

GUTH LABORATORIES, INC.

590 NORTH 67th STREET • HARRISBURG, PA 17111-4511 • TELEPHONE: 717-564-5470

CERTIFICATE OF ANALYSIS

Certified Alcohol Reference Solution for Simulator

Random Samples of Lot Number **19301** of Alcohol Reference Solution for Simulator were analyzed by gas chromatography on **November 1, 2019**, using a Perkin Elmer Gas Chromatograph Autosystem XL S/N: 610N9030209, and found to contain **0.1210%** (w/vol) ethyl alcohol. The expiration date for this lot number is **October 30, 2021** at 11:59 PM.

When used in a calibrated Simulator, operating at $34^{\circ}\text{C} \pm .2^{\circ}\text{C}$, this solution will give a breath alcohol analysis instrument reading of **0.100 g/210L \pm 3%**.

The alcohol and water used in this solution were free of test interfering substances.

Ted L. Pauley, President
GUTH LABORATORIES, INC.

NIST Traceability:

Testing was conducted using Cerilliant Reference Standard lot number FN04271602 whose values are traceable to NIST.

All balances are calibrated annually by an outside agency using NIST traceable weights. Calibration verification is done prior to each use utilizing NIST traceable weights.

SUPERVISOR TEST

Alaska Department of Public Safety
 DATAMASTER dmt: 100353

Date: 01/13/2020
 Time: 12:39:09

SUPERVISOR NAME:
 DEREK WALTON
 OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION
 NOMINAL: 0.100

BLANK TEST	0.000	12:46
INTERNAL STANDARD	VERIFIED	12:46
EXTERNAL STANDARD	0.101	12:46
BLANK TEST	0.000	12:47
EXTERNAL STANDARD	0.101	12:48
BLANK TEST	0.000	12:49
EXTERNAL STANDARD	0.101	12:49
BLANK TEST	0.000	12:50
EXTERNAL STANDARD	0.101	12:50
BLANK TEST	0.000	12:51
EXTERNAL STANDARD	0.101	12:51
BLANK TEST	0.000	12:52

Average = 0.1010
 Std Dev = 0.0000

Simulator S/N: DR4177

Calibrated: 10/08/19

Solution :

Autn Lot 19301

Exp. 10/30/21

0.1010

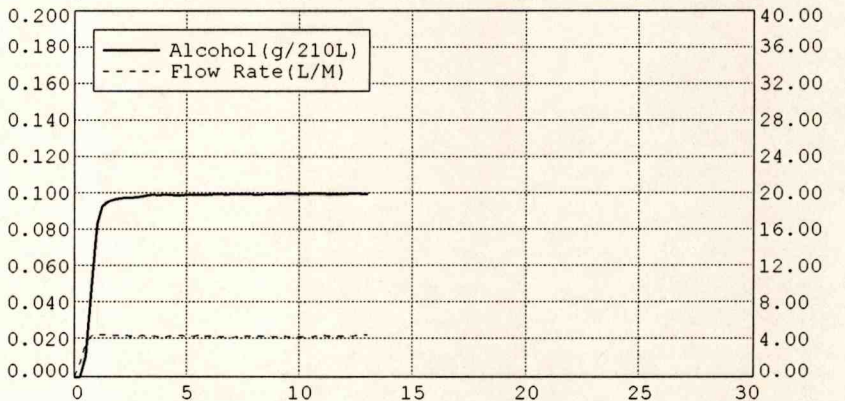
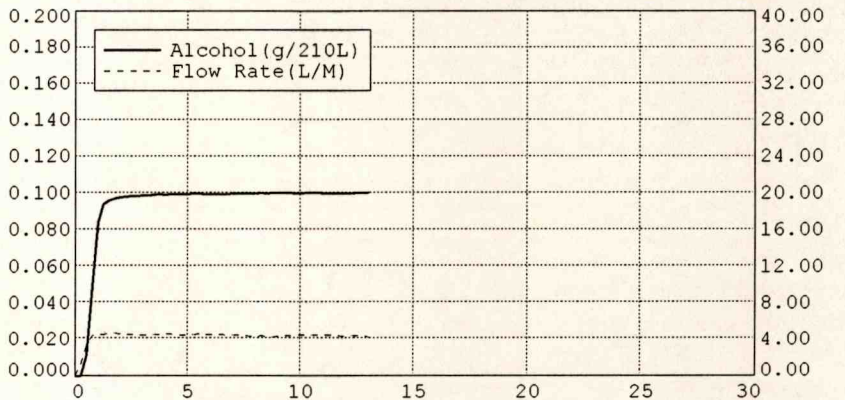
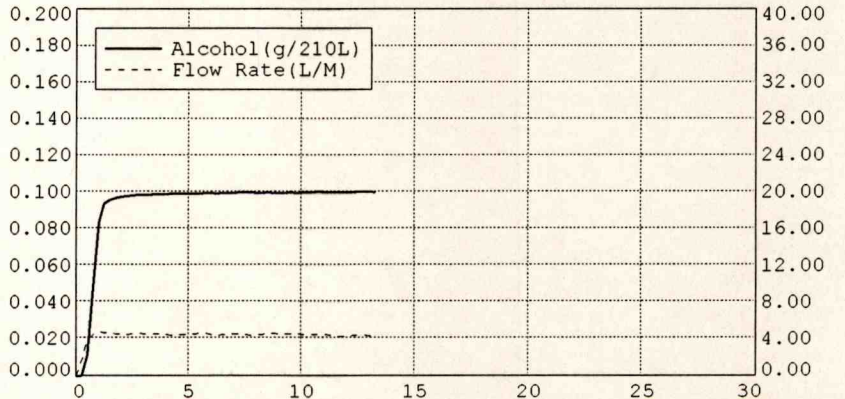
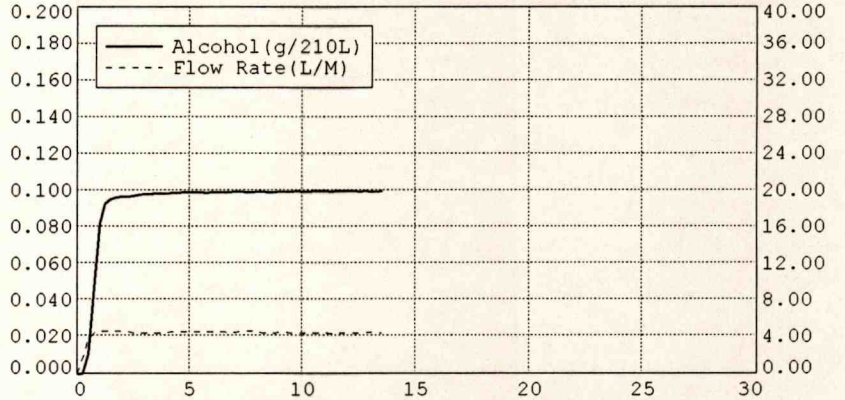
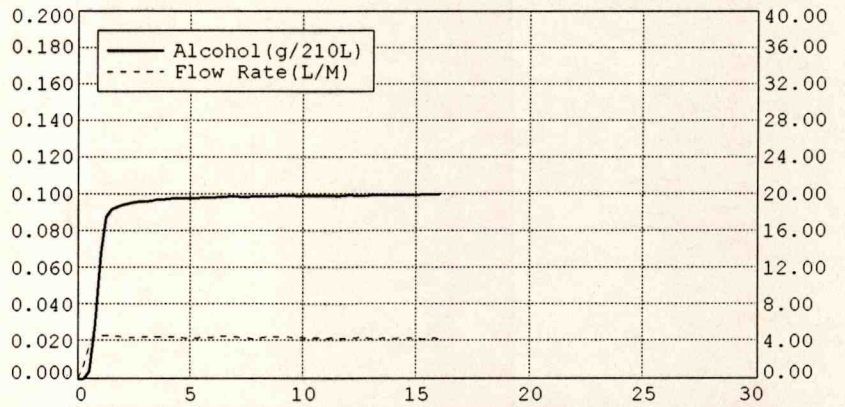
0.0996

0.1012

~~0.1006~~ = Average

0.101

JMW 01/13/20



SUPERVISOR TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100405

Date: 01/13/2020
Time: 12:48:03

SUPERVISOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.100

BLANK TEST	0.000	12:49
INTERNAL STANDARD	VERIFIED	12:49
EXTERNAL STANDARD	0.100	12:49
BLANK TEST	0.000	12:50
EXTERNAL STANDARD	0.100	12:50
BLANK TEST	0.000	12:51
EXTERNAL STANDARD	0.100	12:52
BLANK TEST	0.000	12:53
EXTERNAL STANDARD	0.099	12:53
BLANK TEST	0.000	12:54
EXTERNAL STANDARD	0.099	12:54
BLANK TEST	0.000	12:55

