



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 **21400** of Alcohol Reference Solution for Simulator were analyzed by gas chromatography on **September 29, 2021**, using a Perkin Elmer Gas Chromatograph Autosystem XL S/N: 610N9030209, and found to contain **0.4846%** (w/vol) ethyl alcohol. The expiration date for this lot number is **September 28, 2023** 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 **0.400 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 **FN10051906** 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: 100375

Date: 12/22/2021
 Time: 12:40:32

SUPERVISOR NAME:
 COLLEEN S OBRYANT
 OPERATOR'S #: 6237

EXTERNAL STANDARD INFORMATION
 NOMINAL: 0.400

BLANK TEST	0.000	12:41
INTERNAL STANDARD	VERIFIED	12:41
EXTERNAL STANDARD	0.400	12:42
BLANK TEST	0.000	12:43
EXTERNAL STANDARD	0.398	12:43
BLANK TEST	0.000	12:44
EXTERNAL STANDARD	0.399	12:45
BLANK TEST	0.000	12:46
EXTERNAL STANDARD	0.399	12:46
BLANK TEST	0.000	12:47
EXTERNAL STANDARD	0.399	12:48
BLANK TEST	0.000	12:49

Average = 0.3990
 Std Dev = 0.0007

0.400

Lot: 21400

Exp: 9/28/23

Simulator SN: DR4161

Calibrated: 6/16/21

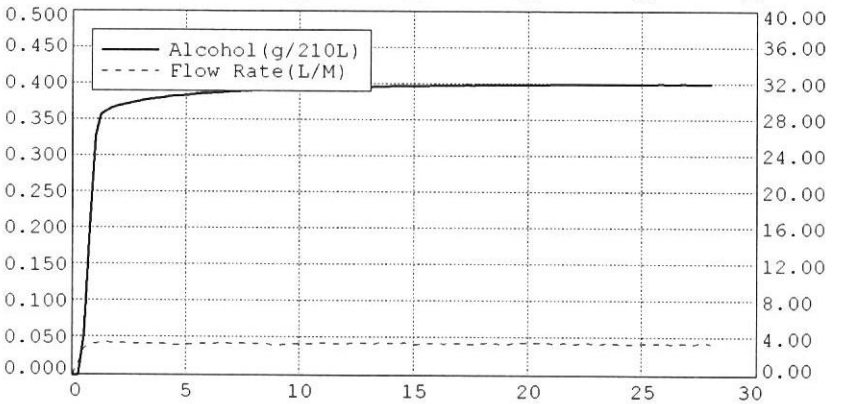
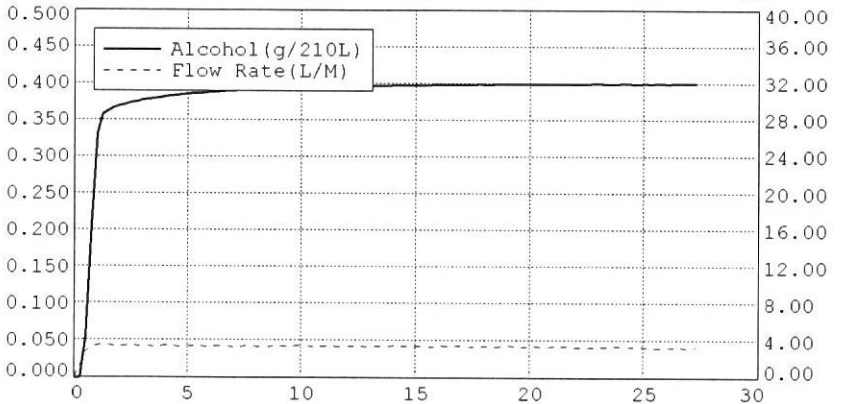
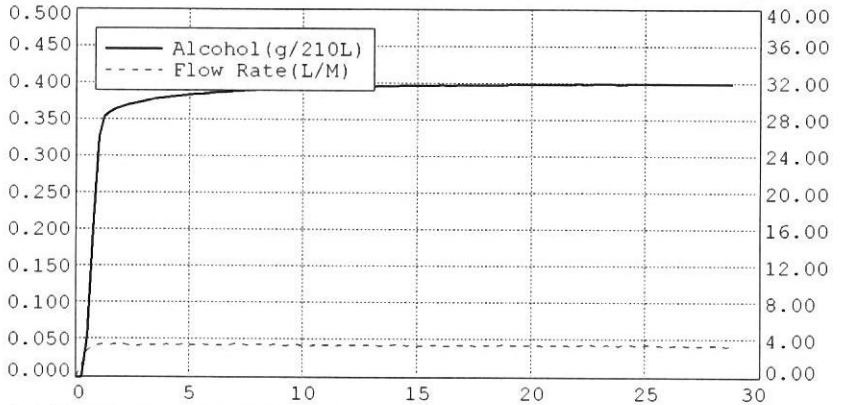
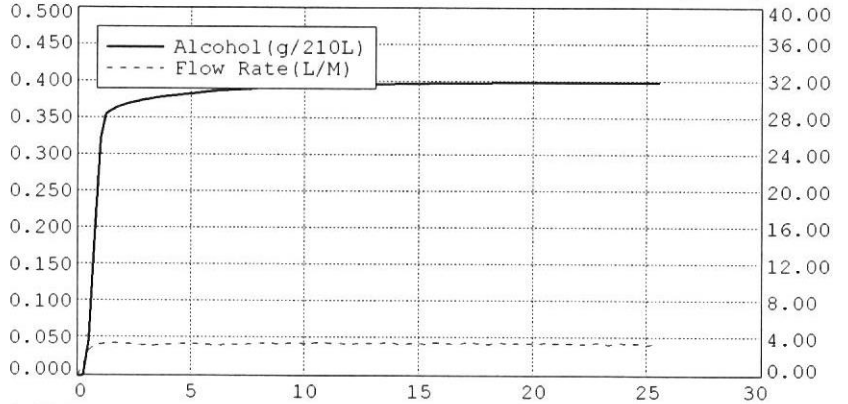
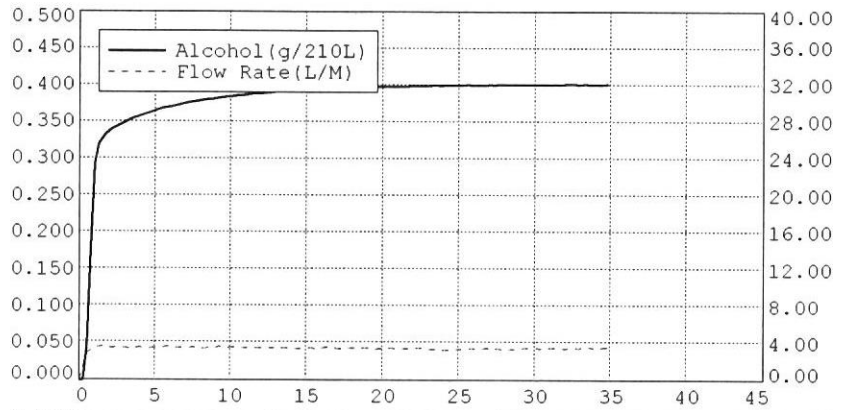
0.3990

0.3978 *Arg*

0.4042 *✓*

0.400

COB 12/22/21



SUPERVISOR TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100405

Date: 12/22/2021
Time: 12:31:53

SUPERVISOR NAME:
COLLEEN S OBRYANT
OPERATOR'S #: 6237

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.400

BLANK TEST	0.000	12:46
INTERNAL STANDARD	VERIFIED	12:46
EXTERNAL STANDARD	0.400	12:46
BLANK TEST	0.000	12:48
EXTERNAL STANDARD	0.398	12:48
BLANK TEST	0.000	12:49
EXTERNAL STANDARD	0.397	12:50
BLANK TEST	0.000	12:50
EXTERNAL STANDARD	0.398	12:51
BLANK TEST	0.000	12:52
EXTERNAL STANDARD	0.396	12:53
BLANK TEST	0.000	12:54

Average = 0.3978
Std Dev = 0.0015

0.400

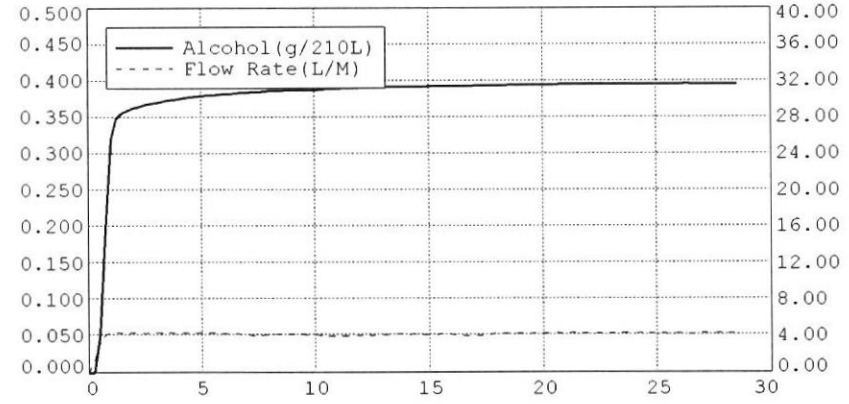
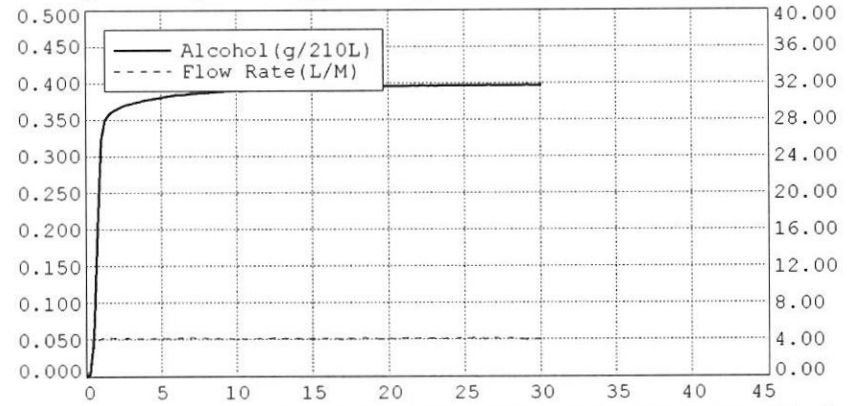
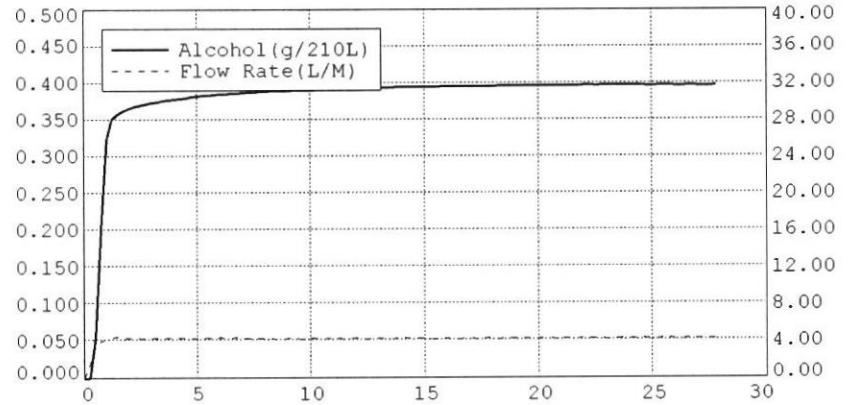
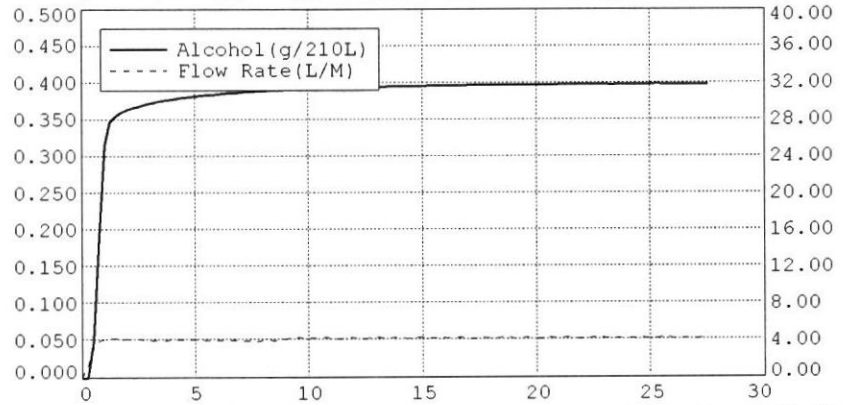
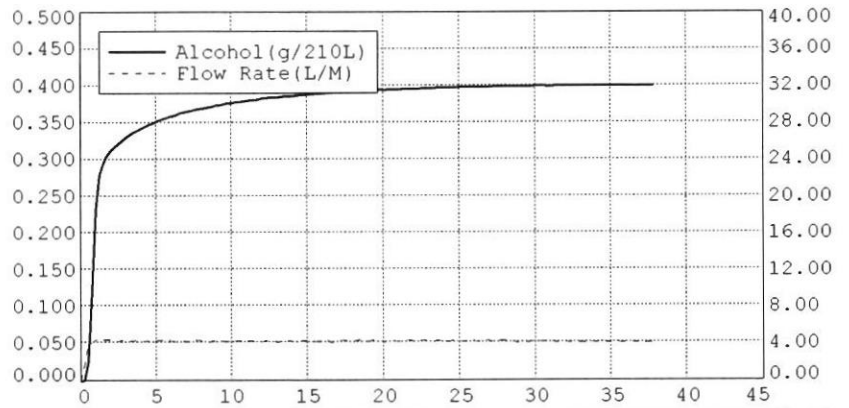
Lot: 21400

