



## GUTH LABORATORIES, INC.

690 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 **18370** of Alcohol Reference Solution for Simulator were analyzed by gas chromatography on **December 6, 2018**, using a Perkin Elmer Gas Chromatograph Autosystem XL S/N: 610N9030209, and found to contain **0.1218%** (w/vol) ethyl alcohol. The expiration date for this lot number is **December 5, 2020** at 11:59 PM.

When used in a calibrated Simulator, operating at  $34^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ , 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: 03/05/2019  
 Time: 13:41:58

SUPERVISOR NAME:  
 DEREK WALTON  
 OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.100

BLANK TEST	0.000	13:43
INTERNAL STANDARD	VERIFIED	13:43
EXTERNAL STANDARD	0.102	13:43
BLANK TEST	0.000	13:44
EXTERNAL STANDARD	0.102	13:45
BLANK TEST	0.000	13:46
EXTERNAL STANDARD	0.102	13:46
BLANK TEST	0.000	13:47
EXTERNAL STANDARD	0.103	13:47
BLANK TEST	0.000	13:48
EXTERNAL STANDARD	0.102	13:48
BLANK TEST	0.000	13:49

Average = 0.1022  
 Std Dev = 0.0004

Solution:

Autn Lot 18370

Exp. 12/05/2020

Simulator:

Autn S/N: DR4162

Calibrated 06/04/2018

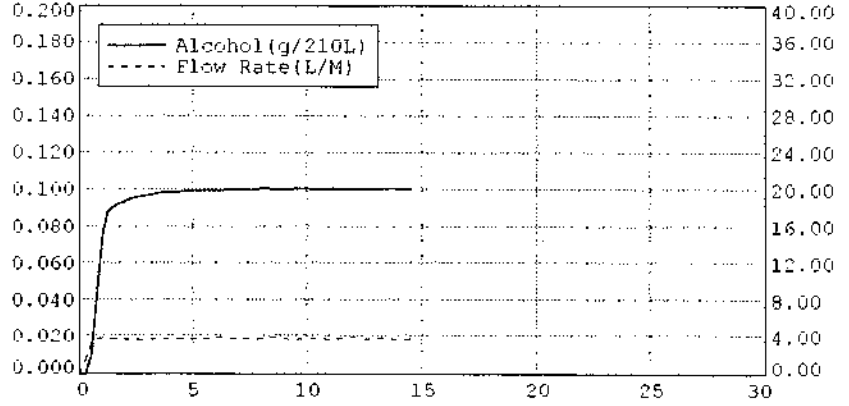
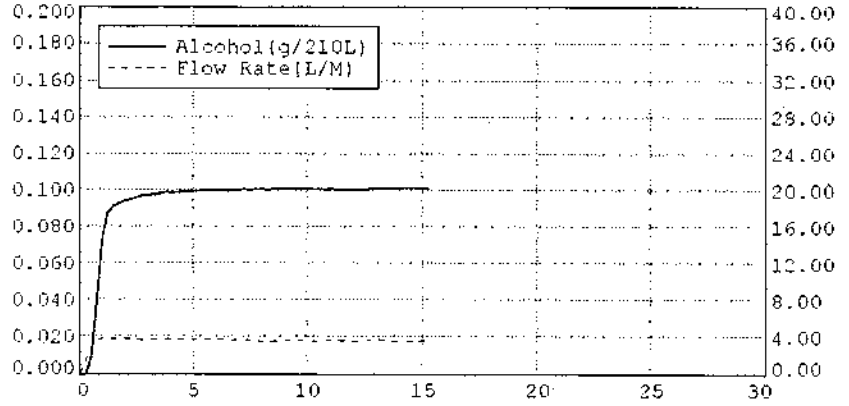
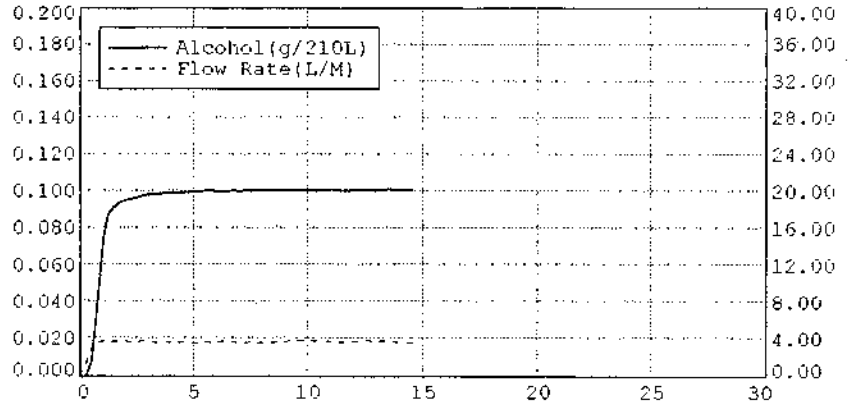
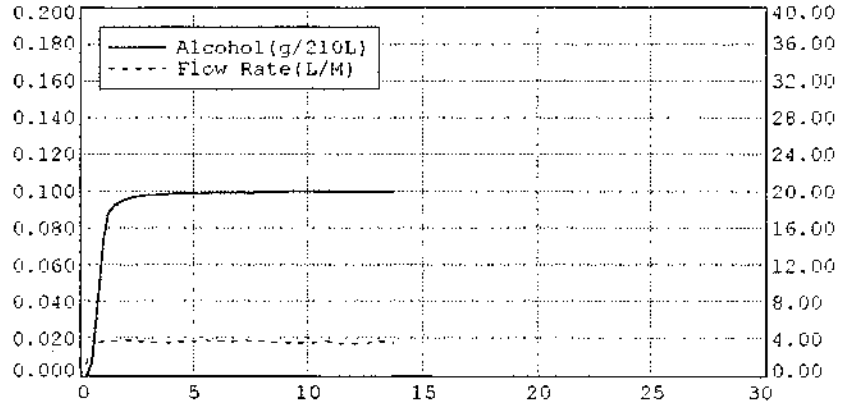
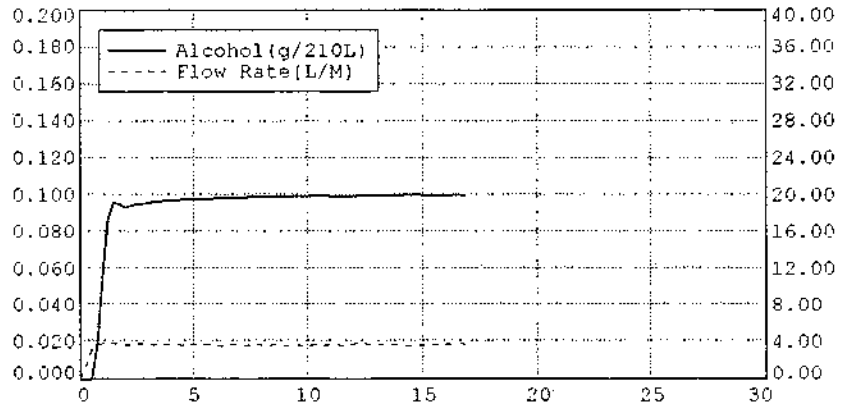
0.1022

0.1030

0.1010

AVG: 0.102

DW 03/06/2019



SUPERVISOR TEST

Alaska Department of Public Safety  
DATA MASTER dmt: 100411

Date: 03/05/2019  
Time: 14:05:31

SUPERVISOR NAME:  
DANIEL WALTON  
OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION  
NORMAL: 0.100

TEST	Result	Time
BLANK TEST	0.000	14:06
EXTERNAL STANDARD	VERIFIED 0.103	14:06
EXTERNAL STANDARD	0.103	14:07
BLANK TEST	0.000	14:08
EXTERNAL STANDARD	0.103	14:08
BLANK TEST	0.000	14:09
EXTERNAL STANDARD	0.103	14:09
BLANK TEST	0.000	14:10
EXTERNAL STANDARD	0.103	14:11
BLANK TEST	0.000	14:12
EXTERNAL STANDARD	0.103	14:12
BLANK TEST	0.000	14:13