Average = 0.0996
Std Dev = 0.0005

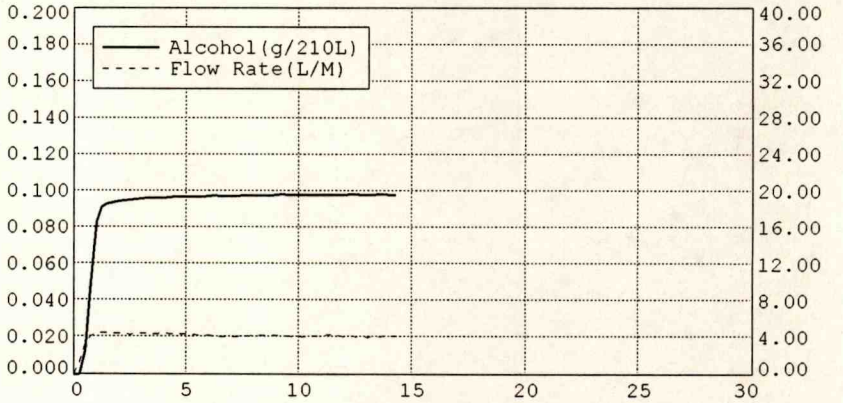
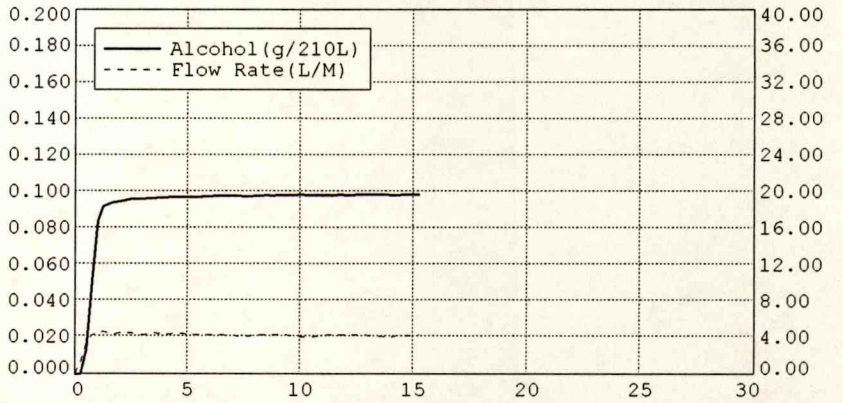
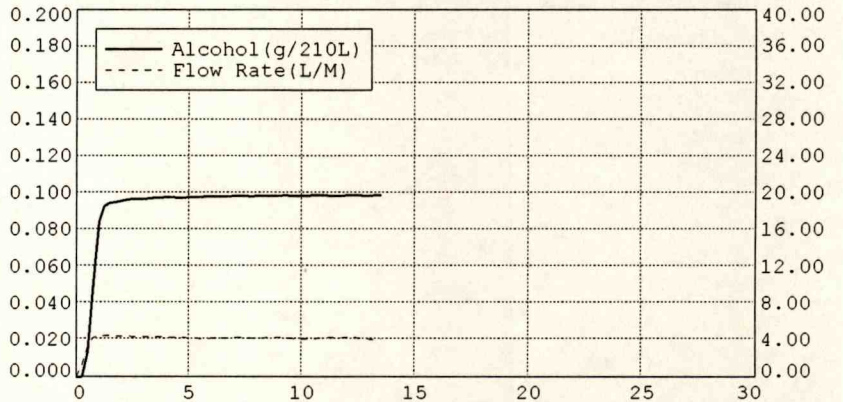
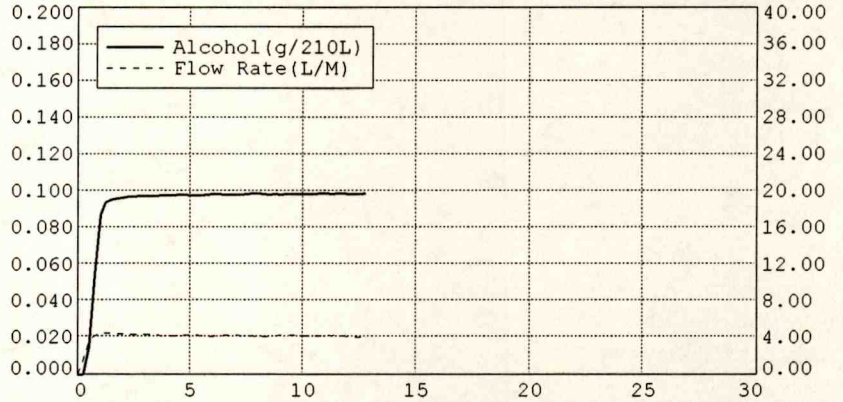
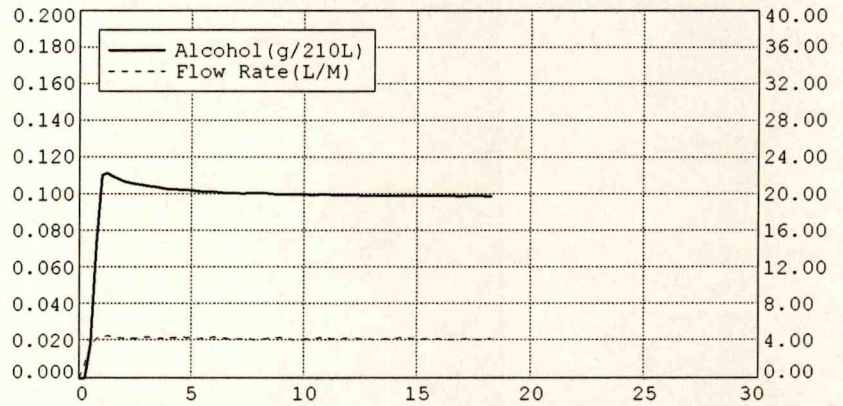
Simulator S/N: DR4177

Calibrated 10/08/19

Solution:

Carta Lot 19301

Exp. 10/30/21



SUPERVISOR TEST

Alaska Department of Public Safety
 DATAMASTER dmt: 100671

Date: 01/13/2020
 Time: 13:31:18

SUPERVISOR NAME:
 DEREK WALTON
 OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION
 NOMINAL: 0.100

BLANK TEST	0.000	13:32
INTERNAL STANDARD	VERIFIED	13:32
EXTERNAL STANDARD	0.102	13:33
BLANK TEST	0.000	13:34
EXTERNAL STANDARD	0.101	13:34
BLANK TEST	0.000	13:35
EXTERNAL STANDARD	0.101	13:35
BLANK TEST	0.000	13:36
EXTERNAL STANDARD	0.101	13:36
BLANK TEST	0.000	13:37
EXTERNAL STANDARD	0.101	13:37
BLANK TEST	0.000	13:38

Average = 0.1012
 Std Dev = 0.0004

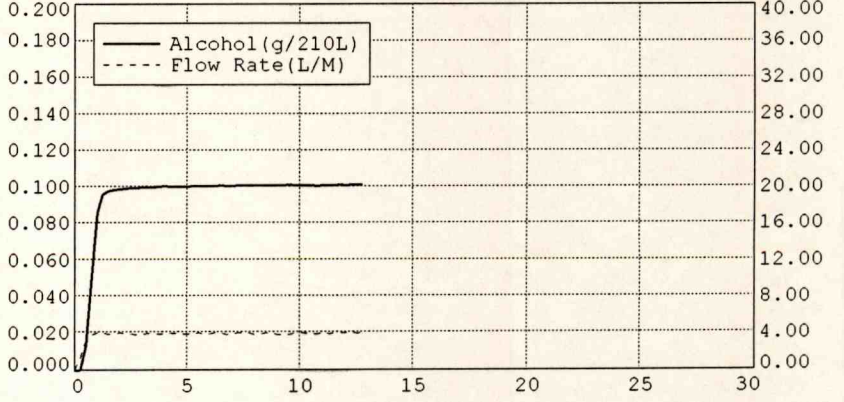
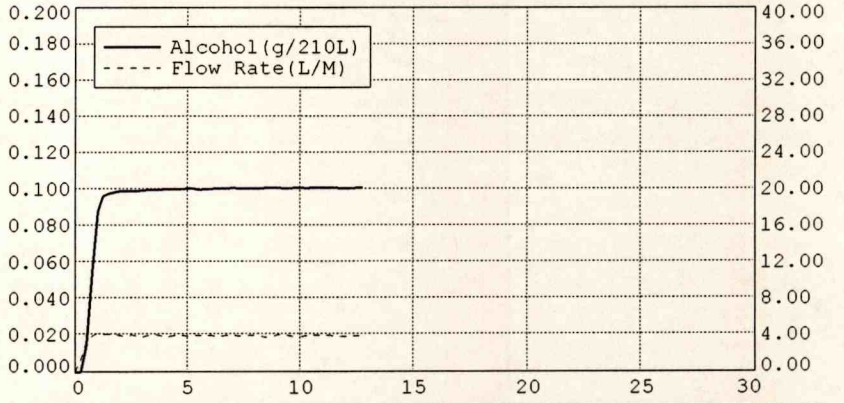
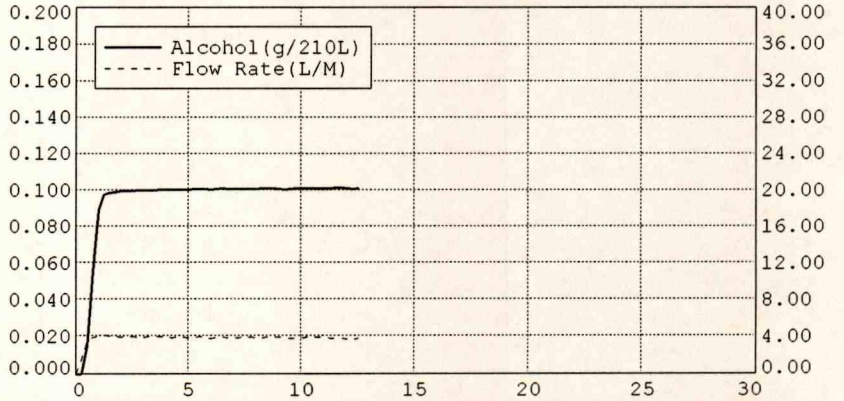
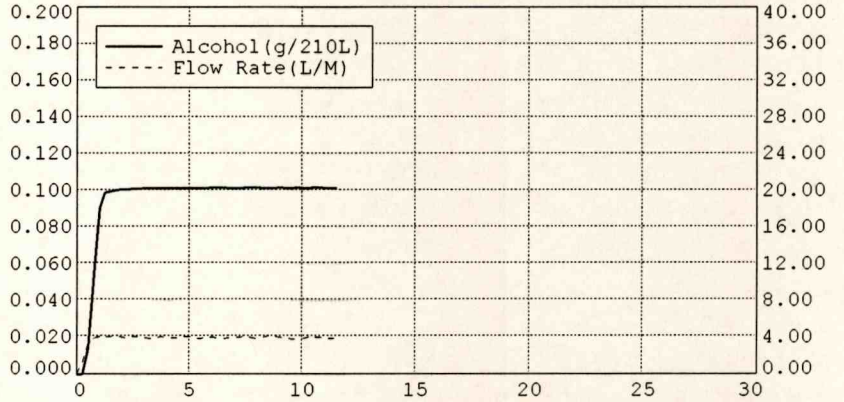
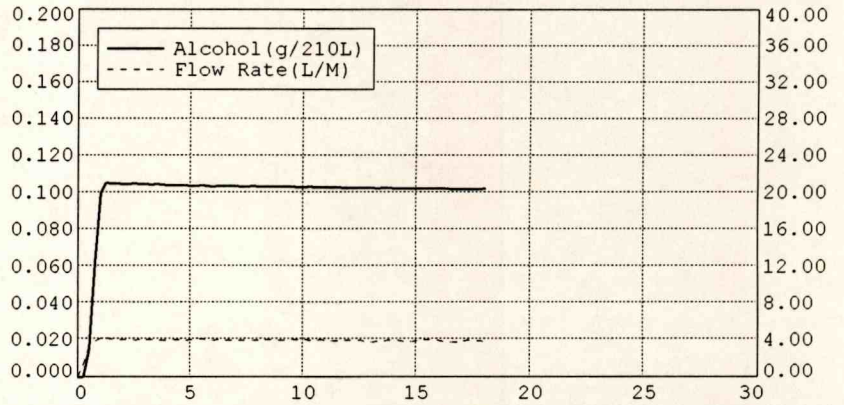
Simulator S/N: DR4177

Calibrated: 10/08/19

Solution:

Cwth Lot 19301

Exp. 10/30/21



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100353

Date: 01/13/2020
Time: 10:57:15

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

TEMPERATURES

Sample Chamber = 49.0°C PASSED
(44.0°C - 52.0°C)
Breath Tube = 48.1°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 2.31 V PASSED
(1.30 V - 3.04 V)
Cooler Voltage = 1.89 V PASSED
(1.26 V - 2.94 V)
Bias Voltage = 79 V PASSED
(48 V - 112 V)
Chopper Freq = 536 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 30.2 in

PUMP INFO

Flow Rate = 5.312 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 = 0.093 0.93% (0.00% - 4.00%)

In house instrument QA

DMV 01/13/20

Technician Screen

DATAMASTER dmt: 100353

Date: 01/13/2020
Time: 11:05 AM

Temperatures (°C)

Sample Cell: 48.9°C
Breath Tube: 48.1°C

Current Barometer 30.2 in
Volume (Ltr) 0.00

Settings

Lamp: 2.31 V
Bias: 79 V
Cooler: 1.95 V
Chopper: 523 Hz

Voltages (V)

