:27
BLANK TEST	0.000	13:28
EXTERNAL STANDARD	0.039	13:28
BLANK TEST	0.000	13:29
EXTERNAL STANDARD	0.039	13:30
BLANK TEST	0.000	13:30
EXTERNAL STANDARD	0.040	13:31
BLANK TEST	0.000	13:32
EXTERNAL STANDARD	0.039	13:32
BLANK TEST	0.000	13:33

Average = 0.0392
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
DATAMASTER dmt: 100669

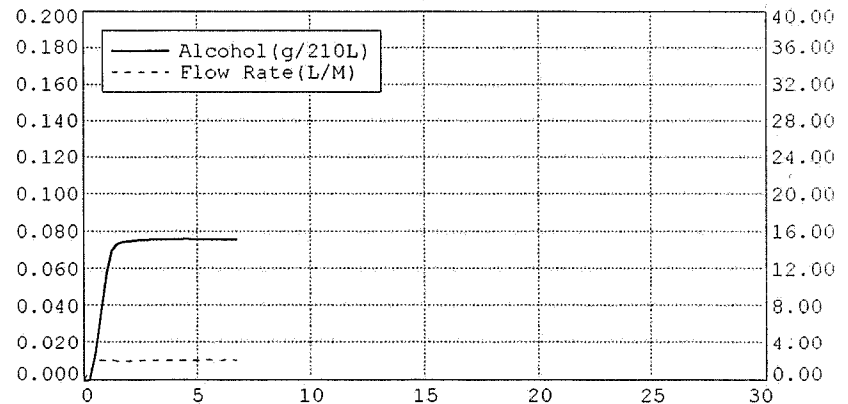
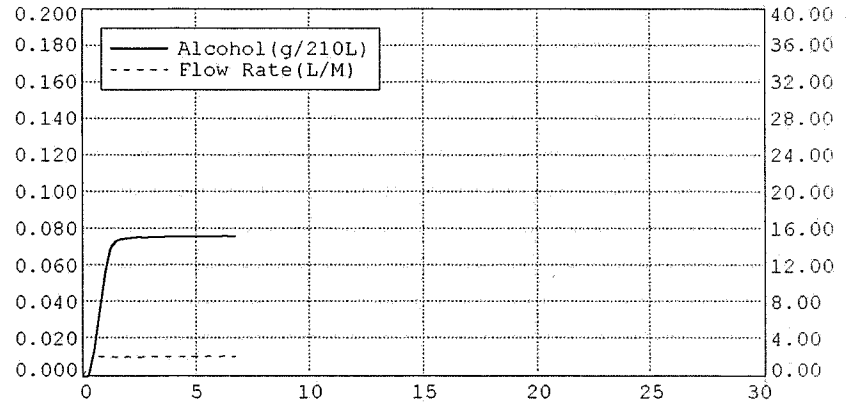
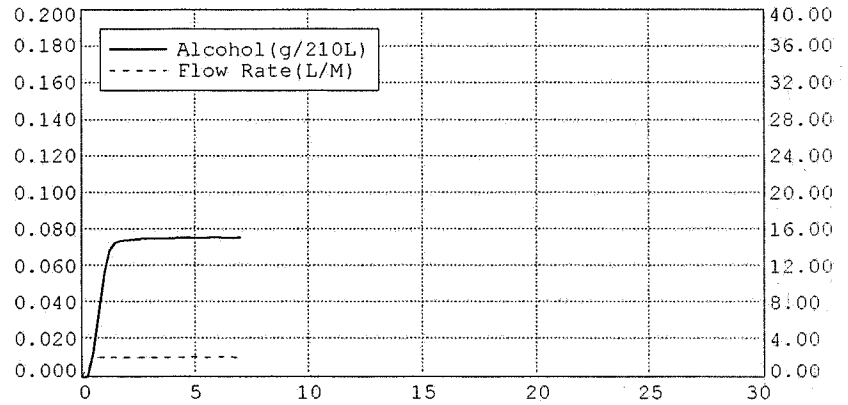
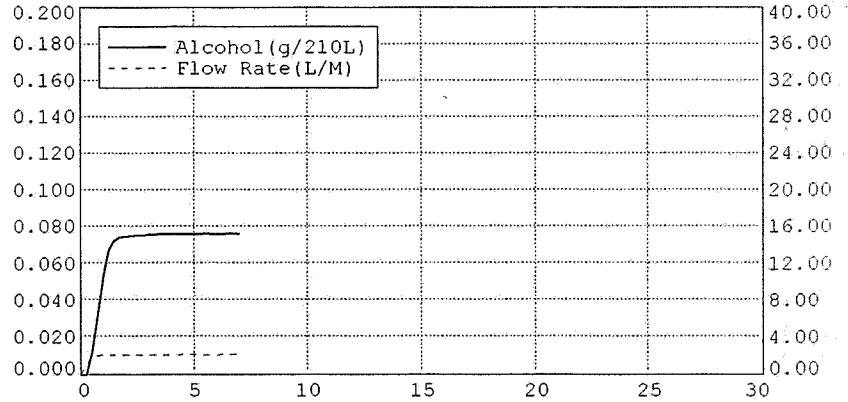
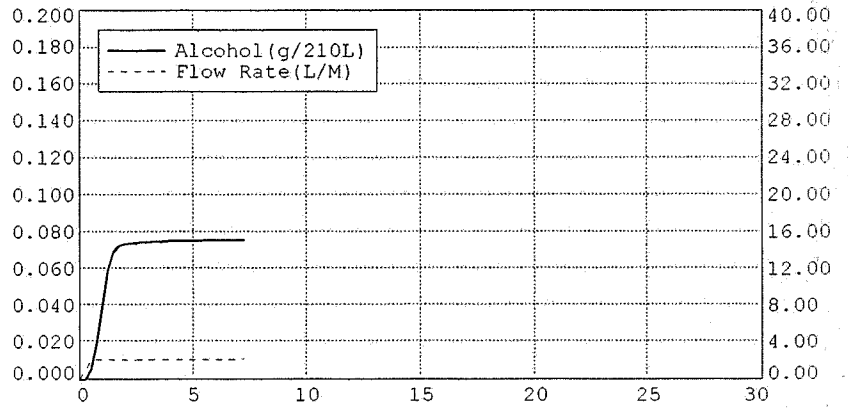
Date: 04/22/2021
Time: 13:34:06

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 29.87: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022
TANK PRESSURE: 736 psi

TEST TYPE	CONCENTRATION	TIME
BLANK TEST	0.000	13:35
INTERNAL STANDARD	VERIFIED	13:35
EXTERNAL STANDARD	0.077	13:36
BLANK TEST	0.000	13:37
EXTERNAL STANDARD	0.077	13:37
BLANK TEST	0.000	13:38
EXTERNAL STANDARD	0.077	13:38
BLANK TEST	0.000	13:39
EXTERNAL STANDARD	0.077	13:39
BLANK TEST	0.000	13:40
EXTERNAL STANDARD	0.077	13:40
BLANK TEST	0.000	13:41

Average = 0.0770
Std Dev = 0.0000



LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety
 DATAMASTER dmt: 100669