Average = 0.1030  
Stdev = 0.0000

Solution:

Auto Lot 18370

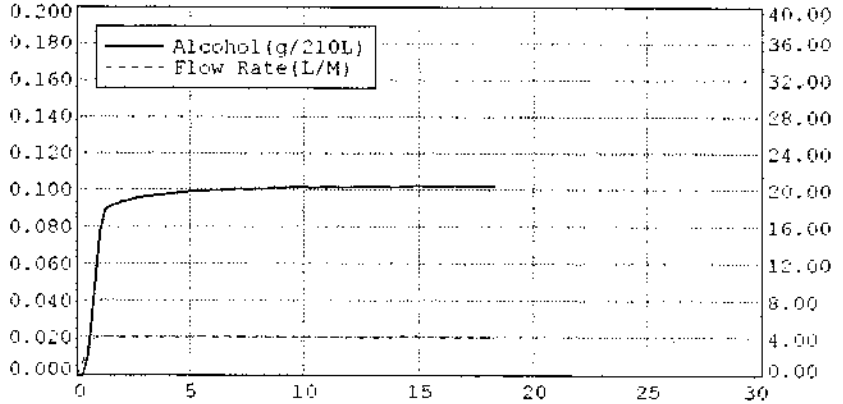
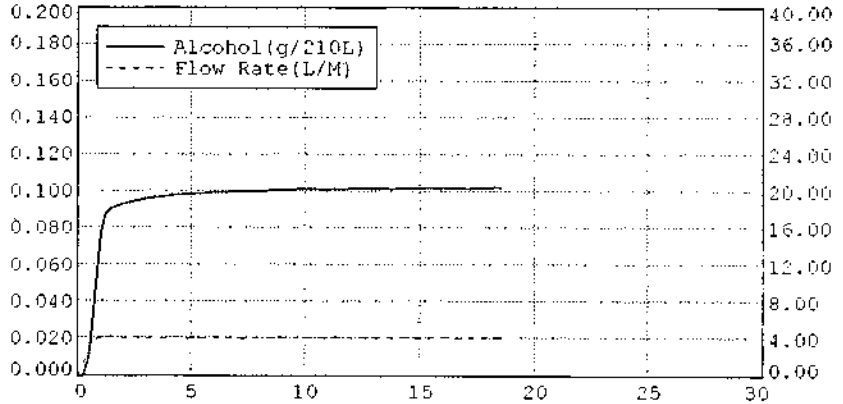
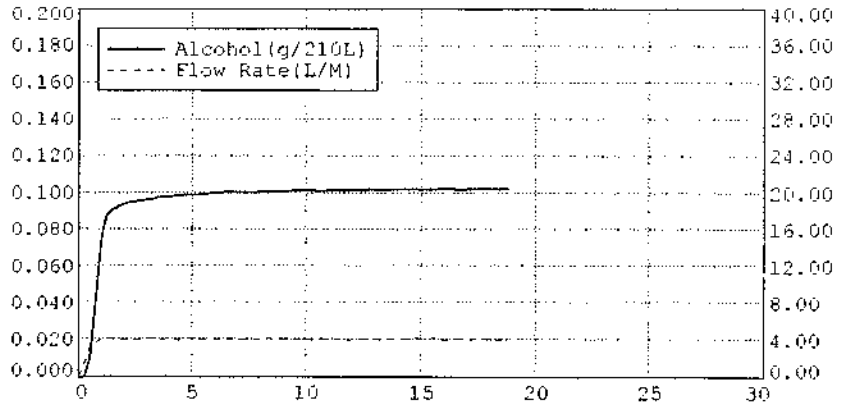
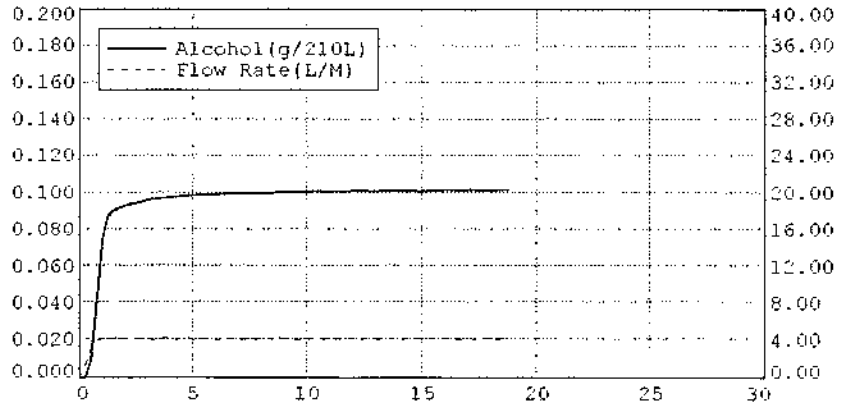
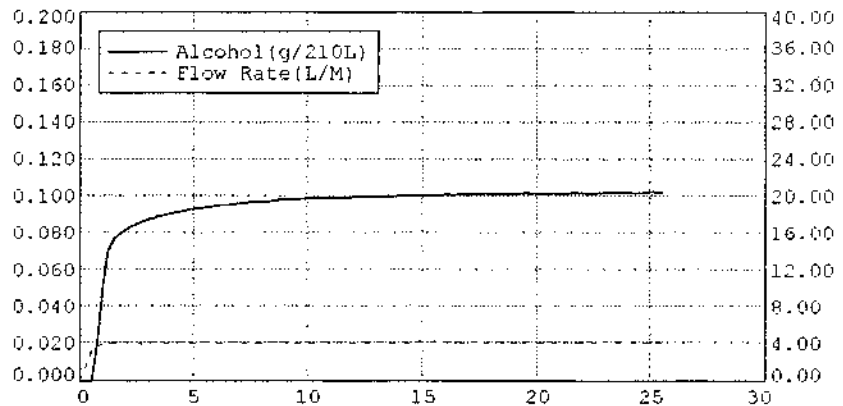
Exp. 12/05/2020

Simulator:

Auto S/N: DR4162

Calibrated 06/04/2018

DW 03/06/2019



SUPERVISOR TEST

Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

Date: 03/05/2019  
 Time: 13:59:09

SUPERVISOR NAME:  
 DEREK WALTON  
 OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.100

BLANK TEST	0.000	14:00
INTERNAL STANDARD	VERIFIED	14:00
EXTERNAL STANDARD	0.101	14:00
BLANK TEST	0.000	14:01
EXTERNAL STANDARD	0.101	14:02
BLANK TEST	0.000	14:03
EXTERNAL STANDARD	0.101	14:03
BLANK TEST	0.000	14:04
EXTERNAL STANDARD	0.101	14:04
BLANK TEST	0.000	14:05
EXTERNAL STANDARD	0.101	14:06
BLANK TEST	0.000	14:06

Average = 0.1010  
 Std Dev = 0.0000

Solution:

