



GUTH LABORATORIES, INC.

690 NORTH 67th STREET • HARRISBURG, PA 17111-4511 • TELEPHONE: 717-664-6470

CERTIFICATE OF ANALYSIS

Certified Alcohol Reference Solution for Simulator

Random Samples of Lot Number **18070** of Alcohol Reference Solution for Simulator were analyzed by gas chromatography on **February 28, 2018**, using a Perkin Elmer Gas Chromatograph Autosystem XL S/N: 610N9030209, and found to contain **0.1219%** (w/vol) ethyl alcohol. The expiration date for this lot number is **February 26, 2020** 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: 04/10/2018
Time: 10:55:34

SUPERVISOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.100

BLANK TEST	0.000	10:56
INTERNAL STANDARD	VERIFIED	10:57
EXTERNAL STANDARD	0.103	10:57
BLANK TEST	0.000	10:58
EXTERNAL STANDARD	0.104	10:58
BLANK TEST	0.000	10:59
EXTERNAL STANDARD	0.104	11:00
BLANK TEST	0.000	11:01
EXTERNAL STANDARD	0.104	11:01
BLANK TEST	0.000	11:02
EXTERNAL STANDARD	0.104	11:02
BLANK TEST	0.000	11:03

Average = 0.1038
Std Dev = 0.0004

Simulator DR4161

Calibrated 01/24/2018

Gain 0.100

Lot # 18070

Exp. 02/26/2020

0.1038

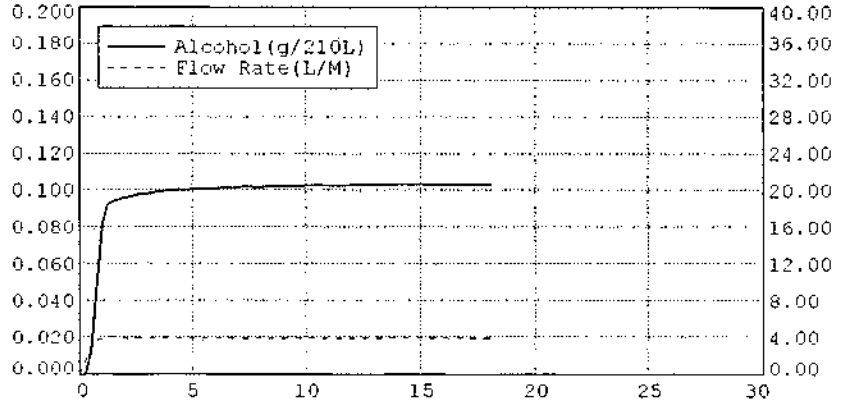
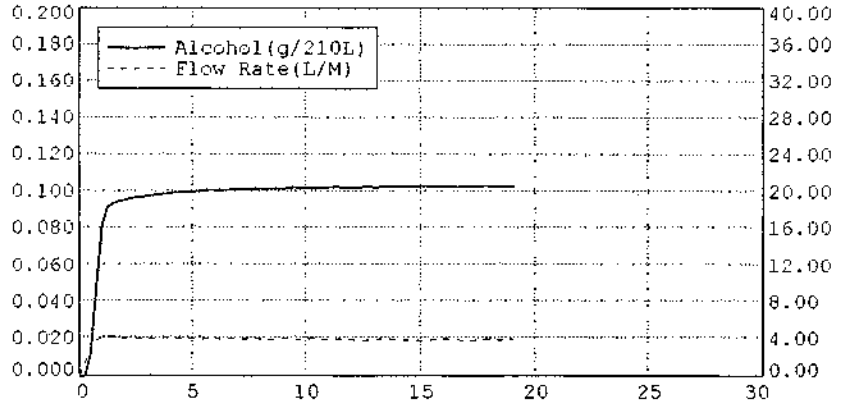
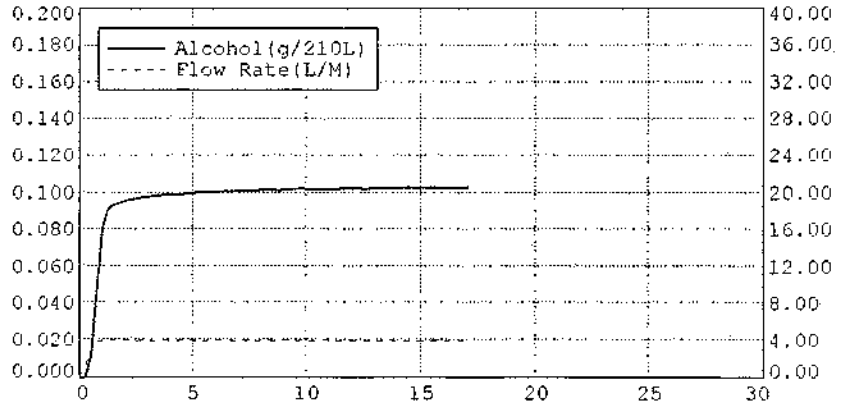
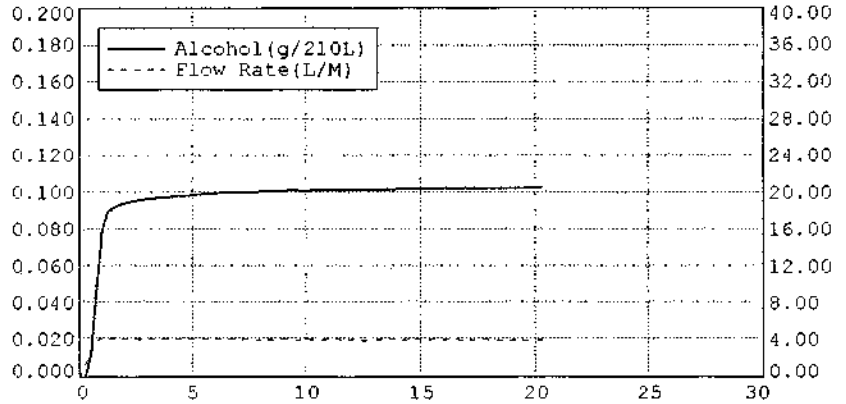
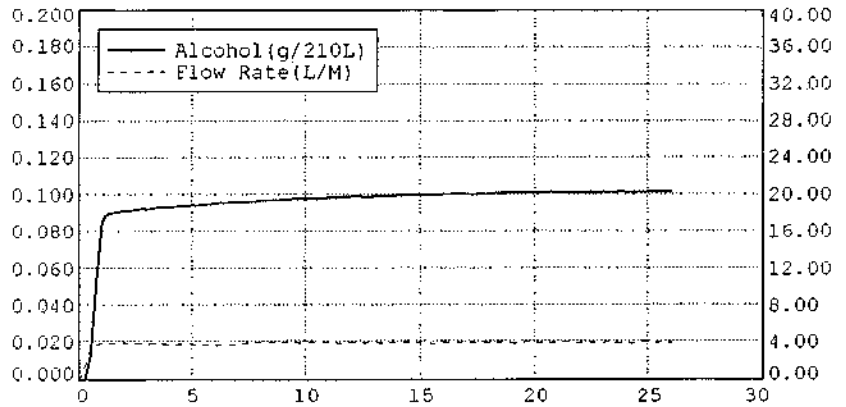
0.1034

0.1024

Avg 0.103

Supervised by CAS 4/10/18

DW 04/10/18



SUPERVISOR TEST

Alaska Department of Public Safety
 DATAMASTER dmt: 100411

Date: 04/10/2018
 Time: 10:30:12

SUPERVISOR NAME:
 DEREK WALTON
 OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION
 NOMINAL: 0.100

BLANK TEST	0.000	10:31
INTERNAL STANDARD	VERIFIED	10:31
EXTERNAL STANDARD	0.103	10:32
BLANK TEST	0.000	10:33
EXTERNAL STANDARD	0.103	10:33
BLANK TEST	0.000	10:34
EXTERNAL STANDARD	0.104	10:34
BLANK TEST	0.000	10:35
EXTERNAL STANDARD	0.104	10:36
BLANK TEST	0.000	10:37
EXTERNAL STANDARD	0.103	10:37
BLANK TEST	0.000	10:38

Average = 0.1034
 Std Dev = 0.0005

Auto 0.100

Lot # 18070

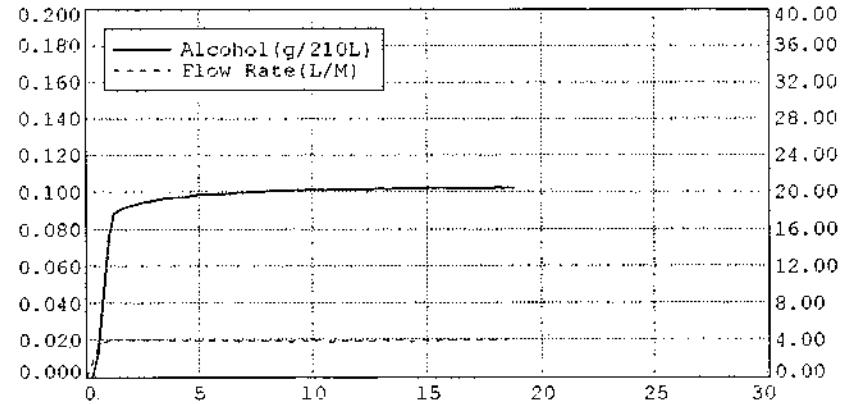
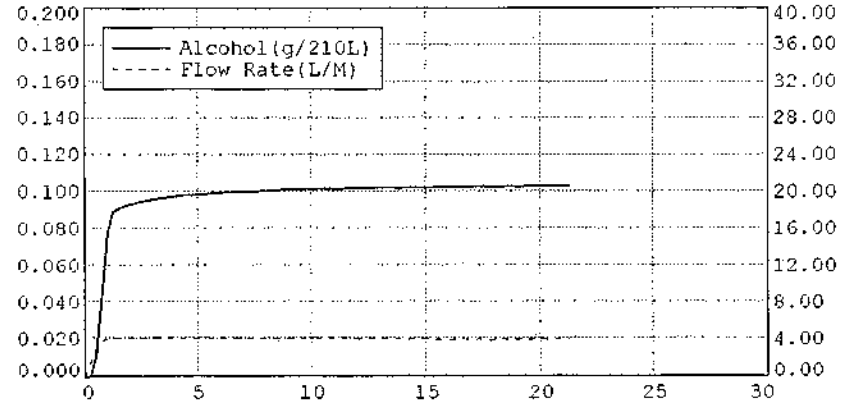
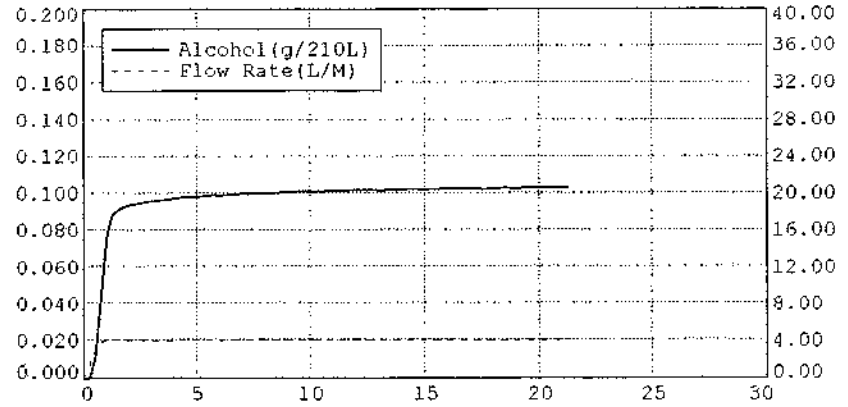
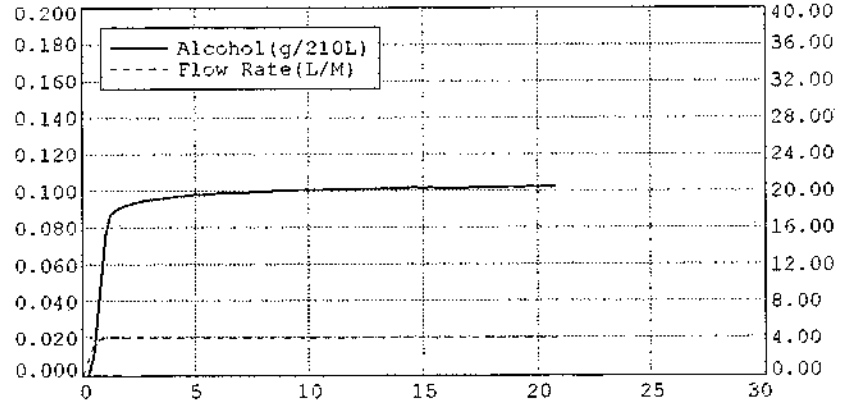
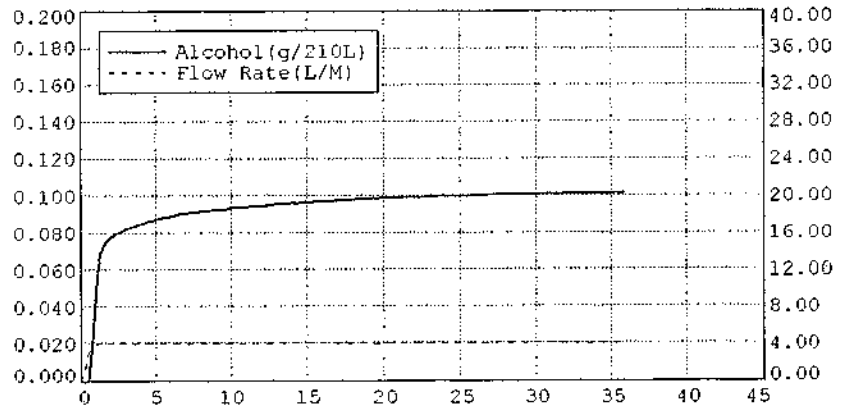
Exp. 02/26/2020