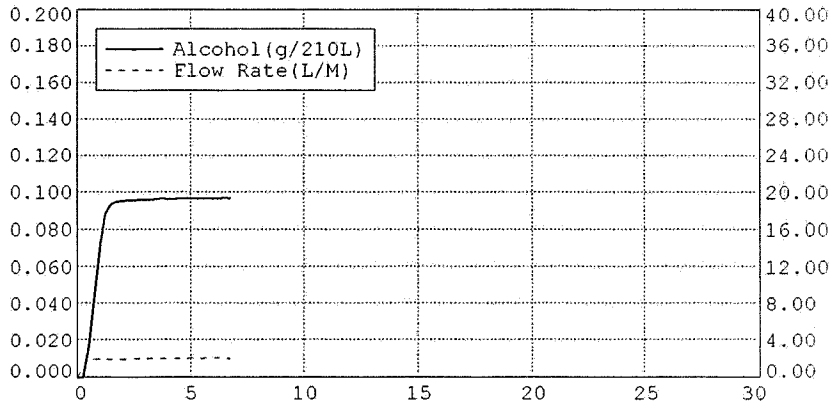
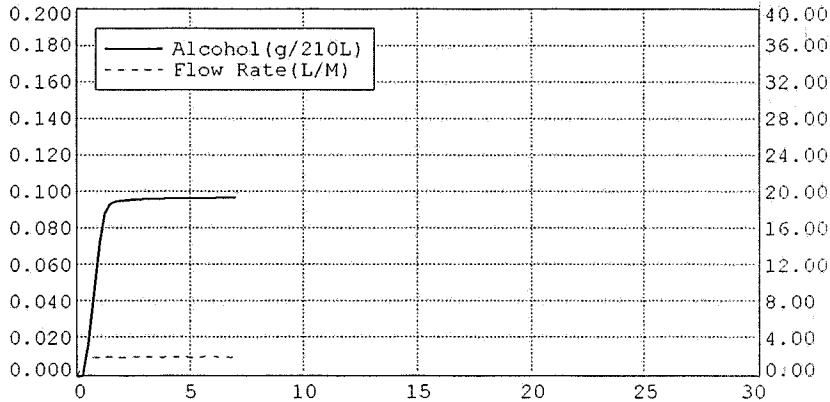
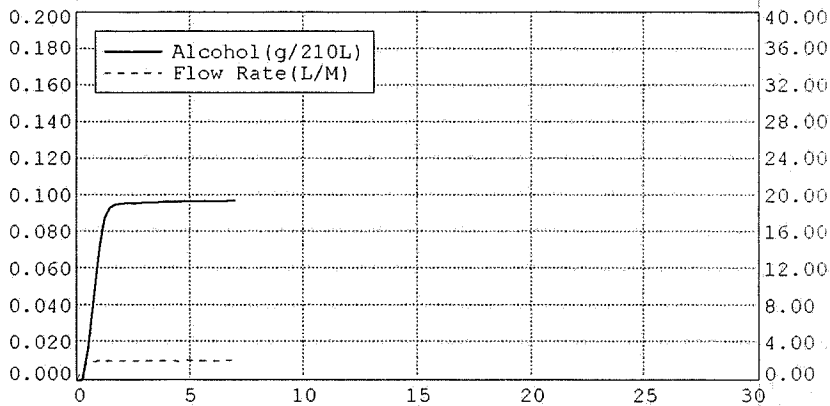
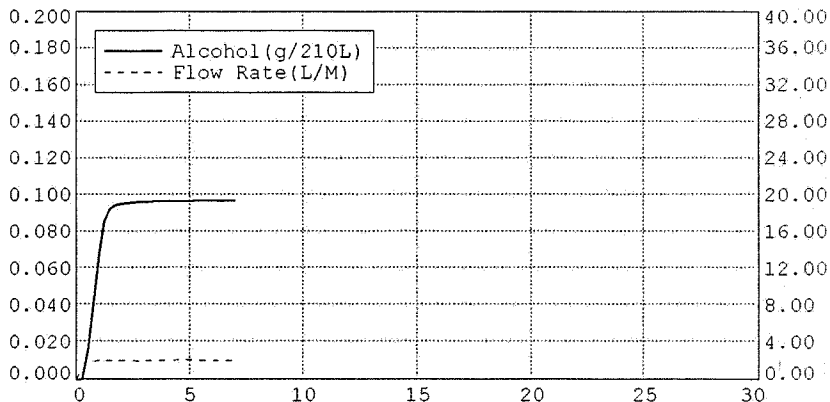
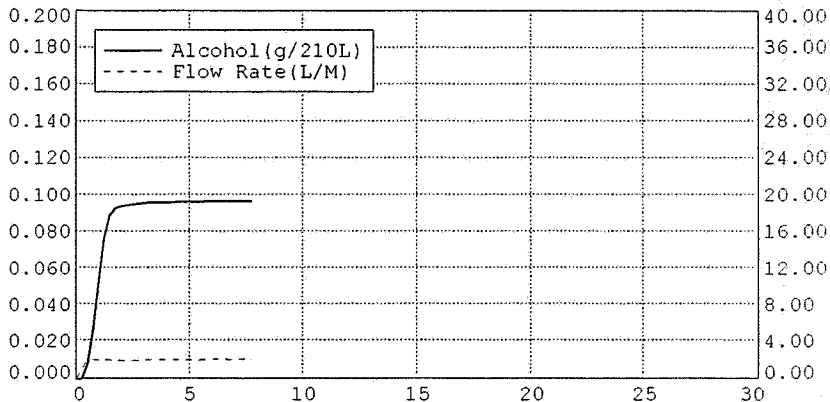
Date: 04/22/2021
 Time: 13:50:11

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 29.85: 0.100
 LOT #: AG924701
 EXPIRATION: 09/04/2021
 TANK PRESSURE: 594 psi

BLANK TEST	0.000	13:51
INTERNAL STANDARD	VERIFIED	13:51
EXTERNAL STANDARD	0.098	13:51
BLANK TEST	0.000	13:52
EXTERNAL STANDARD	0.098	13:52
BLANK TEST	0.000	13:53
EXTERNAL STANDARD	0.098	13:53
BLANK TEST	0.000	13:54
EXTERNAL STANDARD	0.098	13:54
BLANK TEST	0.000	13:55
EXTERNAL STANDARD	0.098	13:56
BLANK TEST	0.000	13:56