Quin Lot 18370

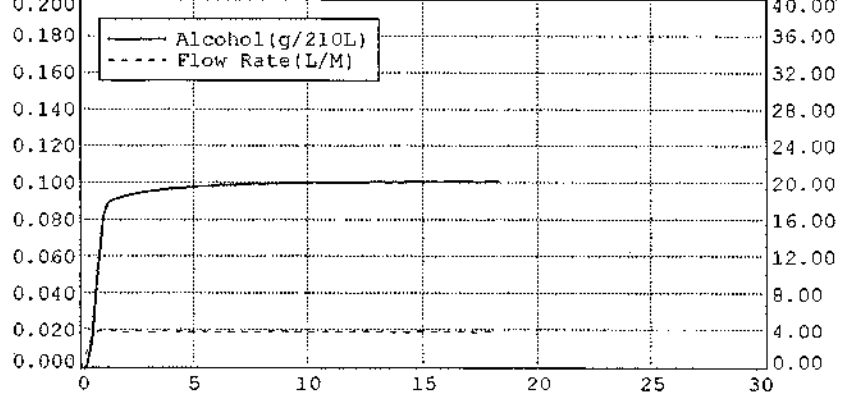
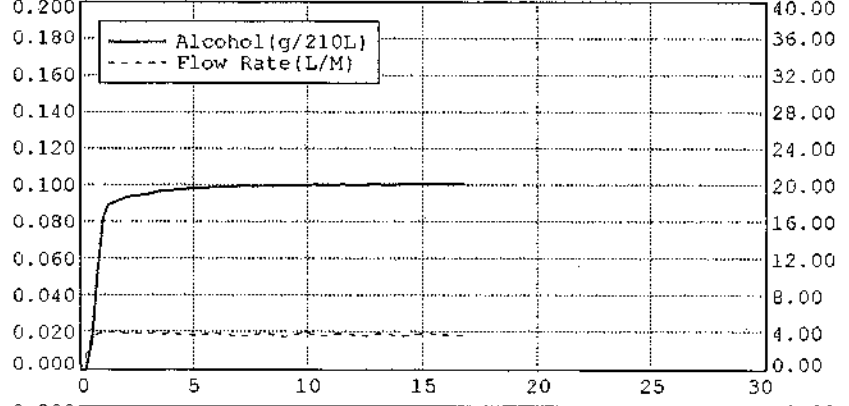
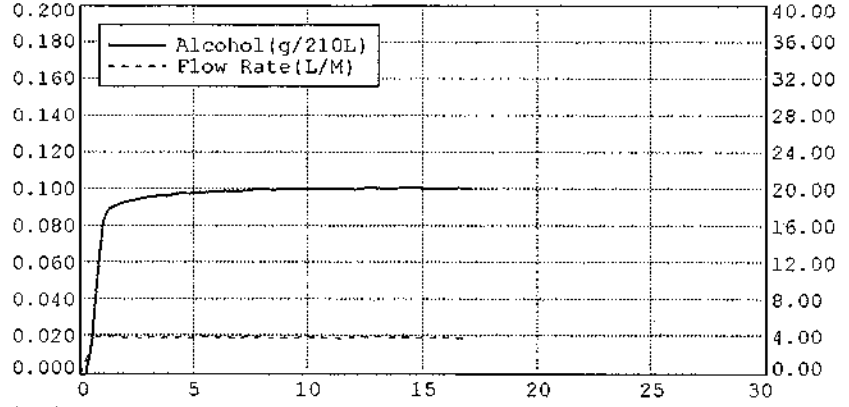
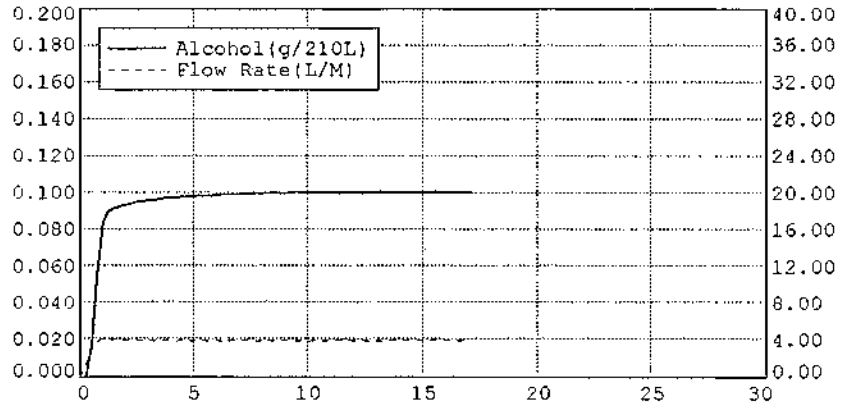
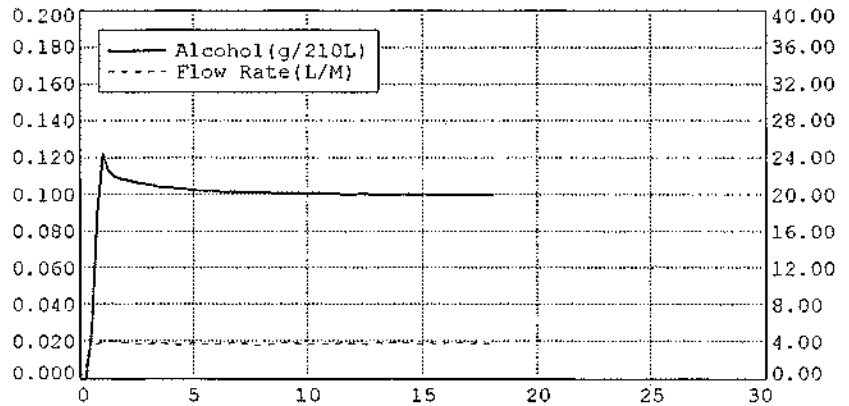
Exp. 12/05/2020

Simulator:

Quin S/N: DR4162

Calibrated 06/04/2018

*DW* 03/06/2019



DIAGNOSTIC RECORD

Alaska Department of Public Safety  
DATAMASTER dmt: 100353

Date: 03/04/2019  
Time: 12:08:29

VERSIONS  
DMT: 3.02  
PIC: 3.02  
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 = 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 = 30.3 in

PUMP INFO

Flow Rate = 4.861 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 0.092 1.86% (0.00% - 4.00%)

In-house QC

JMV 03/04/2019

Technician Screen

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DATAMASTER dmt: 100353  
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Date: 03/04/2019  
Time: 12:20 PM

Temperatures (°C)

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

Current Barometer 30.2 in  
Volume (Ltr) 0.00

Settings

Lamp: 2.31 V  
Bias: 79 V  
Cooler: 1.89 V  
Chopper: 534 Hz

Voltages (V)

Flow: 1.06 V  
Detector: -0.007 V

LINEARITY CHECK

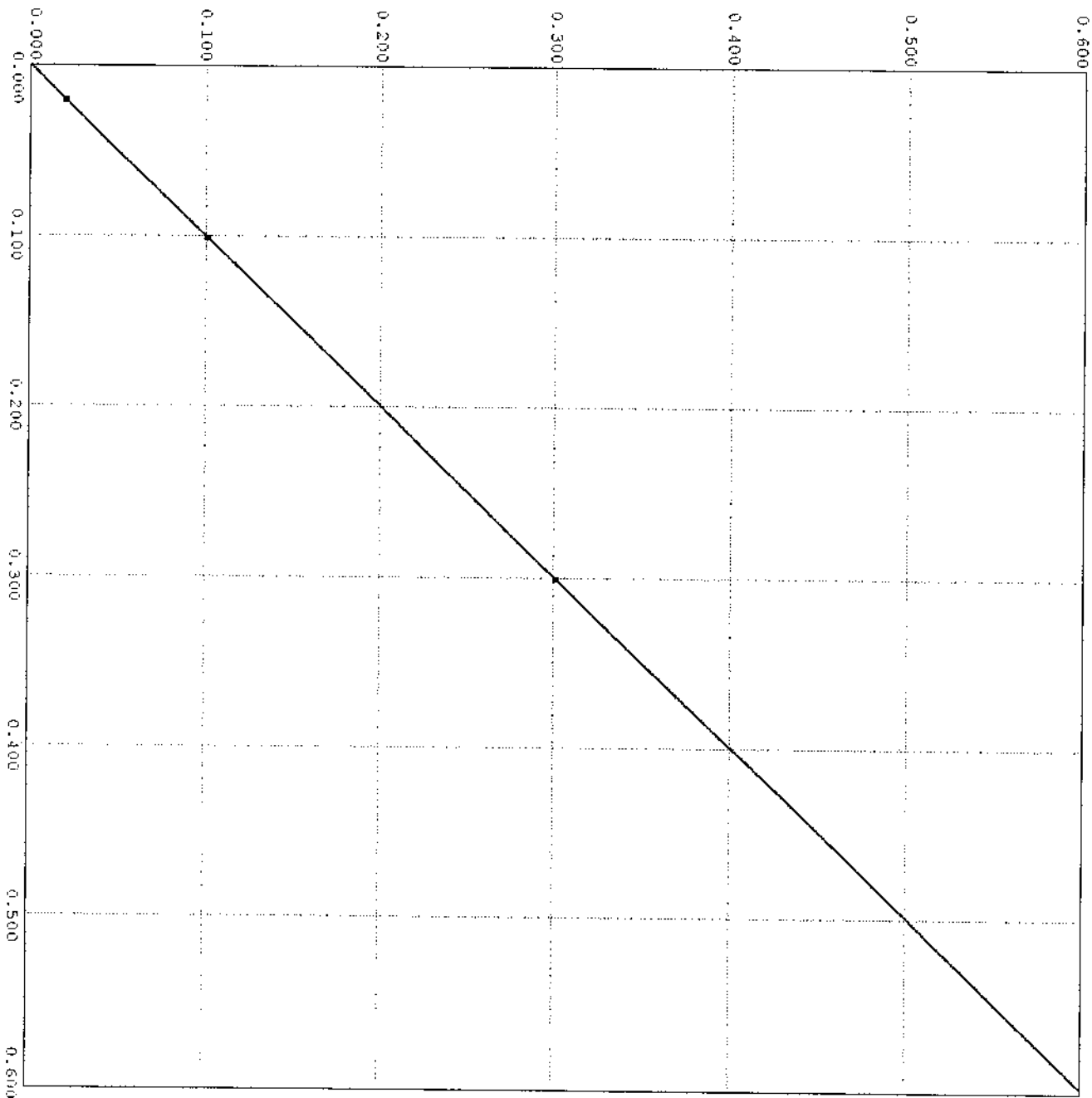
Alaska Department of Public Safety  
DATAMASTER dmt: 100353