Exp: 9/28/23

Simulator SN: DR4161

Calibrated: 6/10/21

COB 12/22/21



SUPERVISOR TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100399

Date: 12/22/2021
Time: 12:51:40

SUPERVISOR NAME:
COLLEEN S OBRYANT
OPERATOR'S #: 6237

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.400

BLANK TEST	0.000	12:53
INTERNAL STANDARD	VERIFIED	12:53
EXTERNAL STANDARD	0.406	12:54
BLANK TEST	0.000	12:55
EXTERNAL STANDARD	0.404	12:56
BLANK TEST	0.000	12:56
EXTERNAL STANDARD	0.403	12:57
BLANK TEST	0.000	12:58
EXTERNAL STANDARD	0.404	12:59
BLANK TEST	0.000	13:00
EXTERNAL STANDARD	0.404	13:00
BLANK TEST	0.000	13:01

Average = 0.4042
Std Dev = 0.0011

0.400

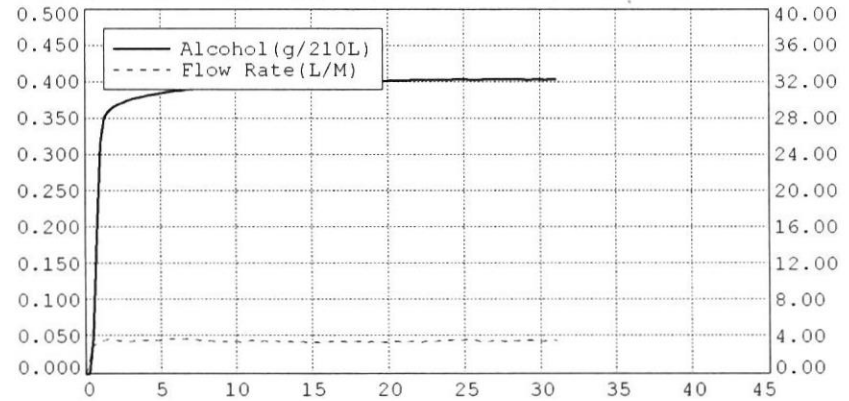
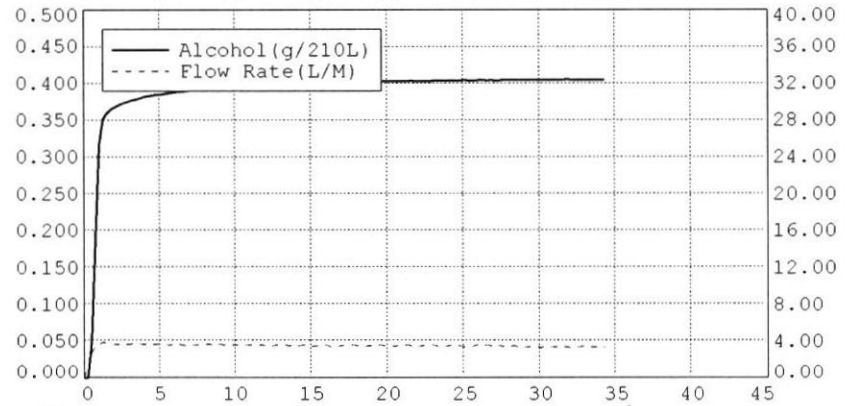
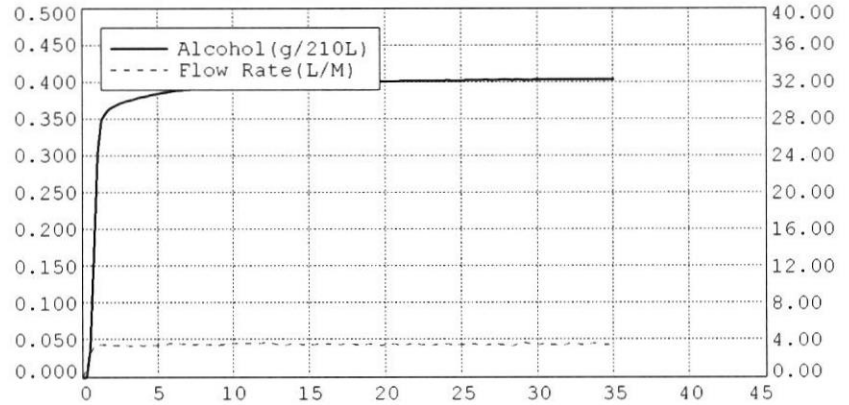
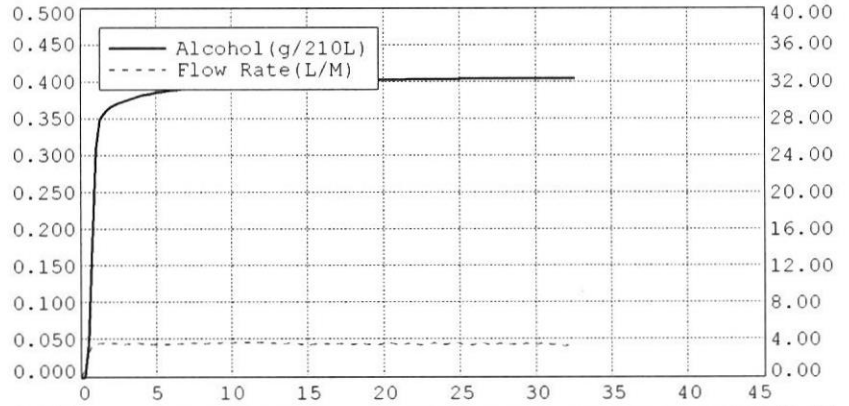
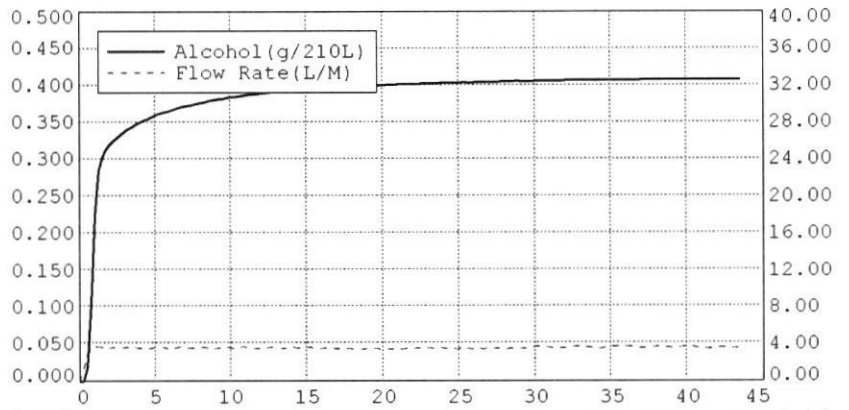
Lot: 21400

Exp: 9/28/23

Simulator SN: DR4161

Calibrated: 6/16/21

COB 12/22/21



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100375

Date: 12/22/2021
Time: 10:35:53

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 = 1.52 V PASSED
(0.92 V - 2.16 V)
Cooler Voltage = 1.57 V PASSED
(0.92 V - 2.16 V)
Bias Voltage = 79 V PASSED
(47 V - 111 V)
Chopper Freq = 543 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.8 in

PUMP INFO

Flow Rate = 3.964 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 = 0.091 0.19% (0.00% - 4.00%) PASSED

Technician Screen

DATAMASTER dmt: 100375

Date: 12/22/2021
Time: 10:42 AM

Temperatures (°C)

Sample Cell: 49.0°C
Breath Tube: 48.1°C

Current Barometer 29.8 in
Volume (Ltr) 0.00

Settings

Lamp: 1.52 V
Bias: 80 V
Cooler: 1.59 V
Chopper: 541 Hz

Voltages (V)