0.1038

0.1034

0.1024

Arg 0.103



SUPERVISOR TEST

Alaska Department of Public Safety
 DATAMASTER dmt: 100671

Date: 04/10/2018
 Time: 11:26:41

SUPERVISOR NAME:
 DEREK WALTON
 OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION
 NOMINAL: 0.100

BLANK TEST	0.000	11:27
INTERNAL STANDARD	VERIFIED	11:27
EXTERNAL STANDARD	0.103	11:28
BLANK TEST	0.000	11:29
EXTERNAL STANDARD	0.103	11:29
BLANK TEST	0.000	11:30
EXTERNAL STANDARD	0.102	11:31
BLANK TEST	0.000	11:32
EXTERNAL STANDARD	0.102	11:32
BLANK TEST	0.000	11:33
EXTERNAL STANDARD	0.102	11:33
BLANK TEST	0.000	11:34

Average = 0.1024
 Std Dev = 0.0005

Concn 0.100

Lot # 18070

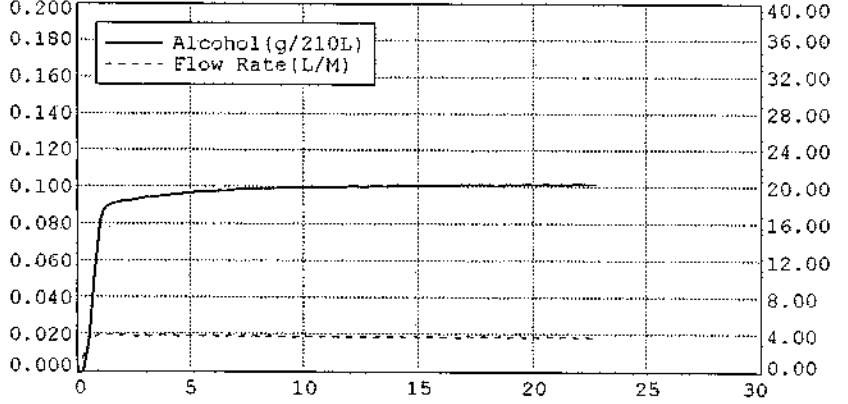
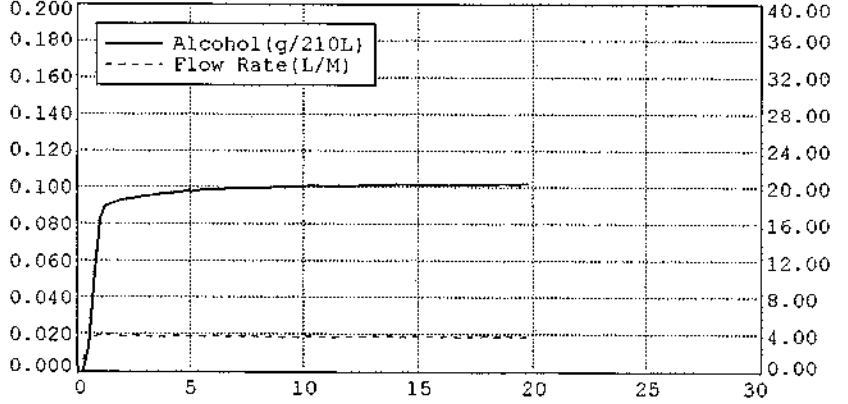
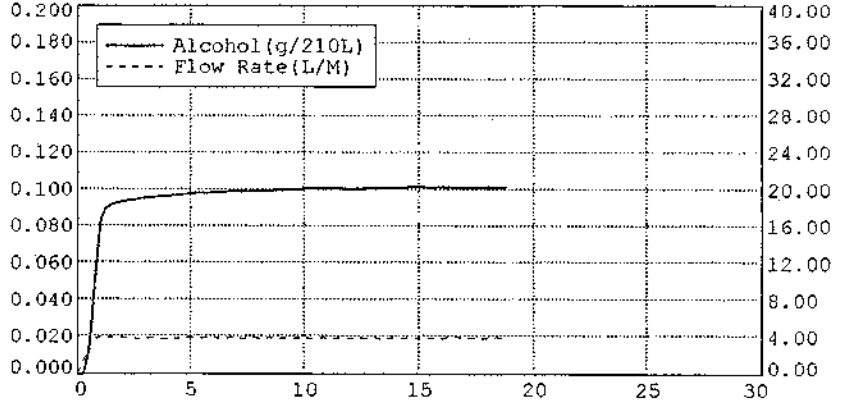
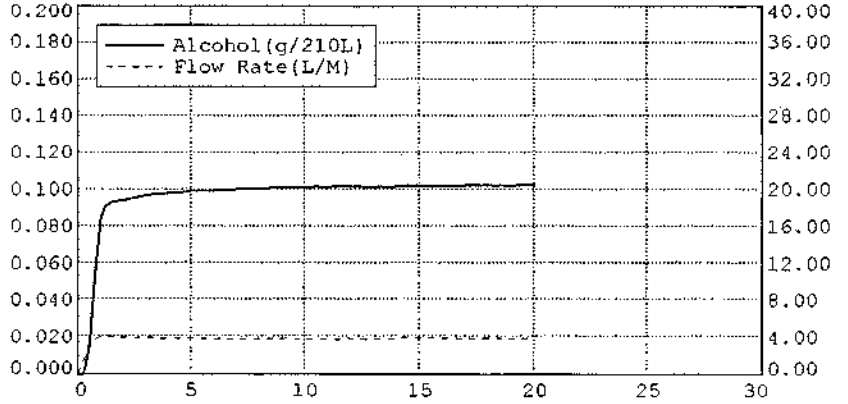
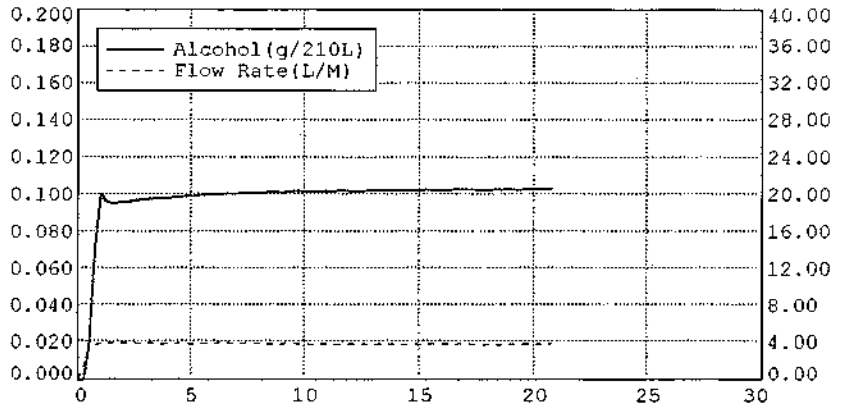
Exp. 02/26/2020

0.1038

0.1034

0.1024

Avg 0.103



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100353

Date: 04/10/2018
Time: 09:09:31

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

TEMPERATURES

Sample Chamber = 49.1°C PASSED
(44.0°C - 52.0°C)
Breath Tube = 48.1°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 2.17 V PASSED
(1.30 V - 3.04 V)
Cooler Voltage = 2.12 V PASSED
(1.26 V - 2.94 V)
Bias Voltage = 80 V PASSED
(48 V - 112 V)
Chopper Freq = 541 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.1 in

PUMP INFO

Flow Rate = 4.705 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 = 0.094 0.28% (0.00% - 4.00%) PASSED

*In-house QC
Supervised case work
COB 4/10/18*

Technician Screen

DATAMASTER dmt: 100353

Date: 04/10/2018
Time: 9:25 AM

Temperatures (°C)

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

Current Barometer 29.1 in
Volume (Ltr) 0.00

Settings

Lamp: 2.17 V
Bias: 80 V
Cooler: 2.12 V
Chopper: 598 Hz

Voltages (V)

