

# 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 100671 Analyst Brandi Bennett Start Date 8/27/21

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

- pmf 8/27/2021 for all initials*
- i. 0.020g/210L Mnf Guth Lot Airgas AG928203 Exp 10/9/21
- ii. 0.040g/210L Mnf Guth Lot Airgas AG111710 Exp 4/27/23
- iii. 0.080g/210L Mnf Guth Lot Airgas AG018102 Exp 6/29/22
- iv. 0.100g/210L Mnf Guth Lot Airgas AG924701 Exp 9/4/21
- v. 0.200g/210L Mnf Guth Lot 20510 Exp 12/3/22  
Simulator S/N DR6267 Date Calibrated 11/17/2020
- vi. 0.300g/210L Mnf Guth Lot 21030 Exp 2/2/23  
Simulator S/N SD1202 Date Calibrated 6/15/2021

### Functional Tests (attached)

Incomplete

Invalid

Interference

- i. Acetone - Mnf Guth Lot 19301 Level 0.100 Exp 10/30/21  
Simulator S/N SD1177 Date Calibrated 6/15/21
- ii. Isopropanol - Mnf Guth Lot 19301 Level 0.100 Exp 10/30/21  
Simulator S/N SD1198 Date Calibrated 6/15/21
- iii. Negative Control - Mnf Guth Lot 19301 Level 0.100 Exp 10/30/21  
Simulator S/N SD1088 Date Calibrated 6/15/21

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 9/1/21



DIAGNOSTIC RECORD

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100671  
-----

Date: 08/27/2021  
Time: 07:58:44

VERSIONS

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

TEMPERATURES

Sample Chamber = 48.9°C                    PASSED  
(44.0°C - 52.0°C)  
Breath Tube       = 48.1°C                   PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage     = 1.67 V                   PASSED  
(1.01 V - 2.37 V)  
Cooler Voltage   = 1.78 V                   PASSED  
(1.00 V - 2.32 V)  
Bias Voltage      = 78 V                    PASSED  
(47 V - 111 V)  
Chopper Freq     = 522 Hz                   PASSED  
(475 Hz - 575 Hz)  
Barometer        = 29.4 in

PUMP INFO

Flow Rate = 4.653 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  
(0.003 V <= 0.010 V)

FILTER INFO

Filter 1                                  PASSED  
Filter 2                                  PASSED  
Filter 3                                  PASSED

INTERNAL STANDARD

Xq = 0.100 1.51% (0.00% - 4.00%)                   PASSED



Technician Screen

-----  
DATAMASTER dmt: 100671  
-----

Date: 08/27/2021  
Time: 8:02 AM

Temperatures (°C)

Sample Cell: 48.8°C  
Breath Tube: 48.0°C

Current Barometer 29.4 in  
Volume (Ltr) 1.51

Settings

Lamp: 1.69 V  
Bias: 78 V  
Cooler: 1.81 V  
Chopper: 521 Hz

Voltages (V)

Flow: 1.06 V  
Detector: -0.073 V

CALIBRATION FACTORS

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100671  
-----

Date: 04/09/2012  
Time: 10:19:13

OPERATOR NAME:  
CHARLES FOSTER  
CERTIFICATE #: 7734

Ca	=	0.1000		
CAL	=	0.981393	0.800	<= CAL < 1.200
b1	=	0.0003	0.0000	<= b1 < 0.0040
b2	=	0.0063	0.0010	<= b2 < 0.0100
b3	=	0.0001	0.0000	<= b3 < 0.0040
Xq	=	0.0987	0.0500	<= Xq < 0.2000
a21	=	1.187324	1.050	<= a21 < 1.300
a31	=	0.451266	0.300	<= a31 < 0.800



SUBJECT TEST

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100671  
-----

Date: 08/27/2021  
Time: 08:04:00

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

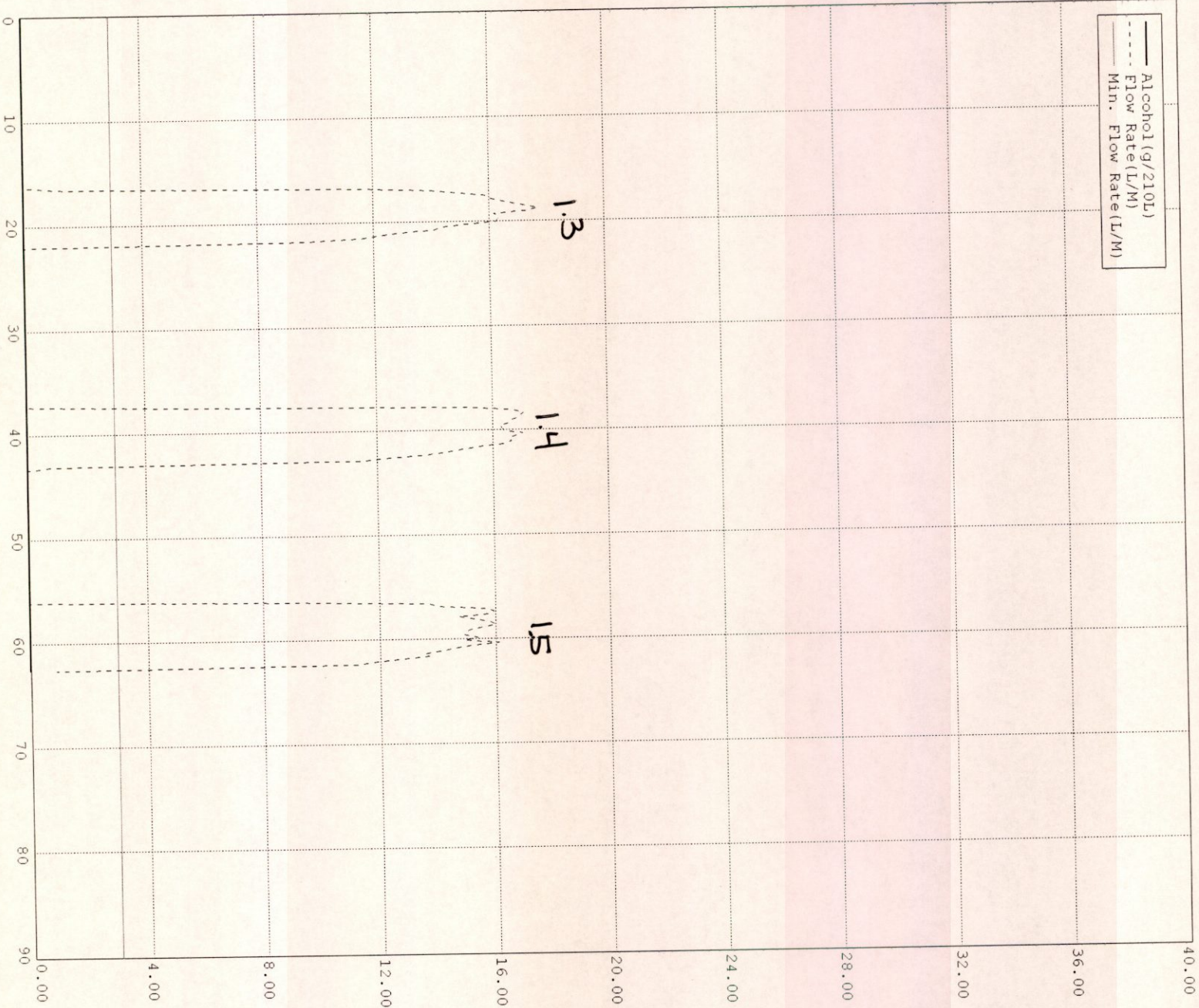
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.36: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	08:06
BLANK TEST	0.000	08:06
INTERNAL STANDARD	VERIFIED	08:06
EXTERNAL STANDARD	0.078	08:06
BLANK TEST	0.000	08:07
SUBJECT SAMPLE (Vol=1.50L)	0.000	08:08
BLANK TEST	0.000	08:09
EXTERNAL STANDARD	0.077	08:09
BLANK TEST	0.000	08:10

*Handwritten signature: BMB*





LINEARITY CHECK

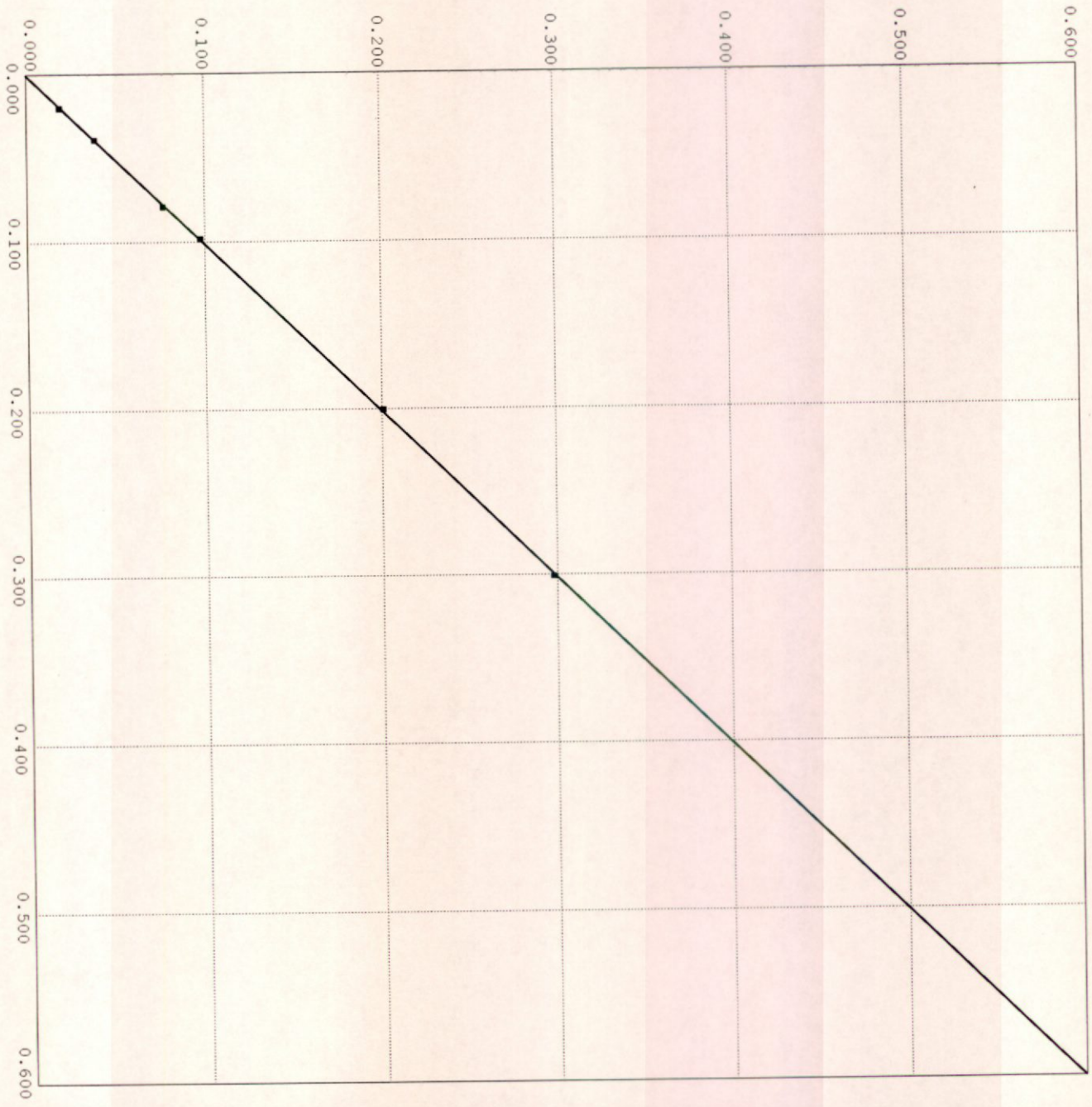
Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 08/27/2021  
Time: 08:30:42

SUPERVISOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

TARGET	AVERAGE	STD. DEV.
0.020	0.0192	0.0004
0.039	0.0390	0.0000
0.079	0.0774	0.0005
0.098	0.0984	0.0005
0.200	0.2016	0.0009
0.300	0.2986	0.0013

SLOPE = 1.000306  
R<sup>2</sup> = 0.999872



BMB



LINEARITY CHECK: Control Test 1

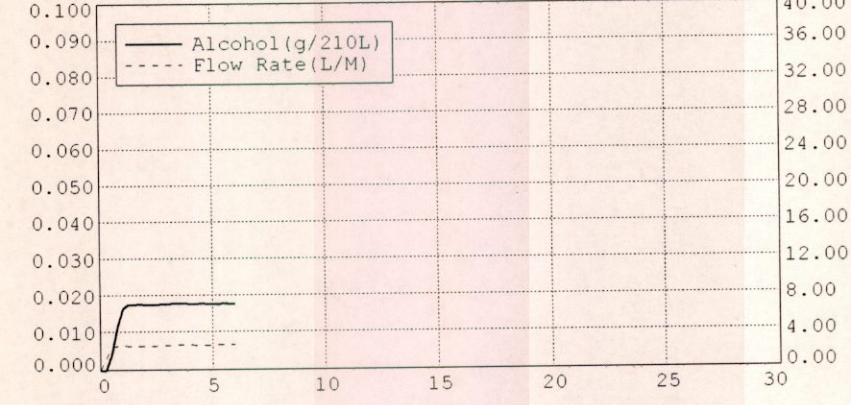
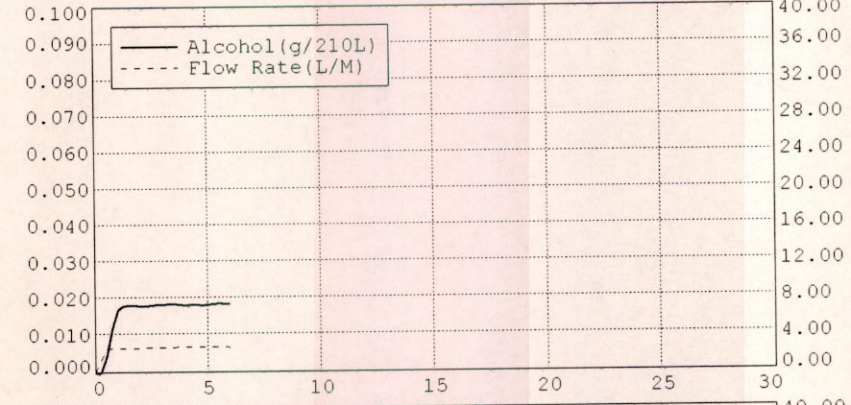
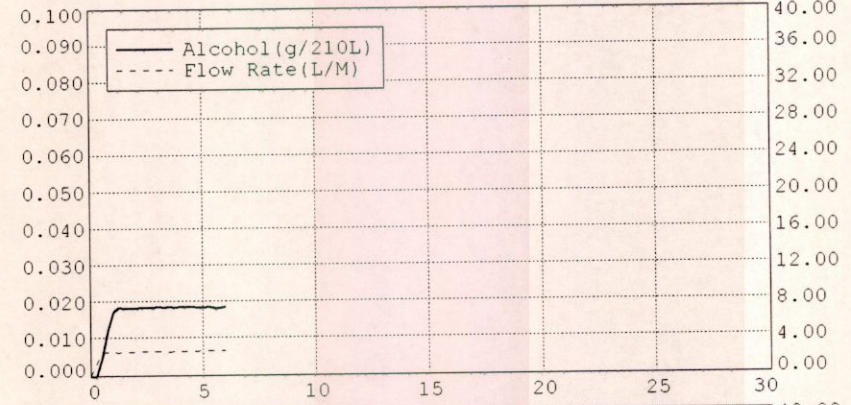
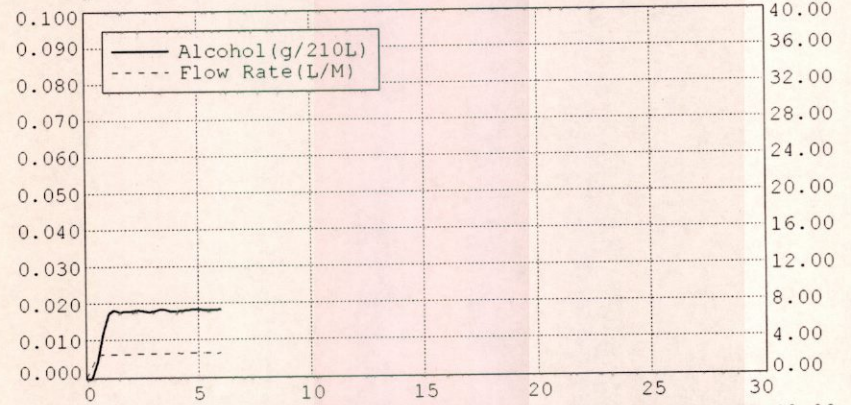
Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

Date: 08/27/2021  
 Time: 08:30:44

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.020  
 TARGET AT 29.35: 0.020  
 LOT #: AG928203  
 EXPIRATION: 10/09/2021  
 TANK PRESSURE: 370 psi

BLANK TEST	0.000	08:32
INTERNAL STANDARD	VERIFIED	08:32
EXTERNAL STANDARD	0.019	08:32
BLANK TEST	0.000	08:33
EXTERNAL STANDARD	0.019	08:33
BLANK TEST	0.000	08:34
EXTERNAL STANDARD	0.020	08:34
BLANK TEST	0.000	08:35
EXTERNAL STANDARD	0.019	08:35
BLANK TEST	0.000	08:36
EXTERNAL STANDARD	0.019	08:36
BLANK TEST	0.000	08:37