Flow: 1.06 V
Detector: -0.097 V

LINEARITY CHECK

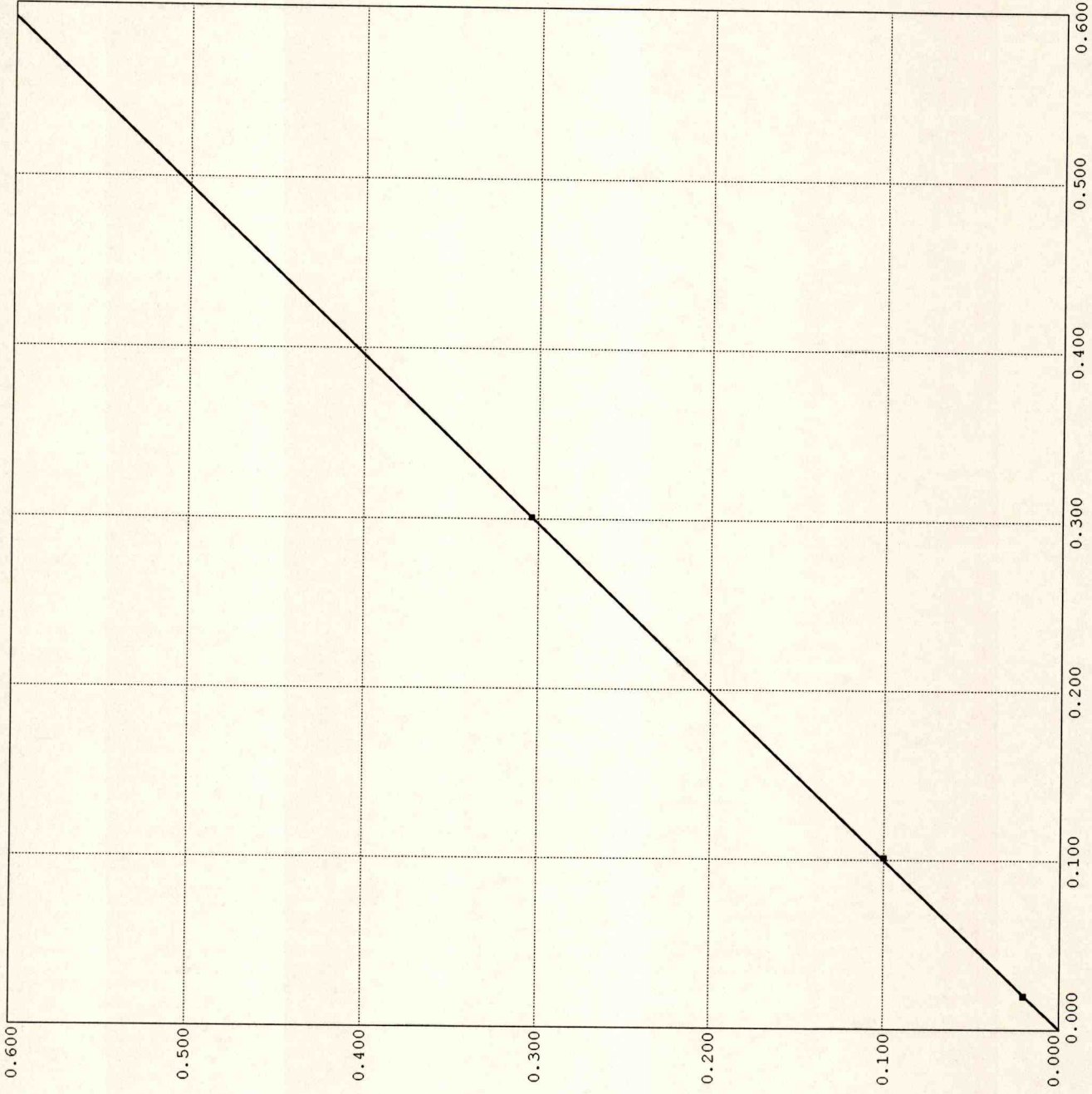
Alaska Department of Public Safety
DATAMASTER dmt: 100353

Date: 01/13/2020
Time: 11:06:09

SUPERVISOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0210	0.0000
0.101	0.1012	0.0004
0.300	0.3046	0.0005

SLOPE = 1.014602
R² = 0.999950



DM

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety
 DATAMASTER dmt: 100353

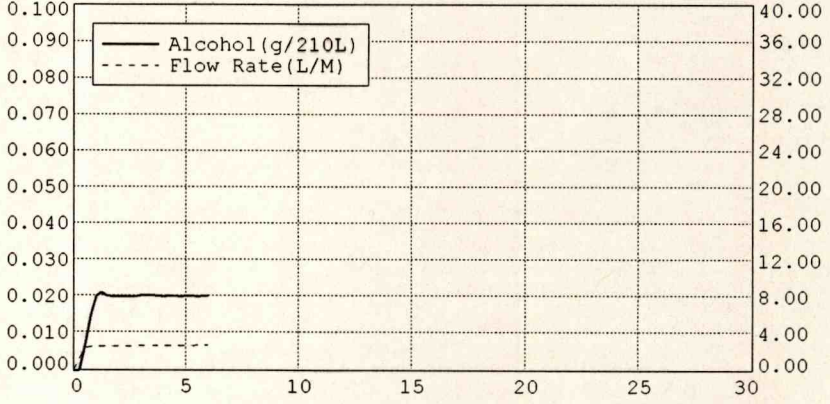
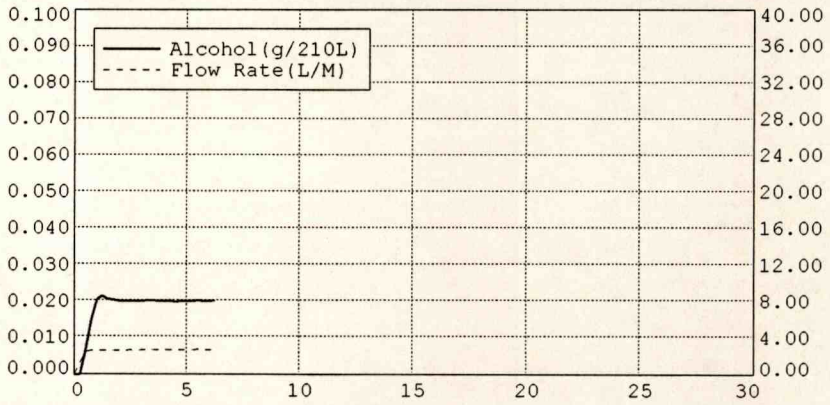
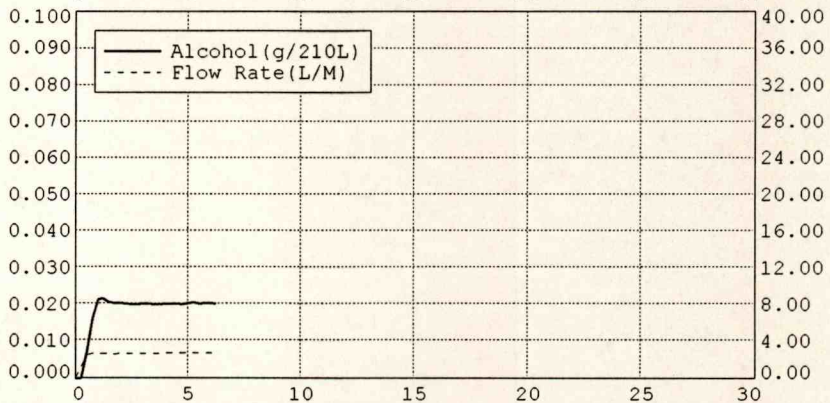
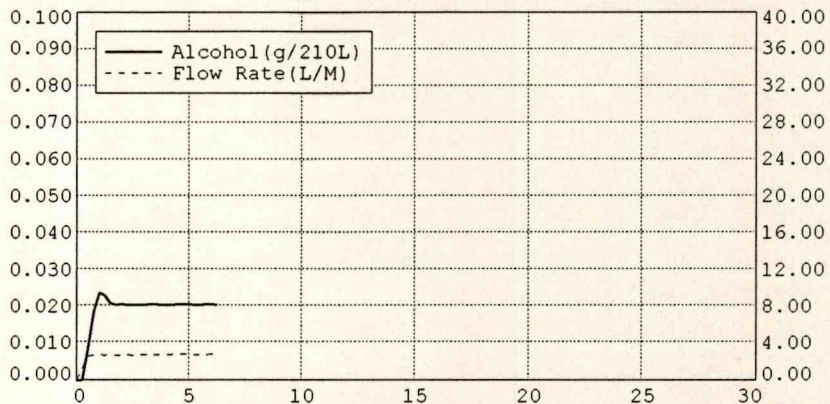
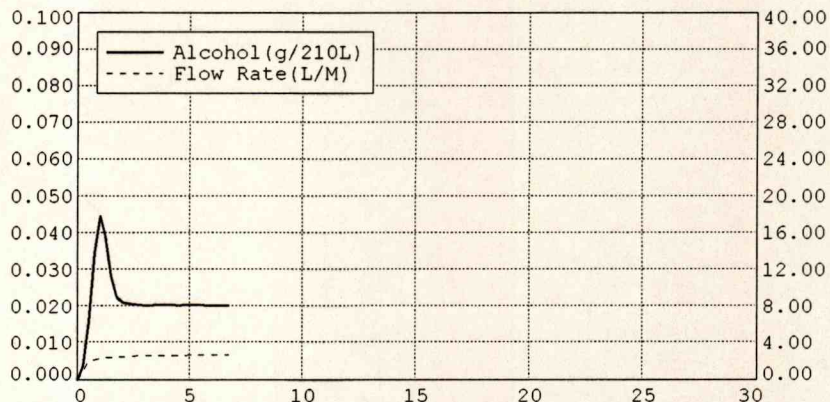
Date: 01/13/2020
 Time: 11:06:12

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
 TARGET AT 30.17: 0.020
 LOT #: AG805804
 EXPIRATION: 02/27/2020
 TANK PRESSURE: 165 psi

BLANK TEST	0.000	11:07
INTERNAL STANDARD	VERIFIED	11:07
EXTERNAL STANDARD	0.021	11:07
BLANK TEST	0.000	11:08
EXTERNAL STANDARD	0.021	11:08
BLANK TEST	0.000	11:09
EXTERNAL STANDARD	0.021	11:10
BLANK TEST	0.000	11:10
EXTERNAL STANDARD	0.021	11:11
BLANK TEST	0.000	11:12
EXTERNAL STANDARD	0.021	11:12
BLANK TEST	0.000	11:13

Average = 0.0210
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
 DATAMASTER dmt: 100353