Average = 0.0980
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 5

Alaska Department of Public Safety
 DATAMASTER dmt: 100669

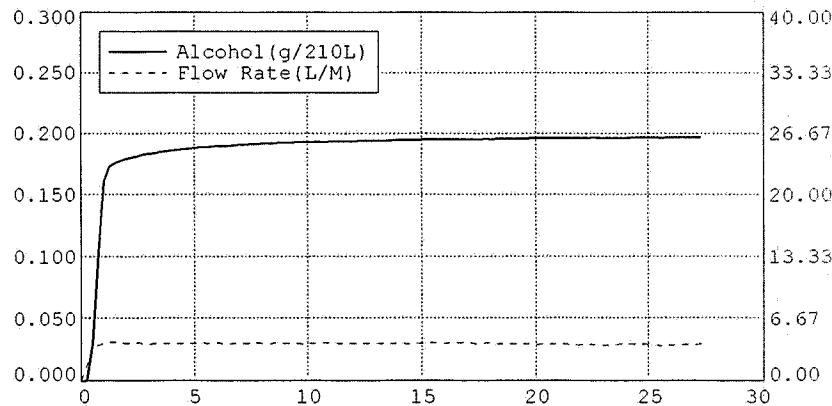
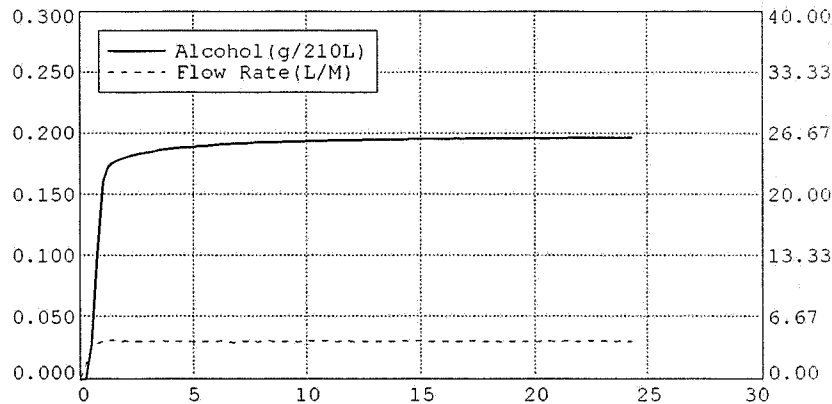
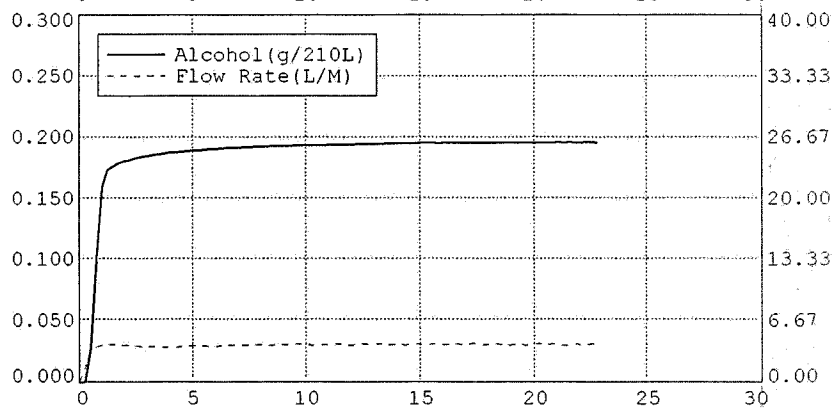
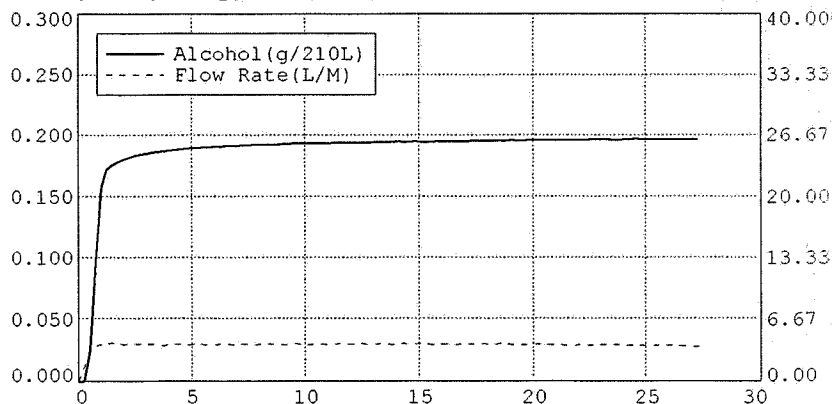
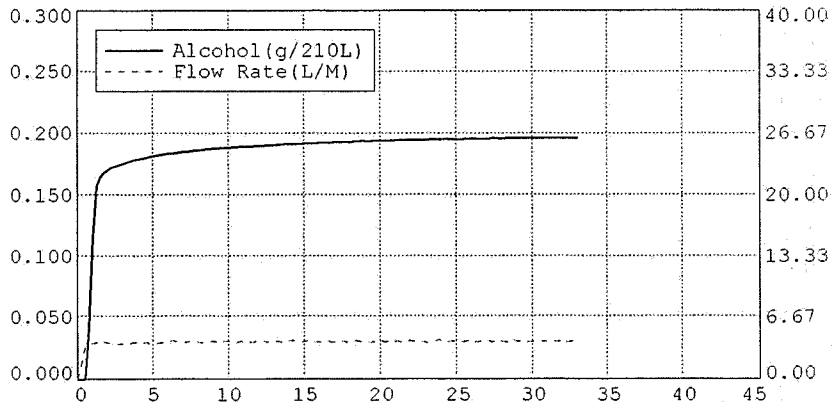
Date: 04/22/2021
 Time: 14:21:17

EXTERNAL STANDARD INFORMATION

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

BLANK TEST	0.000	14:22
INTERNAL STANDARD	VERIFIED	14:22
EXTERNAL STANDARD	0.197	14:23
BLANK TEST	0.000	14:24
EXTERNAL STANDARD	0.198	14:24
BLANK TEST	0.000	14:25
EXTERNAL STANDARD	0.197	14:26
BLANK TEST	0.000	14:27
EXTERNAL STANDARD	0.198	14:27
BLANK TEST	0.000	14:28
EXTERNAL STANDARD	0.198	14:29
BLANK TEST	0.000	14:29

Average = 0.1976
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 6

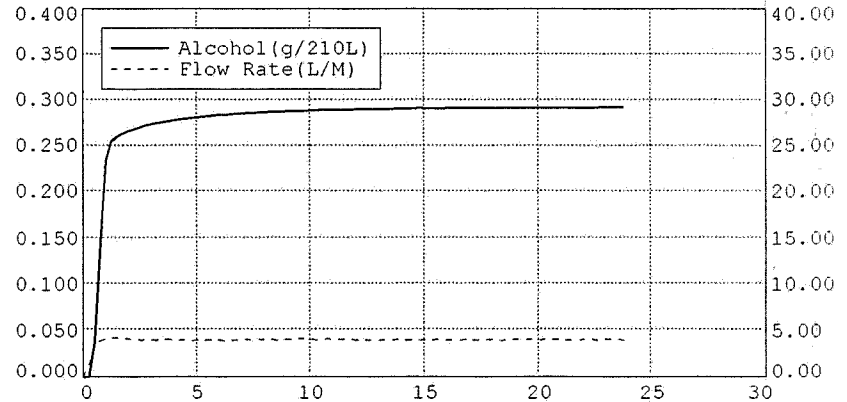
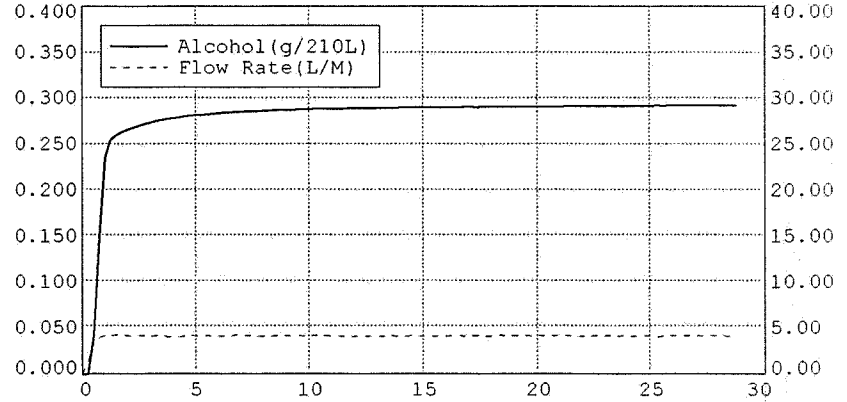
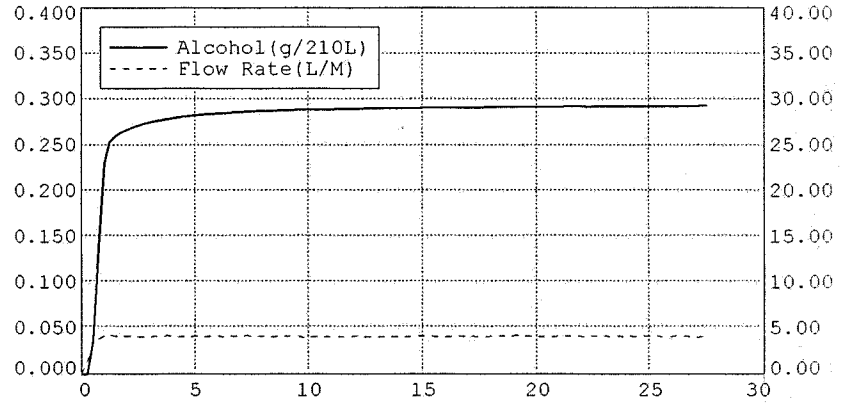
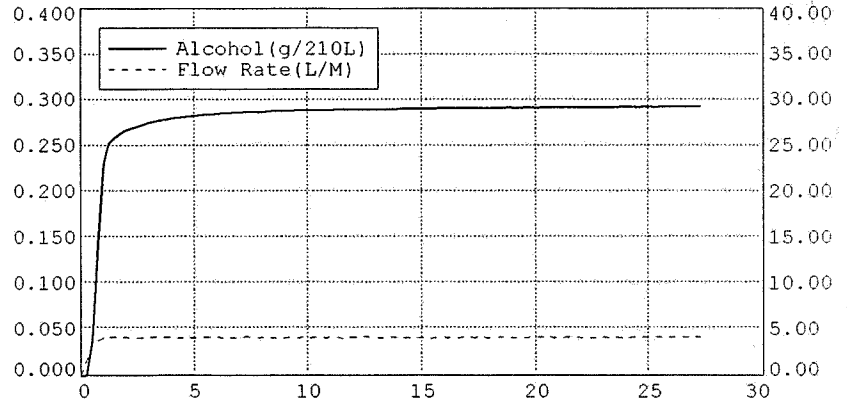
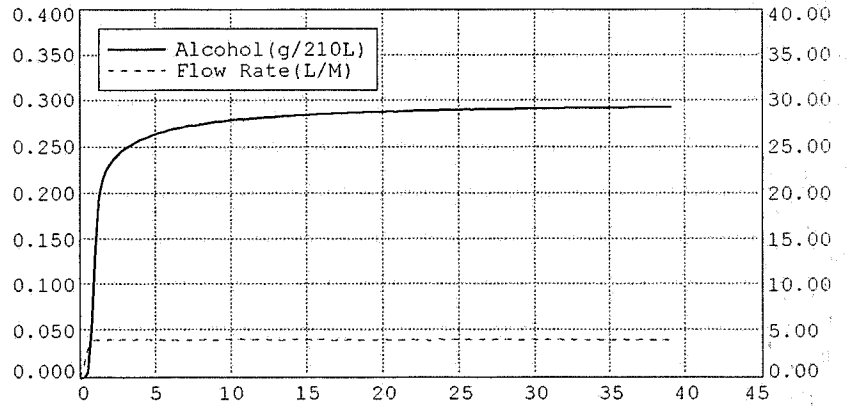
Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/22/2021
Time: 14:34:21