Average = 0.0192  
 Std Dev = 0.0004





LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

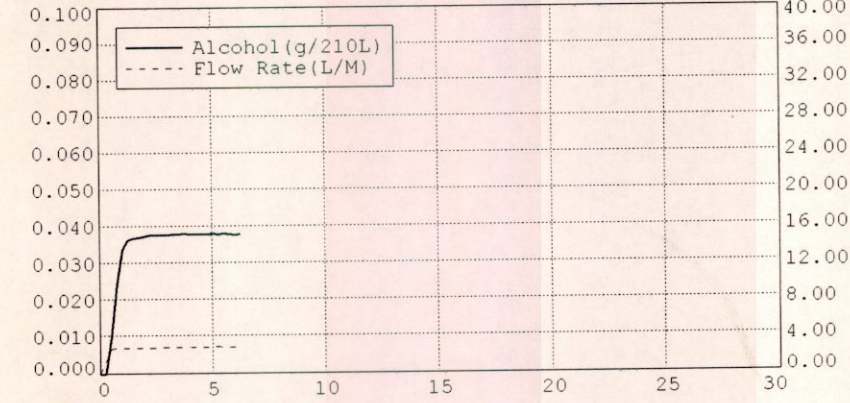
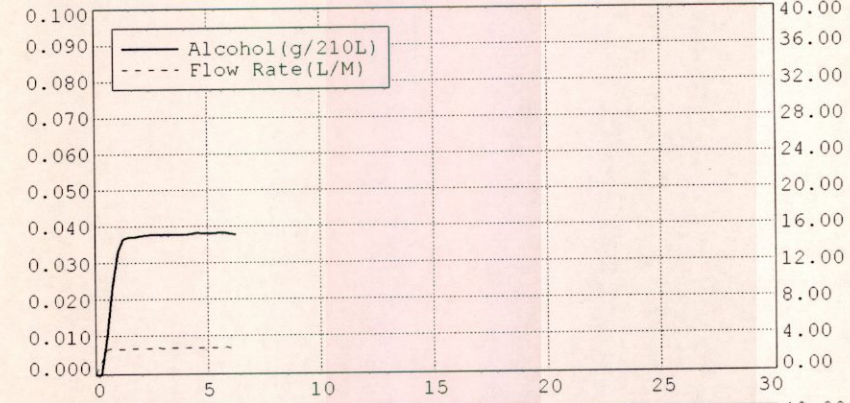
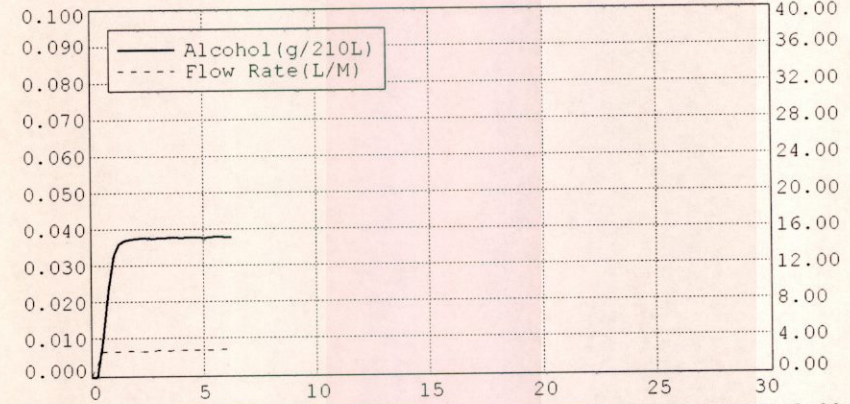
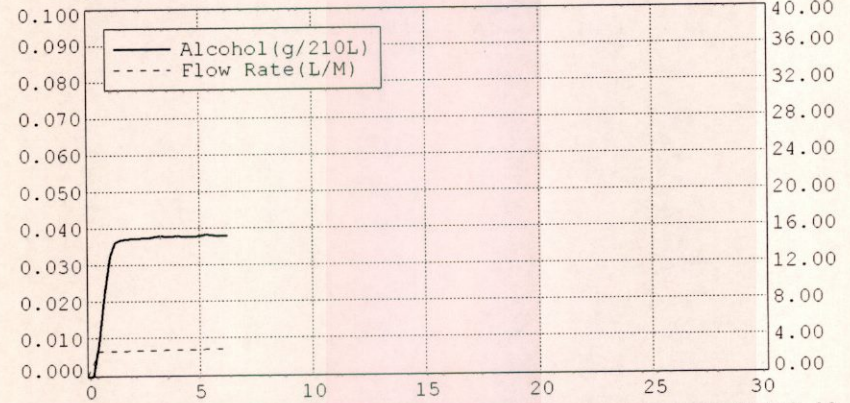
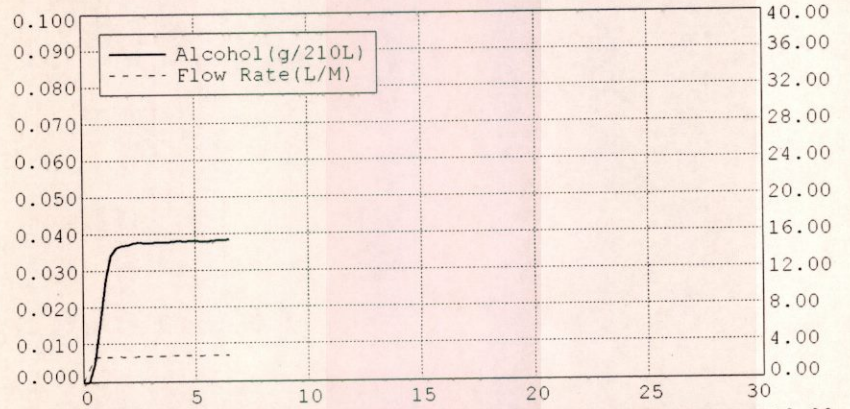
Date: 08/27/2021  
 Time: 08:48:07

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.040  
 TARGET AT 29.36: 0.039  
 LOT #: AG111710  
 EXPIRATION: 04/27/2023  
 TANK PRESSURE: 960 psi

BLANK TEST	0.000	08:49
INTERNAL STANDARD	VERIFIED	08:49
EXTERNAL STANDARD	0.039	08:49
BLANK TEST	0.000	08:50
EXTERNAL STANDARD	0.039	08:50
BLANK TEST	0.000	08:51
EXTERNAL STANDARD	0.039	08:51
BLANK TEST	0.000	08:52
EXTERNAL STANDARD	0.039	08:52
BLANK TEST	0.000	08:53
EXTERNAL STANDARD	0.039	08:53
BLANK TEST	0.000	08:54

Average = 0.0390  
 Std Dev = 0.0000





LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

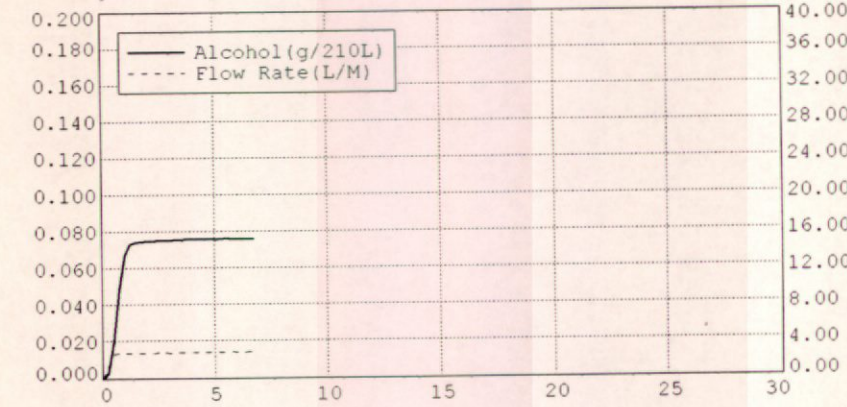
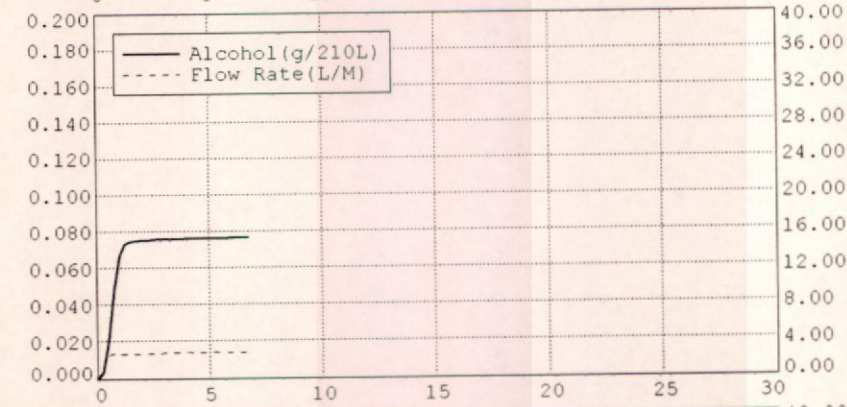
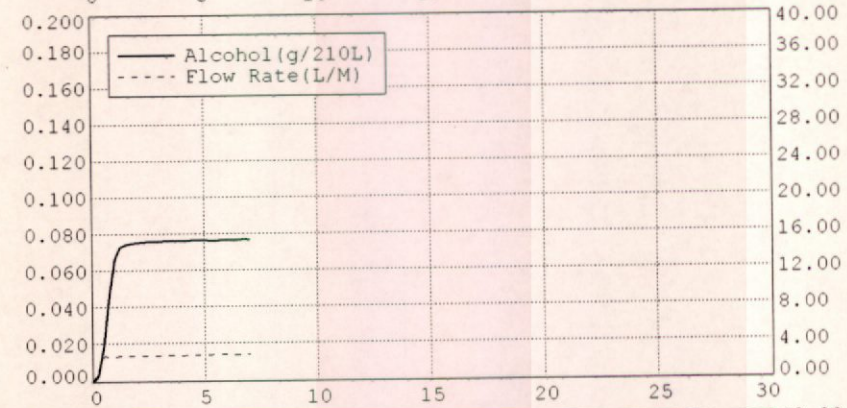
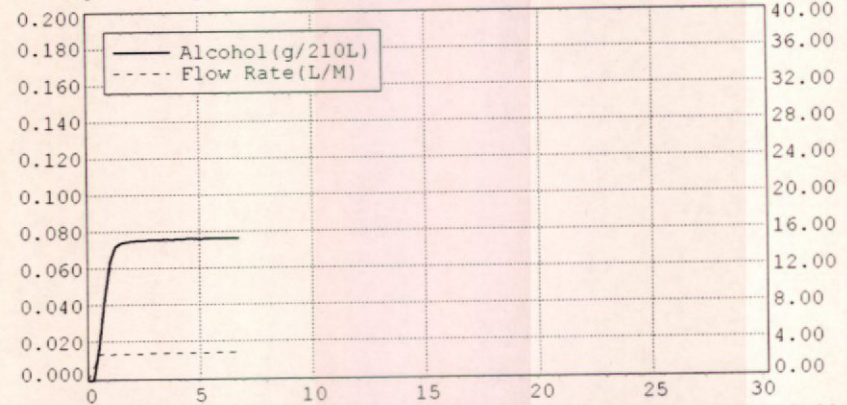
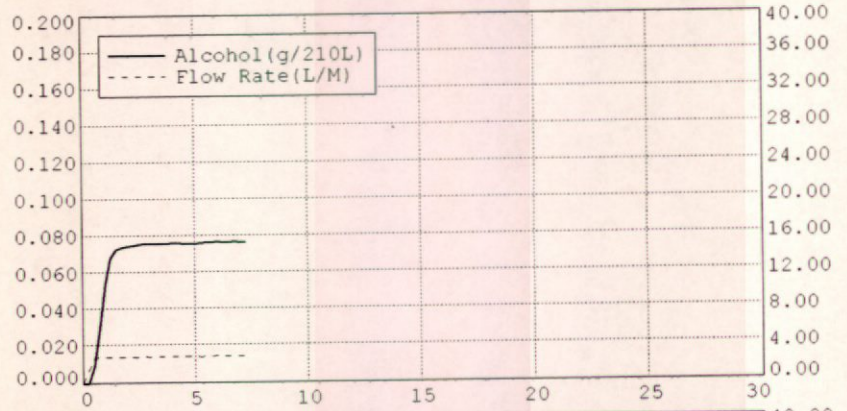
Date: 08/27/2021  
 Time: 08:56:03

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080  
 TARGET AT 29.36: 0.079  
 LOT #: AG018102  
 EXPIRATION: 06/29/2022  
 TANK PRESSURE: 1133 psi