Date: 03/04/2019  
Time: 12:24:05

SUPERVISOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0210	0.0000
0.101	0.1018	0.0004
0.300	0.3020	0.0010

SLOPE = 1.004035  
R<sup>2</sup> = 0.999996



*DM*

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100353

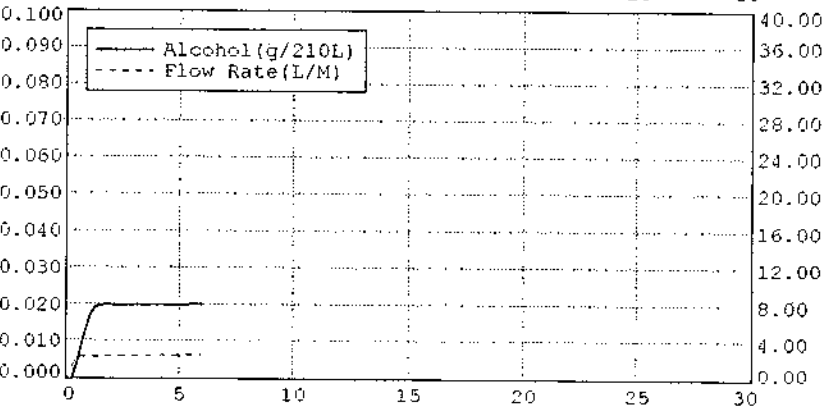
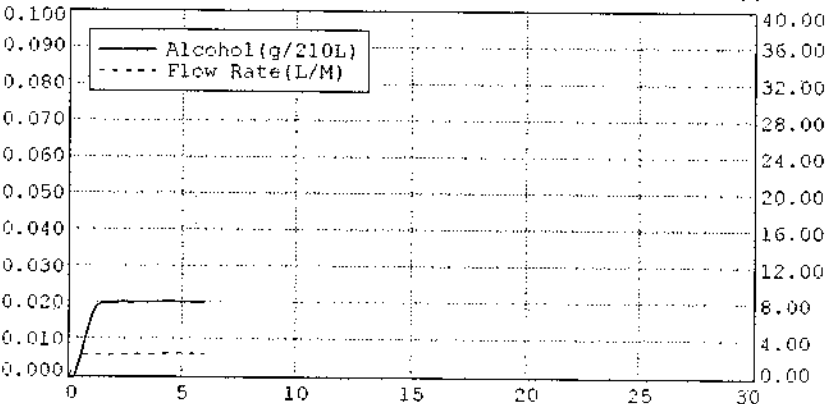
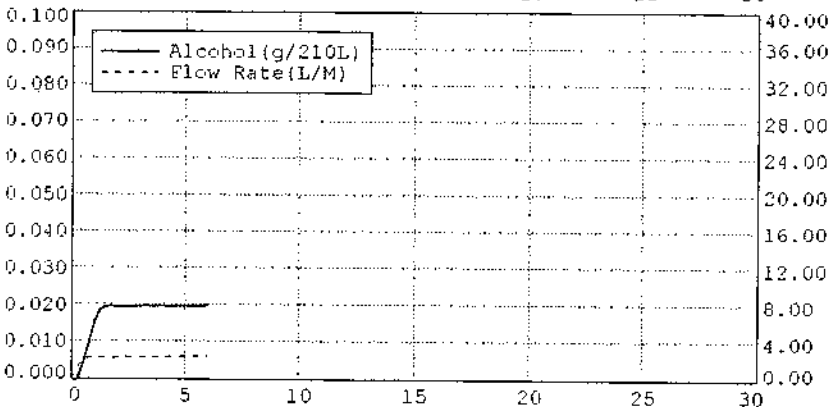
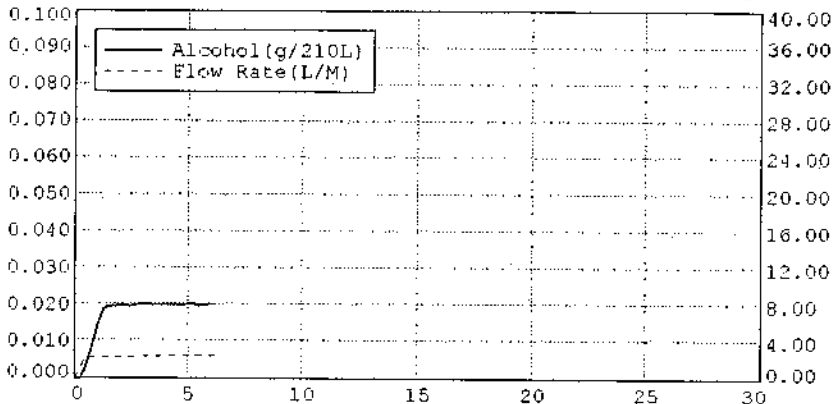
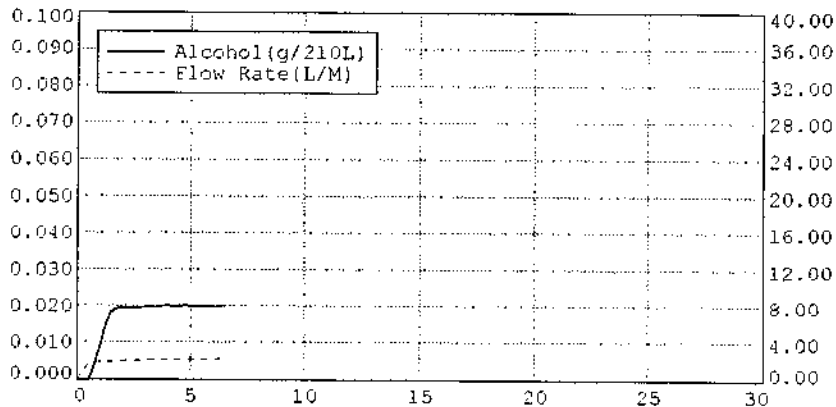
Date: 03/04/2019  
 Time: 12:24:07

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 30.23: 0.020  
 LOT #: AG805804  
 EXPIRATION: 02/27/2020  
 TANK PRESSURE: 904 psi

BLANK TEST	0.000	12:25
INTERNAL STANDARD	VERIFIED	12:25
EXTERNAL STANDARD	0.021	12:25
BLANK TEST	0.000	12:26
EXTERNAL STANDARD	0.021	12:26
BLANK TEST	0.000	12:27
EXTERNAL STANDARD	0.021	12:27
BLANK TEST	0.000	12:28
EXTERNAL STANDARD	0.021	12:28
BLANK TEST	0.000	12:29
EXTERNAL STANDARD	0.021	12:30
BLANK TEST	0.000	12:30