Flow: 1.06 V
Detector: 0.071 V

LINEARITY CHECK

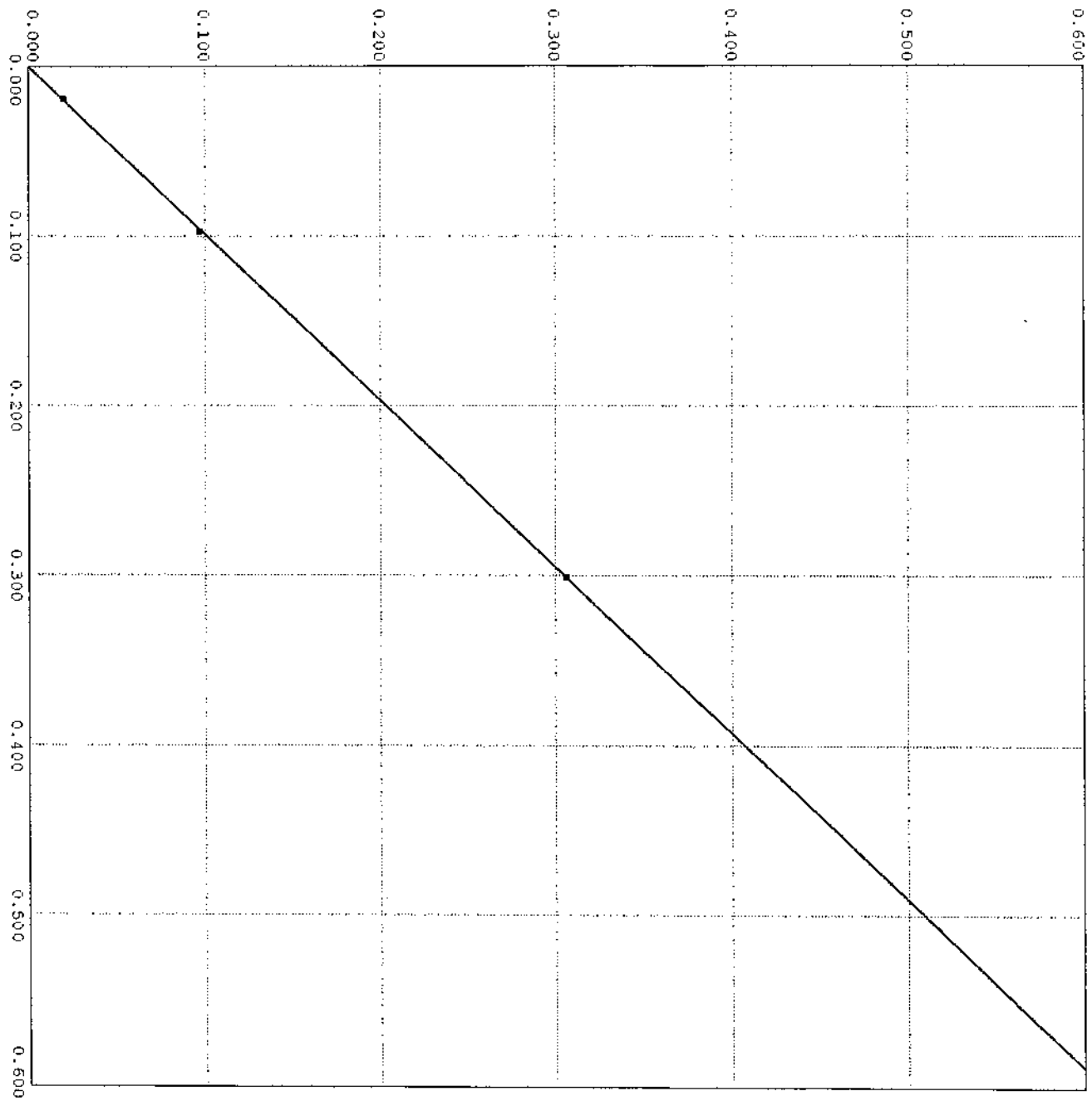
Alaska Department of Public Safety
DATAMASTER dmt: 100353

Date: 04/10/2018
Time: 09:46:12

SUPERVISOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.019	0.0204	0.0005
0.097	0.0980	0.0000
0.300	0.3068	0.0008

SLOPE = 1.021097
R² = 0.999949



WDC

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety
 DATAMASTER dmt: 100353

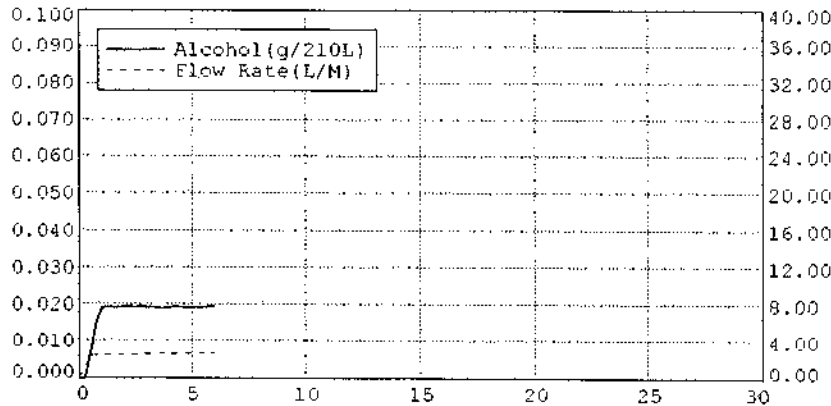
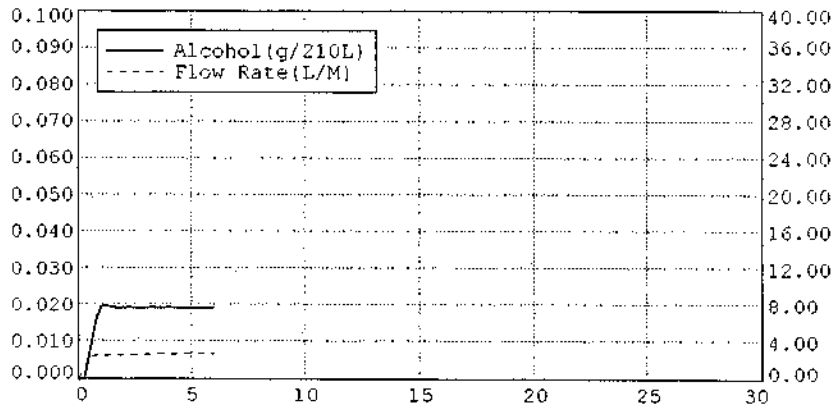
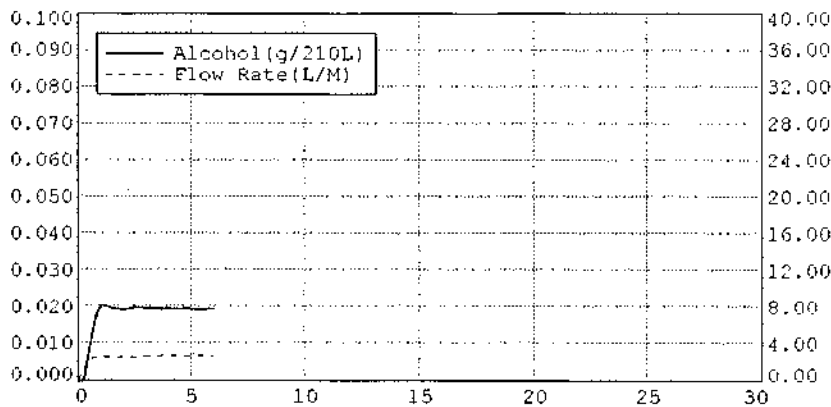
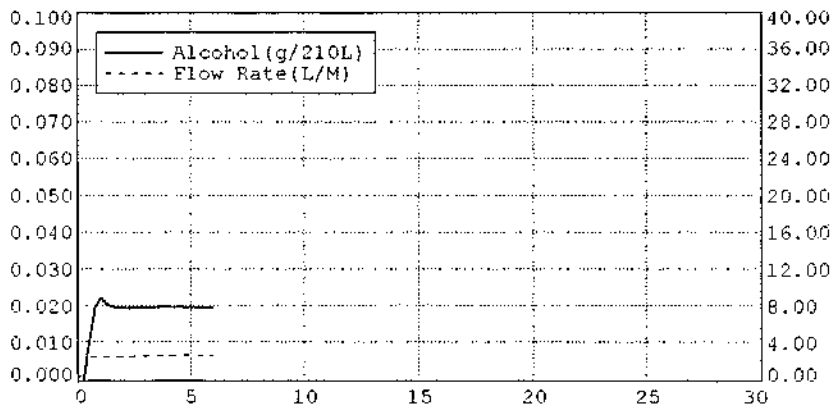
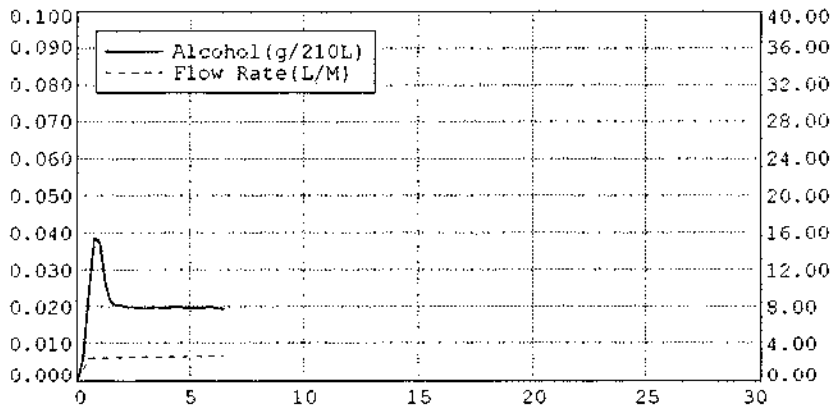
Date: 04/10/2018
 Time: 09:46:15

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
 TARGET AT 29.09: 0.019
 LOT #: AG616504
 EXPIRATION: 06/13/2018
 TANK PRESSURE: 1135 psi

BLANK TEST	0.000	09:48
INTERNAL STANDARD	VERIFIED	09:48
EXTERNAL STANDARD	0.021	09:48
BLANK TEST	0.000	09:49
EXTERNAL STANDARD	0.021	09:49
BLANK TEST	0.000	09:50
EXTERNAL STANDARD	0.020	09:50
BLANK TEST	0.000	09:51
EXTERNAL STANDARD	0.020	09:51
BLANK TEST	0.000	09:52
EXTERNAL STANDARD	0.020	09:52
BLANK TEST	0.000	09:53