BLANK TEST	0.000	08:59
INTERNAL STANDARD	VERIFIED	08:59
EXTERNAL STANDARD	0.077	08:59
BLANK TEST	0.000	09:00
EXTERNAL STANDARD	0.077	09:00
BLANK TEST	0.000	09:01
EXTERNAL STANDARD	0.078	09:02
BLANK TEST	0.000	09:02
EXTERNAL STANDARD	0.078	09:03
BLANK TEST	0.000	09:04
EXTERNAL STANDARD	0.077	09:04
BLANK TEST	0.000	09:05

Average = 0.0774  
 Std Dev = 0.0005





LINEARITY CHECK: Control Test 4

Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

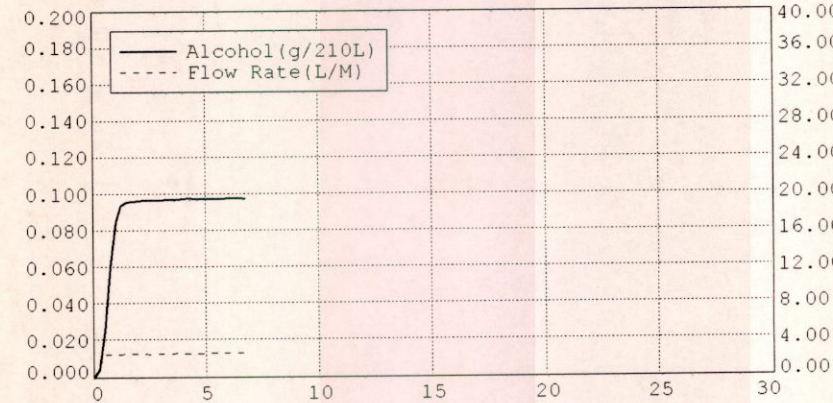
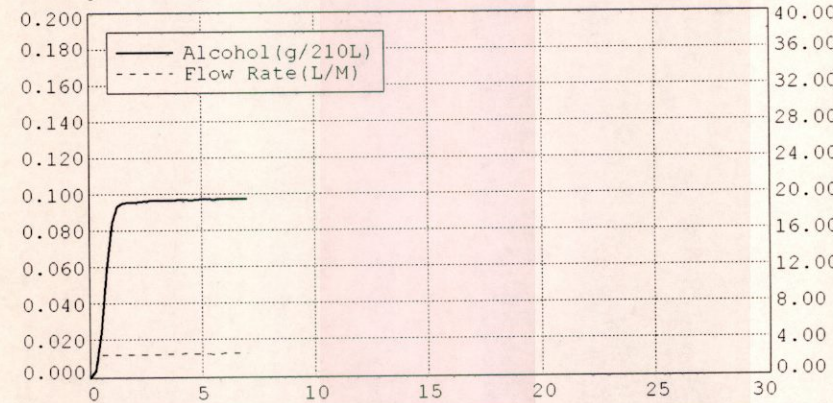
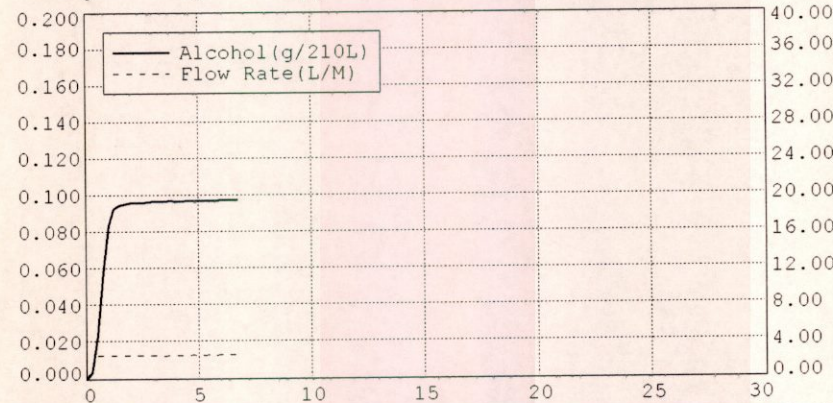
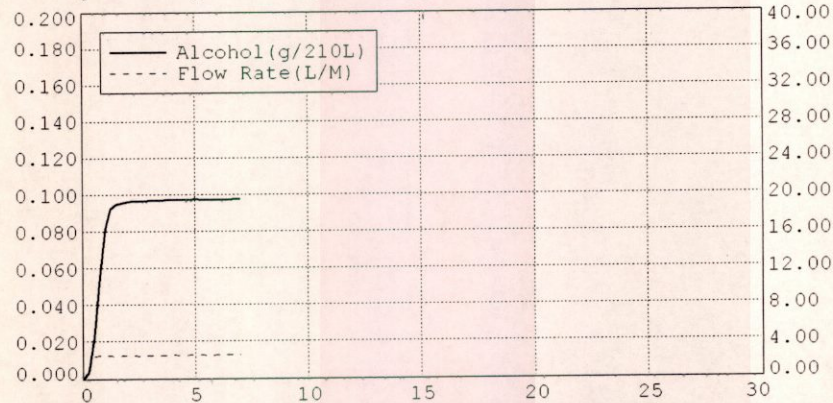
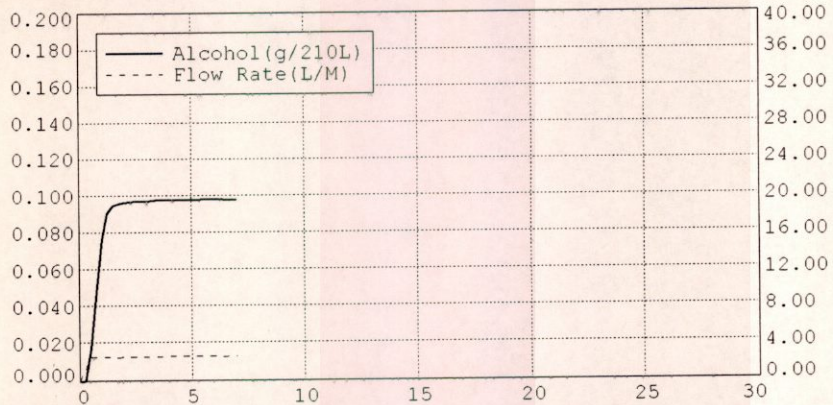
Date: 08/27/2021  
 Time: 09:06:14

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 29.36: 0.098  
 LOT #: AG924701  
 EXPIRATION: 09/04/2021  
 TANK PRESSURE: 193 psi

BLANK TEST	0.000	09:07
INTERNAL STANDARD	VERIFIED	09:07
EXTERNAL STANDARD	0.099	09:07
BLANK TEST	0.000	09:08
EXTERNAL STANDARD	0.098	09:08
BLANK TEST	0.000	09:09
EXTERNAL STANDARD	0.098	09:10
BLANK TEST	0.000	09:10
EXTERNAL STANDARD	0.098	09:11
BLANK TEST	0.000	09:12
EXTERNAL STANDARD	0.099	09:12
BLANK TEST	0.000	09:13

Average = 0.0984  
 Std Dev = 0.0005





LINEARITY CHECK: Control Test 5

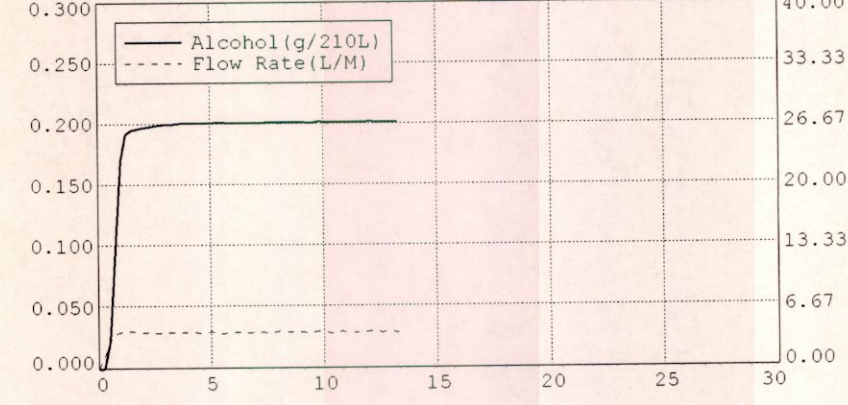
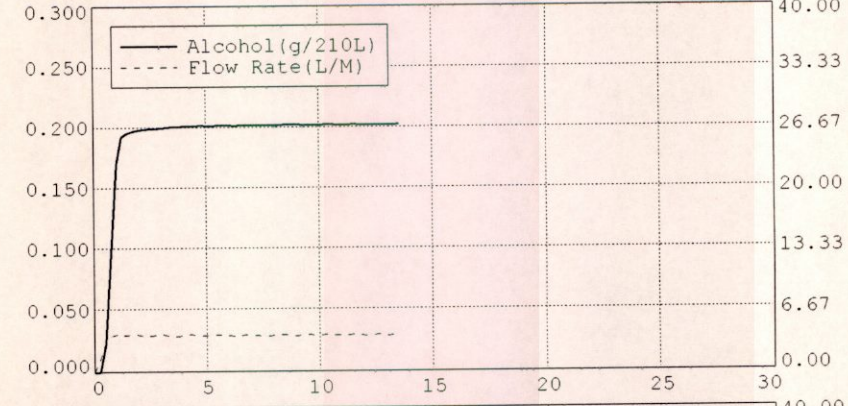
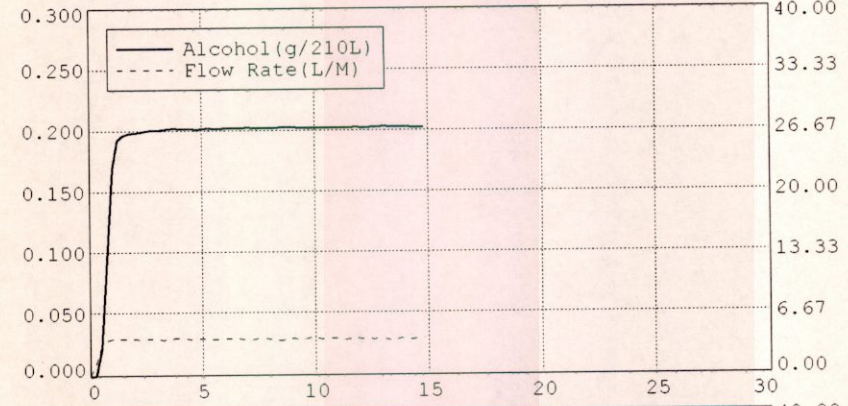
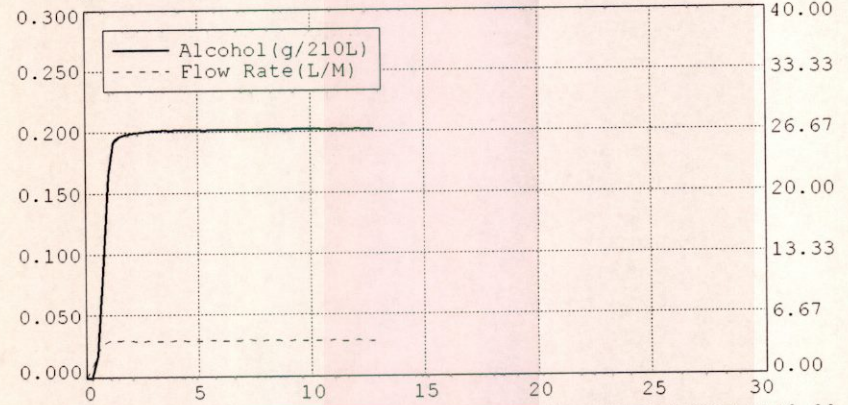
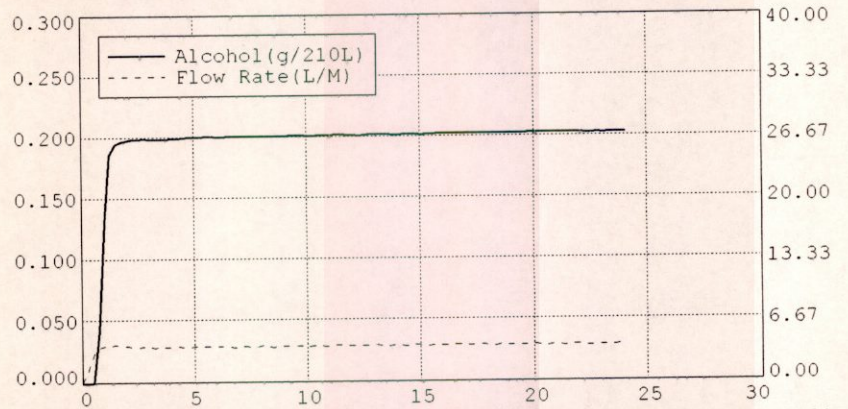
Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