Average = 0.0210  
 Std Dev = 0.0000





LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100353

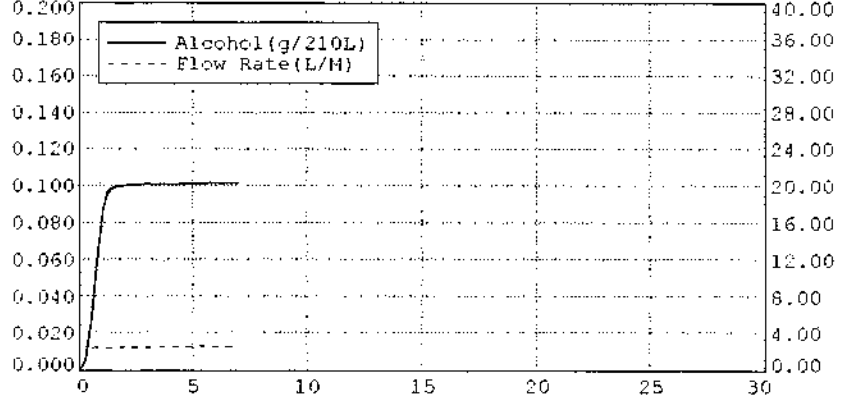
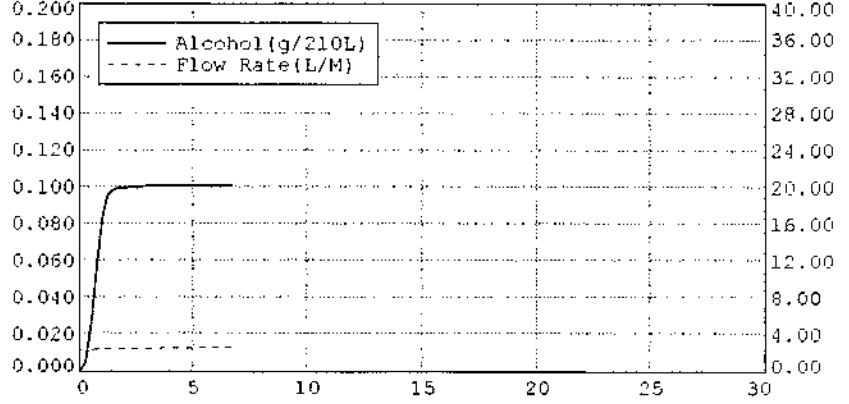
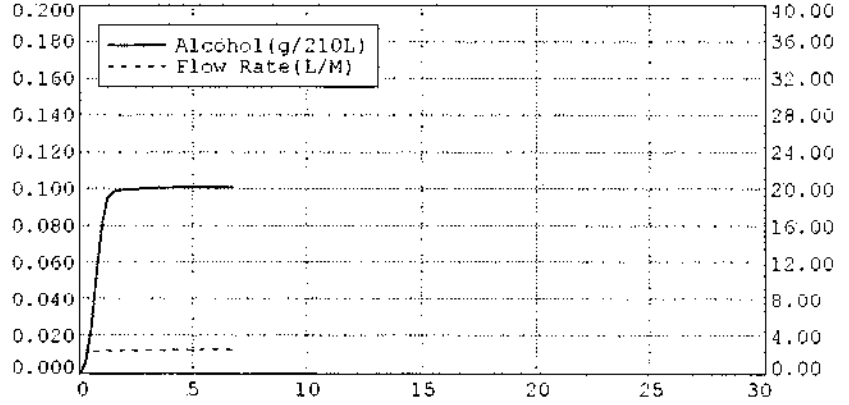
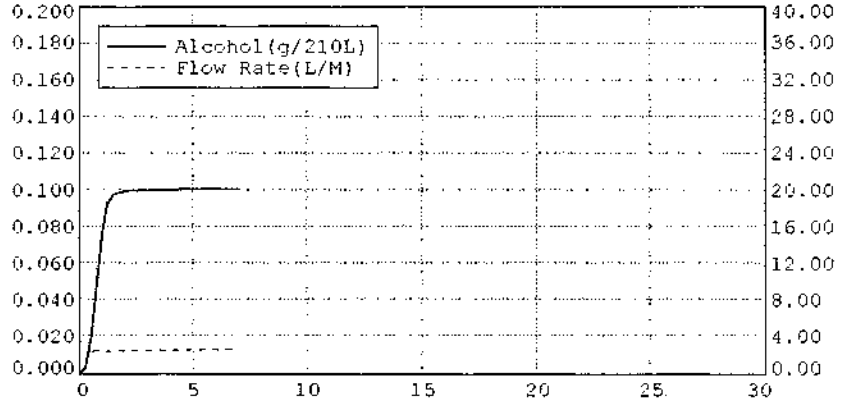
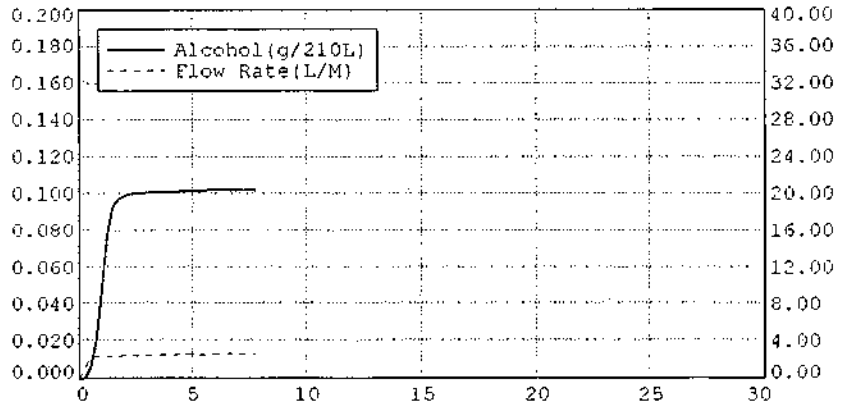
Date: 03/04/2019  
 Time: 12:33:28

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 30.23: 0.101  
 LOT #: AG805903  
 EXPIRATION: 02/28/2020  
 TANK PRESSURE: 1041 psi

BLANK TEST	0.000	12:35
INTERNAL STANDARD	VERIFIED	12:35
EXTERNAL STANDARD	0.102	12:35
BLANK TEST	0.000	12:36
EXTERNAL STANDARD	0.101	12:36
BLANK TEST	0.000	12:37
EXTERNAL STANDARD	0.102	12:37
BLANK TEST	0.000	12:38
EXTERNAL STANDARD	0.102	12:39
BLANK TEST	0.000	12:39
EXTERNAL STANDARD	0.102	12:40
BLANK TEST	0.000	12:41

Average = 0.1018  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
DATAMASTER dnt: 100353

Date: 03/04/2019  
Time: 12:48:52

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.300  
LOT #: 17350  
EXPIRATION: 10/11/2019