Flow: 1.05 V
Detector: 0.099 V

LINEARITY CHECK

Alaska Department of Public Safety
DATAMASTER dmt: 100375

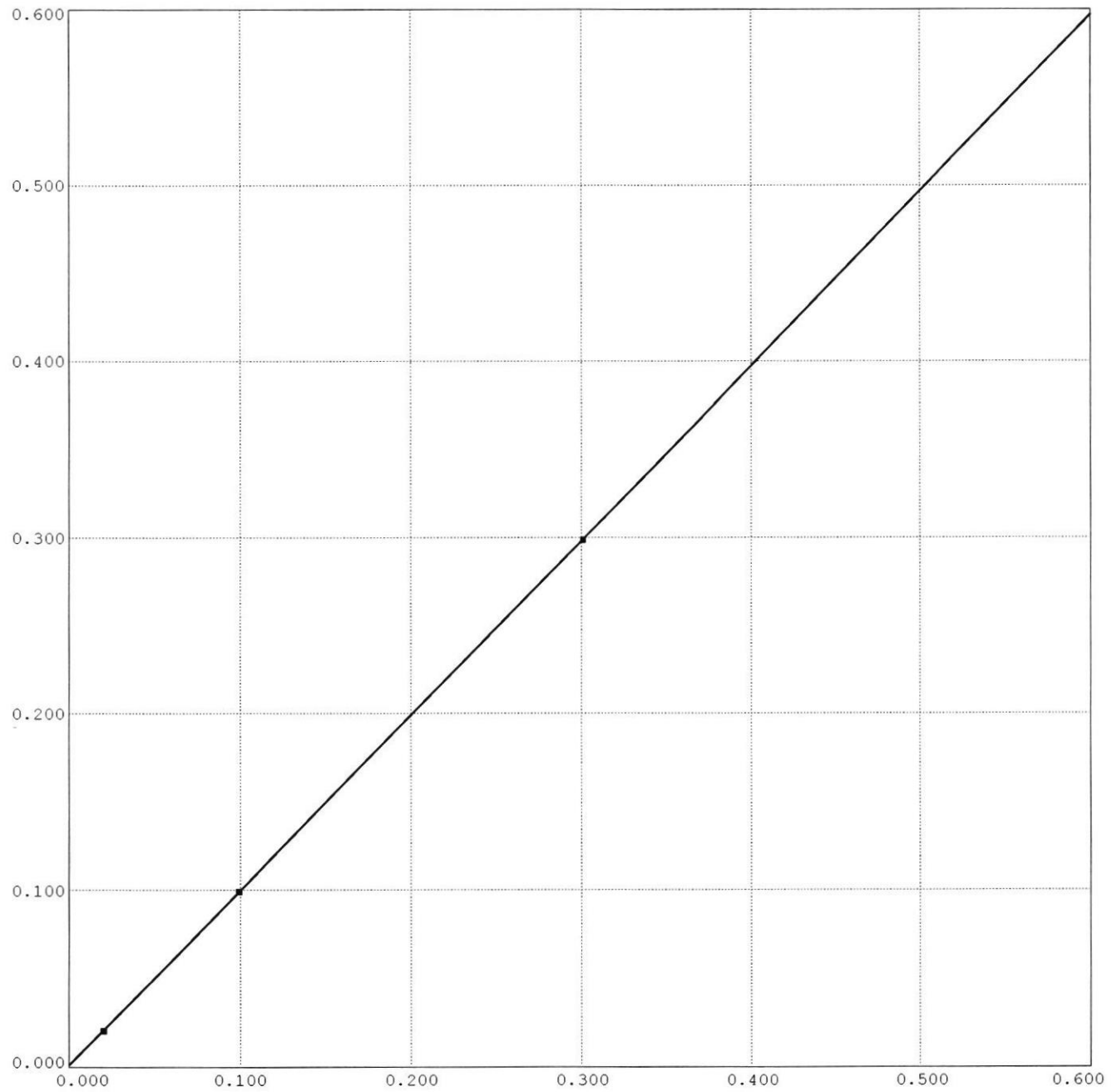
Date: 12/22/2021
Time: 10:43:21

SUPERVISOR NAME:
COLLEEN S OBRYANT
OPERATOR'S #: 6237

TARGET	AVERAGE	STD. DEV.
0.020	0.0210	0.0000
0.099	0.1000	0.0000
0.300	0.2992	0.0015

SLOPE = 0.993076
R² = 0.999996

(YAS)



LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety
DATAMASTER dmt: 100375

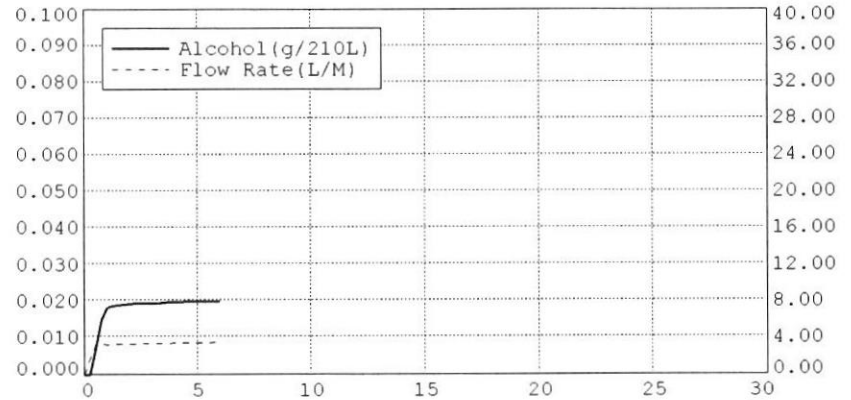
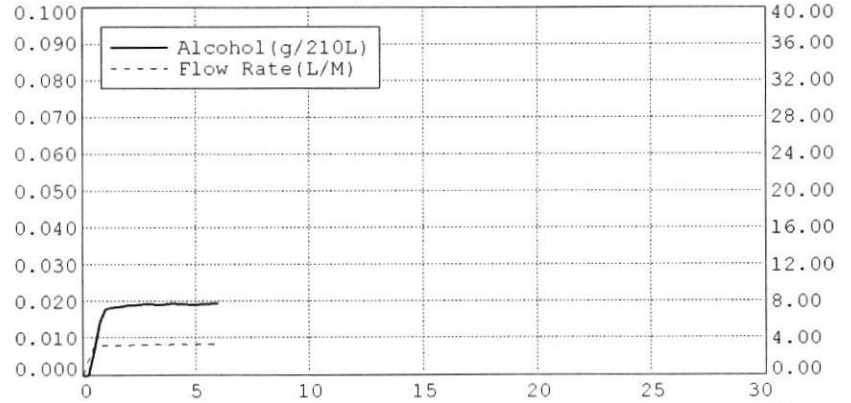
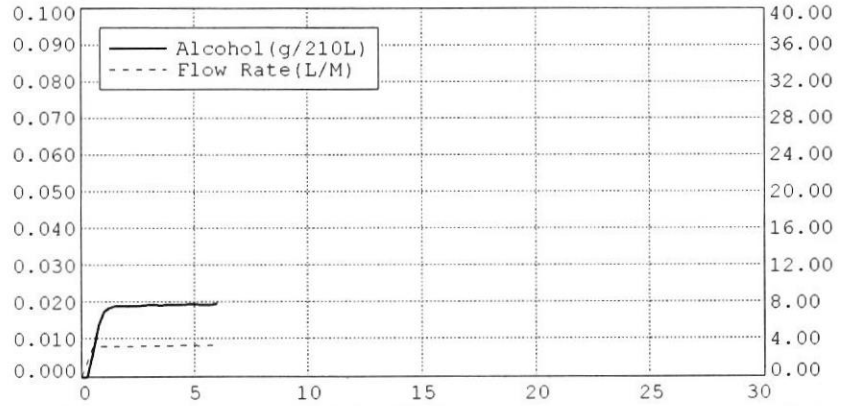
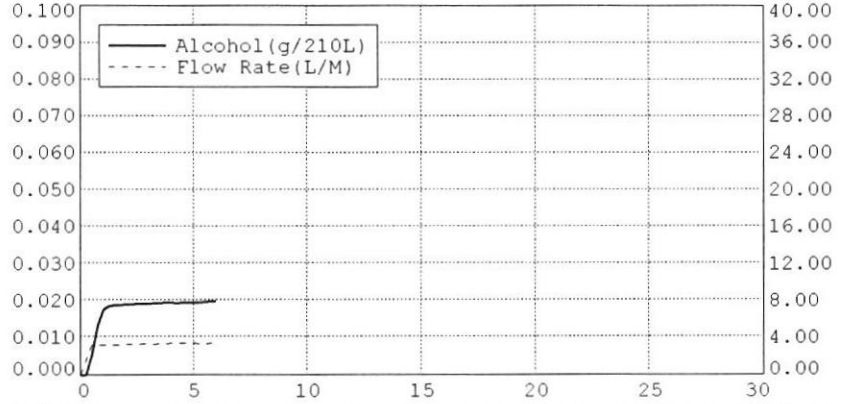
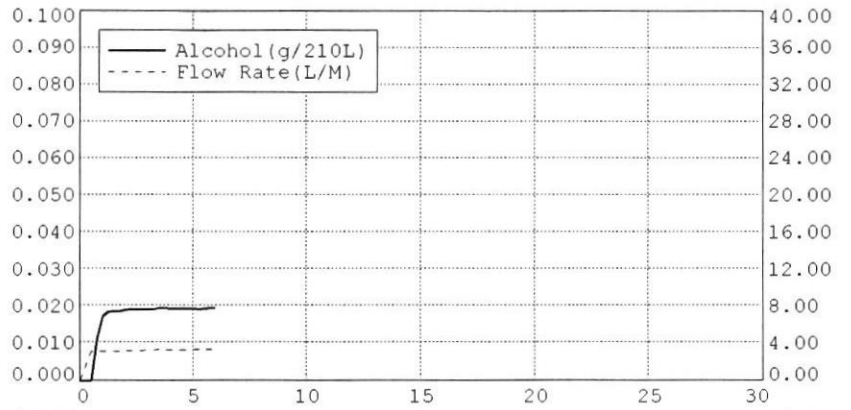
Date: 12/22/2021
Time: 10:43:23

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
TARGET AT 29.76: 0.020
LOT #: AG100401
EXPIRATION: 01/04/2023
TANK PRESSURE: 827 psi

BLANK TEST	0.000	10:44
INTERNAL STANDARD	VERIFIED	10:44
EXTERNAL STANDARD	0.021	10:44
BLANK TEST	0.000	10:45
EXTERNAL STANDARD	0.021	10:46
BLANK TEST	0.000	10:46
EXTERNAL STANDARD	0.021	10:47
BLANK TEST	0.000	10:48
EXTERNAL STANDARD	0.021	10:48
BLANK TEST	0.000	10:49
EXTERNAL STANDARD	0.021	10:49
BLANK TEST	0.000	10:50

Average = 0.0210
Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
DATAMASTER dmt: 100375