Date: 08/27/2021  
 Time: 09:19:34

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.200  
 LOT #: GUTH 20510  
 EXPIRATION: 12/03/2022

BLANK TEST	0.000	09:20
INTERNAL STANDARD	VERIFIED	09:20
EXTERNAL STANDARD	0.203	09:21
BLANK TEST	0.000	09:22
EXTERNAL STANDARD	0.201	09:22
BLANK TEST	0.000	09:23
EXTERNAL STANDARD	0.202	09:23
BLANK TEST	0.000	09:24
EXTERNAL STANDARD	0.201	09:25
BLANK TEST	0.000	09:25
EXTERNAL STANDARD	0.201	09:26
BLANK TEST	0.000	09:27

Average = 0.2016  
 Std Dev = 0.0009





LINEARITY CHECK: Control Test 6

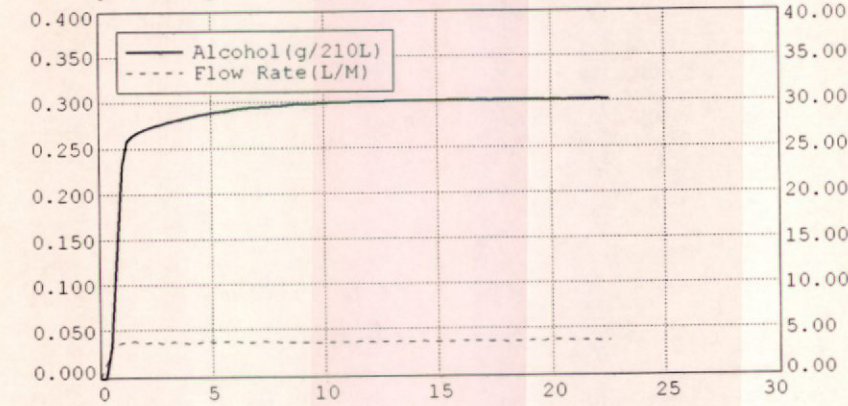
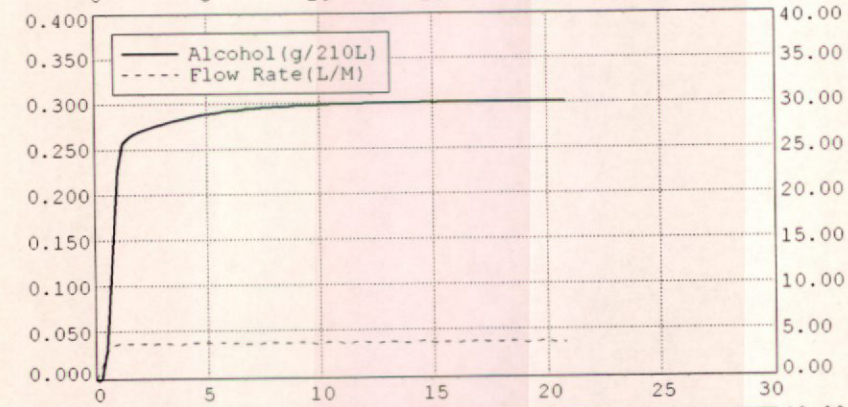
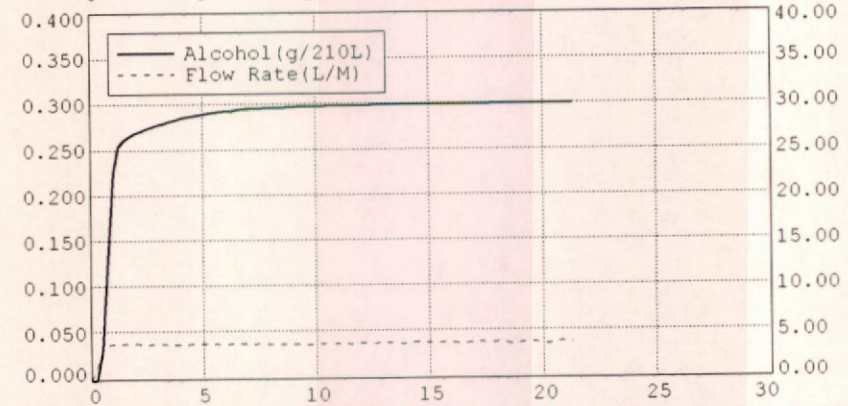
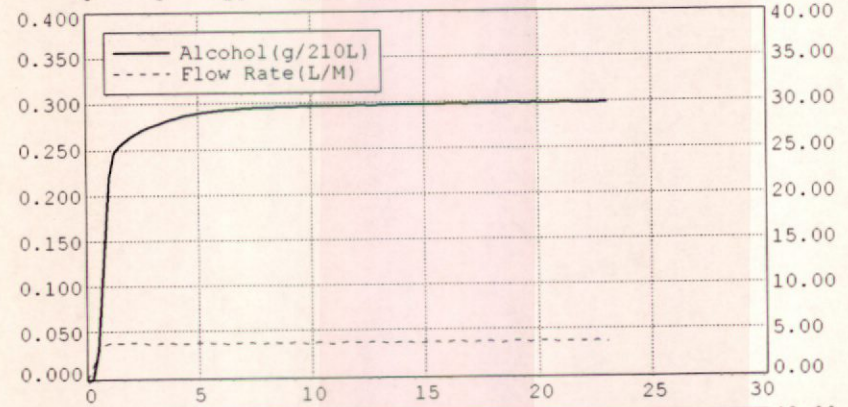
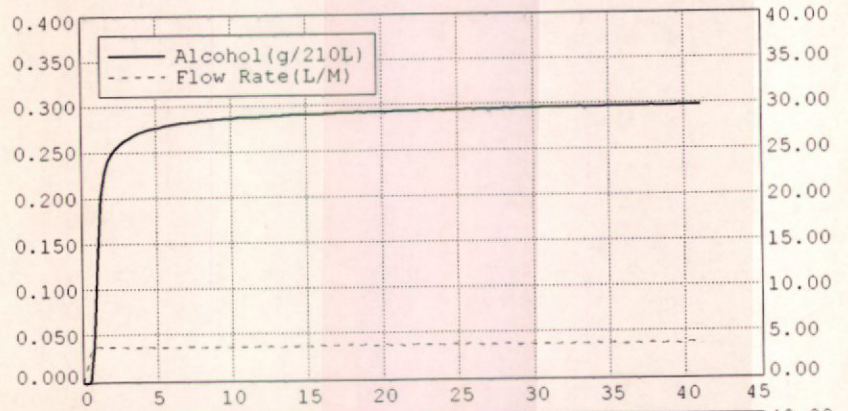
Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

Date: 08/27/2021  
 Time: 09:33:46

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.300  
 LOT #: GUTH 21030  
 EXPIRATION: 02/02/2023

BLANK TEST	0.000	09:34
INTERNAL STANDARD	VERIFIED	09:34
EXTERNAL STANDARD	0.297	09:35
BLANK TEST	0.000	09:36
EXTERNAL STANDARD	0.298	09:37
BLANK TEST	0.000	09:38
EXTERNAL STANDARD	0.298	09:38
BLANK TEST	0.000	09:39
EXTERNAL STANDARD	0.300	09:40
BLANK TEST	0.000	09:40
EXTERNAL STANDARD	0.300	09:41
BLANK TEST	0.000	09:42

Average = 0.2986  
 Std Dev = 0.0013





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 08/27/2021  
Time: 12:05:34