Average = 0.0204
 Std Dev = 0.0005



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
 DATAMASTER dmt: 100353

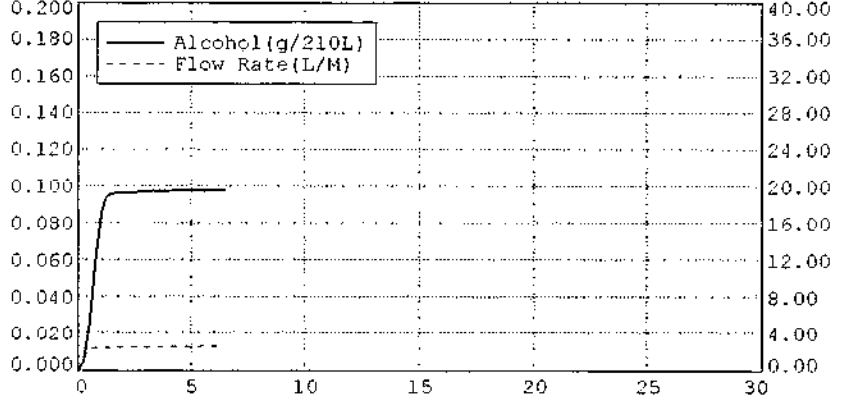
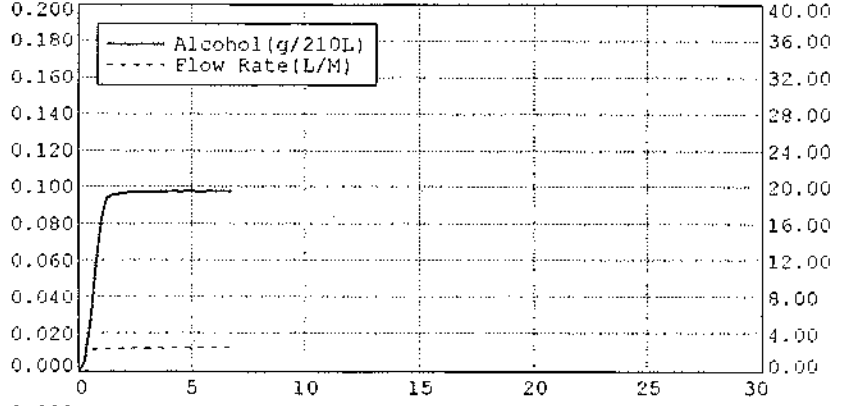
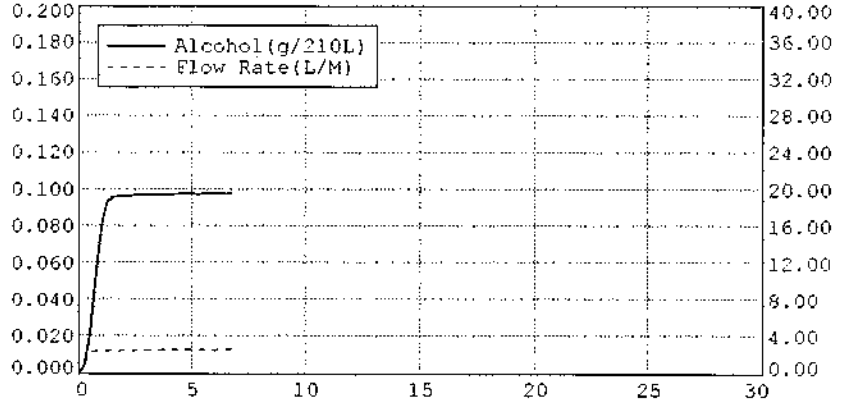
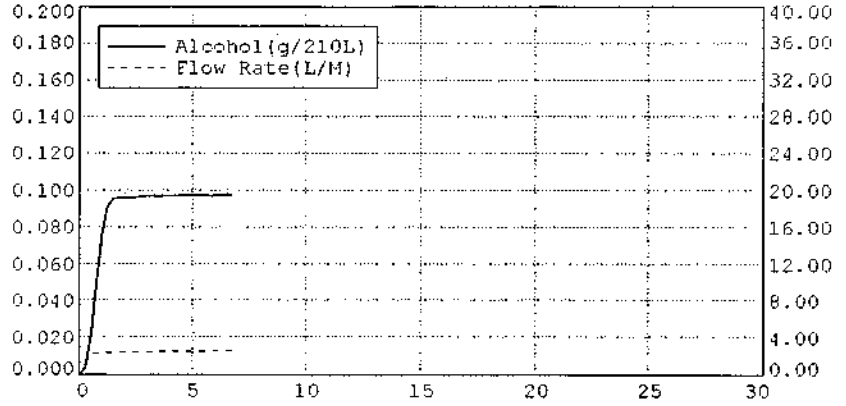
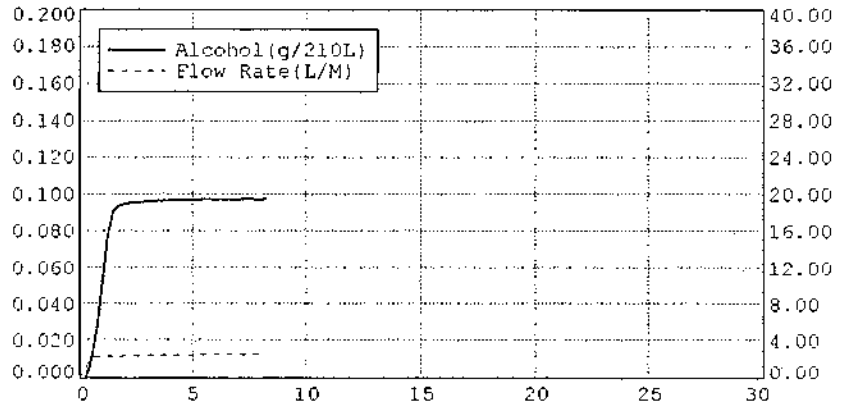
Date: 04/10/2018
 Time: 09:57:22

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 29.10: 0.097
 LOT #: AG629304
 EXPIRATION: 10/19/2018
 TANK PRESSURE: 658 psi

BLANK TEST	0.000	09:59
INTERNAL STANDARD	VERIFIED	09:59
EXTERNAL STANDARD	0.098	10:00
BLANK TEST	0.000	10:00
EXTERNAL STANDARD	0.098	10:01
BLANK TEST	0.000	10:02
EXTERNAL STANDARD	0.098	10:02
BLANK TEST	0.000	10:03
EXTERNAL STANDARD	0.098	10:03
BLANK TEST	0.000	10:04
EXTERNAL STANDARD	0.098	10:04
BLANK TEST	0.000	10:05

Average = 0.0980
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
 DATAMASTER dmt: 100353

Date: 04/10/2018
 Time: 10:07:13

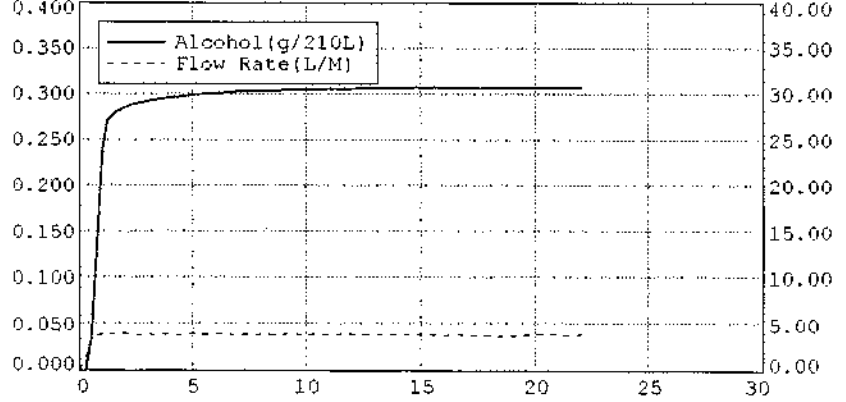
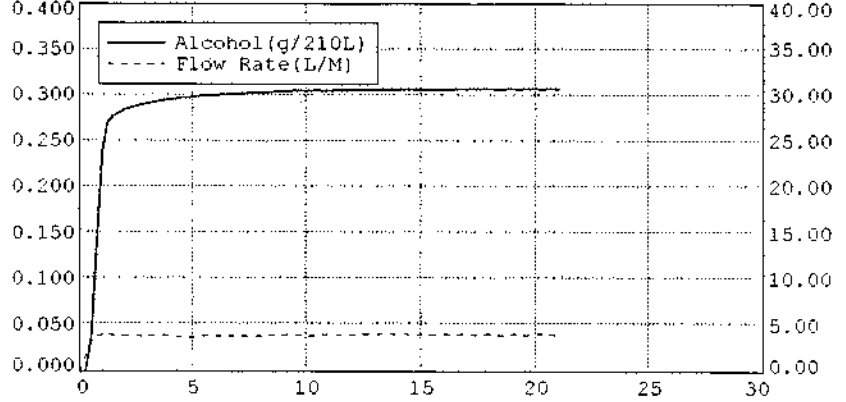
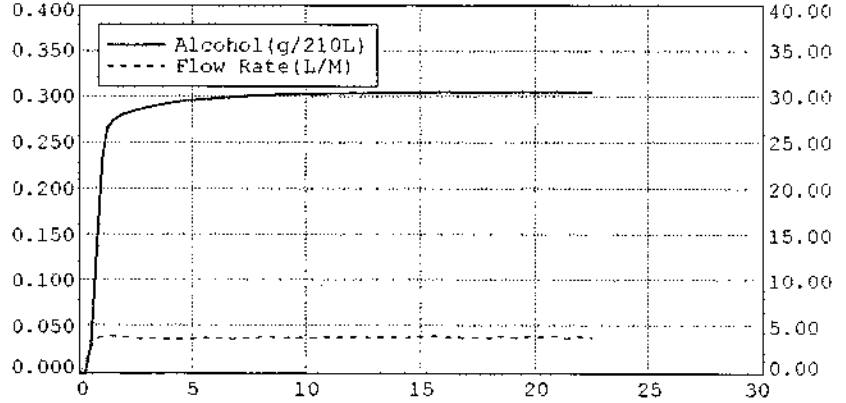
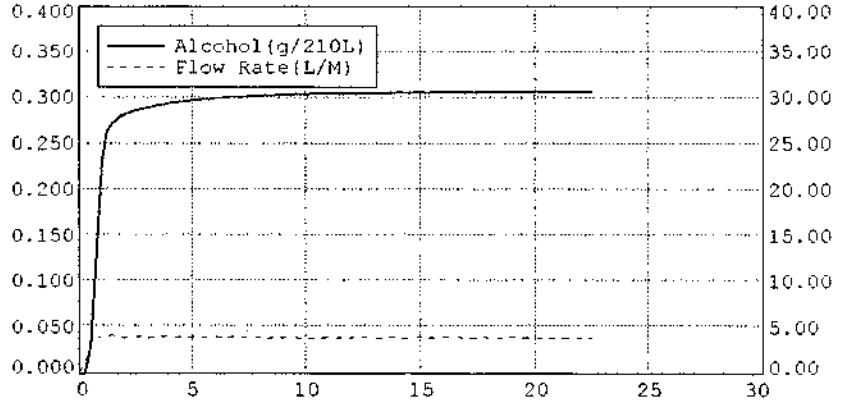
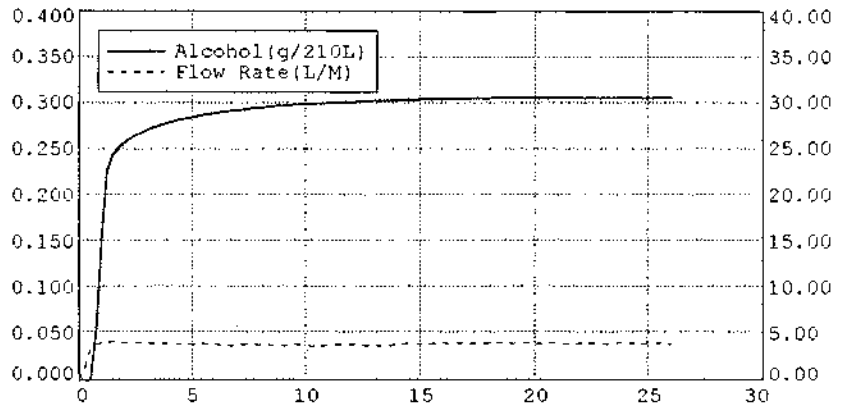
EXTERNAL STANDARD INFORMATION