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

BLANK TEST	0.000	14:36
INTERNAL STANDARD	VERIFIED	14:36
EXTERNAL STANDARD	0.293	14:36
BLANK TEST	0.000	14:37
EXTERNAL STANDARD	0.292	14:38
BLANK TEST	0.000	14:39
EXTERNAL STANDARD	0.292	14:39
BLANK TEST	0.000	14:40
EXTERNAL STANDARD	0.292	14:41
BLANK TEST	0.000	14:42
EXTERNAL STANDARD	0.292	14:42
BLANK TEST	0.000	14:43

Average = 0.2922
Std Dev = 0.0004



SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/22/2021
Time: 14:49:47

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

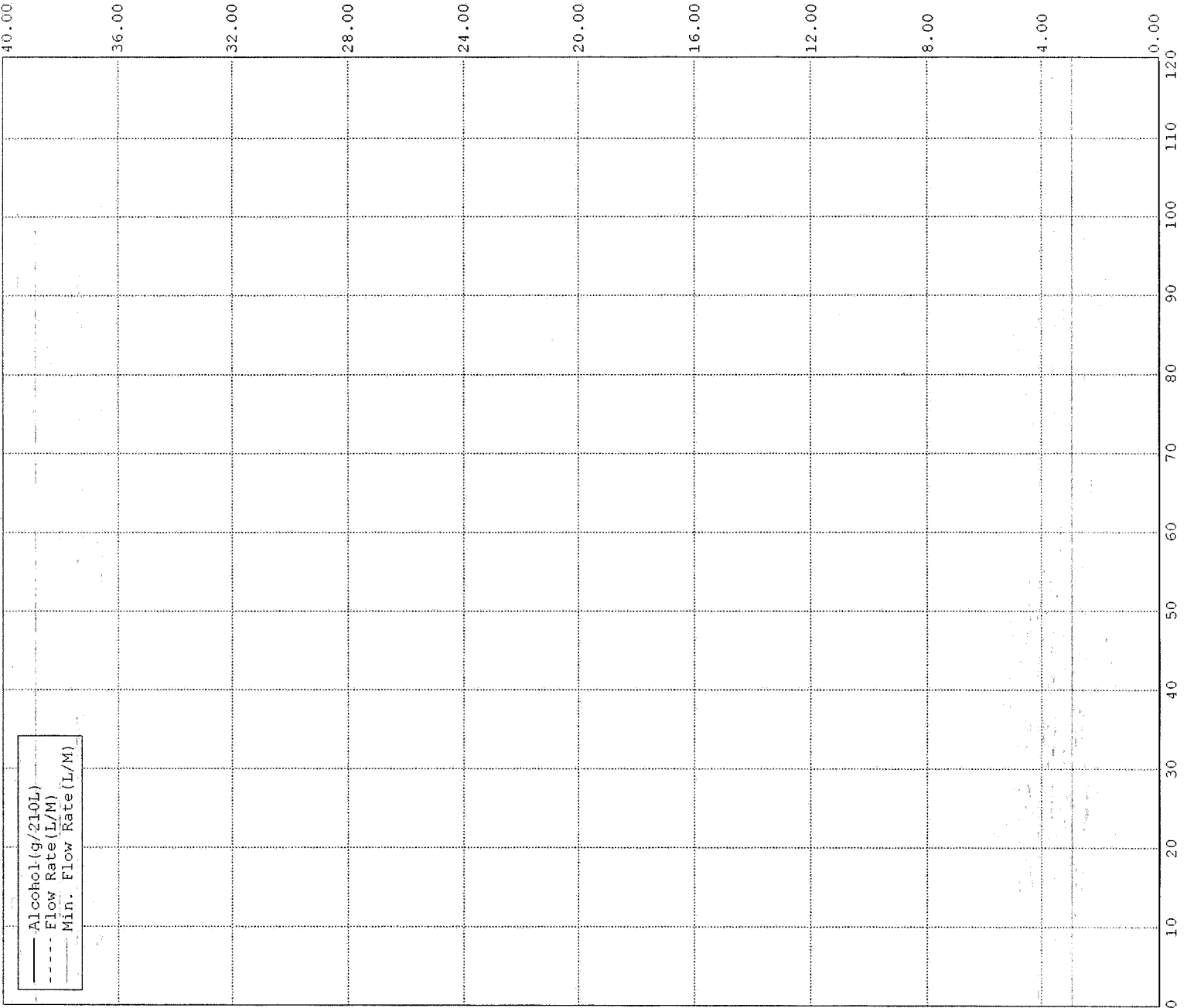
OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 29.83: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK PASSED 14:50
BLANK TEST 0.000 14:50
INTERNAL STANDARD VERIFIED 14:51
EXTERNAL STANDARD 0.076 14:51
BLANK TEST 0.000 14:52
SUBJECT SAMPLE INCOMPLETE 14:54



SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/23/2021
Time: 13:03:23

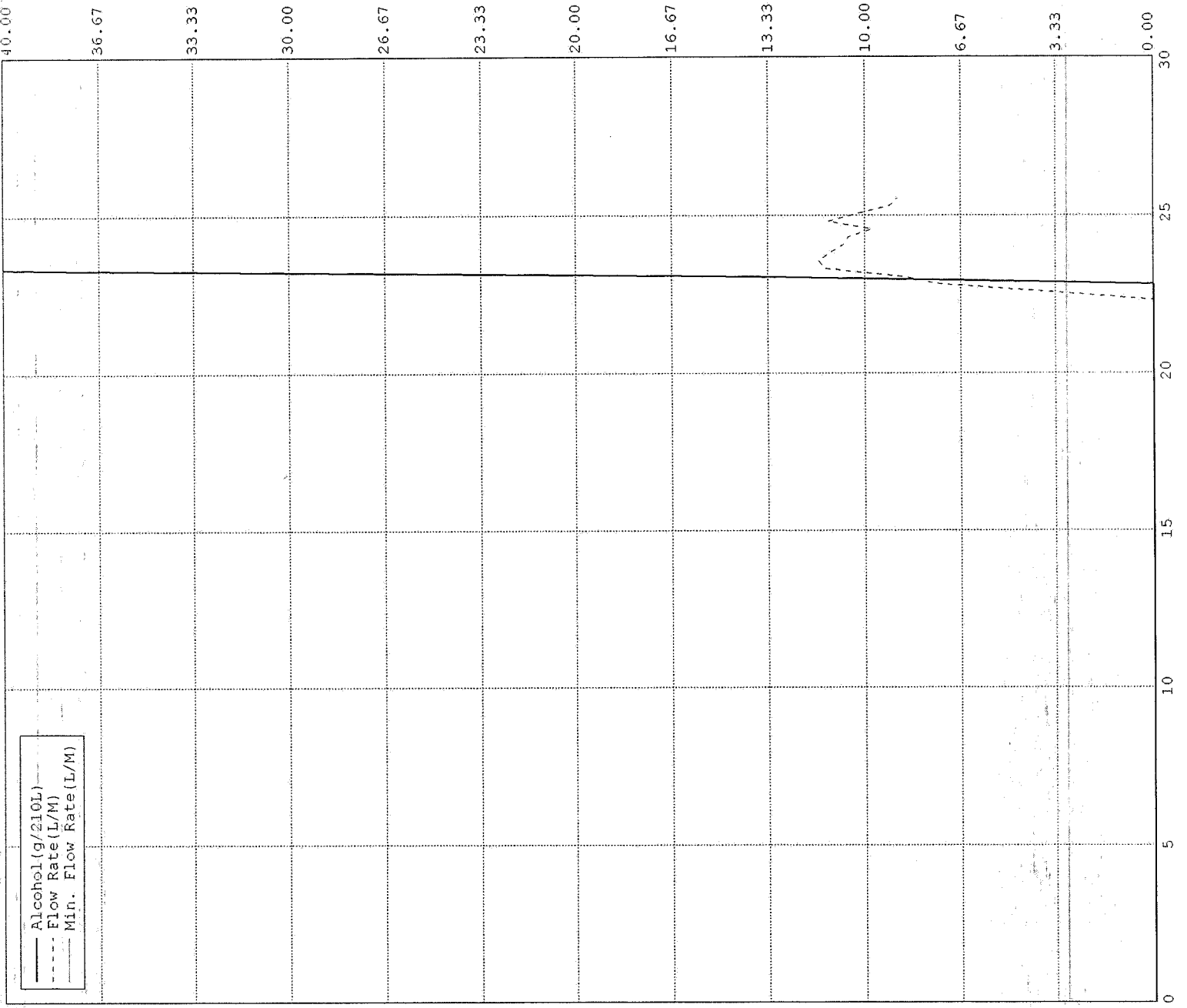
SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 29.75: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK PASSED 13:04
BLANK TEST 0.000 13:04
INTERNAL STANDARD VERIFIED 13:04
EXTERNAL STANDARD 0.077 13:05
BLANK TEST 0.000 13:06
SUBJECT SAMPLE INVALID 13:07



SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/26/2021
Time: 12:39:49

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

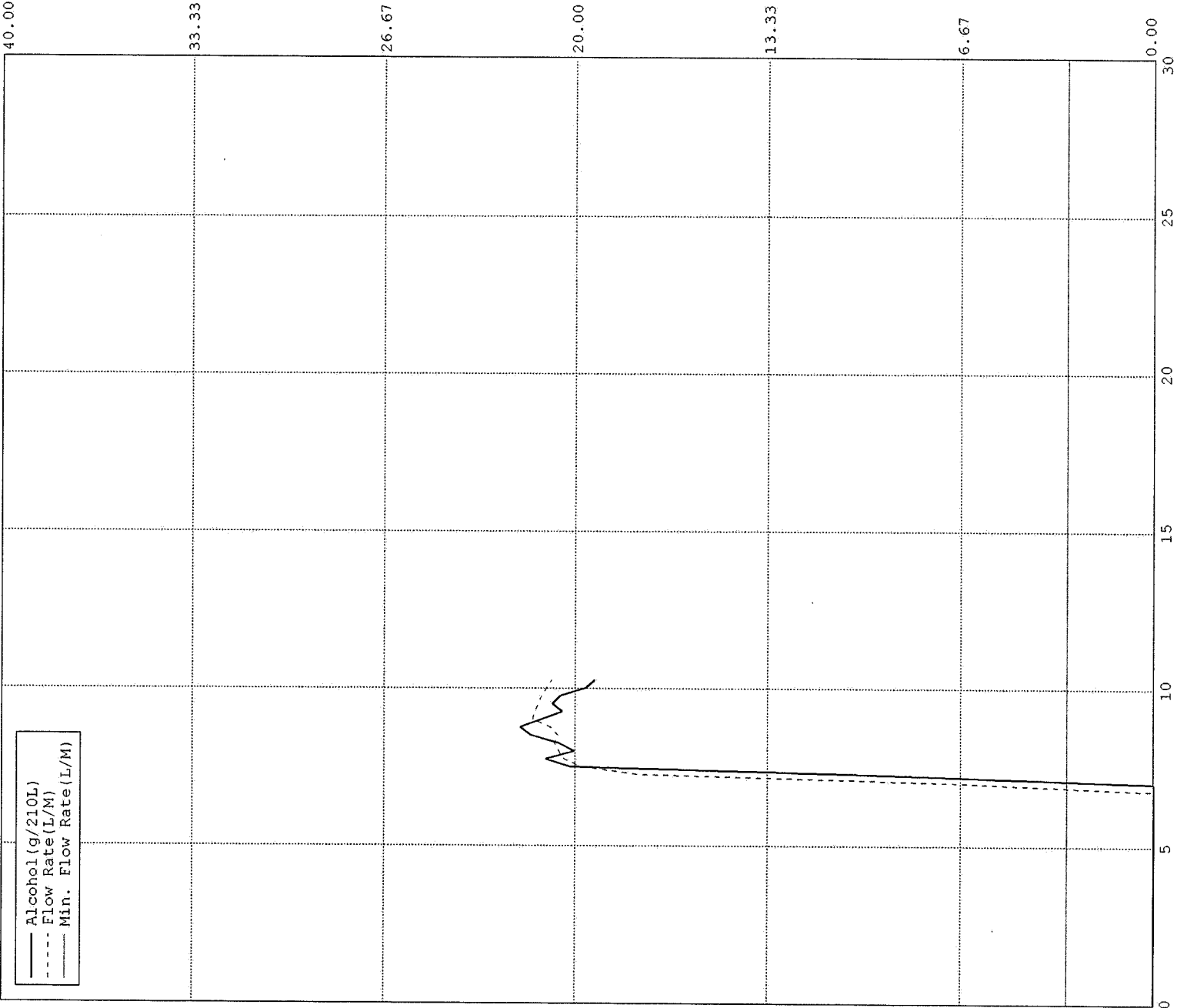
DEPT/AGENCY:
INVALID #2
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 29.38: 0.079
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	12:41
BLANK TEST	0.000	12:41
INTERNAL STANDARD	VERIFIED	12:41
EXTERNAL STANDARD	0.076	12:41
BLANK TEST	0.000	12:42
SUBJECT SAMPLE	INVALID	12:42

First Invalid functional test on
04/23/21 correctly triggered the status
message but the negative slope is not
visible on the graph. Repeated this
functional test on 04/26/21 after a
new VOC (instrument shut down on 04/23/21).