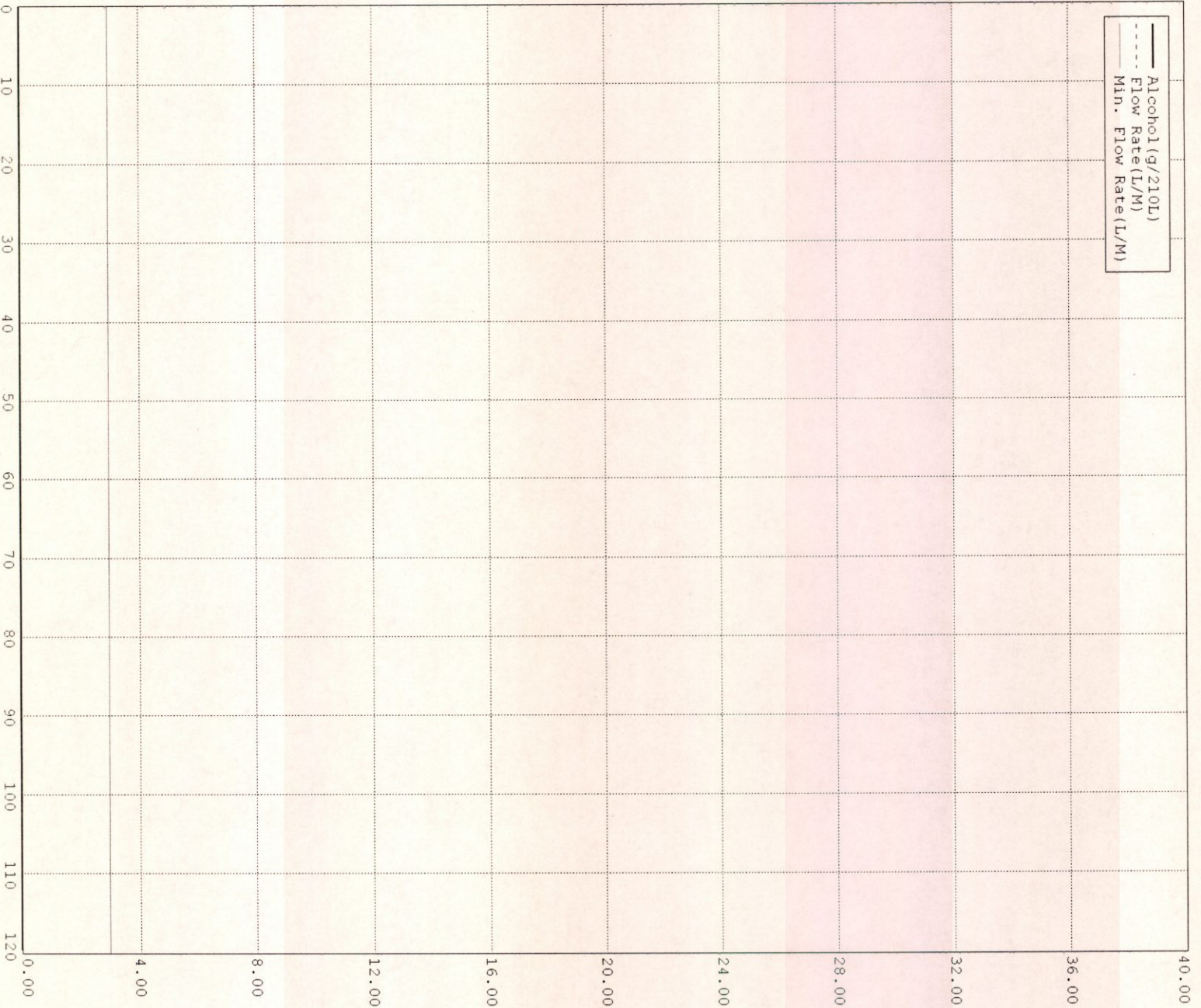
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.39: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	12:06
BIANK TEST	0.000	12:06
INTERNAL STANDARD	VERIFIED	12:06
EXTERNAL STANDARD	0.077	12:07
BIANK TEST	0.000	12:07
SUBJECT SAMPLE	INCOMPLETE	12:10





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 08/27/2021  
Time: 12:18:03

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

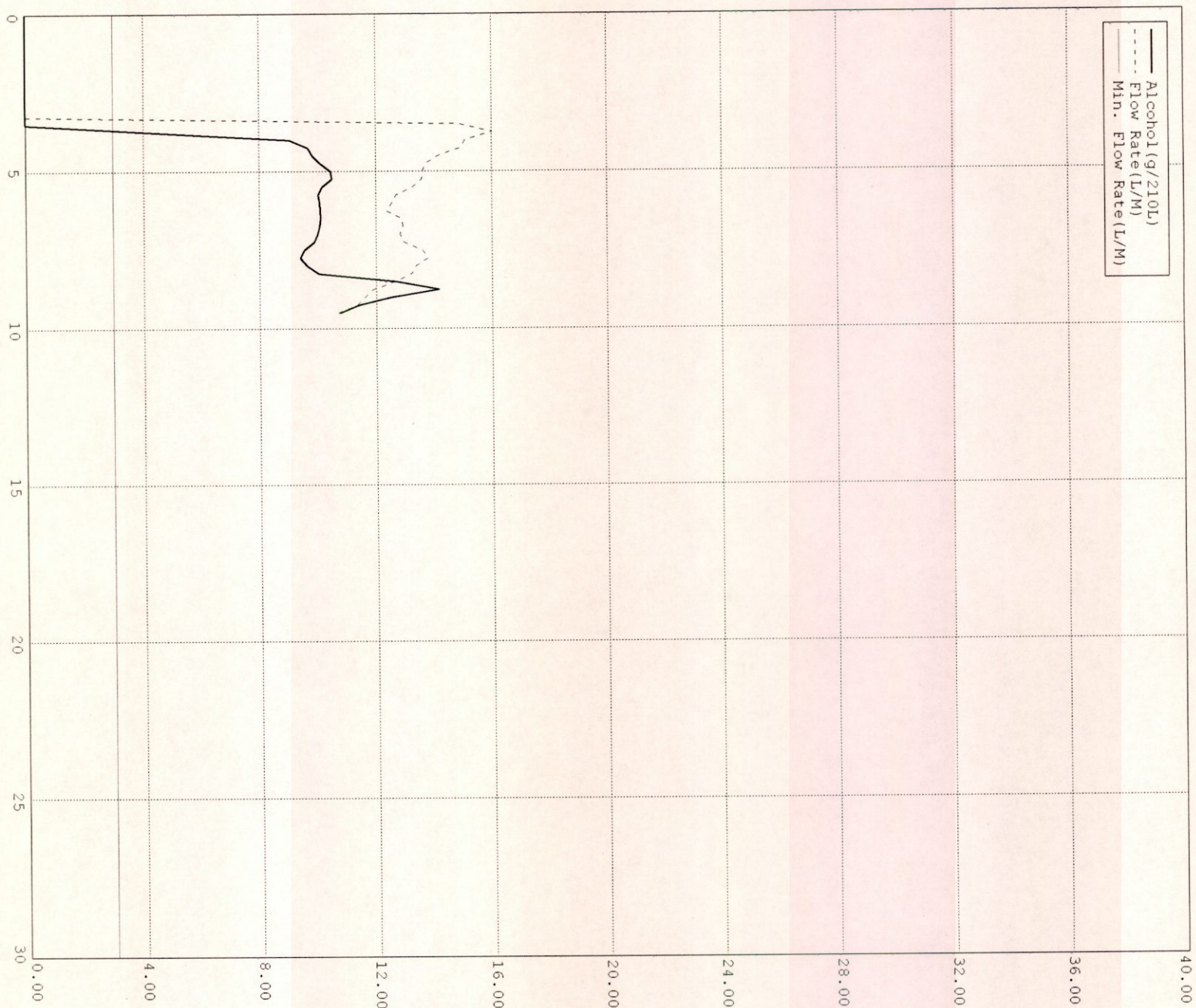
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.37: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	12:19
BLANK TEST	0.000	12:19
INTERNAL STANDARD	VERIFIED	12:19
EXTERNAL STANDARD	0.077	12:19
BLANK TEST	0.000	12:20
SUBJECT SAMPLE	INVALID	12:20

*BRB*





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 09/01/2021  
Time: 09:19:21

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

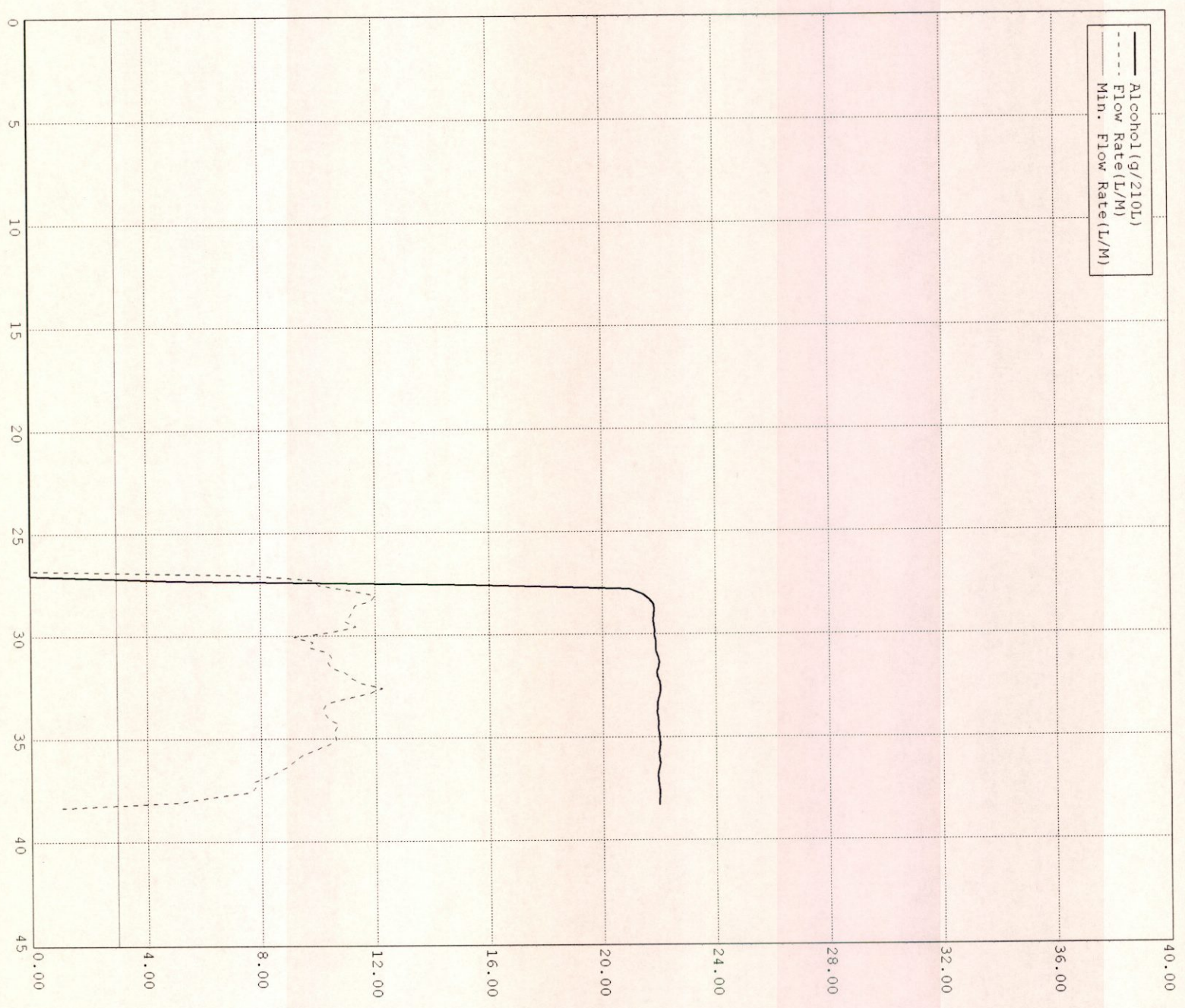
EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.59: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK PASSED 09:20  
BLANK TEST 0.000 09:20  
INTERNAL STANDARD VERIFIED 09:20  
Xq = 0.100 (1.60%) 0.078 09:20  
EXTERNAL STANDARD (0.0018)  
X[1] = 0.0778 (-0.0013) 0.000 09:21  
BLANK TEST 0.000 09:22  
SUBJECT SAMPLE XXX  
X[1] = 0.1104 (-0.0182) (-0.0006)