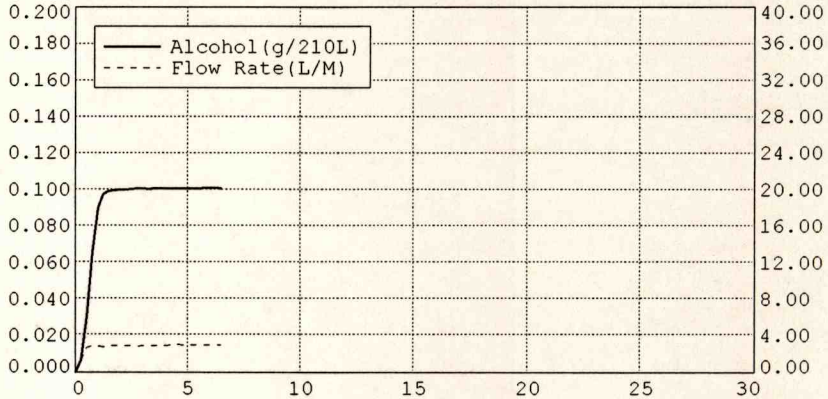
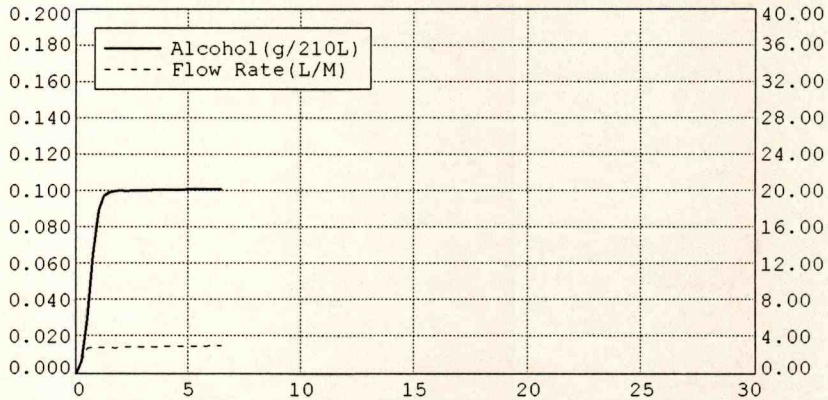
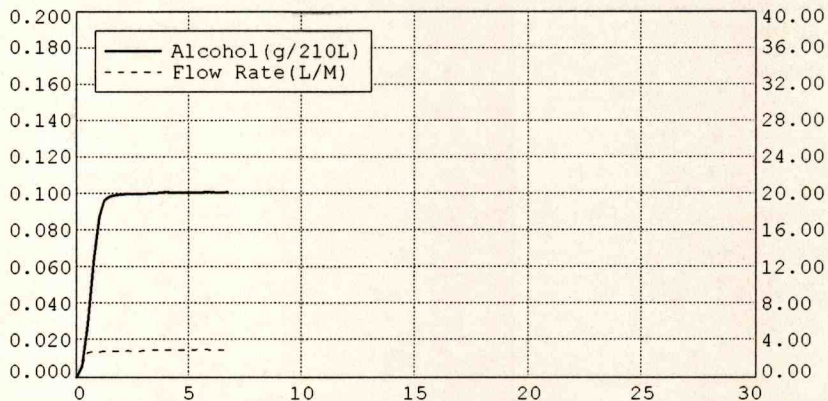
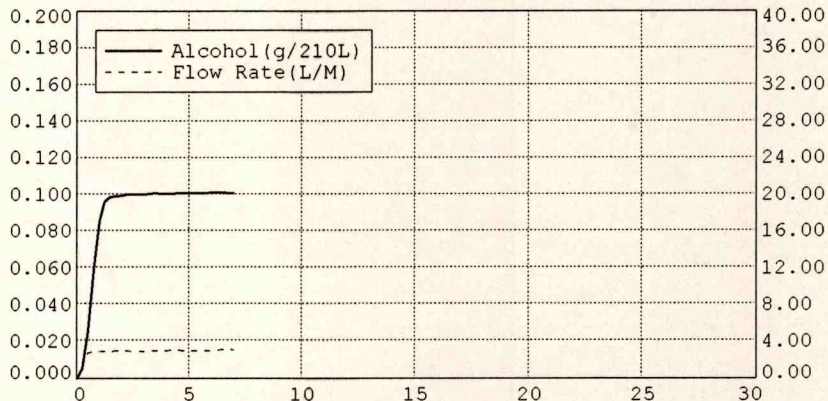
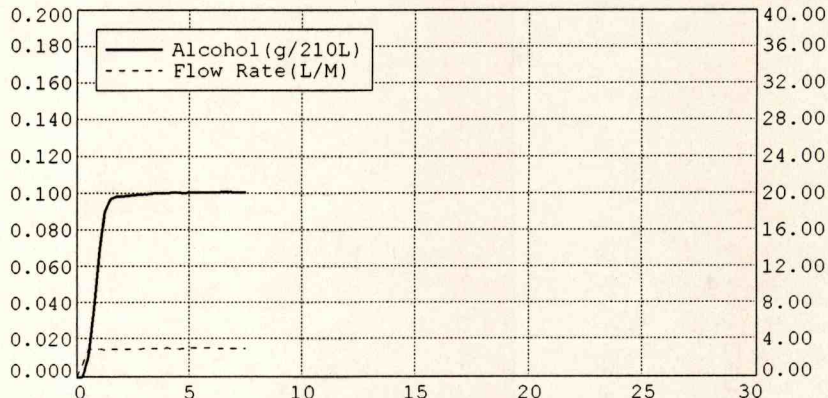
Date: 01/13/2020
 Time: 11:13:33

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 30.17: 0.101
 LOT #: AG924701
 EXPIRATION: 09/04/2021
 TANK PRESSURE: 1083 psi

BLANK TEST	0.000	11:14
INTERNAL STANDARD	VERIFIED	11:14
EXTERNAL STANDARD	0.102	11:15
BLANK TEST	0.000	11:16
EXTERNAL STANDARD	0.101	11:16
BLANK TEST	0.000	11:17
EXTERNAL STANDARD	0.101	11:17
BLANK TEST	0.000	11:18
EXTERNAL STANDARD	0.101	11:18
BLANK TEST	0.000	11:19
EXTERNAL STANDARD	0.101	11:19
BLANK TEST	0.000	11:20

Average = 0.1012
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
 DATAMASTER dmt: 100353

Date: 01/13/2020
 Time: 11:33:19

EXTERNAL STANDARD INFORMATION
 NOMINAL: 0.300
 LOT #: 19010
 EXPIRATION: 01/03/2021

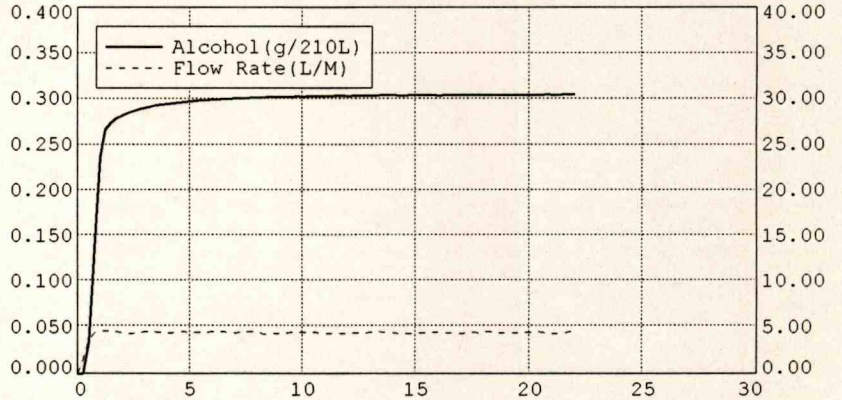
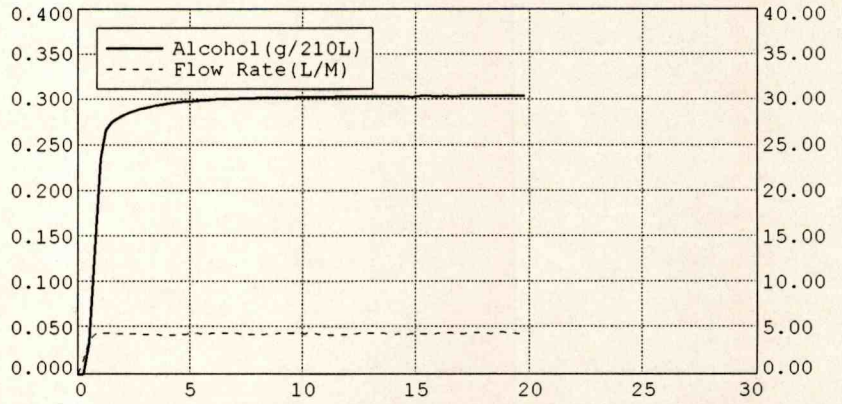
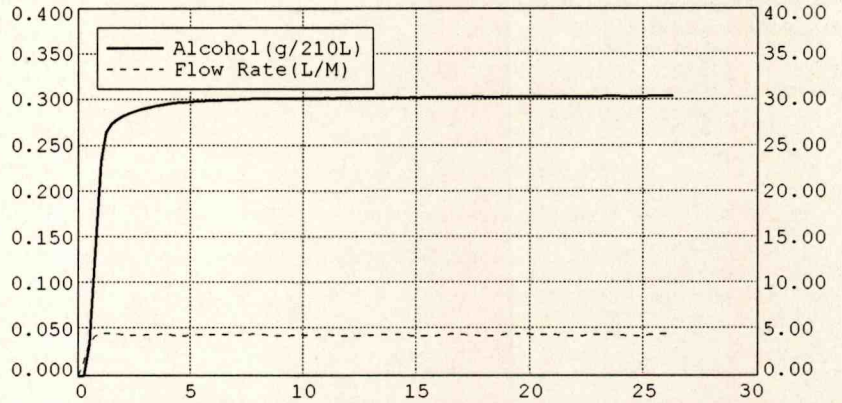
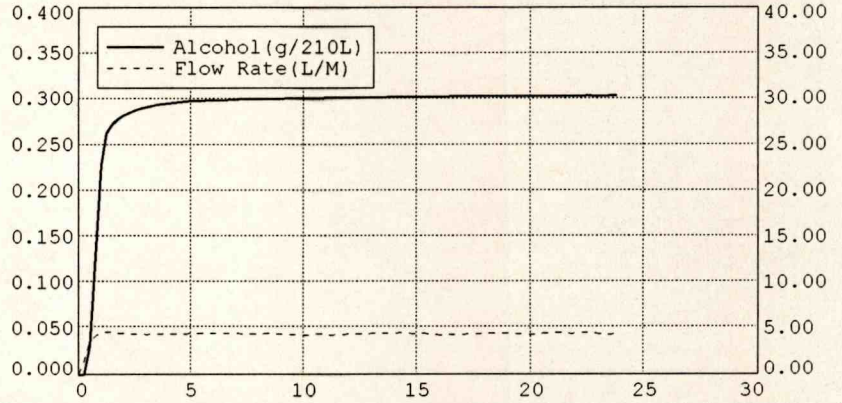
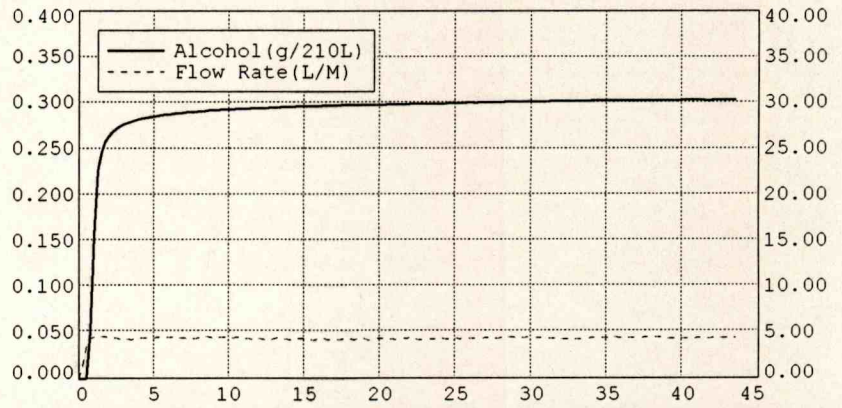
BLANK TEST	0.000	11:34
INTERNAL STANDARD	VERIFIED	11:34
EXTERNAL STANDARD	0.304	11:35
BLANK TEST	0.000	11:36
EXTERNAL STANDARD	0.304	11:36
BLANK TEST	0.000	11:37
EXTERNAL STANDARD	0.305	11:38
BLANK TEST	0.000	11:39
EXTERNAL STANDARD	0.305	11:39
BLANK TEST	0.000	11:40
EXTERNAL STANDARD	0.305	11:41
BLANK TEST	0.000	11:41