DW
DW 04/26/21



SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/23/2021
Time: 13:54:52

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 29.75: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	13:55
BLANK TEST	0.000	13:56
INTERNAL STANDARD	VERIFIED	13:56
$x_g = 0.085$ (0.31%)		
EXTERNAL STANDARD	0.077	13:56
$x_{[1]} = 0.0767$ (-0.0011)	(0.0014)	
BLANK TEST	0.000	13:57
SUBJECT SAMPLE	XXX	13:57
$x_{[1]} = 0.1090$ (-0.0141)	(0.0035)	

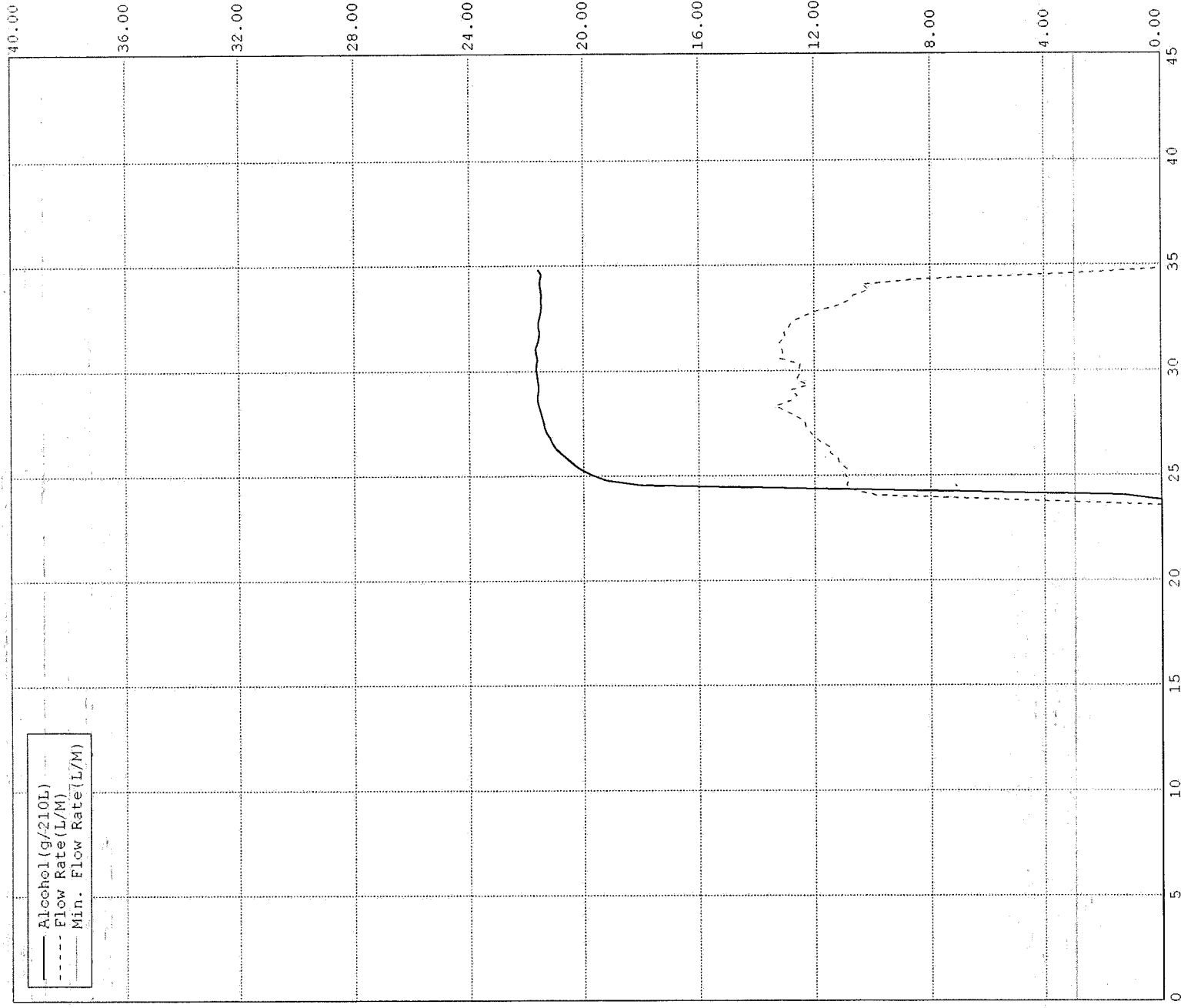
Interference Detected

filter 2 avg -0.0013

filter 3 avg 0.0017

UUB 4/23/2021

JM 04/26/21



SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/23/2021
Time: 13:29:28

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

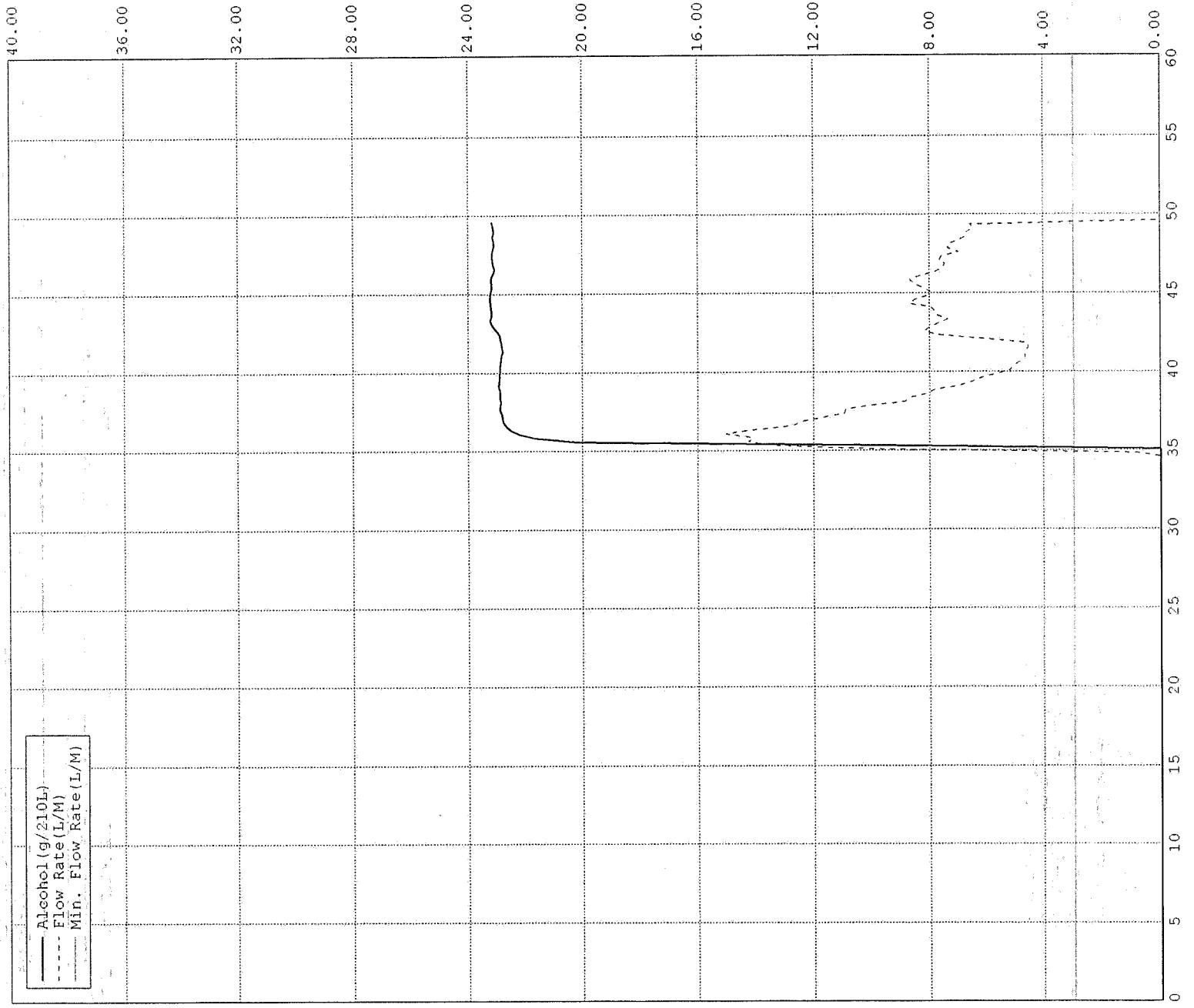
OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 29.75: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	13:32
BLANK TEST	0.000	13:32
INTERNAL STANDARD	VERIFIED	13:32
Xq = 0.084 (0.10%)	0.076	13:32
EXTERNAL STANDARD	X[1] = 0.0765 (-0.0019)	(0.0012)
BLANK TEST	0.000	13:33
SUBJECT SAMPLE	XXX	13:34
X[1] = 0.1172 (-0.0248)	(0.0005)	