Interference Detected

Filter 2 Avg: -0.0015  
Filter 3 Avg: 0.0016  
BMB 9/1/21

BMB





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 09/01/2021  
Time: 09:28:19

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

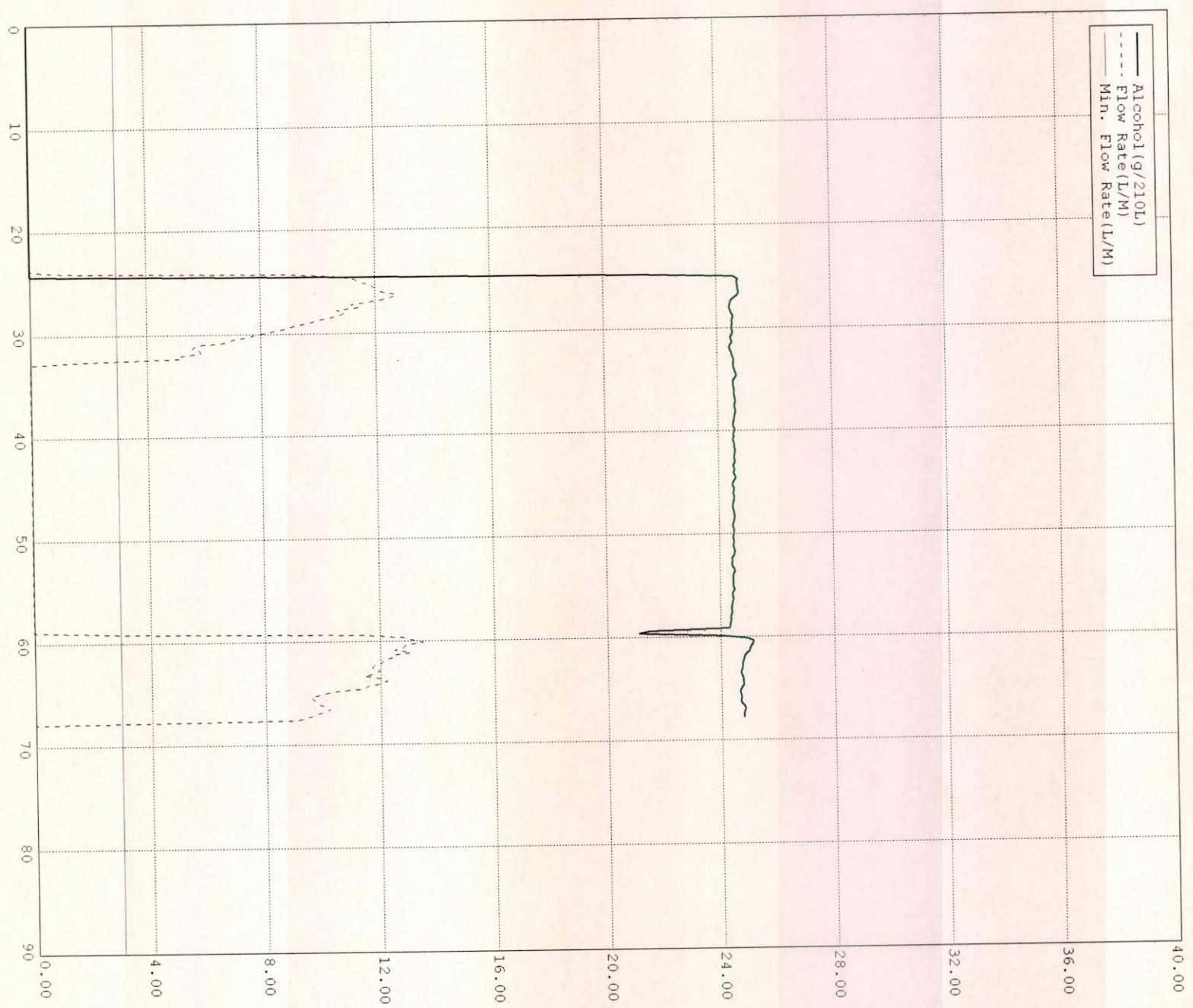
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.59: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK  
BLANK TEST PASSED 09:29  
INTERNAL STANDARD 0.000 09:29  
INTERNAL STANDARD VERIFIED 09:29  
Xq = 0.100 (1.60%)  
EXTERNAL STANDARD 0.077 09:29  
X[1] = 0.0775 (-0.0013) (0.0015)  
BLANK TEST 0.000 09:30  
SUBJECT SAMPLE XXX 09:32  
X[1] = 0.1242 (-0.0314) (0.0007)

Interference Detected





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 09/01/2021  
Time: 09:35:25

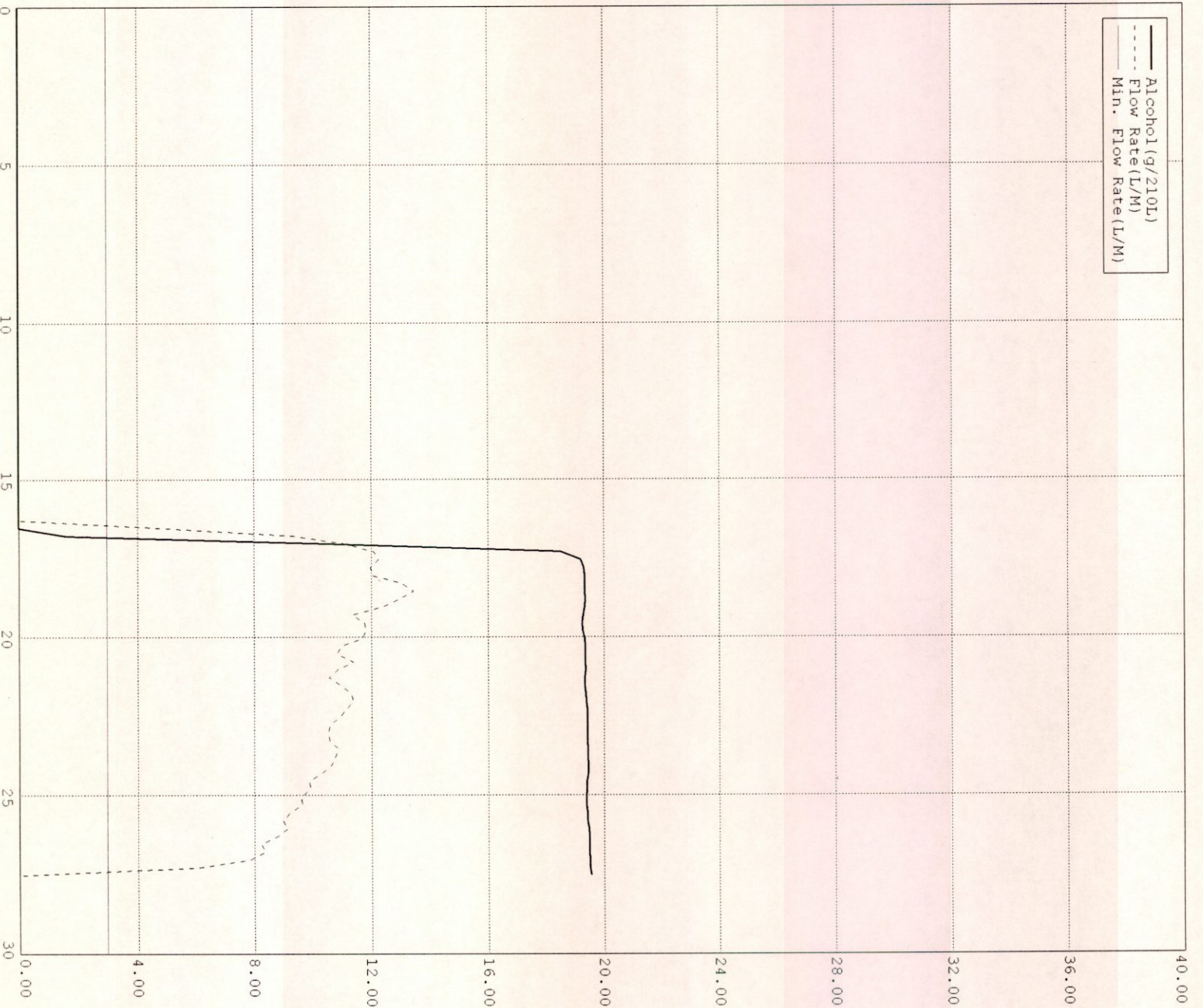
SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.58: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	09:36
BLANK TEST	0.000	09:36
INTERNAL STANDARD	VERIFIED	09:36
Xq = 0.100 (1.15%)	0.077	09:36
EXTERNAL STANDARD	X[1] = 0.0772 (-0.0017)	(0.0017)
BLANK TEST	0.000	09:37
SUBJECT SAMPLE (Vol=1.93L)	0.098	09:38
X[1] = 0.0982 (-0.0001)	(-0.0002)	
BLANK TEST	0.000	09:39
EXTERNAL STANDARD	0.077	09:39
X[1] = 0.0773 (-0.0015)	(0.0013)	
BLANK TEST	0.000	09:40