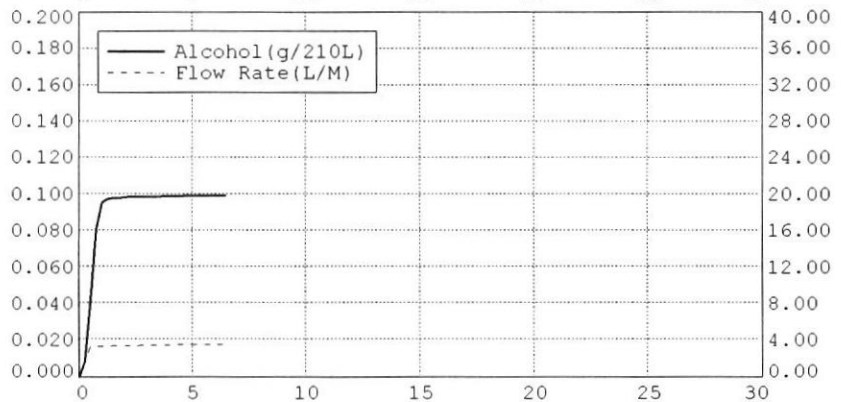
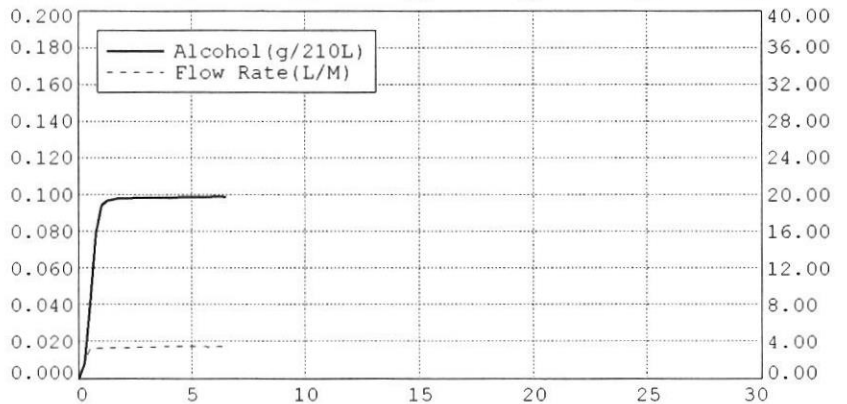
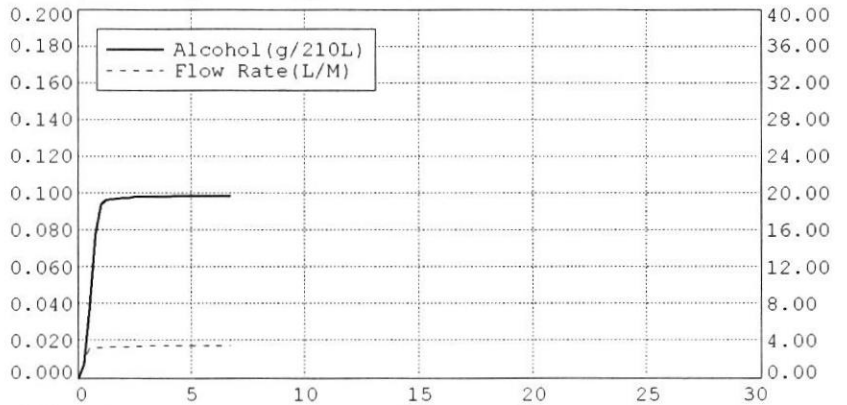
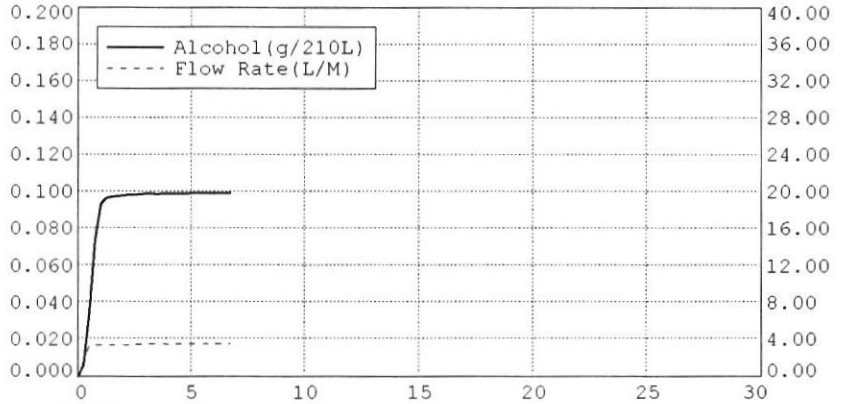
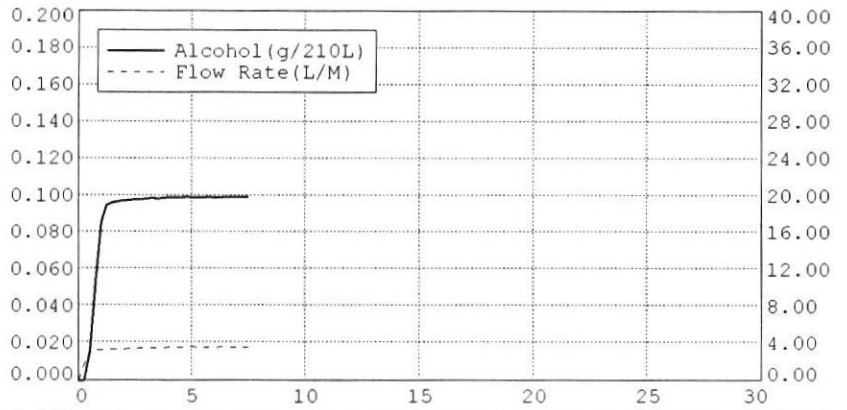
Date: 12/22/2021
Time: 10:51:03

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
TARGET AT 29.77: 0.099
LOT #: AG108404
EXPIRATION: 03/25/2023
TANK PRESSURE: 852 psi

BLANK TEST	0.000	10:52
INTERNAL STANDARD	VERIFIED	10:52
EXTERNAL STANDARD	0.100	10:52
BLANK TEST	0.000	10:53
EXTERNAL STANDARD	0.100	10:53
BLANK TEST	0.000	10:54
EXTERNAL STANDARD	0.100	10:55
BLANK TEST	0.000	10:56
EXTERNAL STANDARD	0.100	10:56
BLANK TEST	0.000	10:57
EXTERNAL STANDARD	0.100	10:57
BLANK TEST	0.000	10:58

Average = 0.1000
Std Dev = 0.0000



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
DATAMASTER dmt: 100375

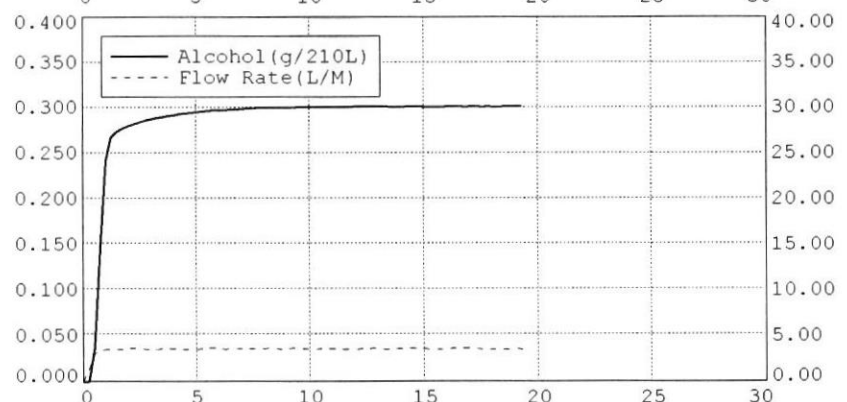
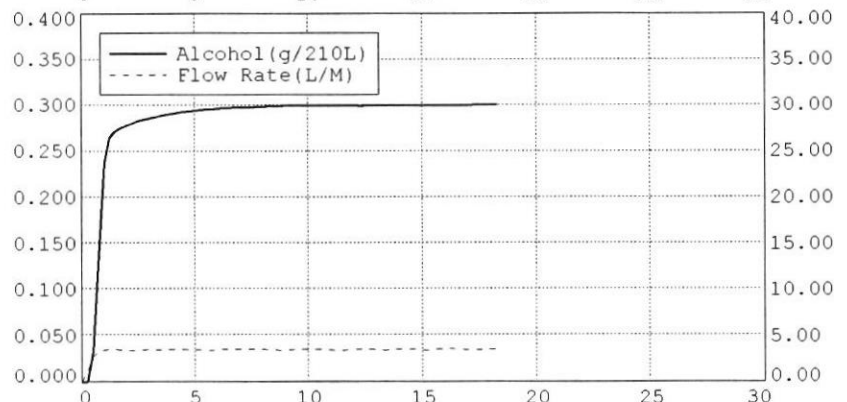
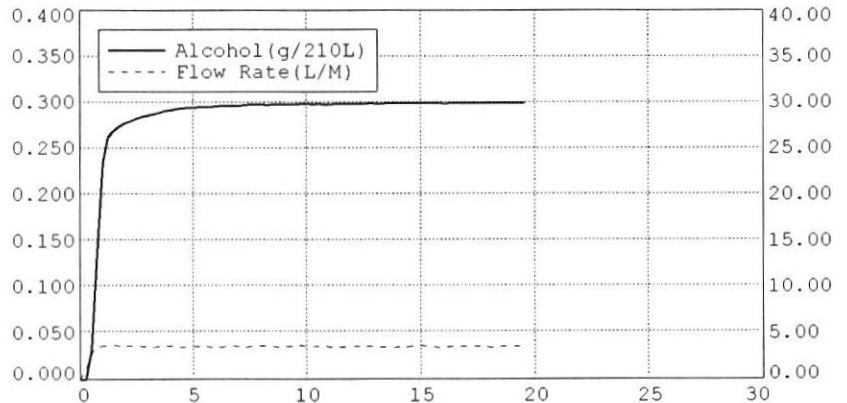
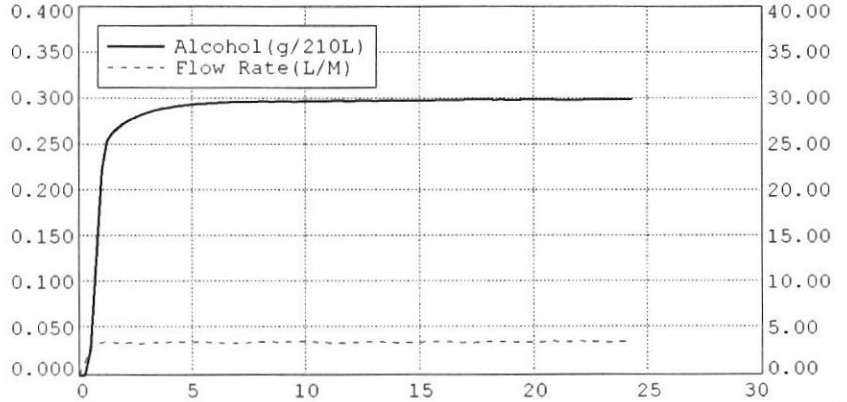
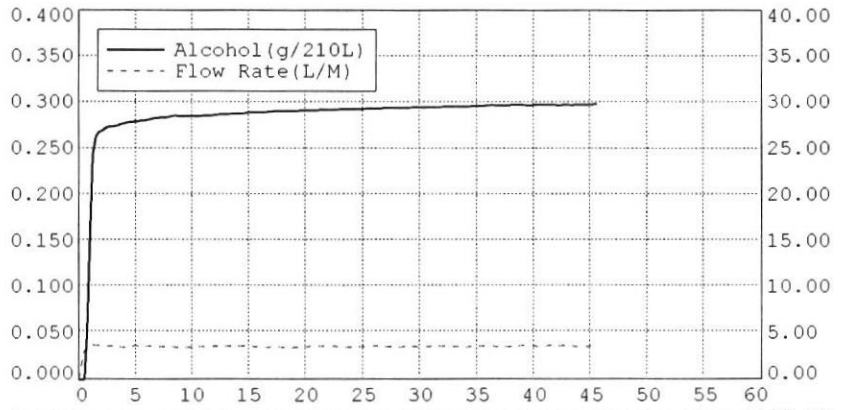
Date: 12/22/2021
Time: 11:02:24