NOMINAL: 0.300
 LOT #: 17140
 EXPIRATION: 05/15/2019

BLANK TEST	0.000	10:17
INTERNAL STANDARD	VERIFIED	10:17
EXTERNAL STANDARD	0.306	10:18
BLANK TEST	0.000	10:19
EXTERNAL STANDARD	0.307	10:19
BLANK TEST	0.000	10:20
EXTERNAL STANDARD	0.306	10:21
BLANK TEST	0.000	10:22
EXTERNAL STANDARD	0.307	10:22
BLANK TEST	0.000	10:23
EXTERNAL STANDARD	0.308	10:24
BLANK TEST	0.000	10:24

Average = 0.3068
 Std Dev = 0.0008

JMV 04/10/18
 Simulator S/N: 17140 SD1198
 Calibrated: 01/23/2018
JMV 04/10/18



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100411

Date: 04/10/2018
Time: 08:55:13

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

TEMPERATURES

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

SETTINGS

Lamp Voltage = 1.84 V PASSED
(1.10 V - 2.58 V)
Cooler Voltage = 1.95 V PASSED
(1.06 V - 2.48 V)
Bias Voltage = 80 V PASSED
(48 V - 112 V)
Chopper Freq = 540 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.1 in

PUMP INFO

Flow Rate = 5.132 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

Xg = 0.086 0.40% (0.00% - 4.00%) PASSED

Technician Screen

DATAMASTER dmt: 100411

Date: 04/10/2018
Time: 9:11 AM

Temperatures (°C)
Sample Cell: 48.7°C
Breath Tube: 48.1°C

Current Barometer 29.1 in
Volume (Ltr) 0.00

Settings
Lamp: 1.84 V
Bias: 80 V
Cooler: 1.95 V
Chopper: 564 Hz

Voltages (V)
Flow: 1.05 V
Detector: -0.023 V

LINEARITY CHECK

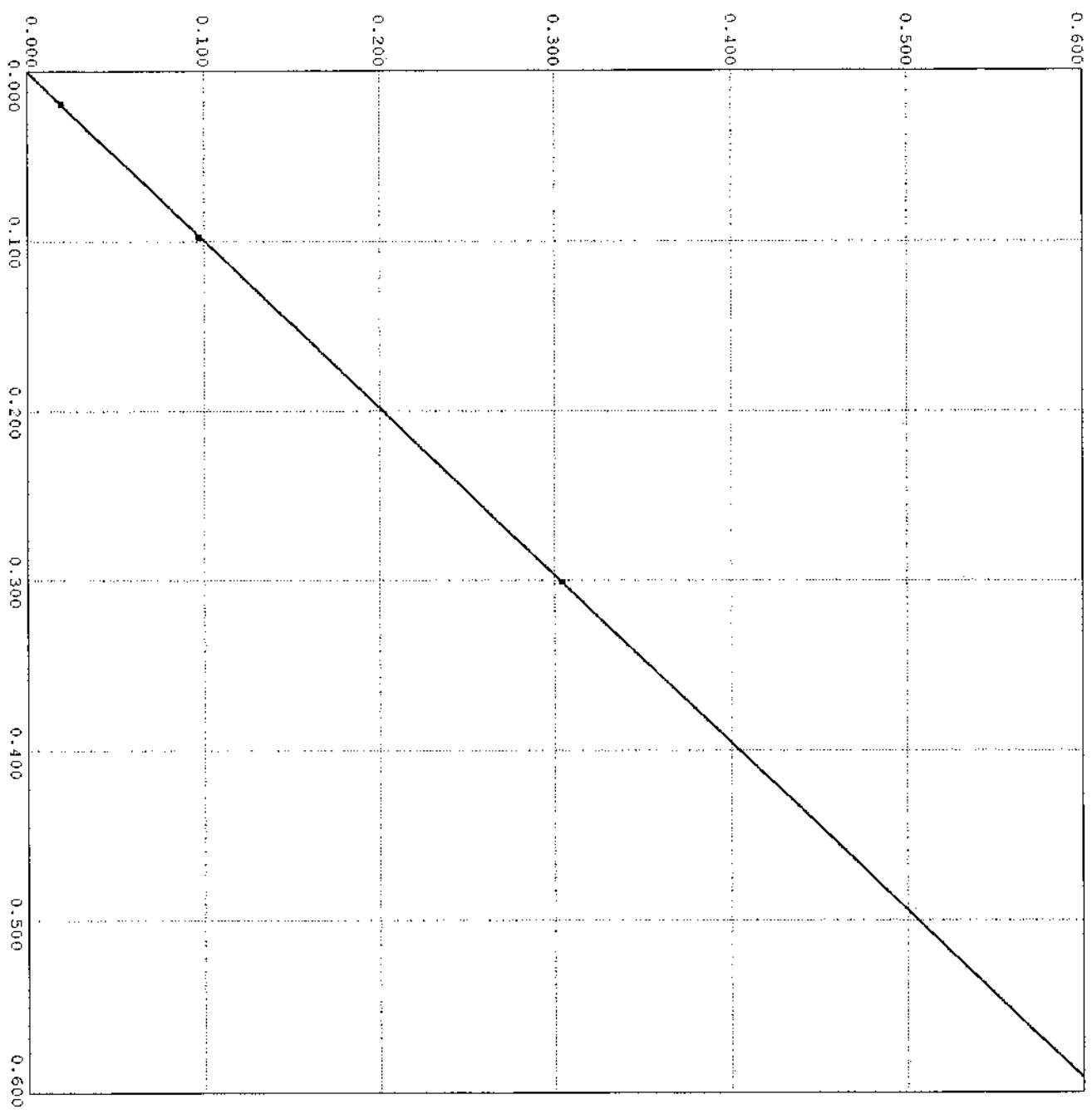
Alaska Department of Public Safety
DATAMASTER dmt: 100411

Date: 04/10/2018
Time: 09:15:54

SUPERVISOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.019	0.0200	0.0000
0.097	0.0982	0.0004
0.300	0.3048	0.0008

SLOPE = 1.014369
R² = 0.999989



2018

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety
 DATAMASTER dmt: 100411

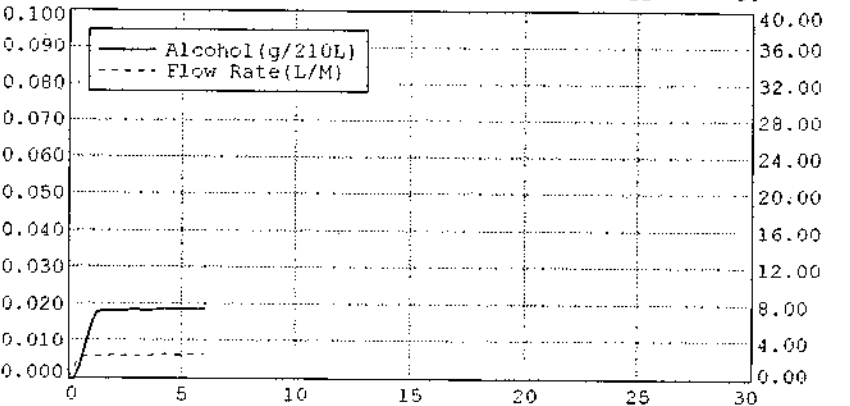
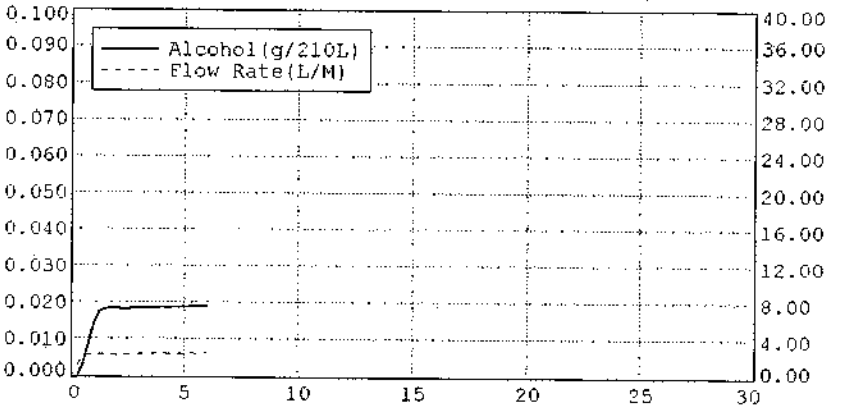
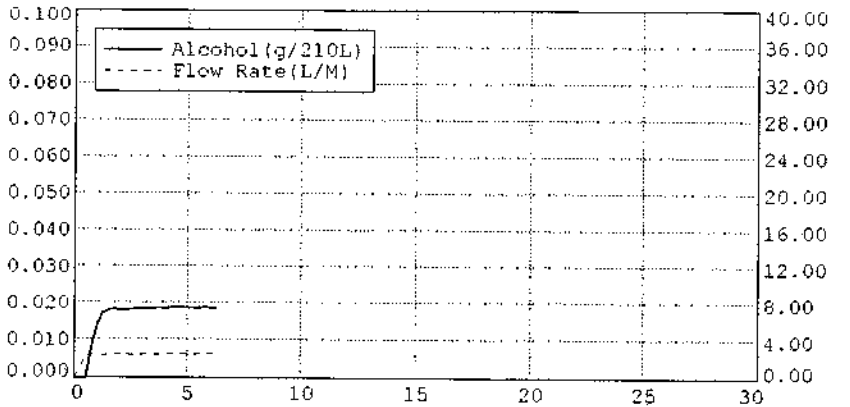
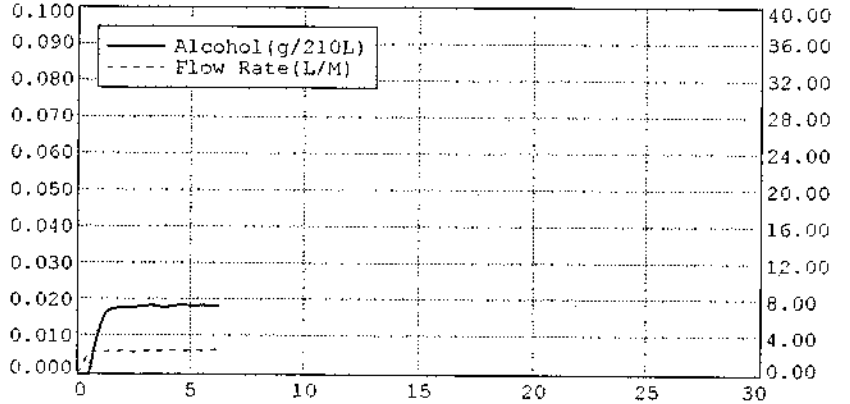
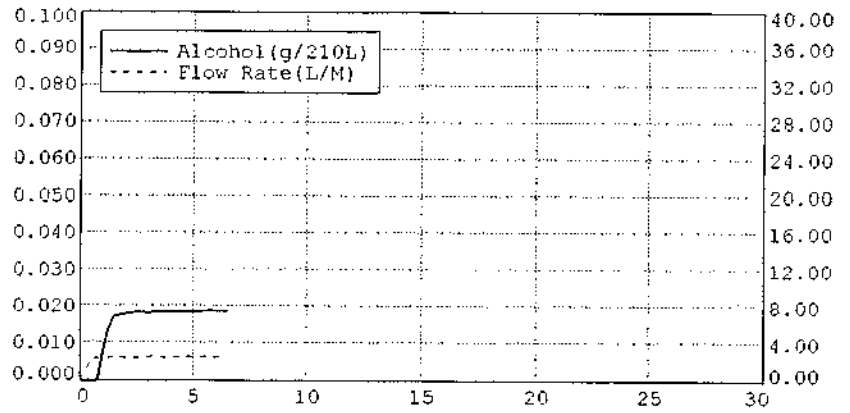
Date: 04/10/2018
 Time: 09:17:36