Average = 0.3046
 Std Dev = 0.0005

Simulator S/N: DR4178

Calibrated: 10/04/19

JM 01/13/20



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100405

Date: 01/13/2020
Time: 10:43:23

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

TEMPERATURES

Sample Chamber = 49.0°C PASSED
(44.0°C - 52.0°C)
Breath Tube = 47.0°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.74 V PASSED
(1.01 V - 2.37 V)
Cooler Voltage = 1.71 V PASSED
(1.01 V - 2.37 V)
Bias Voltage = 81 V PASSED
(49 V - 113 V)
Chopper Freq = 527 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 30.2 in

PUMP INFO

Flow Rate = 5.200 L/M PASSED
(3.500 L/M - 6.500 L/M)

DETECTOR INFO

PUMP ON PASSED
(0.002 V <= 0.010 V)
PUMP OFF PASSED
(0.002 V <= 0.010 V)

FILTER INFO

Filter 1 PASSED
Filter 2 PASSED
Filter 3 PASSED

INTERNAL STANDARD ✓

Xq = 0.089 0.69% (0.00% - 4.00%) PASSED

Technician Screen

DATAMASTER dmt: 100405

Date: 01/13/2020
Time: 10:51 AM

Temperatures (°C)

Sample Cell: 49.0°C
Breath Tube: 47.3°C

Current Barometer 30.2 in
Volume (Ltr) 0.00

Settings

Lamp: 1.74 V
Bias: 81 V
Cooler: 1.71 V
Chopper: 526 Hz

Voltages (V)

Flow: 1.05 V
Detector: -0.015 V

LINEARITY CHECK

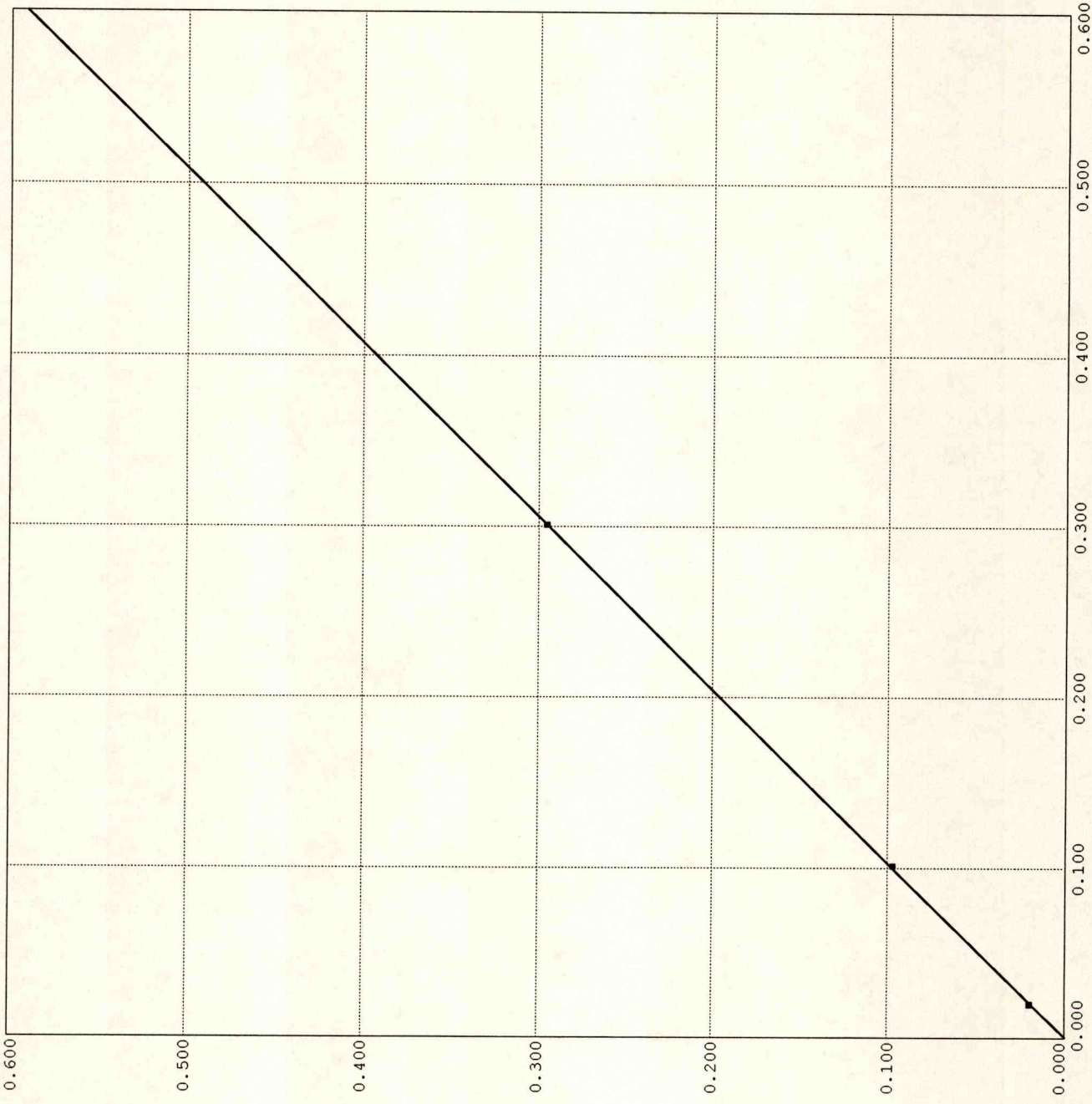
Alaska Department of Public Safety
DATAMASTER dmt: 100405

Date: 01/13/2020
Time: 10:53:21

SUPERVISOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0204	0.0005
0.101	0.0980	0.0000
0.300	0.2960	0.0010

SLOPE = 0.986301
R² = 0.999929



DW

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety
 DATAMASTER dmt: 100405

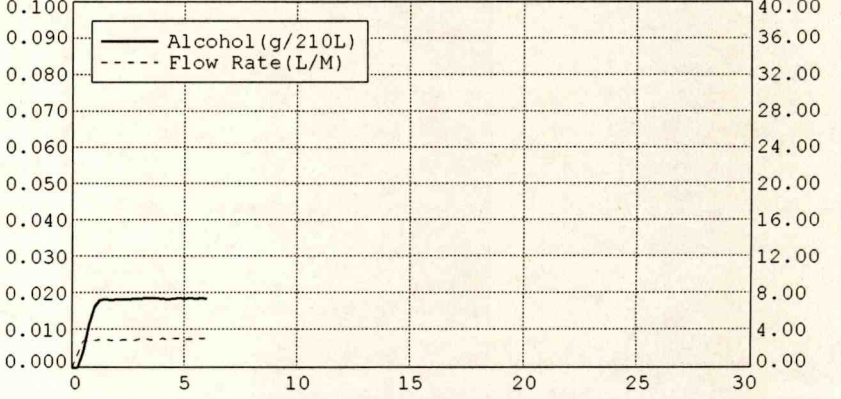
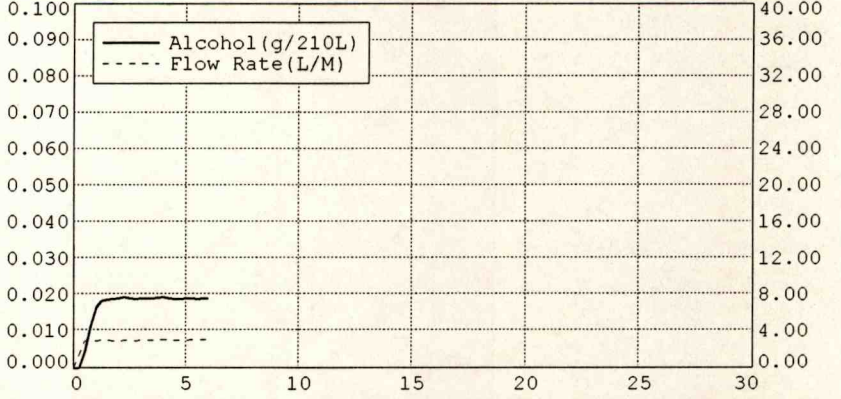
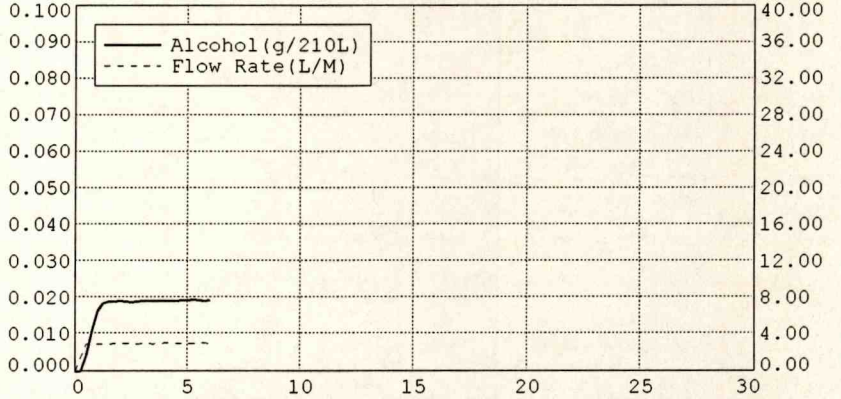
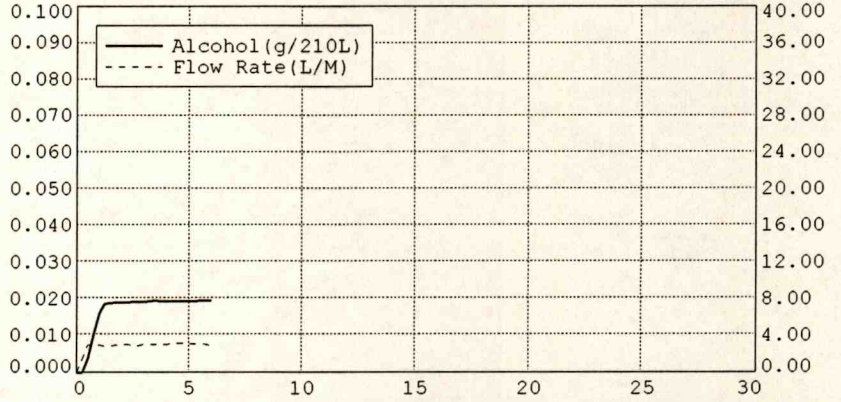
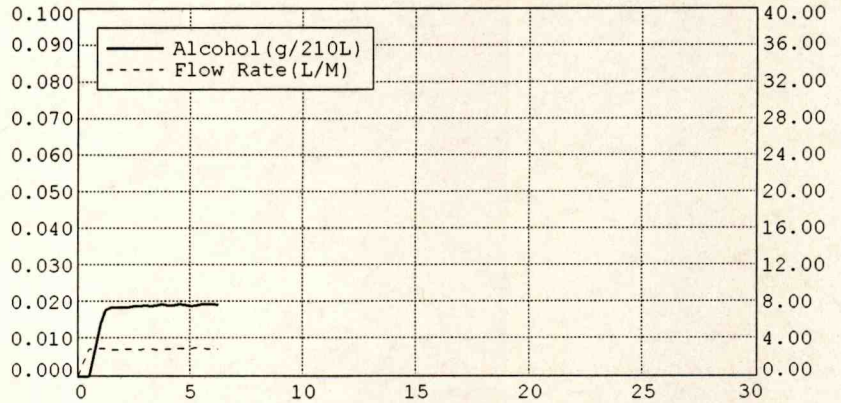
Date: 01/13/2020
 Time: 10:53:22