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

BLANK TEST	0.000	11:04
INTERNAL STANDARD	VERIFIED	11:04
EXTERNAL STANDARD	0.297	11:05
BLANK TEST	0.000	11:06
EXTERNAL STANDARD	0.299	11:06
BLANK TEST	0.000	11:07
EXTERNAL STANDARD	0.299	11:08
BLANK TEST	0.000	11:09
EXTERNAL STANDARD	0.300	11:09
BLANK TEST	0.000	11:10
EXTERNAL STANDARD	0.301	11:10
BLANK TEST	0.000	11:11

Average = 0.2992
Std Dev = 0.0015

*Simulator SN: SD1202
Calibrated: 6/15/21
CAS 12/20/21*



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100399

Date: 12/22/2021
Time: 10:28:32

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

TEMPERATURES

Sample Chamber = 48.8°C PASSED
(44.0°C - 52.0°C)
Breath Tube = 48.1°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.66 V PASSED
(1.00 V - 2.32 V)
Cooler Voltage = 1.65 V PASSED
(0.99 V - 2.31 V)
Bias Voltage = 81 V PASSED
(49 V - 113 V)
Chopper Freq = 524 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.8 in

PUMP INFO

Flow Rate = 4.441 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 = 0.085 0.52% (0.00% - 4.00%) PASSED

Technician Screen

DATAMASTER dmt: 100399

Date: 12/22/2021
Time: 10:38 AM

Temperatures (°C)

Sample Cell: 48.9°C
Breath Tube: 47.9°C

Current Barometer 29.8 in
Volume (Ltr) 0.00

Settings

Lamp: 1.66 V
Bias: 81 V
Cooler: 1.65 V
Chopper: 523 Hz

Voltages (V)

Flow: 1.06 V
Detector: 0.077 V

LINEARITY CHECK

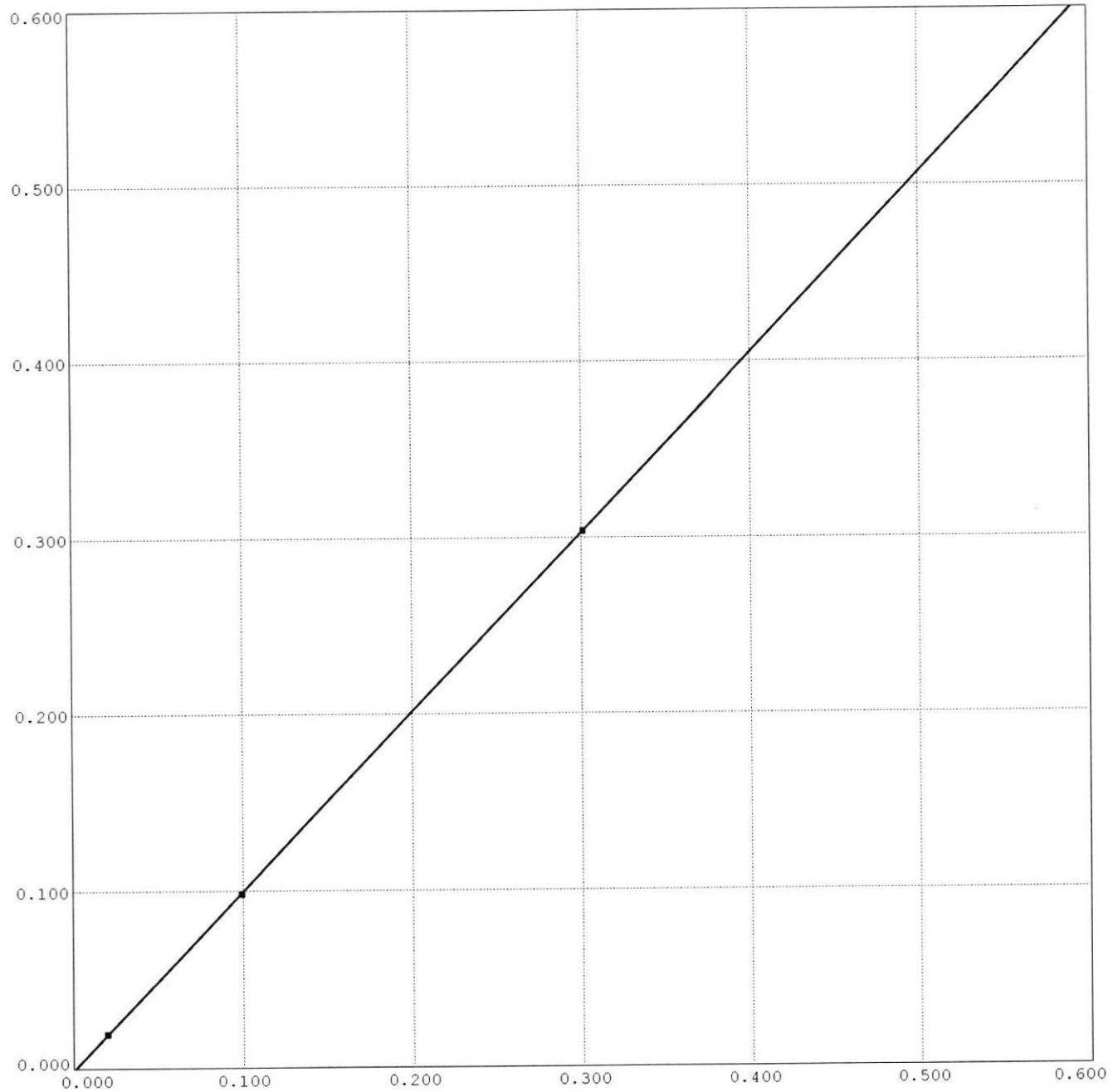
Alaska Department of Public Safety
DATAMASTER dmt: 100399

Date: 12/22/2021
Time: 10:38:59

SUPERVISOR NAME:
COLLEEN S OBRYANT
OPERATOR'S #: 6237

TARGET	AVERAGE	STD. DEV.
0.020	0.0198	0.0004
0.099	0.0994	0.0005
0.300	0.3044	0.0005

SLOPE = 1.017109
R² = 0.999993



CAB

LINEARITY CHECK: Control Test 1

 Alaska Department of Public Safety
 DATAMASTER dmt: 100399

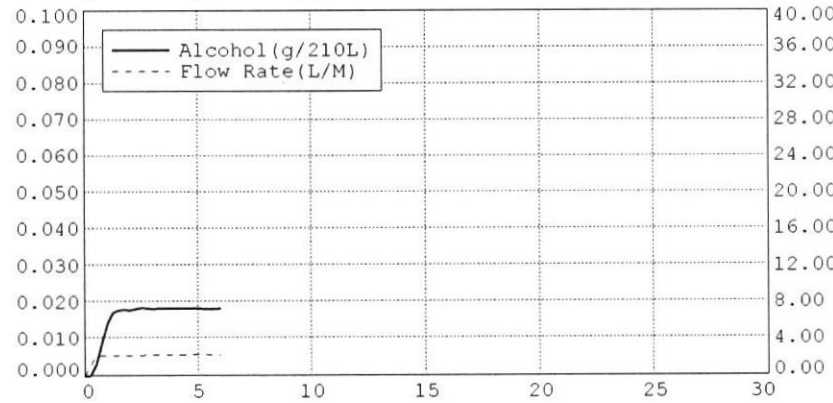
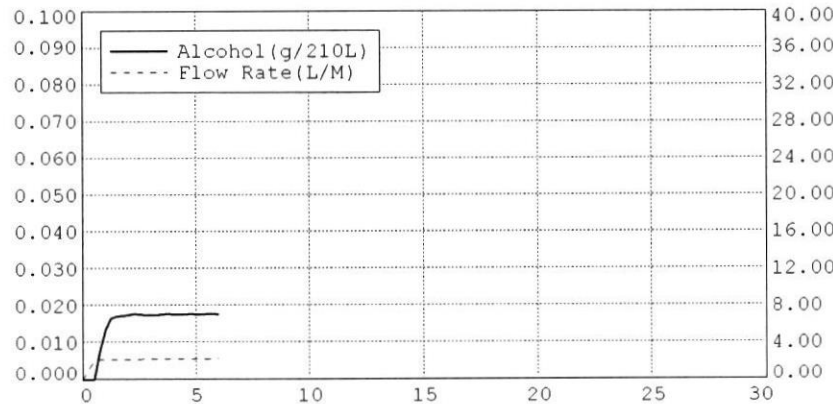
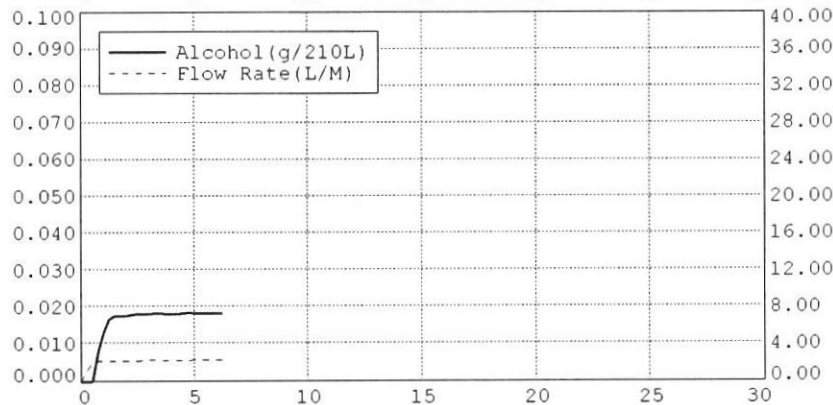
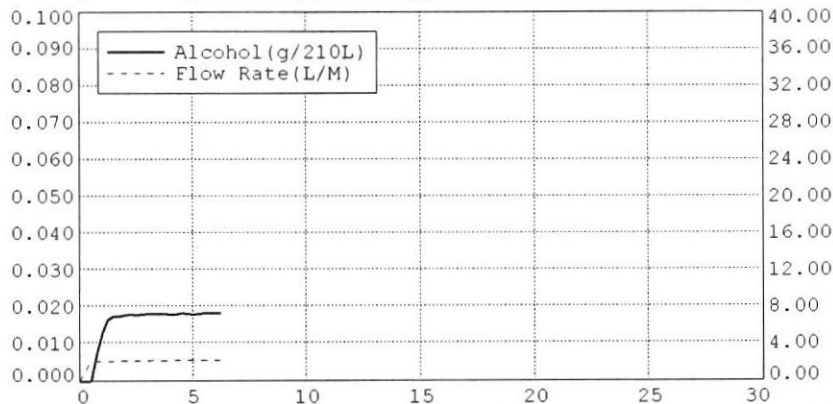
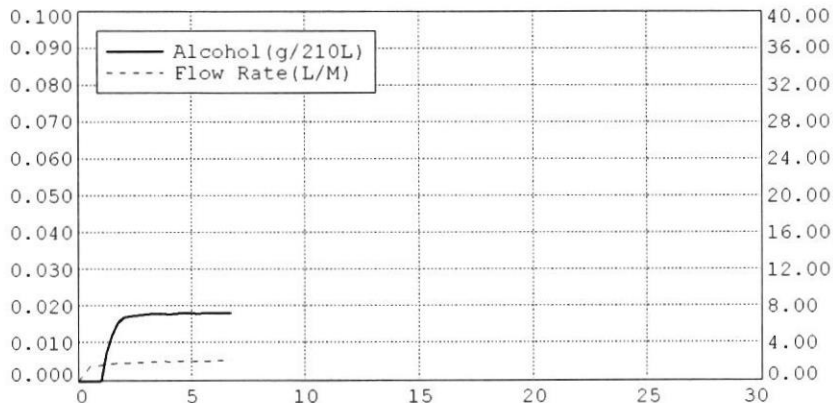
Date: 12/22/2021
 Time: 10:39:01