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
 TARGET AT 29.08: 0.019
 LOT #: AG616504
 EXPIRATION: 06/13/2018
 TANK PRESSURE: 1143 psi

BLANK TEST	0.000	09:19
INTERNAL STANDARD	VERIFIED	09:20
EXTERNAL STANDARD	0.020	09:20
BLANK TEST	0.000	09:21
EXTERNAL STANDARD	0.020	09:21
BLANK TEST	0.000	09:22
EXTERNAL STANDARD	0.020	09:22
BLANK TEST	0.000	09:23
EXTERNAL STANDARD	0.020	09:23
BLANK TEST	0.000	09:24
EXTERNAL STANDARD	0.020	09:24
BLANK TEST	0.000	09:25

Average = 0.0200
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
 DATAMASTER dmt: 100411

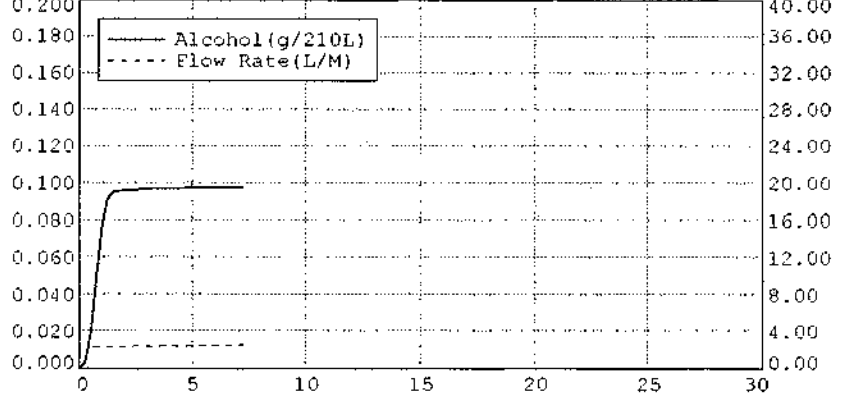
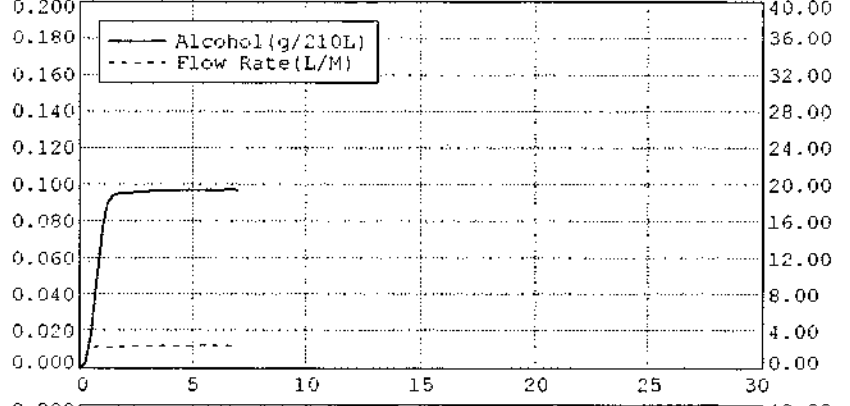
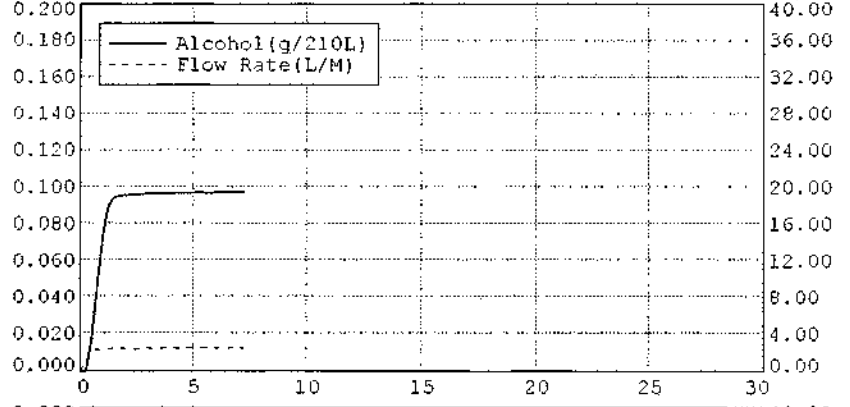
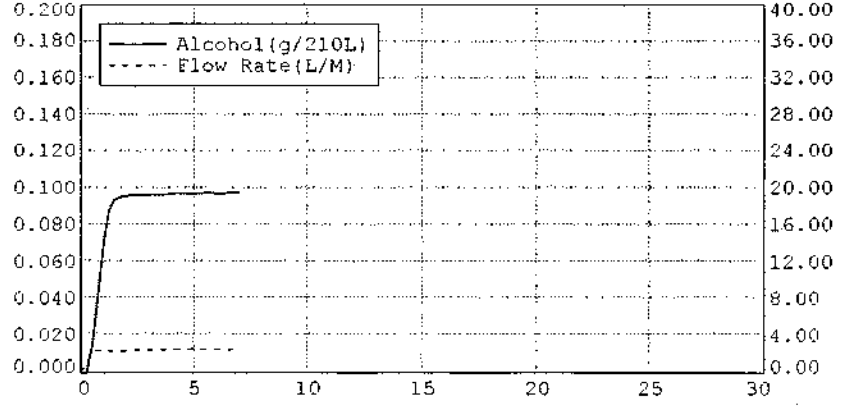
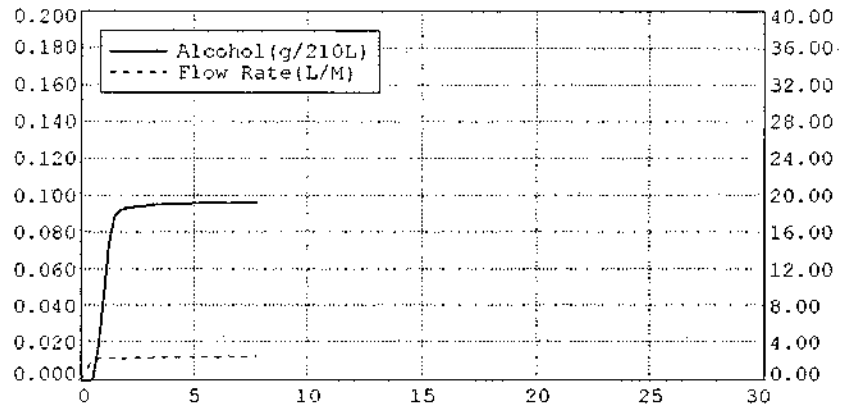
Date: 04/10/2018
 Time: 09:30:07

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 29.07: 0.097
 LOT #: AG629304
 EXPIRATION: 10/19/2018
 TANK PRESSURE: 1012 psi

BLANK TEST	0.000	09:32
INTERNAL STANDARD	VERIFIED	09:32
EXTERNAL STANDARD	0.098	09:32
BLANK TEST	0.000	09:33
EXTERNAL STANDARD	0.098	09:33
BLANK TEST	0.000	09:34
EXTERNAL STANDARD	0.098	09:34
BLANK TEST	0.000	09:35
EXTERNAL STANDARD	0.098	09:35
BLANK TEST	0.000	09:36
EXTERNAL STANDARD	0.099	09:37
BLANK TEST	0.000	09:37

Average = 0.0982
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
DATAMASTER dmt: 100411

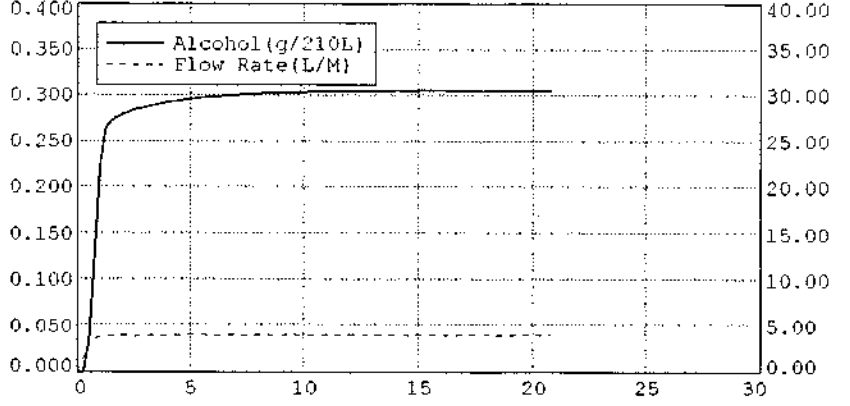
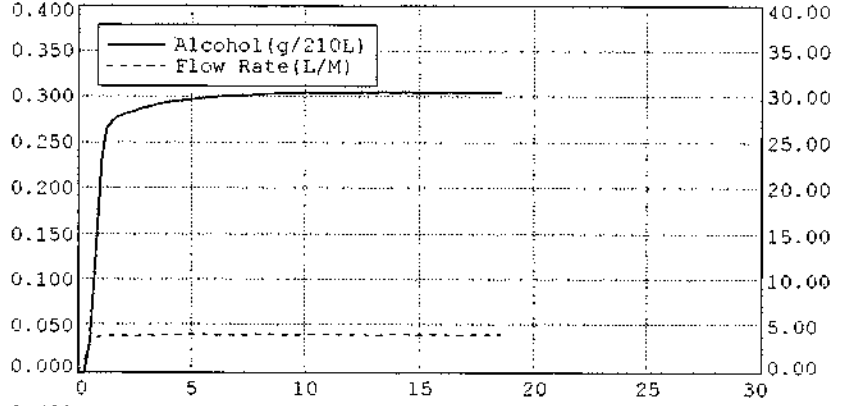
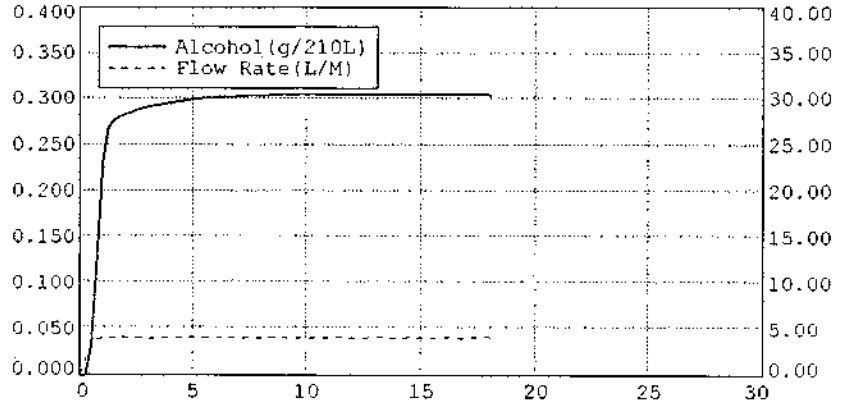
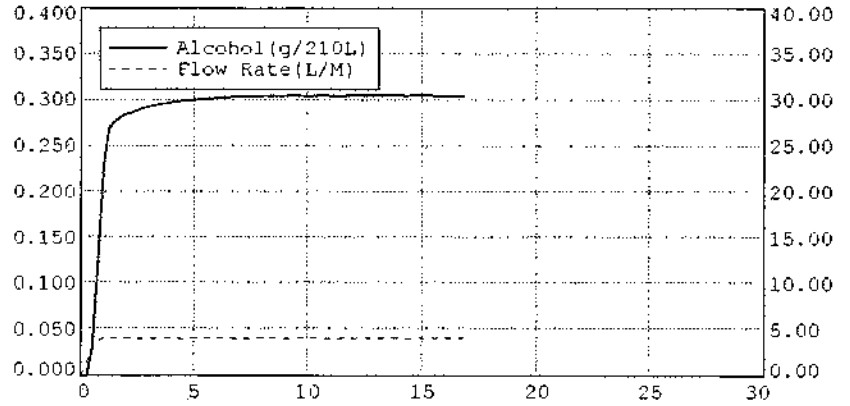
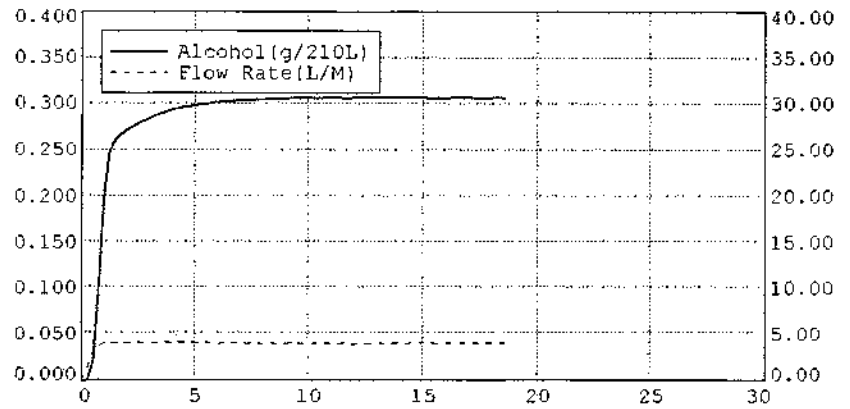
Date: 04/10/2018
Time: 09:51:26