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
 TARGET AT 30.16: 0.020
 LOT #: AG805804
 EXPIRATION: 02/27/2020
 TANK PRESSURE: 416 psi

BLANK TEST	0.000	10:54
INTERNAL STANDARD	VERIFIED	10:54
EXTERNAL STANDARD	0.020	10:55
BLANK TEST	0.000	10:56
EXTERNAL STANDARD	0.021	10:56
BLANK TEST	0.000	10:57
EXTERNAL STANDARD	0.021	10:57
BLANK TEST	0.000	10:58
EXTERNAL STANDARD	0.020	10:58
BLANK TEST	0.000	10:59
EXTERNAL STANDARD	0.020	10:59
BLANK TEST	0.000	11:00

Average = 0.0204
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
 DATAMASTER dmt: 100405

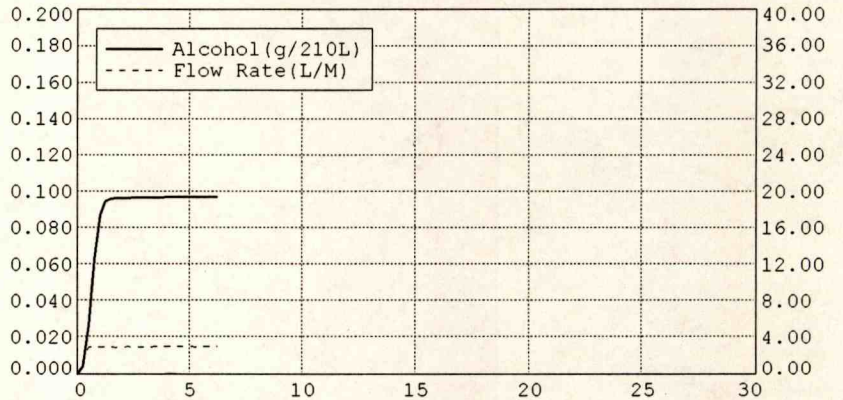
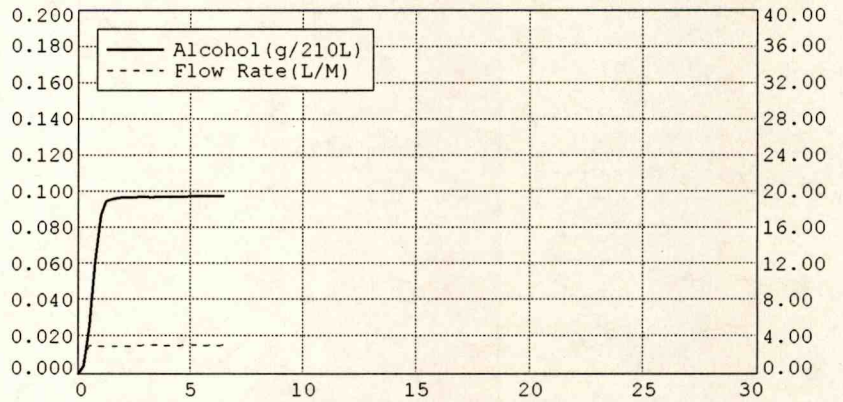
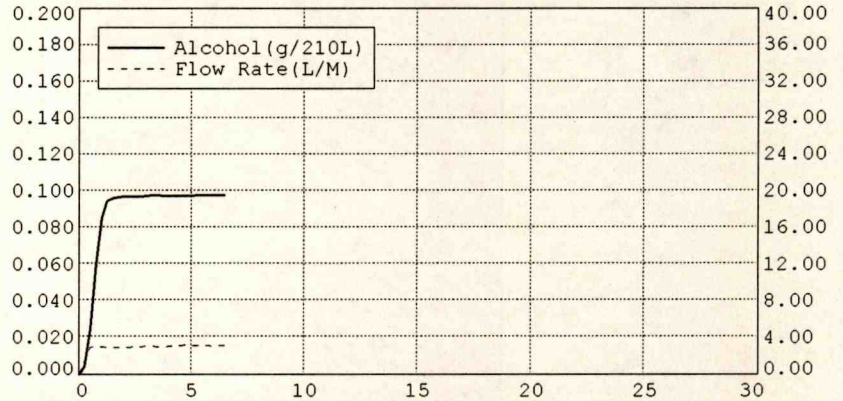
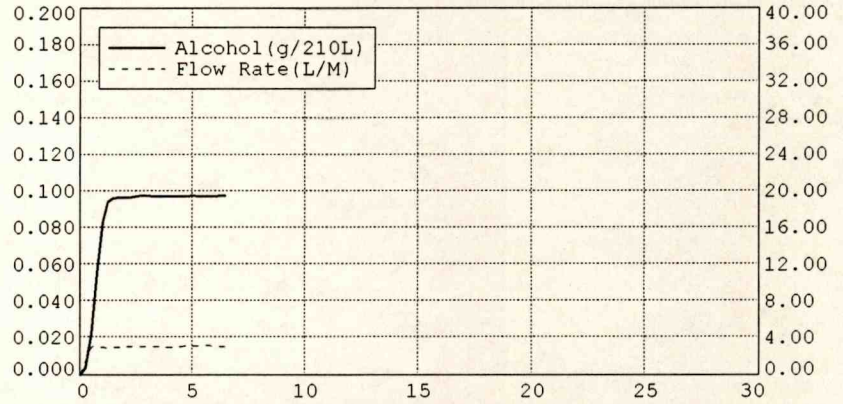
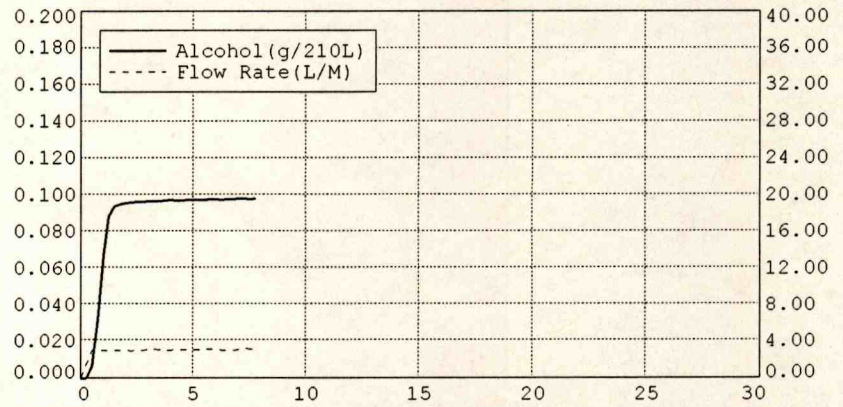
Date: 01/13/2020
 Time: 11:00:47

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 30.16: 0.101
 LOT #: AG805903
 EXPIRATION: 02/28/2020
 TANK PRESSURE: 504 psi

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

Average = 0.0980
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
DATAMASTER dmt: 100405

Date: 01/13/2020
Time: 11:55:28

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.300
LOT #: 19010
EXPIRATION: 01/03/2021

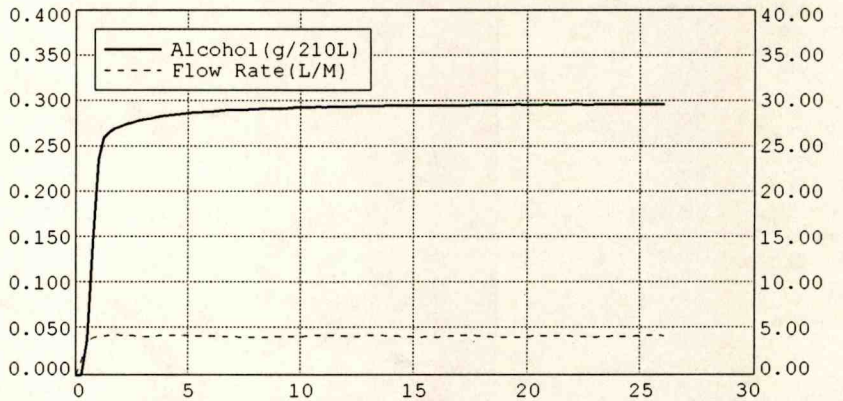
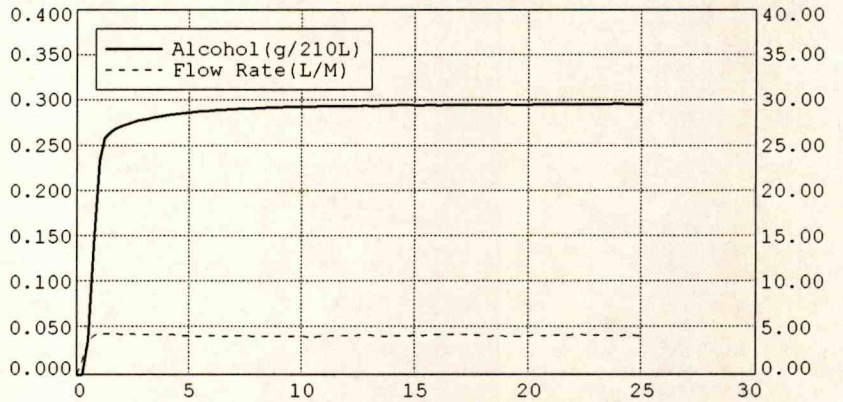
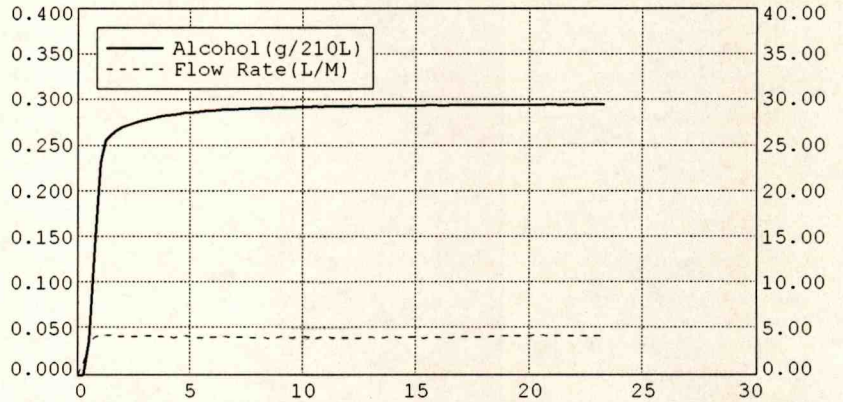
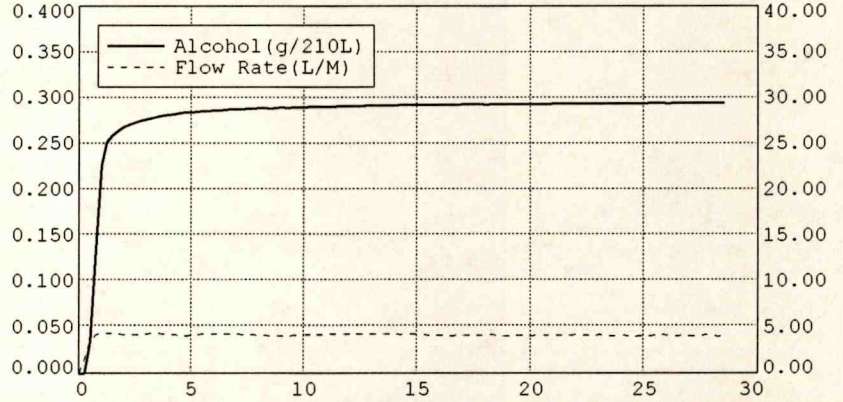
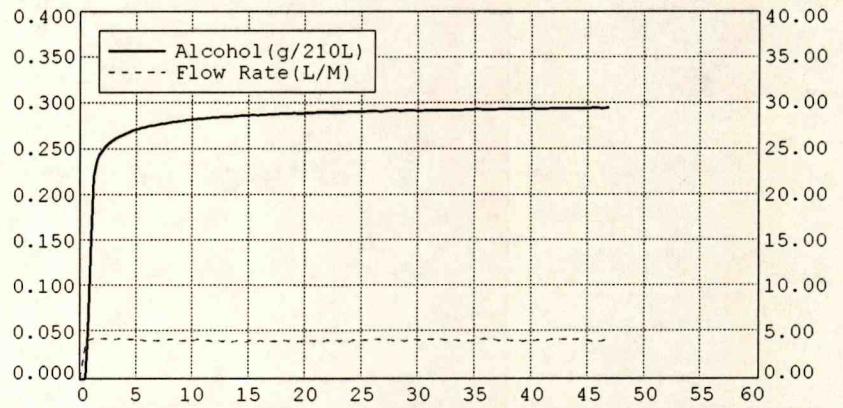
BLANK TEST	0.000	11:56
INTERNAL STANDARD	VERIFIED	11:56
EXTERNAL STANDARD	0.295	11:57
BLANK TEST	0.000	11:58
EXTERNAL STANDARD	0.295	11:59
BLANK TEST	0.000	12:00
EXTERNAL STANDARD	0.296	12:00
BLANK TEST	0.000	12:01
EXTERNAL STANDARD	0.297	12:02
BLANK TEST	0.000	12:03
EXTERNAL STANDARD	0.297	12:03
BLANK TEST	0.000	12:04