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
 TARGET AT 29.77: 0.020
 LOT #: AG100401
 EXPIRATION: 01/04/2023
 TANK PRESSURE: 789 psi

BLANK TEST	0.000	10:57
INTERNAL STANDARD	VERIFIED	10:57
EXTERNAL STANDARD	0.020	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
EXTERNAL STANDARD	0.019	11:00
BLANK TEST	0.000	11:01
EXTERNAL STANDARD	0.020	11:01
BLANK TEST	0.000	11:02

Average = 0.0198
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
 DATAMASTER dmt: 100399

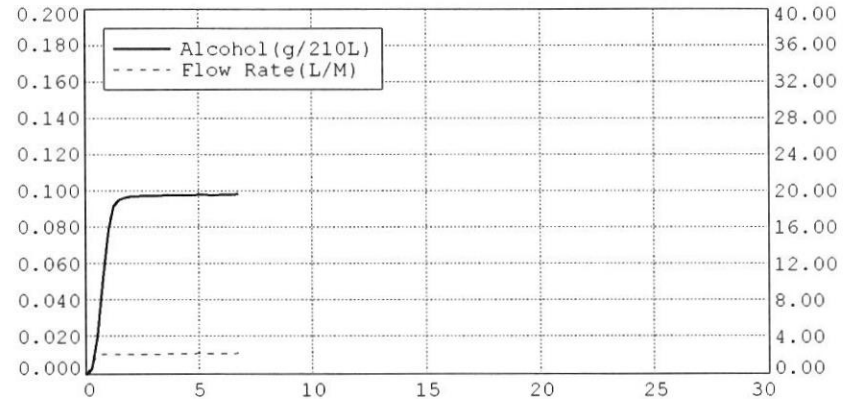
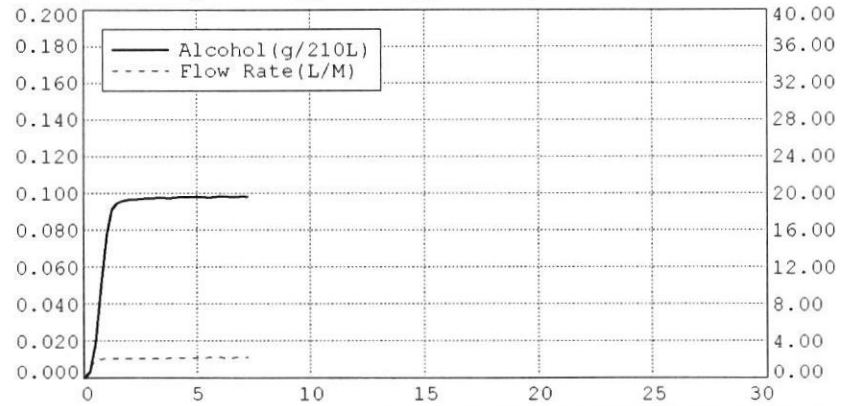
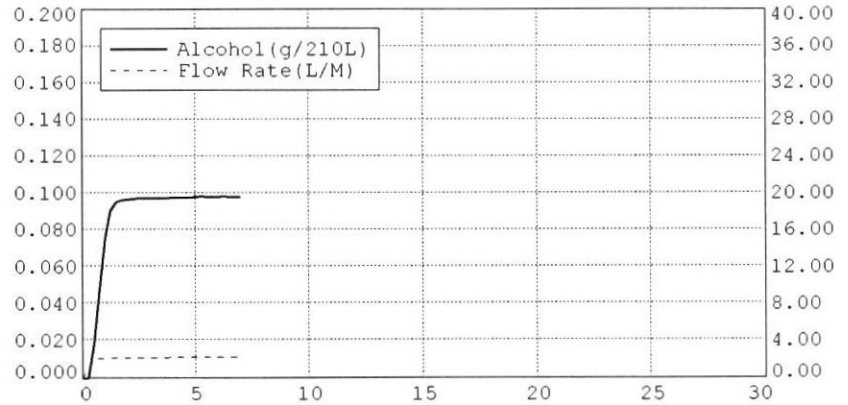
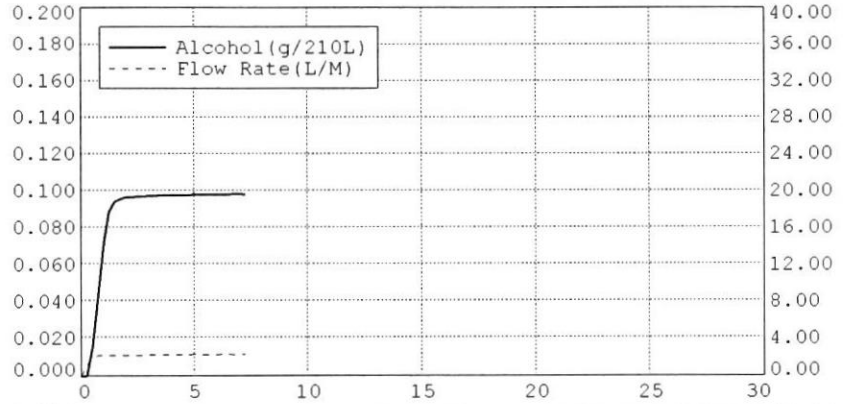
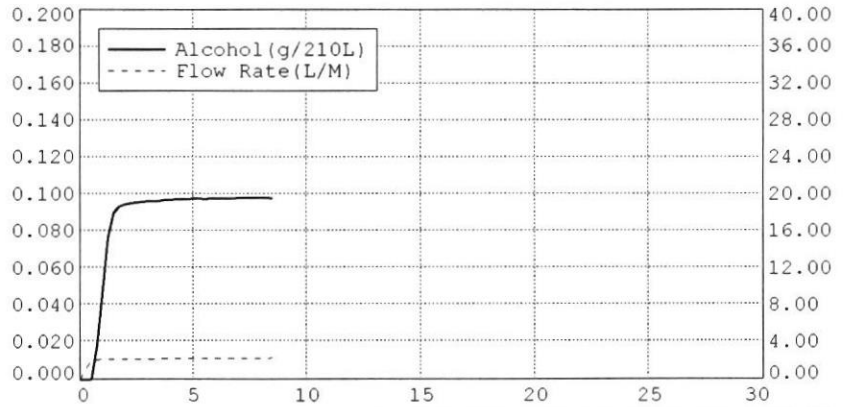
Date: 12/22/2021
 Time: 11:04:39

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 29.76: 0.099
 LOT #: AG108404
 EXPIRATION: 03/25/2023
 TANK PRESSURE: 817 psi

BLANK TEST	0.000	11:05
INTERNAL STANDARD	VERIFIED	11:06
EXTERNAL STANDARD	0.099	11:06
BLANK TEST	0.000	11:07
EXTERNAL STANDARD	0.099	11:07
BLANK TEST	0.000	11:08
EXTERNAL STANDARD	0.099	11:08
BLANK TEST	0.000	11:09
EXTERNAL STANDARD	0.100	11:09
BLANK TEST	0.000	11:10
EXTERNAL STANDARD	0.100	11:10
BLANK TEST	0.000	11:11

Average = 0.0994
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
 DATAMASTER dmt: 100399

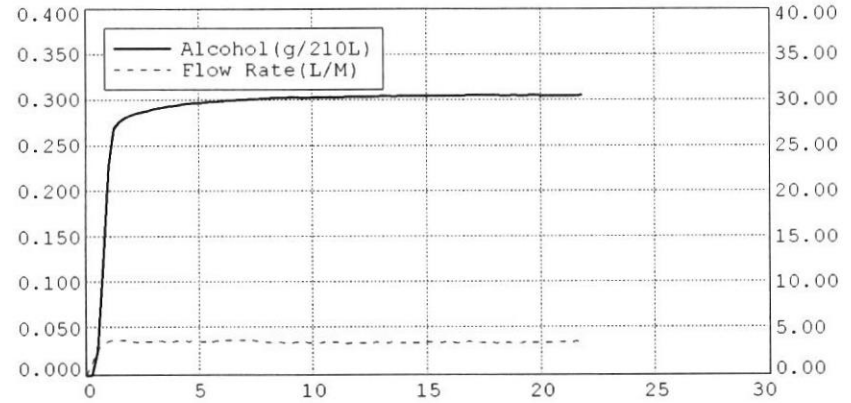
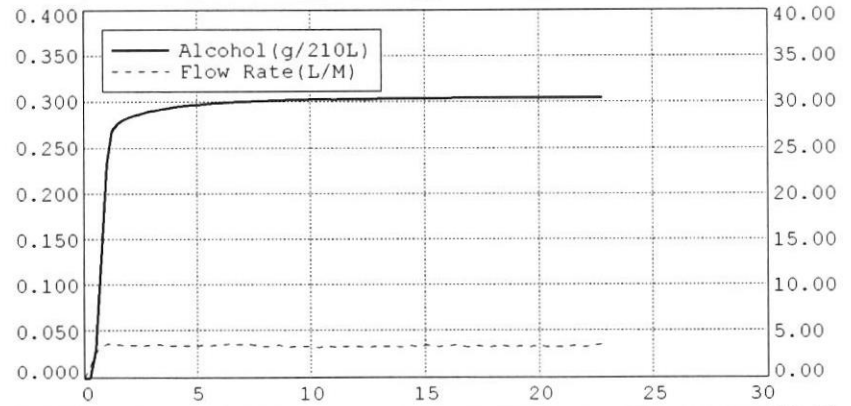
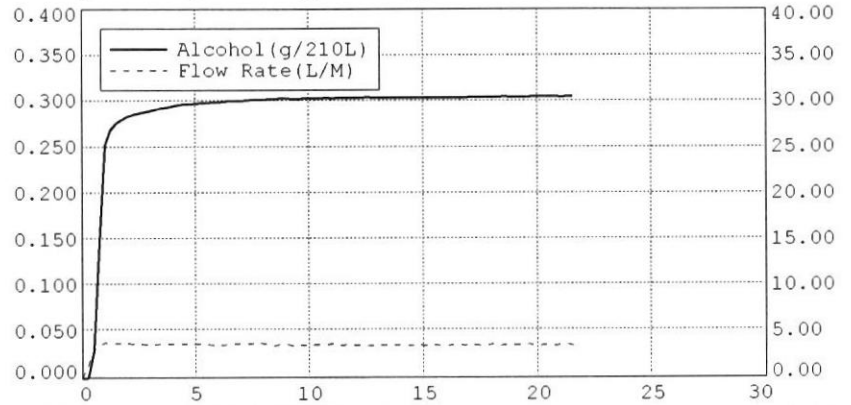
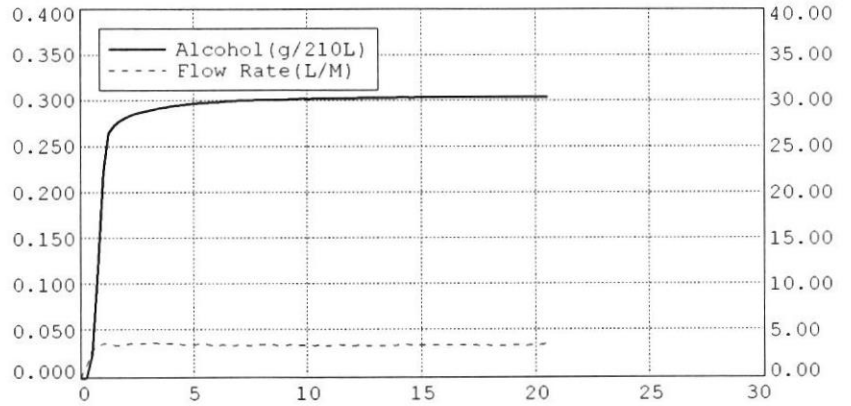
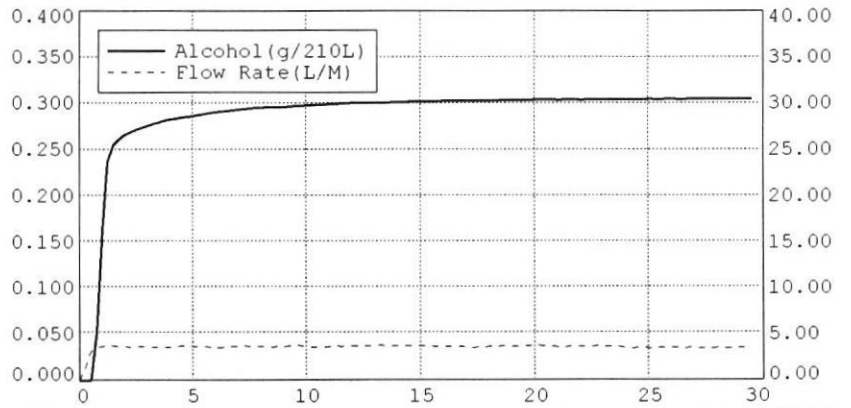
Date: 12/22/2021
 Time: 11:11:54