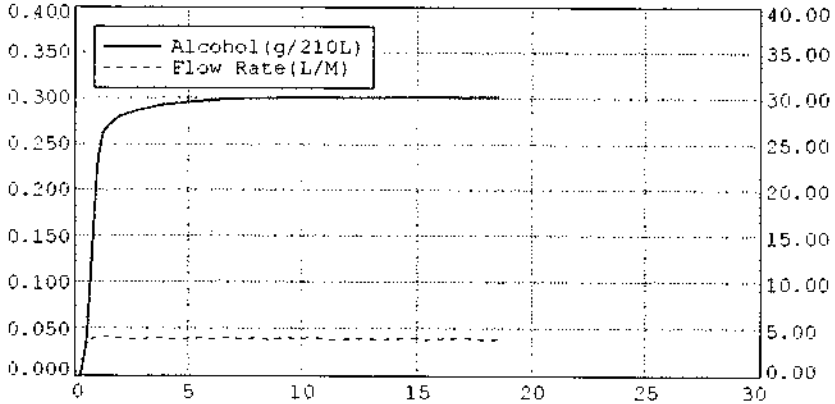
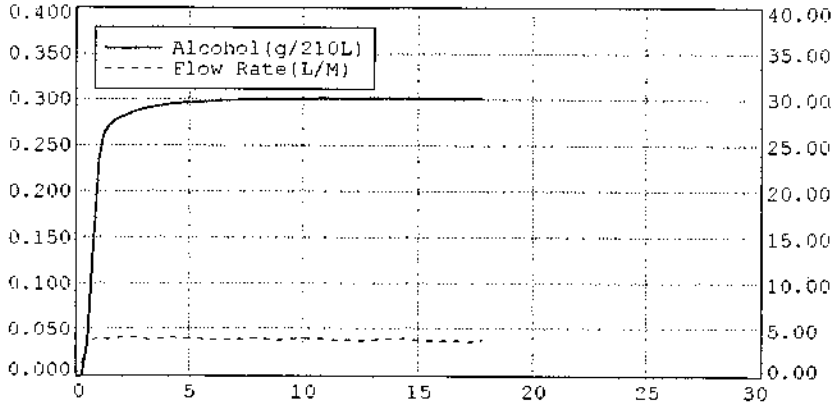
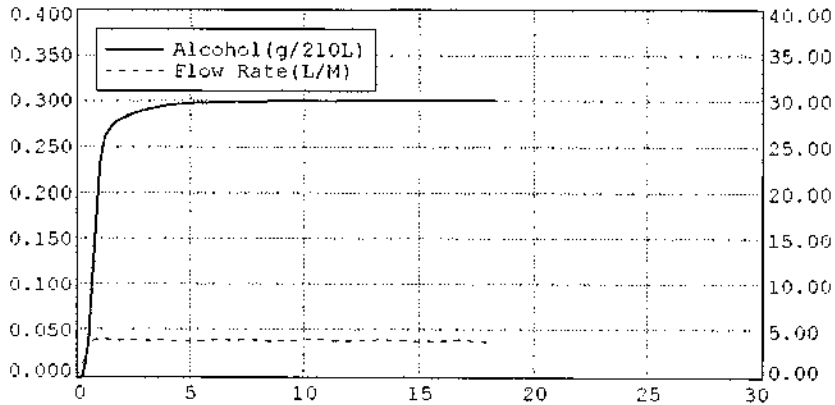
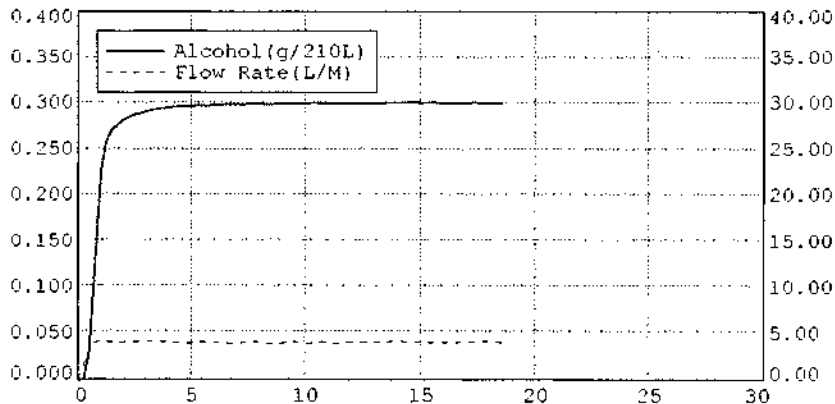
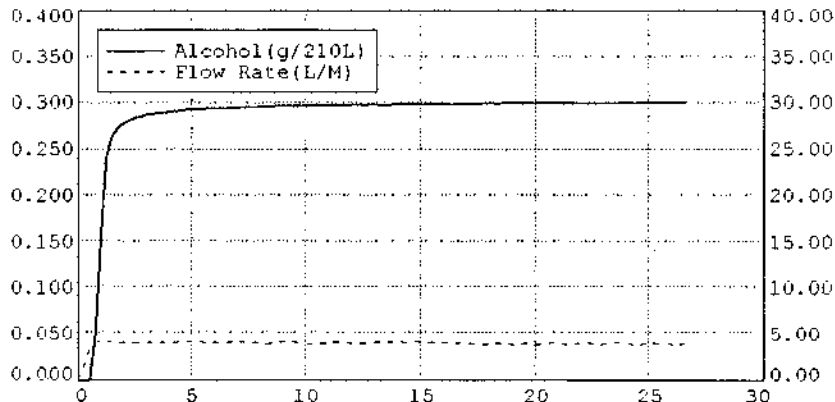
BLANK TEST	0.000	12:50
INTERNAL STANDARD	VERIFIED	12:50
EXTERNAL STANDARD	0.301	12:50
BLANK TEST	0.000	12:51
EXTERNAL STANDARD	0.301	12:52
BLANK TEST	0.000	12:53
EXTERNAL STANDARD	0.302	12:53
BLANK TEST	0.000	12:54
EXTERNAL STANDARD	0.303	12:55
BLANK TEST	0.000	12:56
EXTERNAL STANDARD	0.303	12:56
BLANK TEST	0.000	12:57

Average = 0.3020  
Std Dev = 0.0010

Simulator S/N SD1176

Calibrated: 06/01/2018

JM 03/04/2019



DIAGNOSTIC RECORD

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Alaska Department of Public Safety  
DATAMASTER dmt: 100411  
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Date: 03/04/2019  
Time: 12:05:32

VERSIONS

DMT: 3.02  
PIC: 3.02  
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     = 1.87 V                PASSED  
(1.10 V - 2.58 V)  
Cooler Voltage = 1.87 V                PASSED  
(1.06 V - 2.48 V)  
Bias Voltage     = 80 V                    PASSED  
(48 V - 112 V)  
Chopper Freq    = 538 Hz                    PASSED  
(475 Hz - 575 Hz)  
Barometer        = 30.2 in

PUMP INFO

Flow Rate = 5.303 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 = 0.087 1.32% (0.00% - 4.00%)      PASSED

In-house QC  
DM 03/04/2019

Technician Screen

-----  
DATAMASTER dmt: 100411  
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Date: 03/04/2019  
Time: 12:16 PM

Temperatures (°C)

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

Current Barometer 30.2 in  
Volume (Ltr) 0.00

Settings

Lamp: 1.87 V  
Bias: 80 V  
Cooler: 1.87 V  
Chopper: 536 Hz

Voltages (V)