Average = 0.2960
Std Dev = 0.0010

Simulator S/N: DR4178

Calibrated: 10/04/19

JW 01/13/20



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100671

Date: 01/13/2020
Time: 10:53:41

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 = 48.1°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.69 V PASSED
(1.01 V - 2.37 V)
Cooler Voltage = 1.78 V PASSED
(1.00 V - 2.32 V)
Bias Voltage = 79 V PASSED
(47 V - 111 V)
Chopper Freq = 543 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 30.2 in

PUMP INFO

Flow Rate = 4.741 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 ✓

Xq = 0.101 2.04% (0.00% - 4.00%) PASSED

Technician Screen

DATAMASTER dmt: 100671

Date: 01/13/2020
Time: 11:01 AM

Temperatures (°C)

Sample Cell: 48.8°C
Breath Tube: 48.1°C

Current Barometer 30.2 in
Volume (Itr) 0.00

Settings

Lamp: 1.69 V
Bias: 79 V
Cooler: 1.79 V
Chopper: 541 Hz

Voltages (V)

Flow: 1.07 V
Detector: 0.029 V

LINEARITY CHECK

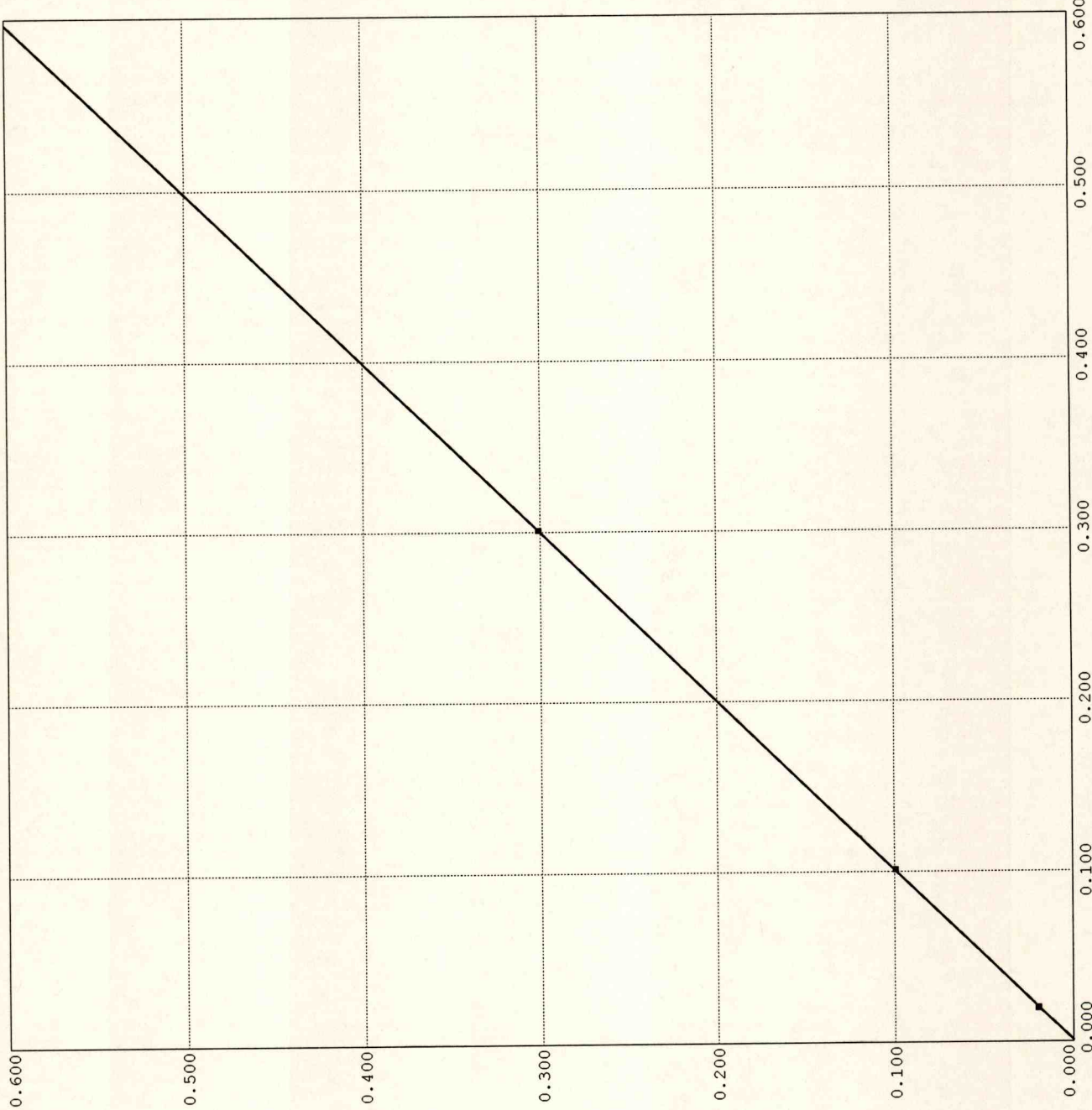
 Alaska Department of Public Safety
 DATAMASTER dmt: 100671

Date: 01/13/2020
 Time: 11:04:49

SUPERVISOR NAME:
 DEREK WALTON
 OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0202	0.0004
0.101	0.1004	0.0005
0.300	0.3018	0.0008