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

BLANK TEST	0.000	11:15
INTERNAL STANDARD	VERIFIED	11:15
EXTERNAL STANDARD	0.304	11:15
BLANK TEST	0.000	11:16
EXTERNAL STANDARD	0.304	11:17
BLANK TEST	0.000	11:18
EXTERNAL STANDARD	0.304	11:18
BLANK TEST	0.000	11:19
EXTERNAL STANDARD	0.305	11:20
BLANK TEST	0.000	11:21
EXTERNAL STANDARD	0.305	11:21
BLANK TEST	0.000	11:22

Average = 0.3044
 Std Dev = 0.0005

*Simulator SN: SD1002
 Calibrated: 6/15/21
 CBS 12/22/21*



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100405

Date: 12/22/2021
Time: 10:29:47

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 = 47.9°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.69 V PASSED
(1.01 V - 2.37 V)
Cooler Voltage = 1.74 V PASSED
(1.01 V - 2.37 V)
Bias Voltage = 81 V PASSED
(49 V - 113 V)
Chopper Freq = 525 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.8 in

PUMP INFO

Flow Rate = 5.161 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 PASSED
Xq = 0.088 0.20% (0.00% - 4.00%)

Technician Screen

DATAMASTER dmt: 100405

Date: 12/22/2021
Time: 10:38 AM

Temperatures (°C)

Sample Cell: 48.8°C
Breath Tube: 47.9°C

Current Barometer 29.8 in
Volume (Ltr) 0.00

Settings

Lamp: 1.74 V
Bias: 81 V
Cooler: 1.74 V
Chopper: 523 Hz

Voltages (V)

Flow: 1.05 V
Detector: -0.023 V

LINEARITY CHECK

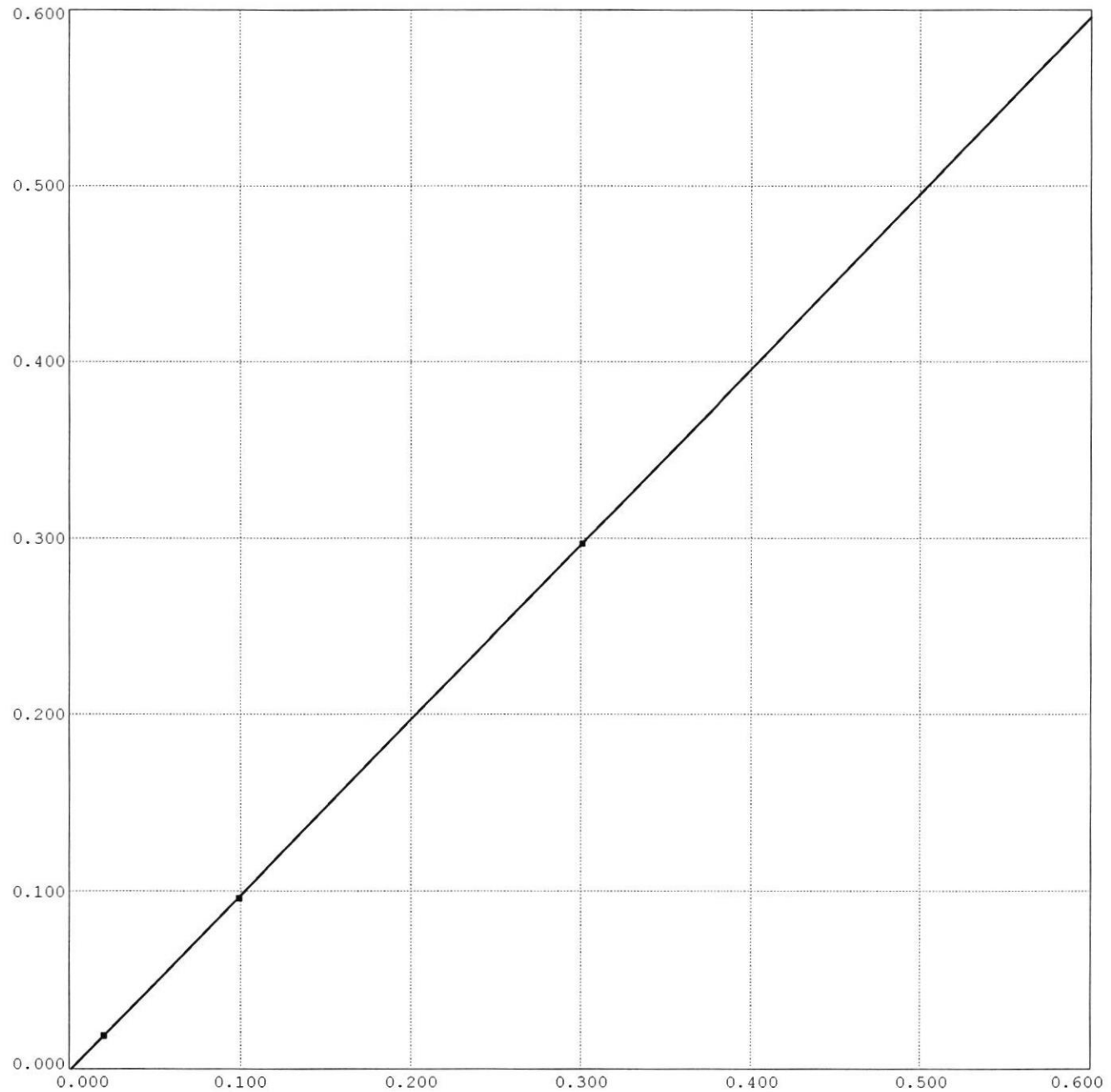
Alaska Department of Public Safety
DATAMASTER dmt: 100405