Flow: 1.05 V  
Detector: 0.021 V

LINEARITY CHECK

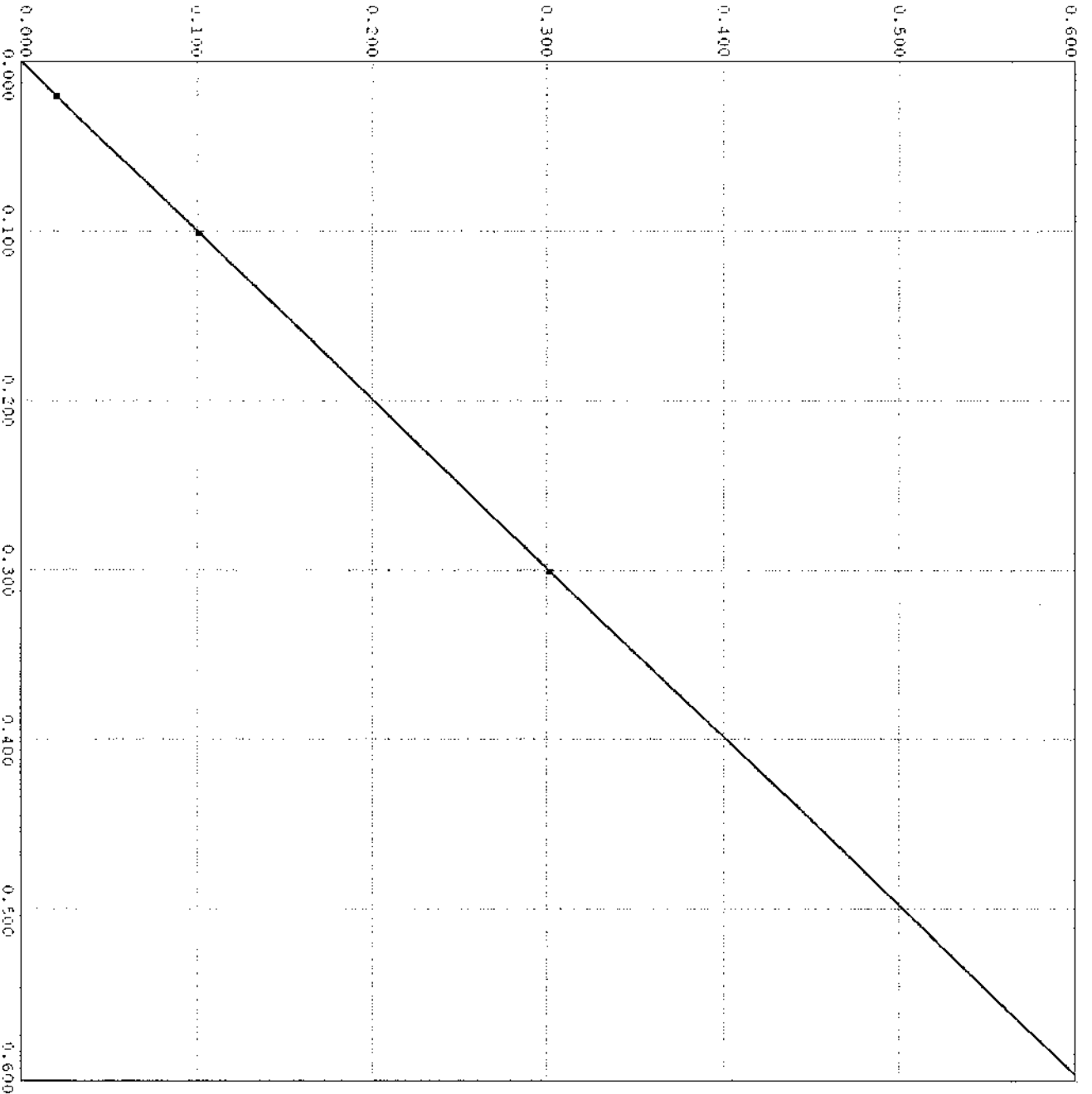
Alaska Department of Public Safety  
DATAMASTER dmt: 100411

Date: 03/04/2019  
Time: 12:22:00

SUPERVISOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0208	0.0004
0.101	0.1020	0.0000
0.300	0.3024	0.0023

SLOPE = 1.005963  
R<sup>2</sup> = 0.999999



*DM*

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100411

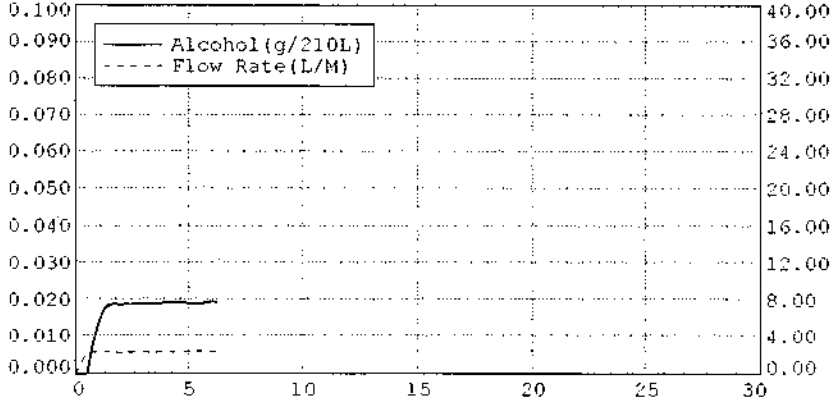
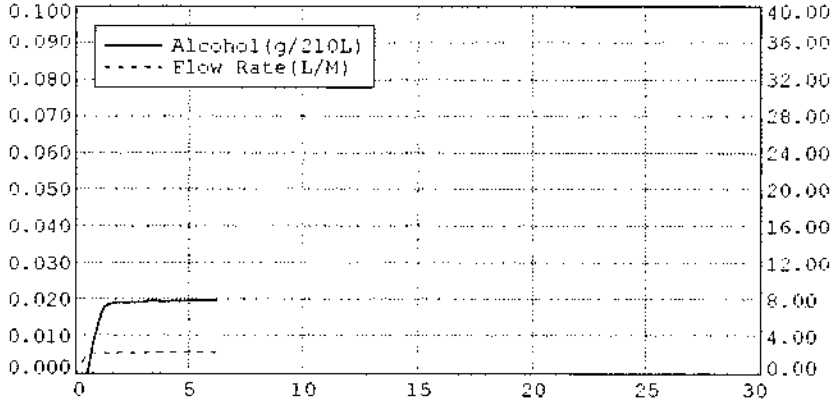
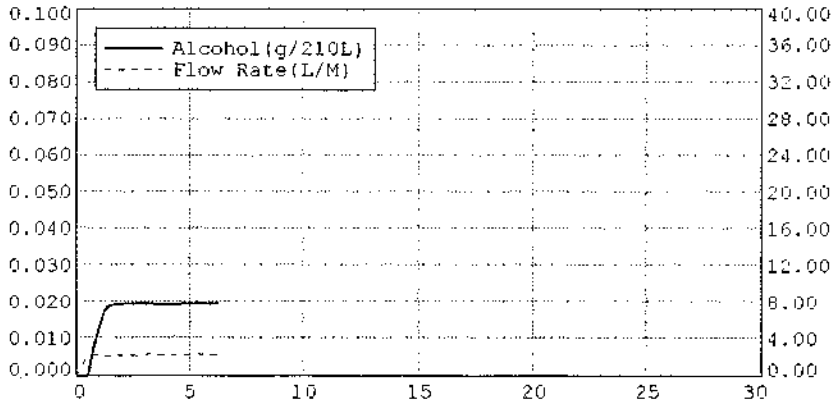
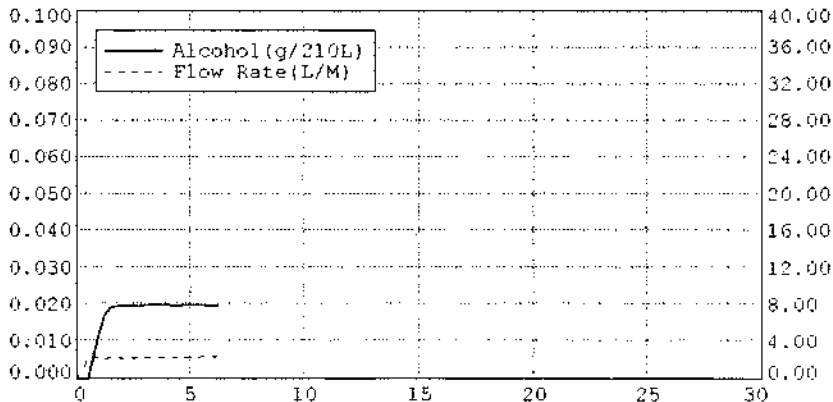
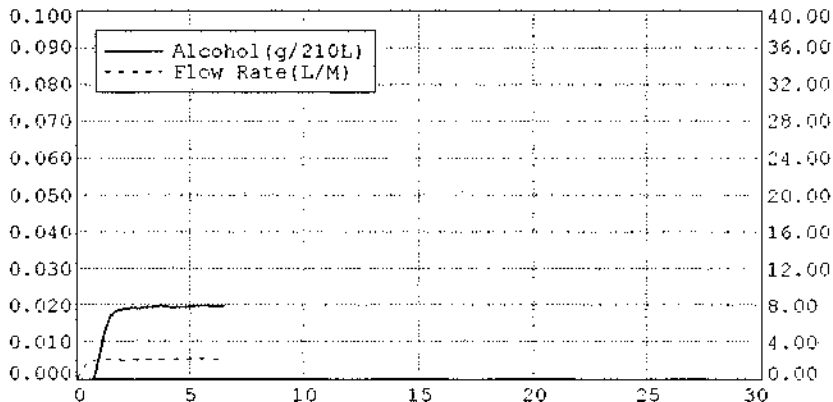
Date: 03/04/2019  
 Time: 12:22:02