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.300
LOT #: 17140
EXPIRATION: 05/15/2019

BLANK TEST	0.000	09:52
INTERNAL STANDARD	VERIFIED	09:52
EXTERNAL STANDARD	0.306	09:53
BLANK TEST	0.000	09:54
EXTERNAL STANDARD	0.304	09:54
BLANK TEST	0.000	09:55
EXTERNAL STANDARD	0.304	09:55
BLANK TEST	0.000	09:56
EXTERNAL STANDARD	0.305	09:57
BLANK TEST	0.000	09:58
EXTERNAL STANDARD	0.305	09:58
BLANK TEST	0.000	09:59

Average = 0.3048
Std Dev = 0.0008

Simulator S/N: SD1198
Calibrated: 01/23/2018
JW 04/10/18



DIAGNOSTIC RECORD

Alaska Department of Public Safety
DATAMASTER dmt: 100671

Date: 04/10/2018
Time: 09:17:30

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 = 80 V PASSED
(47 V - 111 V)
Chopper Freq = 548 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.1 in

PUMP INFO

Flow Rate = 4.672 L/M PASSED
(3.500 L/M - 6.500 L/M)

DETECTOR INFO

PUMP ON PASSED
(0.003 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 = 0.100 1.07% (0.00% - 4.00%)

Technician Screen

DATAMASTER dmt: 100671

Date: 04/10/2018
Time: 9:33 AM

Temperatures (°C)
Sample Cell: 48.9°C
Breath Tube: 48.1°C

Current Barometer 29.1 in
Volume (Ltr) 0.00

Settings
Lamp: 1.67 V
Bias: 80 V
Cooler: 1.78 V
Chopper: 658 Hz

Voltages (V)
Flow: 1.06 V
Detector: 0.080 V

LINEARITY CHECK

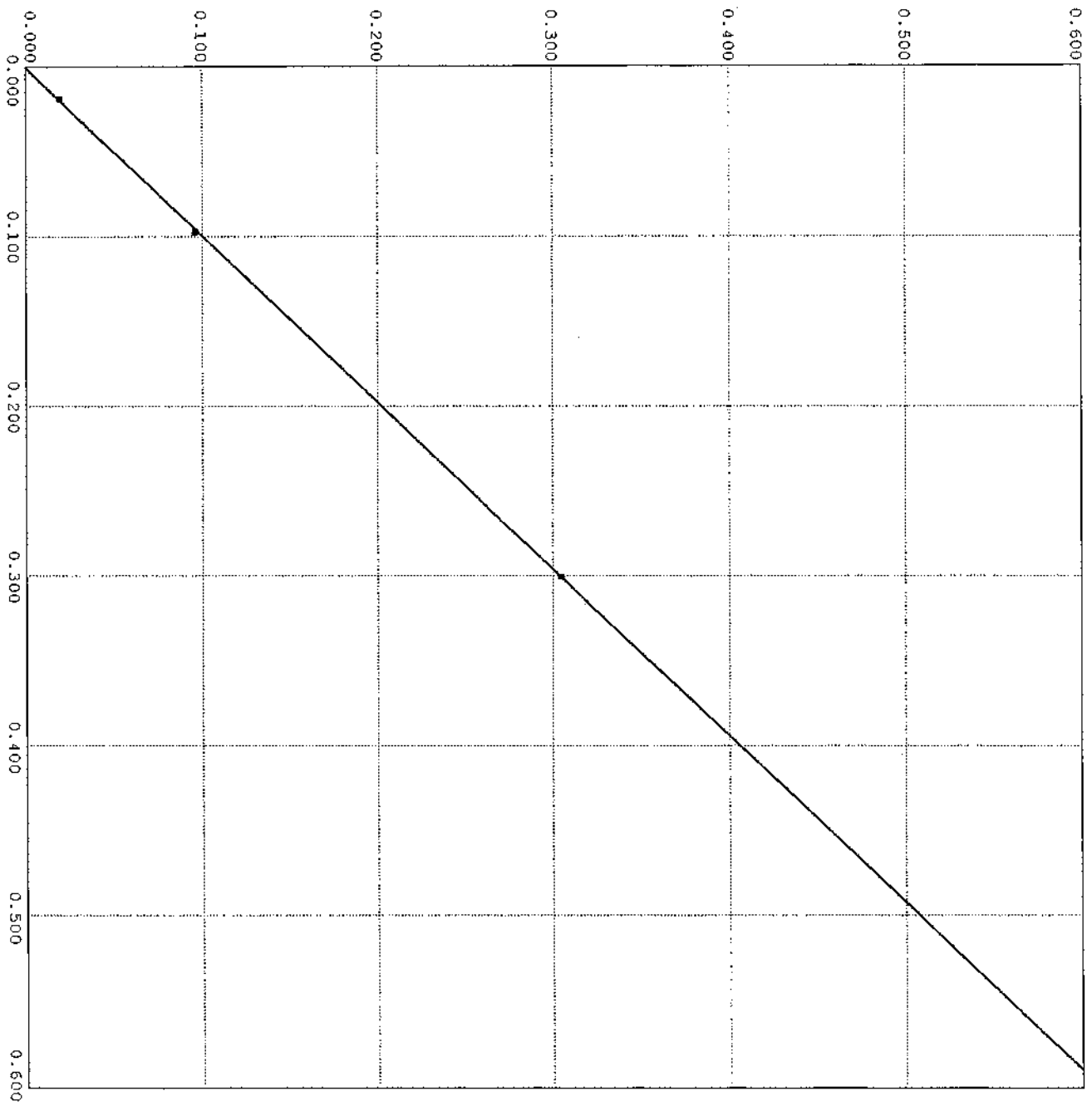
Alaska Department of Public Safety
DATAMASTER dmt: 100671

Date: 04/10/2018
Time: 10:07:24

SUPERVISOR NAME:
DEREK WALTON
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.019	0.0200	0.0000
0.097	0.0970	0.0000
0.300	0.3056	0.0013