Date: 12/22/2021
Time: 10:39:23

SUPERVISOR NAME:
COLLEEN S OBRYANT
OPERATOR'S #: 6237

TARGET	AVERAGE	STD. DEV.
0.020	0.0192	0.0004
0.099	0.0970	0.0000
0.300	0.2976	0.0005

SLOPE = 0.995016
R² = 0.999991



CB

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety
DATAMASTER dmt: 100405

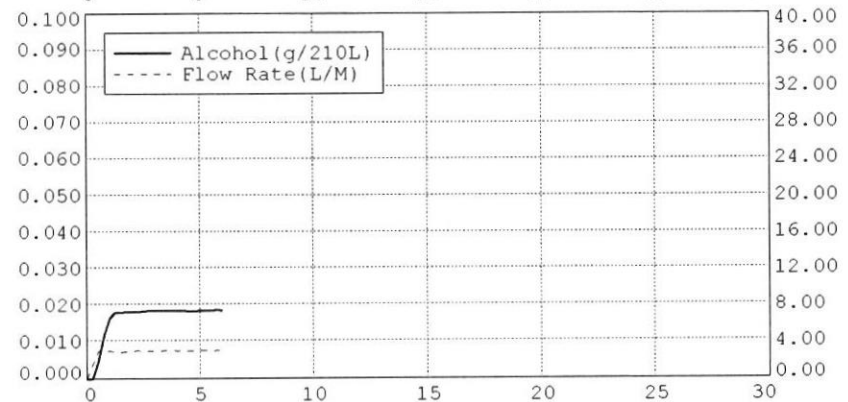
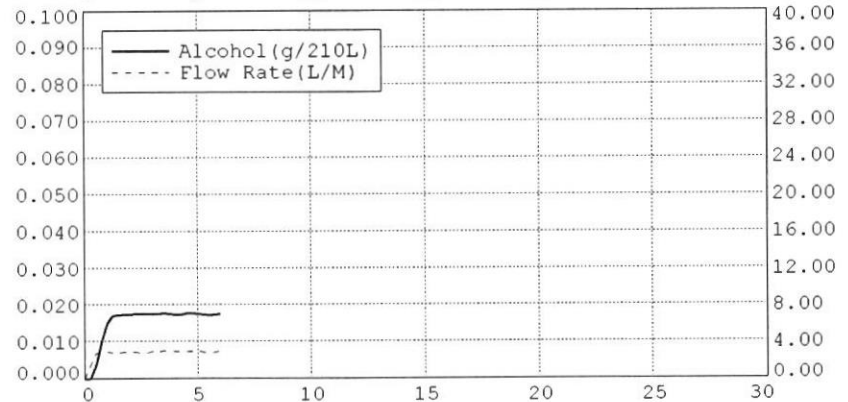
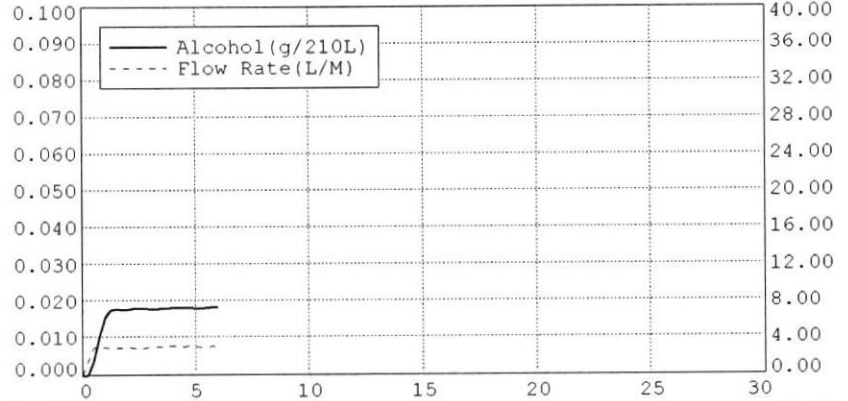
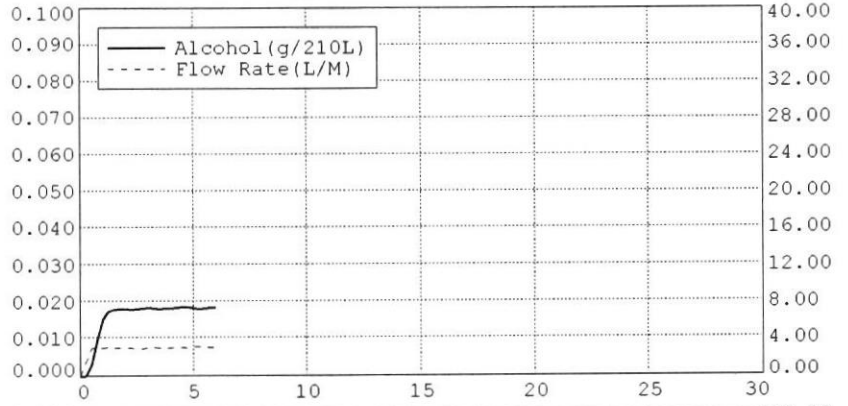
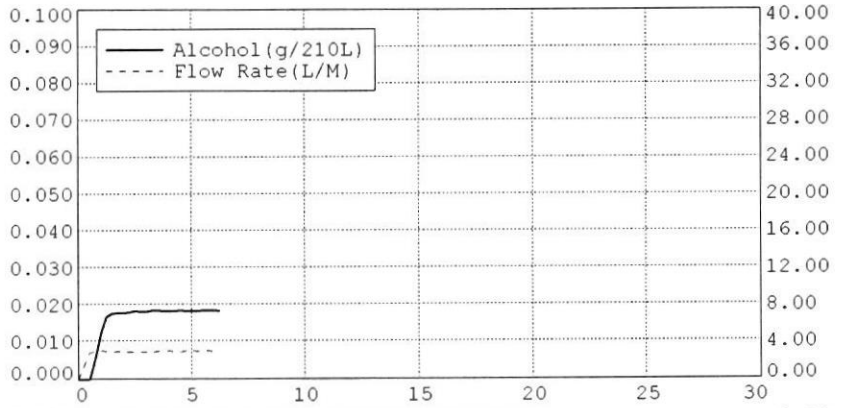
Date: 12/22/2021
Time: 10:39:25

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
TARGET AT 29.77: 0.020
LOT #: AG100401
EXPIRATION: 01/04/2023
TANK PRESSURE: 796 psi

BLANK TEST	0.000	10:46
INTERNAL STANDARD	VERIFIED	10:46
EXTERNAL STANDARD	0.020	10:46
BLANK TEST	0.000	10:47
EXTERNAL STANDARD	0.019	10:47
BLANK TEST	0.000	10:48
EXTERNAL STANDARD	0.019	10:48
BLANK TEST	0.000	10:49
EXTERNAL STANDARD	0.019	10:49
BLANK TEST	0.000	10:50
EXTERNAL STANDARD	0.019	10:50
BLANK TEST	0.000	10:51

Average = 0.0192
Std Dev = 0.0004



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
 DATAMASTER dmt: 100405

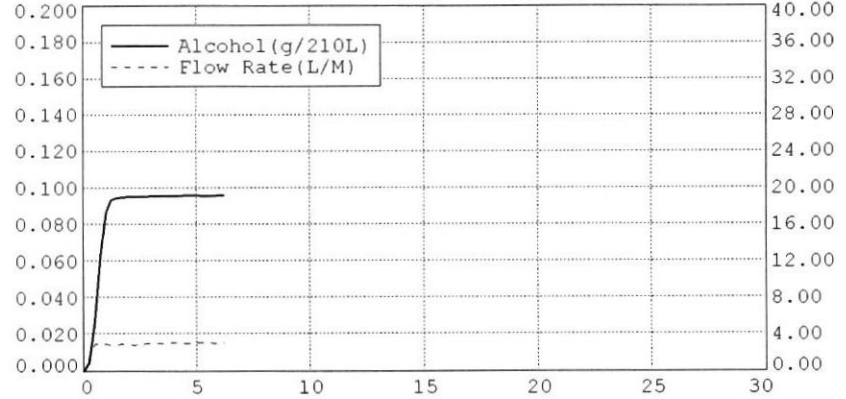
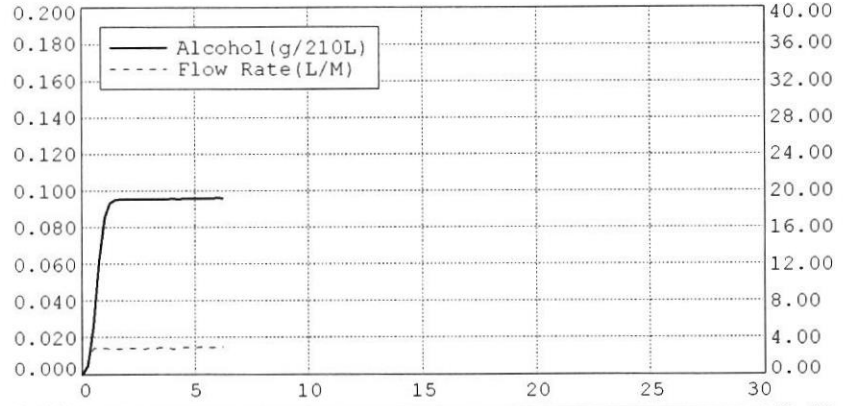
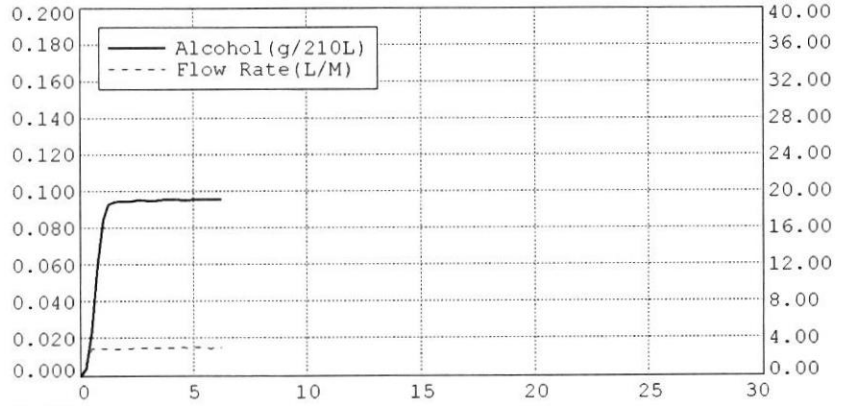
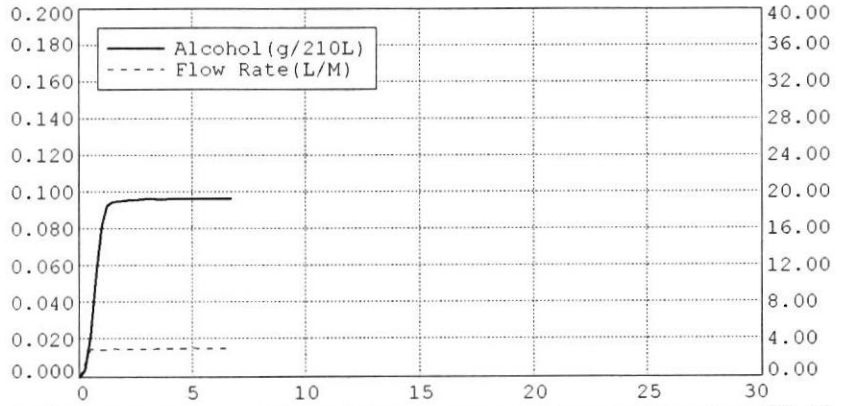
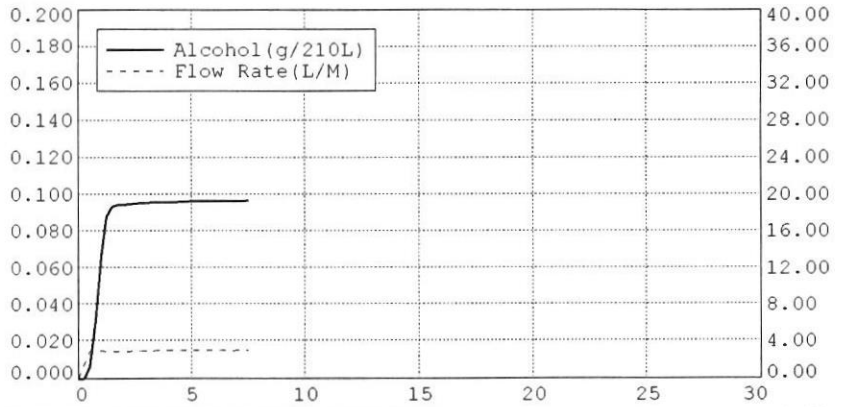
Date: 12/22/2021
 Time: 10:57:14

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 29.76: 0.099
 LOT #: AG108404
 EXPIRATION: 03/25/2023
 TANK PRESSURE: 819 psi

BLANK TEST	0.000	10:58
INTERNAL STANDARD	VERIFIED	10:58
EXTERNAL STANDARD	0.097	10:59
BLANK TEST	0.000	11:00
EXTERNAL STANDARD	0.097	11:00
BLANK TEST	0.000	11:01
EXTERNAL STANDARD	0.097	11:01
BLANK TEST	0.000	11:02
EXTERNAL STANDARD	0.097	11:02
BLANK TEST	0.000	11:03
EXTERNAL STANDARD	0.097	11:03
BLANK TEST	0.000	11:04

Average = 0.0970
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
 DATAMASTER dmt: 100405

Date: 12/22/2021
 Time: 11:05:28

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

BLANK TEST	0.000	11:07
INTERNAL STANDARD	VERIFIED	11:07
EXTERNAL STANDARD	0.298	11:08
BLANK TEST	0.000	11:09
EXTERNAL STANDARD	0.297	11:09
BLANK TEST	0.000	11:10
EXTERNAL STANDARD	0.297	11:11
BLANK TEST	0.000	11:12
EXTERNAL STANDARD	0.298	11:12
BLANK TEST	0.000	11:13
EXTERNAL STANDARD	0.298	11:14
BLANK TEST	0.000	11:14

Average = 0.2976
 Std Dev = 0.0005

*Simulator SN: SD1202
 Calibrated: 6/15/21
 CMB 12/22/21*