Interference Detected



SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/23/2021
Time: 13:48:31

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

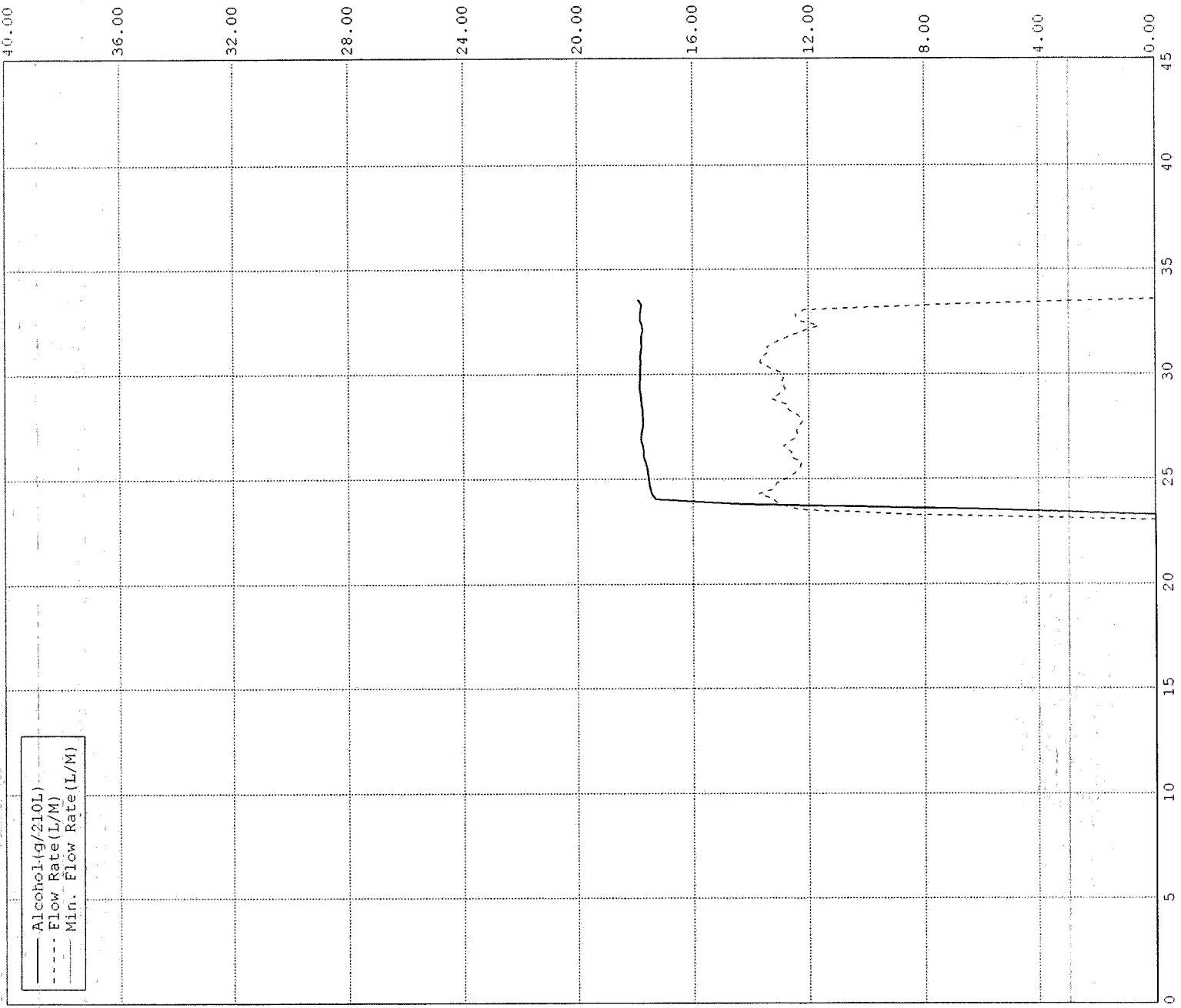
OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 29.74: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	13:49
BLANK TEST	0.000	13:49
INTERNAL STANDARD	VERIFIED	13:49
Xq = 0.085 (0.31%)		
EXTERNAL STANDARD	0.077	13:49
X[1] = 0.0767 (-0.0010)	(0.0021)	
BLANK TEST	0.000	13:50
SUBJECT SAMPLE (Vol=2.15L)	0.090	13:51
X[1] = 0.0907 (-0.0011)	(0.0016)	
BLANK TEST	0.000	13:52
EXTERNAL STANDARD	0.077	13:52
X[1] = 0.0766 (-0.0011)	(0.0019)	
BLANK TEST	0.000	13:53



SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100669

Date: 04/22/2021
Time: 14:56:53

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

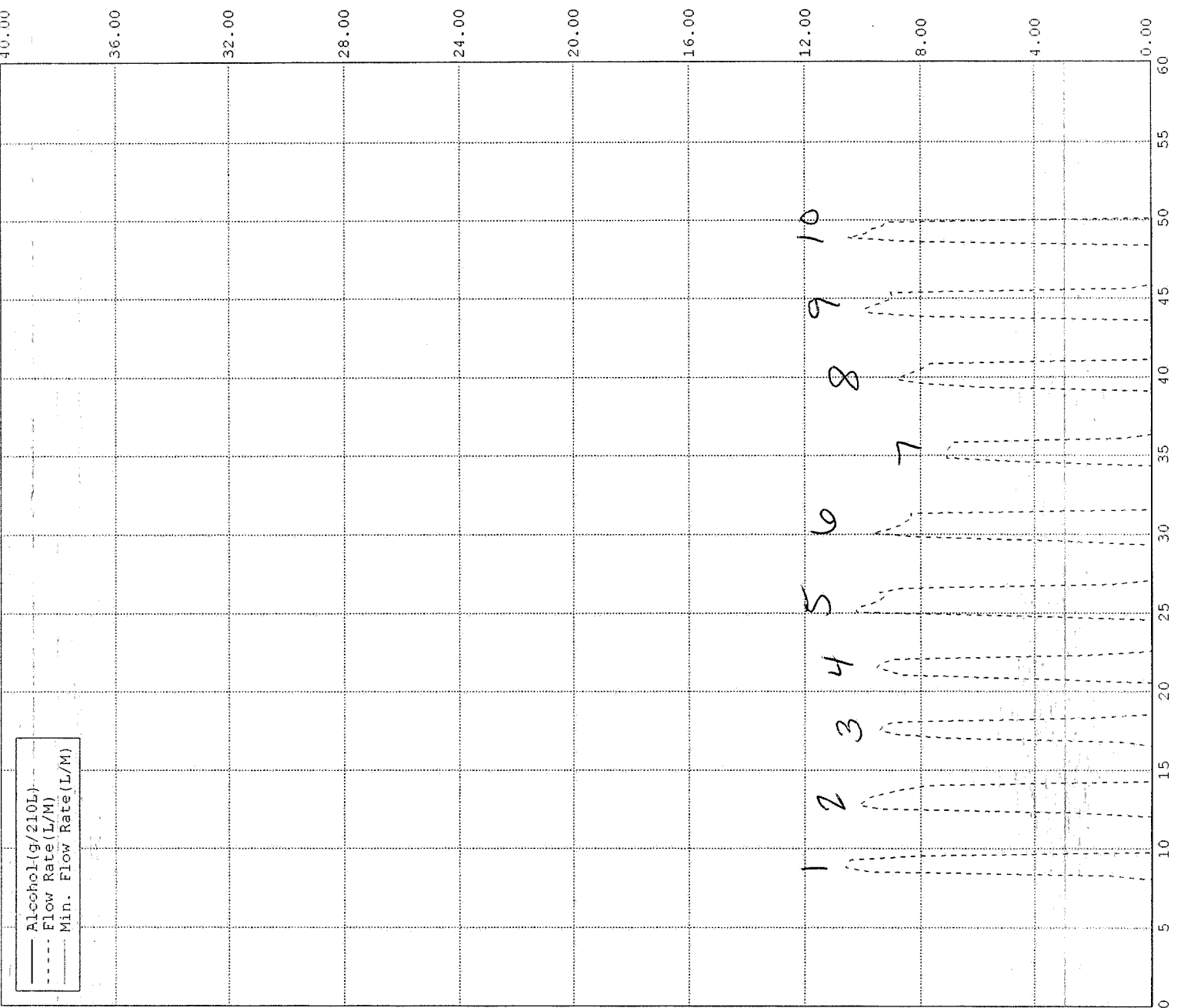
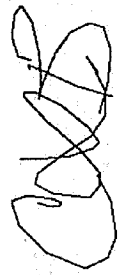
OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 29.83: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK PASSED 14:57
BLANK TEST 0.000 14:58
INTERNAL STANDARD VERIFIED 14:58
EXTERNAL STANDARD 0.077 14:58
BLANK TEST 0.000 14:59
SUBJECT SAMPLE XXX 15:00

Maximum Attempts Exceeded



SUBJECT TEST

Alaska Department of Public Safety
DAFAMASTER dmt: 100669

Date: 04/23/2021
Time: 13:10:06

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

DEPT/AGENCY:

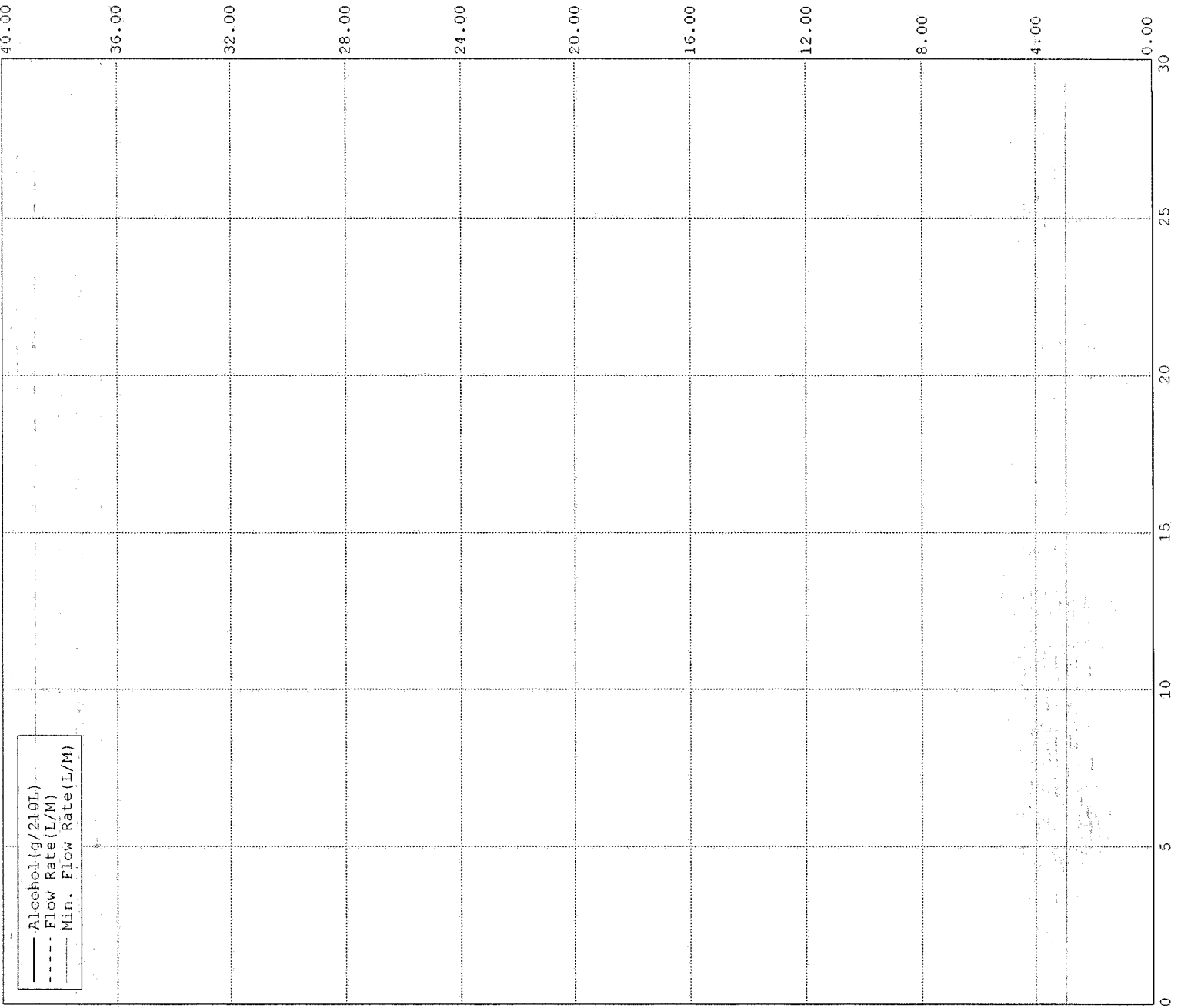
REFI
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 29.76: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK PASSED 13:11
BLANK TEST 0.000 13:11
INTERNAL STANDARD VERIFIED 13:11
EXTERNAL STANDARD 0.076 13:12
BLANK TEST 0.000 13:13

REFI DETECTED



SUBJECT TEST

Alaska Department of Public Safety
DAPAMASTER dmt: 100669

Date: 04/23/2021
Time: 14:19:46

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

OPERATOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

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

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 29.75: 0.080
LOT #: AG018102
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	14:20
BLANK TEST	0.000	14:20
INTERNAL STANDARD	VERIFIED	14:21
EXTERNAL STANDARD	0.078	14:21
BLANK TEST	0.000	14:22
SUBJECT SAMPLE (Vol=2.63L)	0.000	14:22
BLANK TEST	0.000	14:23
EXTERNAL STANDARD	0.077	14:23
BLANK TEST	0.000	14:24

UXS