SLOPE = 1.018624
R² = 0.999926



DDW

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety
 DATAMASTER dmt: 100671

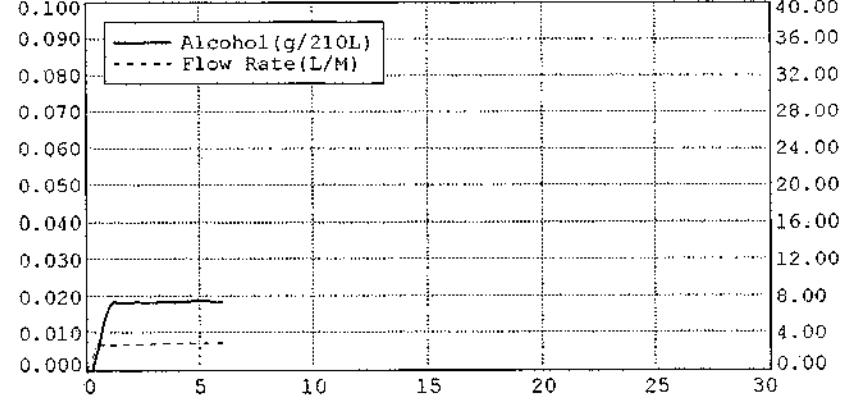
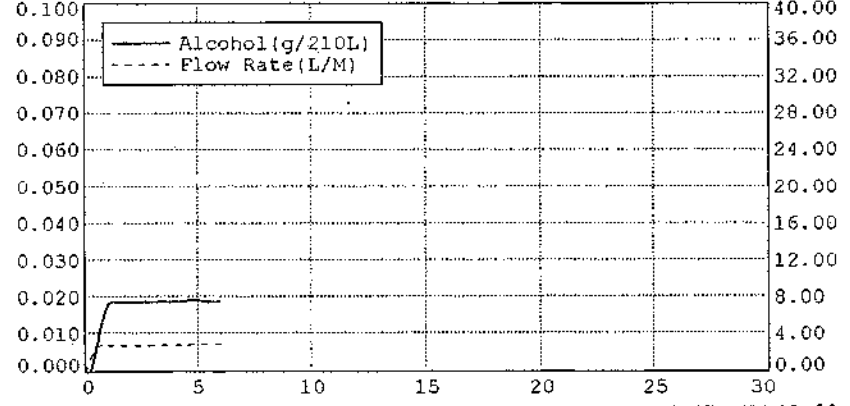
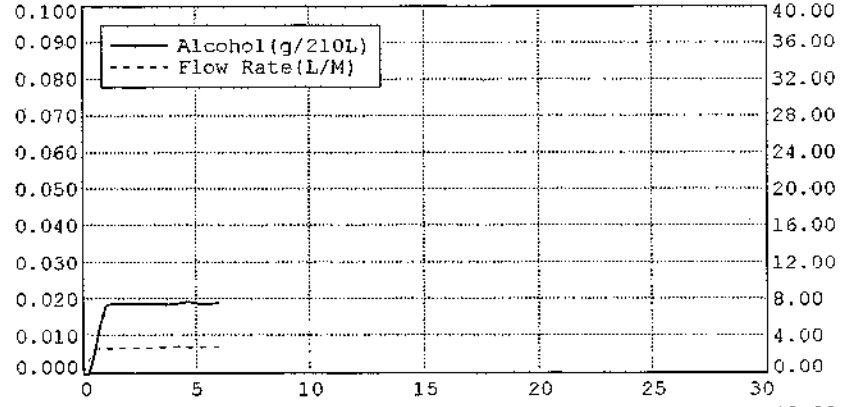
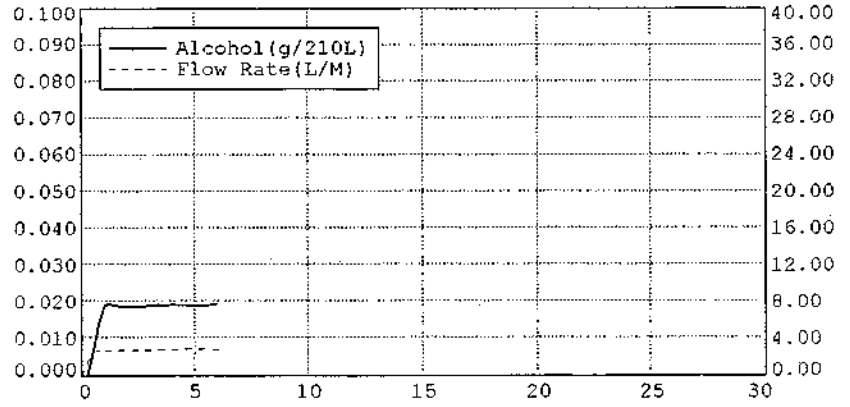
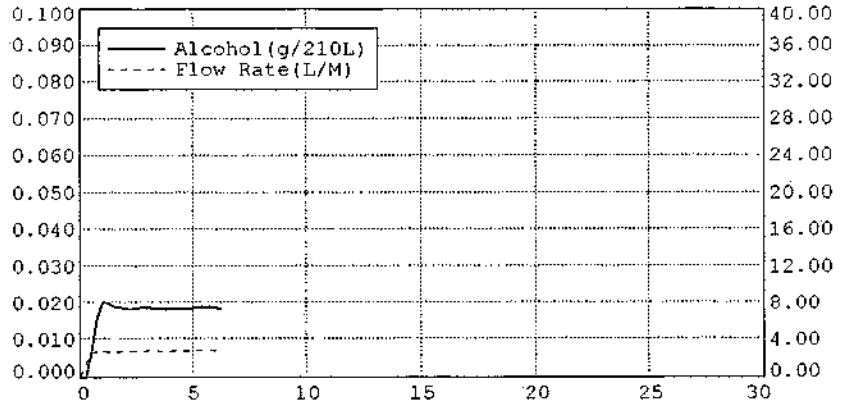
Date: 04/10/2018
 Time: 10:07:26

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020
 TARGET AT 29.08: 0.019
 LOT #: AG616504
 EXPIRATION: 06/13/2018
 TANK PRESSURE: 1123 psi

BLANK TEST	0.000	10:09
INTERNAL STANDARD	VERIFIED	10:09
EXTERNAL STANDARD	0.020	10:09
BLANK TEST	0.000	10:10
EXTERNAL STANDARD	0.020	10:10
BLANK TEST	0.000	10:11
EXTERNAL STANDARD	0.020	10:11
BLANK TEST	0.000	10:12
EXTERNAL STANDARD	0.020	10:12
BLANK TEST	0.000	10:13
EXTERNAL STANDARD	0.020	10:14
BLANK TEST	0.000	10:14

Average = 0.0200
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety
 DATAMASTER dmt: 100671

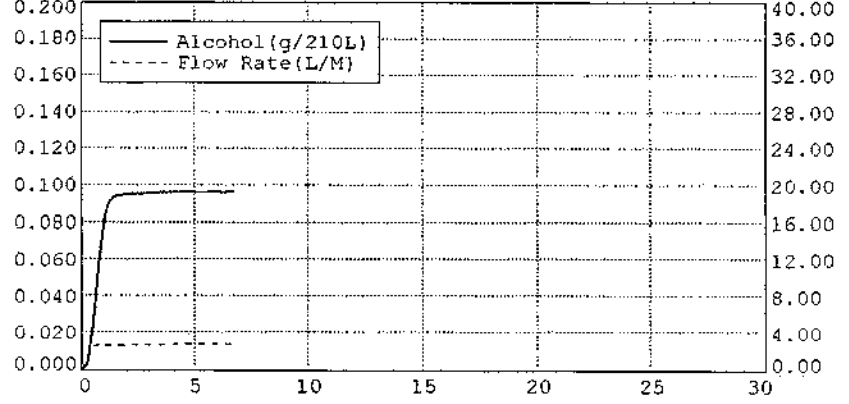
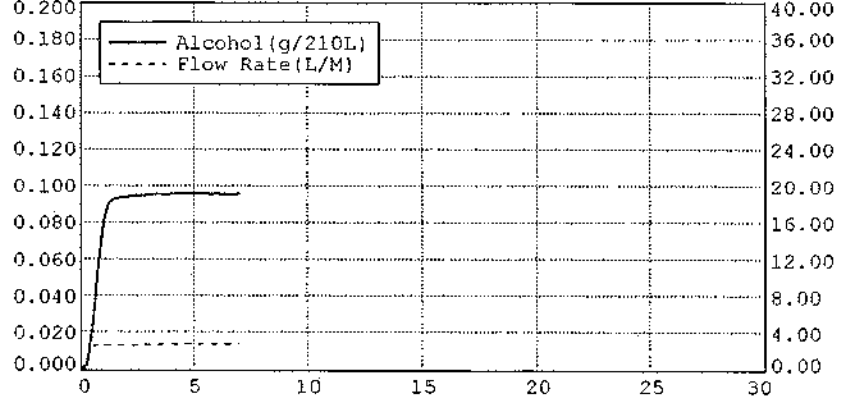
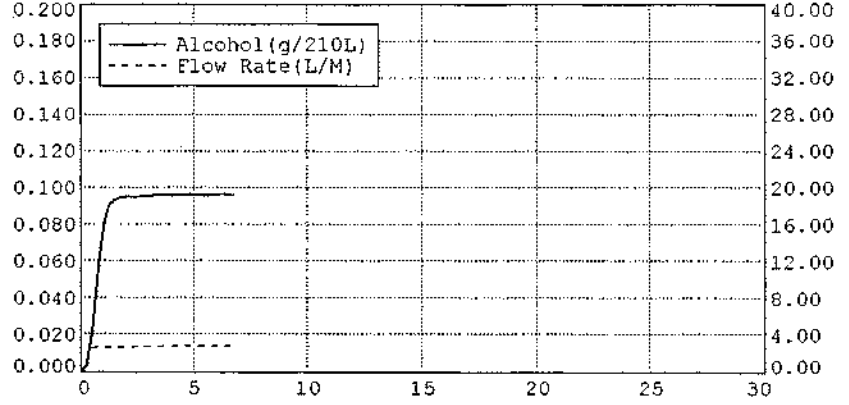
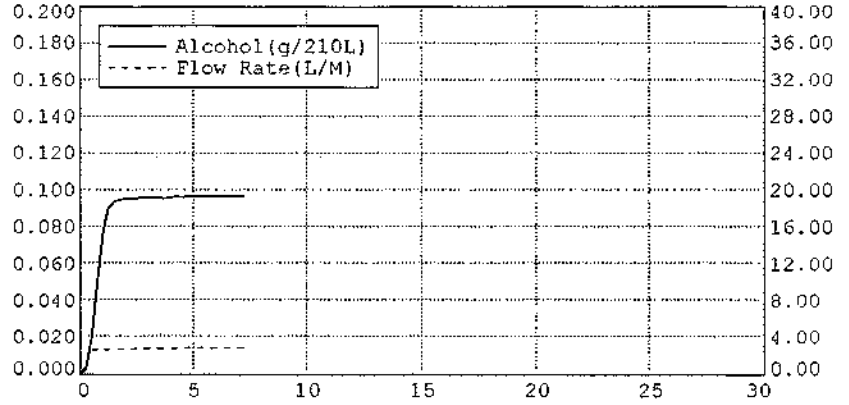
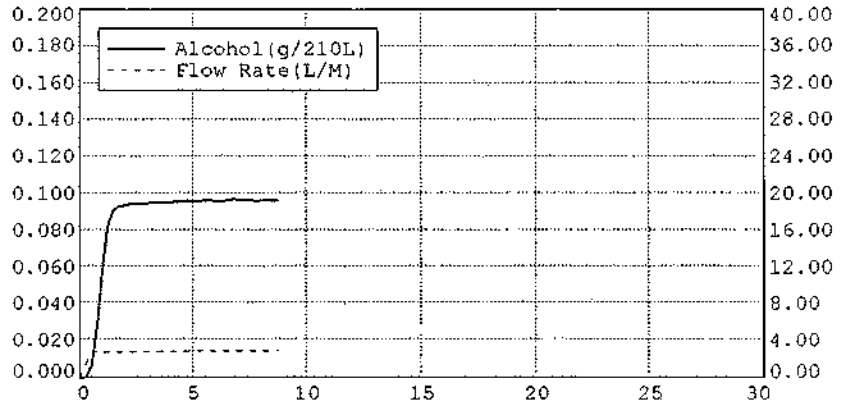
Date: 04/10/2018
 Time: 10:29:54

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100
 TARGET AT 29.07: 0.097
 LOT #: AG629304
 EXPIRATION: 10/19/2018
 TANK PRESSURE: 986 psi

BLANK TEST	0.000	10:31
INTERNAL STANDARD	VERIFIED	10:31
EXTERNAL STANDARD	0.097	10:31
BLANK TEST	0.000	10:32
EXTERNAL STANDARD	0.097	10:32
BLANK TEST	0.000	10:33
EXTERNAL STANDARD	0.097	10:33
BLANK TEST	0.000	10:34
EXTERNAL STANDARD	0.097	10:34
BLANK TEST	0.000	10:35
EXTERNAL STANDARD	0.097	10:35
BLANK TEST	0.000	10:36

Average = 0.0970
 Std Dev = 0.0000



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety
 DATAMASTER dmt: 100671

Date: 04/10/2018
 Time: 10:39:28

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.300
 LOT #: 17140
 EXPIRATION: 05/15/2019

BLANK TEST	0.000	10:40
INTERNAL STANDARD	VERIFIED	10:40
EXTERNAL STANDARD	0.307	10:41
BLANK TEST	0.000	10:42
EXTERNAL STANDARD	0.307	10:43
BLANK TEST	0.000	10:44
EXTERNAL STANDARD	0.305	10:44
BLANK TEST	0.000	10:45
EXTERNAL STANDARD	0.305	10:45
BLANK TEST	0.000	10:46
EXTERNAL STANDARD	0.304	10:47
BLANK TEST	0.000	10:48

Average = 0.3056
 Std Dev = 0.0013

Simulator S/N: SD1198

Calibrated: 01/23/2018

Jm 04/10/18