SLOPE = 1.006911
 R² = 0.999976



DM

LINEARITY CHECK: Control Test 1

 Alaska Department of Public Safety
 DATAMASTER dmt: 100671

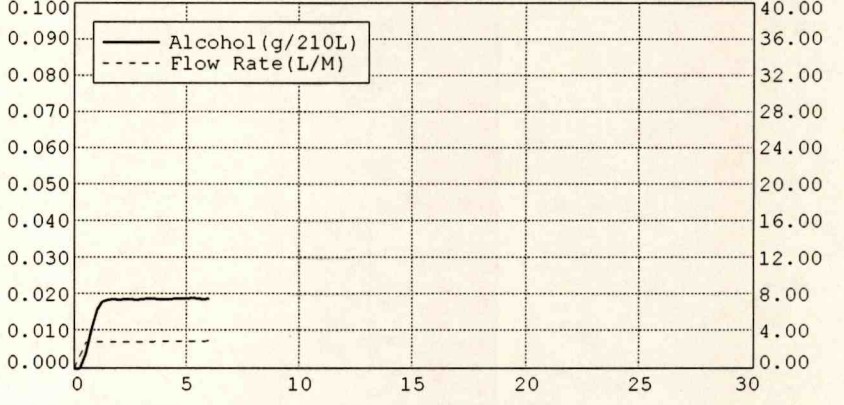
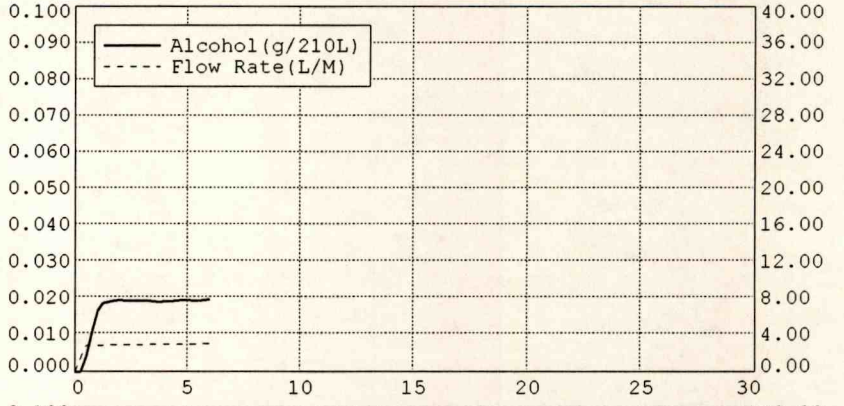
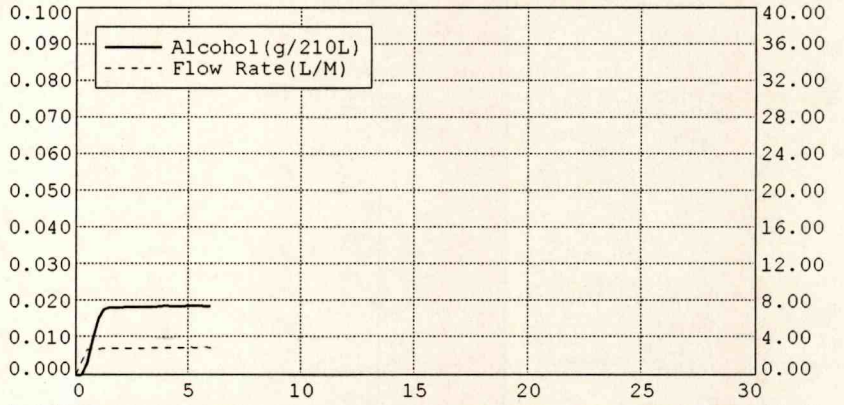
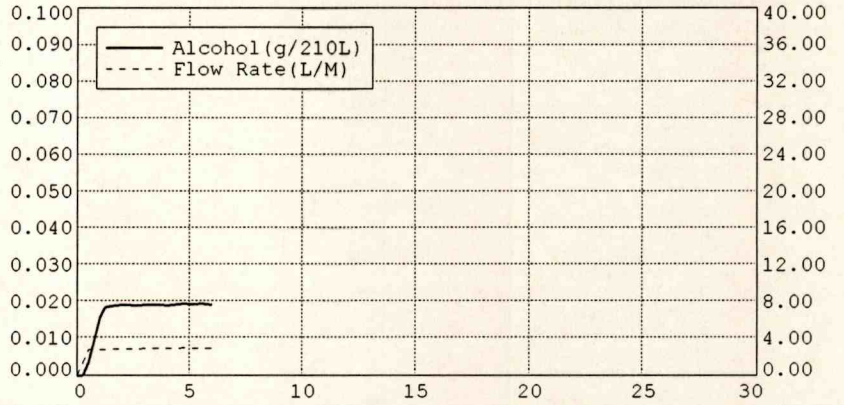
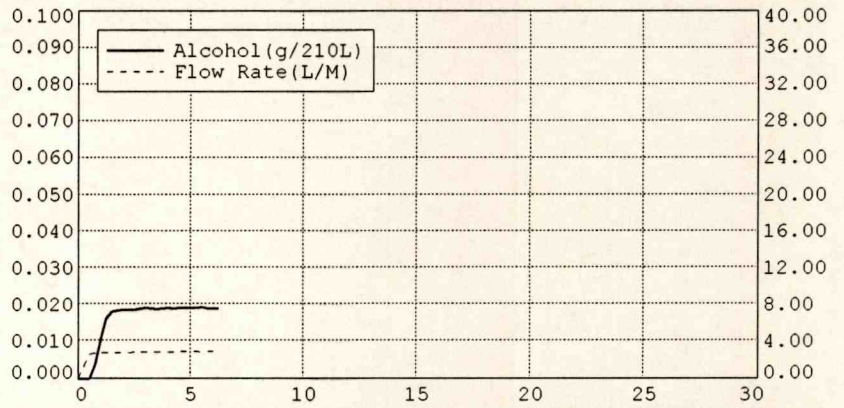
Date: 01/13/2020
 Time: 11:04:51

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
 TARGET AT 30.16: 0.020
 LOT #: AG928203
 EXPIRATION: 10/09/2021
 TANK PRESSURE: 1112 psi

BLANK TEST	0.000	11:06
INTERNAL STANDARD	VERIFIED	11:06
EXTERNAL STANDARD	0.020	11:06
BLANK TEST	0.000	11:07
EXTERNAL STANDARD	0.021	11:07
BLANK TEST	0.000	11:08
EXTERNAL STANDARD	0.020	11:08
BLANK TEST	0.000	11:09
EXTERNAL STANDARD	0.020	11:09
BLANK TEST	0.000	11:10
EXTERNAL STANDARD	0.020	11:10
BLANK TEST	0.000	11:11

Average = 0.0202
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 2

 Alaska Department of Public Safety
 DATAMASTER dmt: 100671

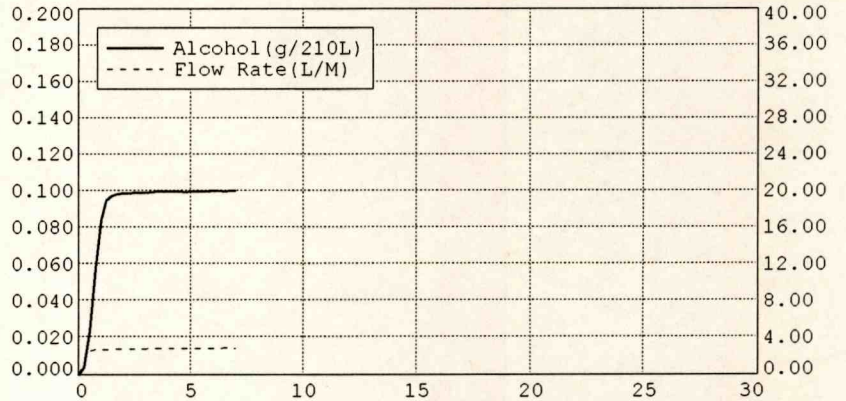
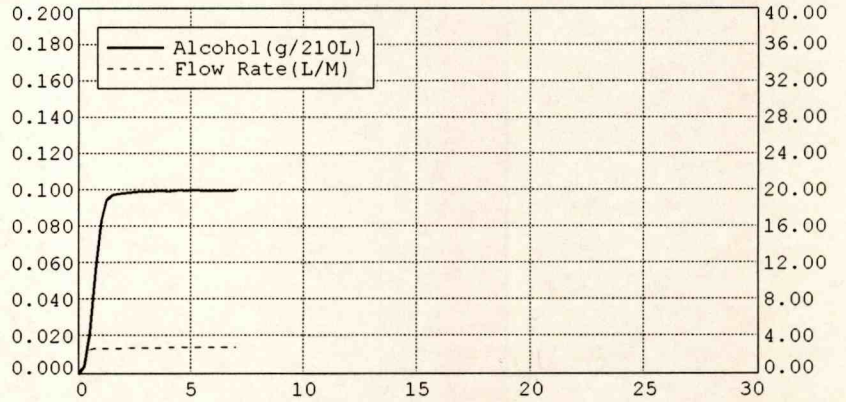
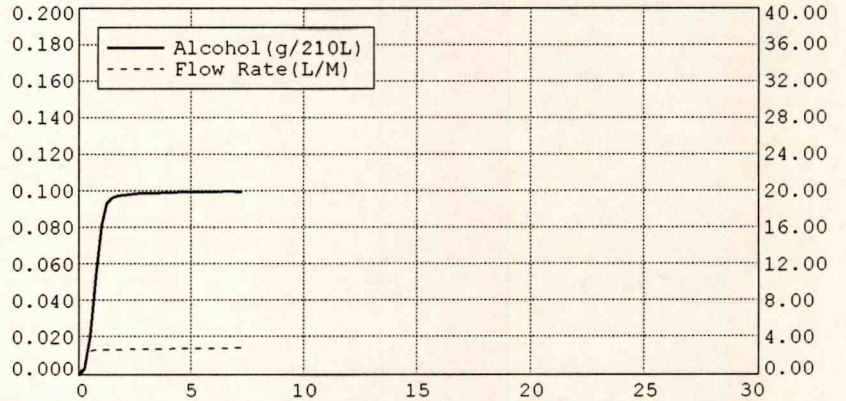
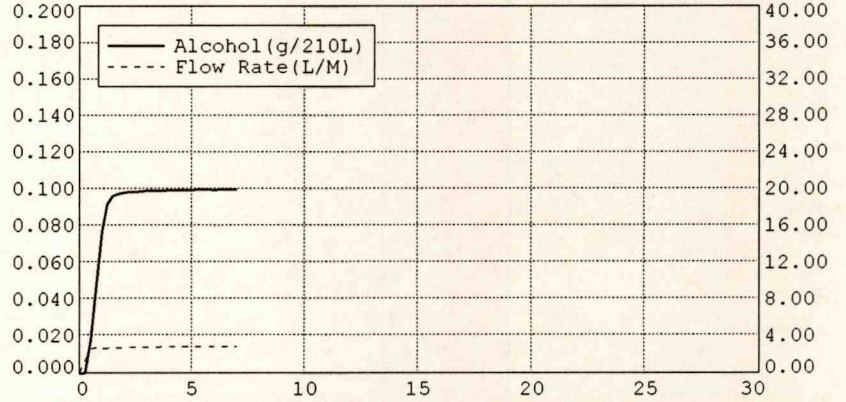
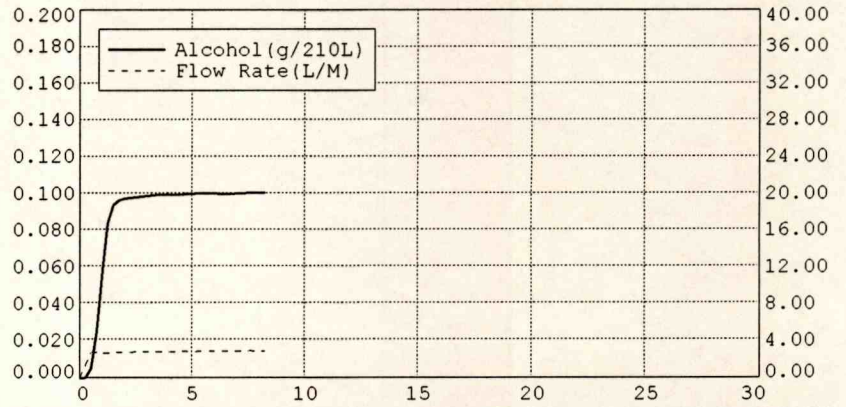
Date: 01/13/2020
 Time: 11:12:09

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 30.16: 0.101
 LOT #: AG924701
 EXPIRATION: 09/04/2021
 TANK PRESSURE: 738 psi

BLANK TEST	0.000	11:13
INTERNAL STANDARD	VERIFIED	11:13
EXTERNAL STANDARD	0.101	11:13
BLANK TEST	0.000	11:14
EXTERNAL STANDARD	0.100	11:14
BLANK TEST	0.000	11:15
EXTERNAL STANDARD	0.100	11:16
BLANK TEST	0.000	11:16
EXTERNAL STANDARD	0.100	11:17
BLANK TEST	0.000	11:18
EXTERNAL STANDARD	0.101	11:18
BLANK TEST	0.000	11:19

Average = 0.1004
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
DATAMASTER dmt: 100671

Date: 01/13/2020
Time: 12:06:02

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.300
LOT #: 19010
EXPIRATION: 01/03/2021

BLANK TEST	0.000	12:20
INTERNAL STANDARD	VERIFIED	12:20
EXTERNAL STANDARD	0.302	12:21
BLANK TEST	0.000	12:22
EXTERNAL STANDARD	0.303	12:22
BLANK TEST	0.000	12:23
EXTERNAL STANDARD	0.301	12:24
BLANK TEST	0.000	12:25
EXTERNAL STANDARD	0.302	12:25
BLANK TEST	0.000	12:26
EXTERNAL STANDARD	0.301	12:27
BLANK TEST	0.000	12:27

Average = 0.3018
Std Dev = 0.0008

Simulator S/N: DR4178

Calibrated: 10/04/19

JMV 01/13/20