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 08/27/2021  
Time: 14:27:07

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

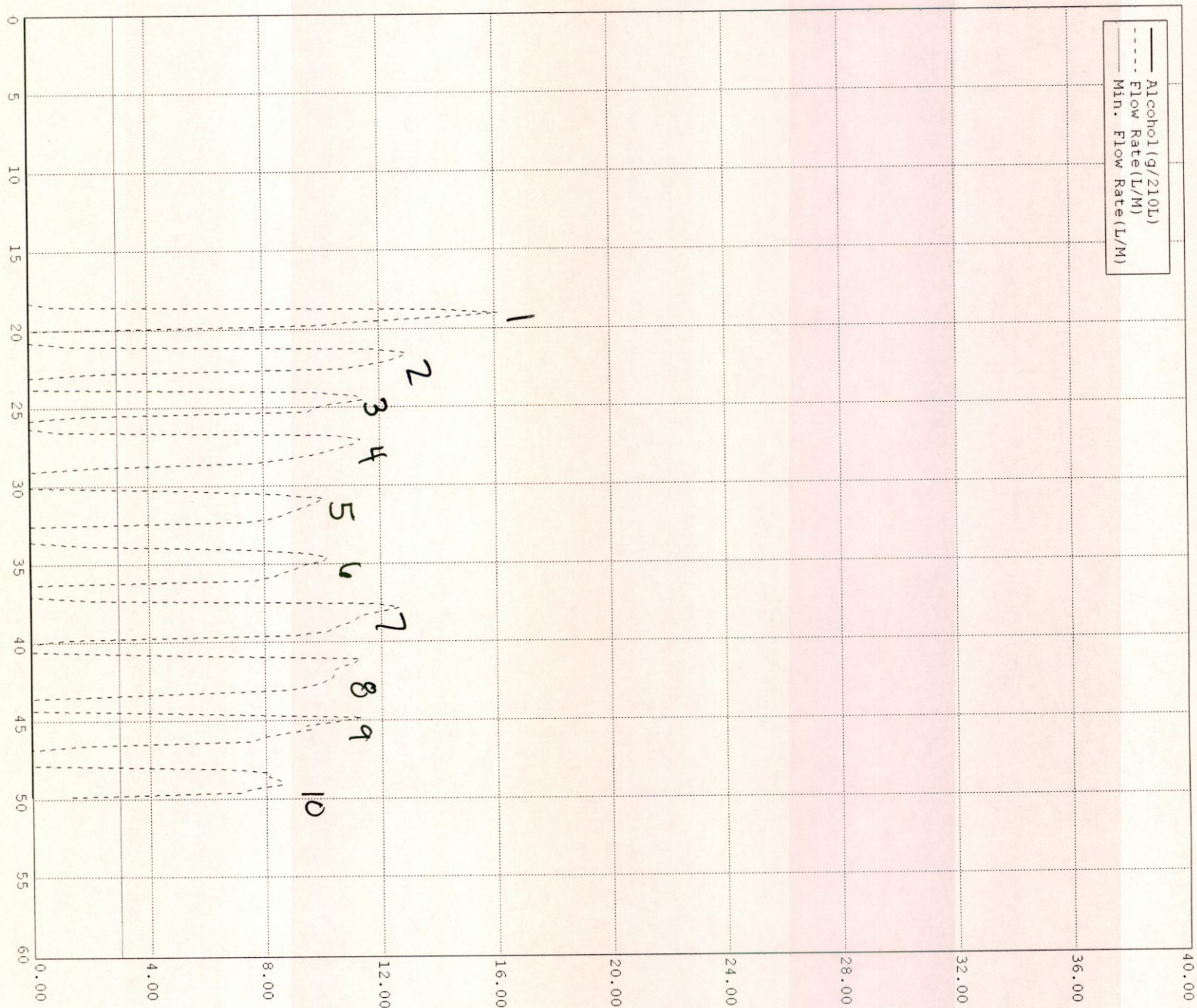
OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.40: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	14:28
BLANK TEST	0.000	14:28
INTERNAL STANDARD	0.077	14:28
EXTERNAL STANDARD	0.000	14:29
BLANK TEST	XXX	14:30

Maximum Attempts Exceeded





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 08/27/2021  
Time: 12:22:20

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

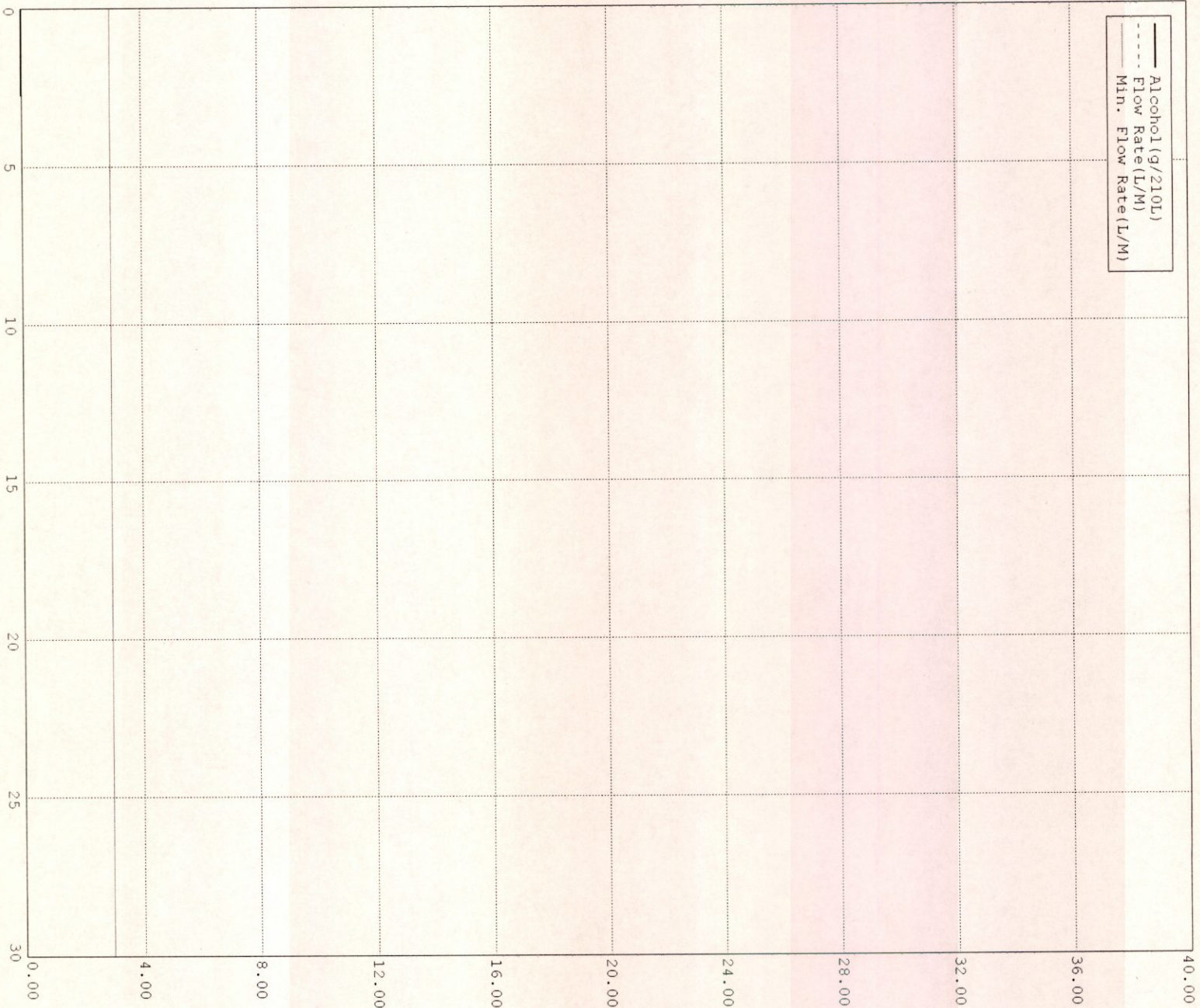
EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.37: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	12:23
BLANK TEST	0.000	12:23
INTERNAL STANDARD	VERIFIED	12:23
EXTERNAL STANDARD	0.078	12:23
BLANK TEST	0.000	12:24

RFI DETECTED

RFI

Alcohol (g/210L)  
Flow Rate(L/M)  
Min. Flow Rate(L/M)





SUBJECT TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 09/01/2021  
Time: 09:56:46

SUBJECT NAME:  
TEST TEST  
LICENSE #: XXXX

OPERATOR NAME:  
BRANDI BARNETT  
OPERATOR'S #: 7038

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

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.080  
TARGET AT 29.58: 0.079  
LOT #: AG018102  
EXPIRATION: 06/29/2022

DIAGNOSTIC CHECK	PASSED	09:58
BLANK TEST	0.000	09:58
INTERNAL STANDARD	VERIFIED	09:58
EXTERNAL STANDARD	0.078	09:58
BLANK TEST	0.000	09:59
SUBJECT SAMPLE (Vol=2.42L)	0.000	09:59
BLANK TEST	0.000	10:00
EXTERNAL STANDARD	0.079	10:00
BLANK TEST	0.000	10:01

BBB