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 30.23: 0.020  
 LOT #: AG805804  
 EXPIRATION: 02/27/2020  
 TANK PRESSURE: 764 psi

BLANK TEST	0.000	12:23
INTERNAL STANDARD	VERIFIED	12:23
EXTERNAL STANDARD	0.021	12:24
BLANK TEST	0.000	12:24
EXTERNAL STANDARD	0.021	12:25
BLANK TEST	0.000	12:26
EXTERNAL STANDARD	0.021	12:26
BLANK TEST	0.000	12:27
EXTERNAL STANDARD	0.021	12:27
BLANK TEST	0.000	12:28
EXTERNAL STANDARD	0.020	12:28
BLANK TEST	0.000	12:29

Average = 0.0208  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
LABMASTER dmt: 100411

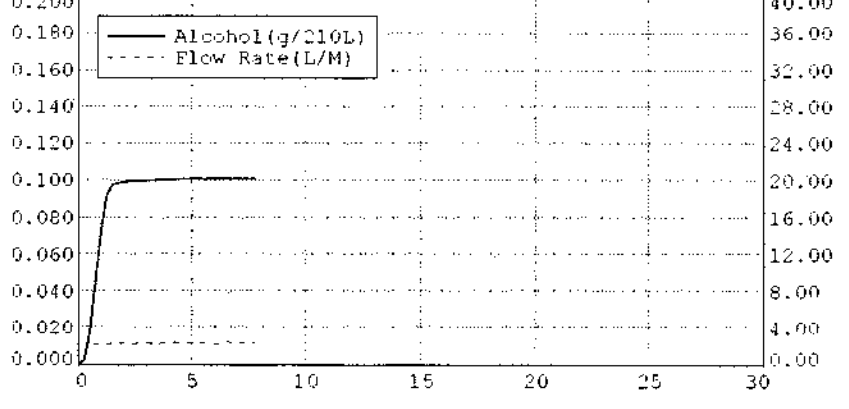
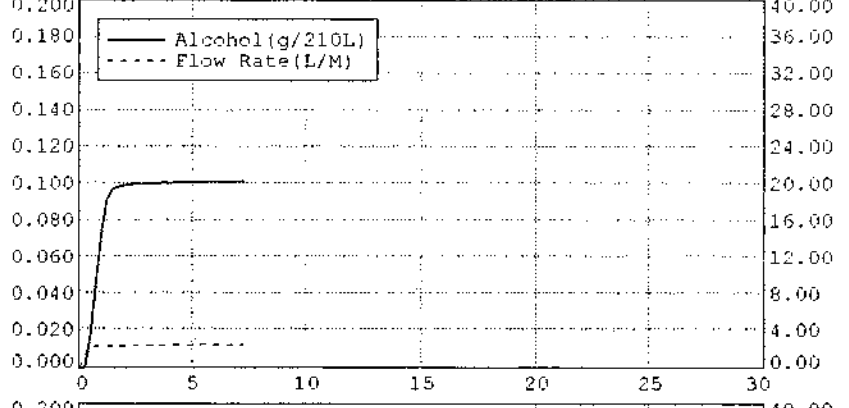
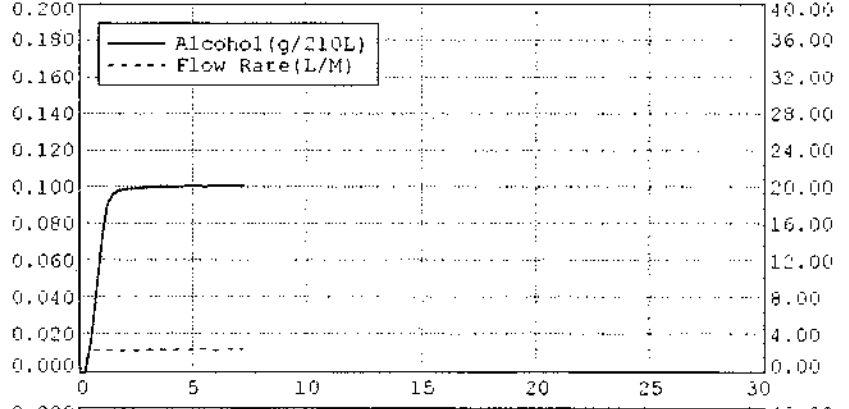
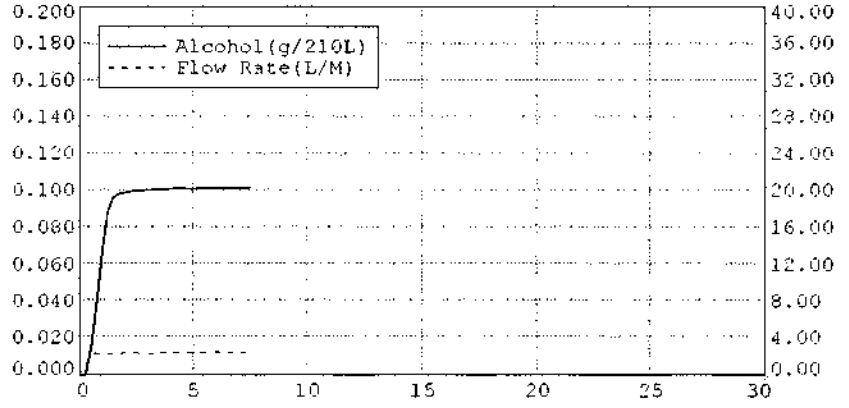
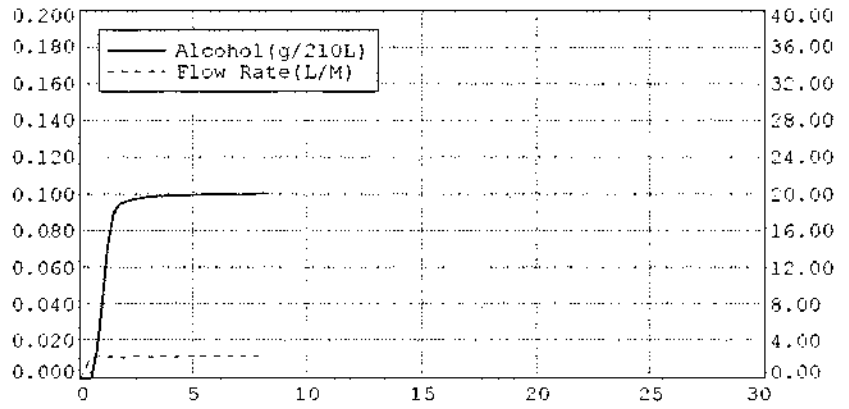
Date: 03/04/2019  
Time: 12:31:49

INTERNAL STANDARD INFORMATION

CONCENTRATION: 0.100  
TARGET AT 30.22: 0.101  
ID #: AG805903  
EXPIRATION: 02/28/2020  
TANK PRESSURE: 873 psi

TEST TYPE	CONCENTRATION	TIME
BANK TEST	0.000	12:32
INTERNAL STANDARD	VERIFIED	12:33
INTERNAL STANDARD	0.102	12:33
BANK TEST	0.000	12:34
INTERNAL STANDARD	0.102	12:34
BANK TEST	0.000	12:35
INTERNAL STANDARD	0.102	12:35
BANK TEST	0.000	12:36
INTERNAL STANDARD	0.102	12:36
BANK TEST	0.000	12:37
INTERNAL STANDARD	0.102	12:37
BANK TEST	0.000	12:38

Average = 0.1020  
Std Dev = 0.0000



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
 BYAMASTER dmt: 100411

Date: 03/04/2019  
 Time: 13:00:49

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.300  
 LAM #: 17350  
 EXPIRATION: 10/11/2019

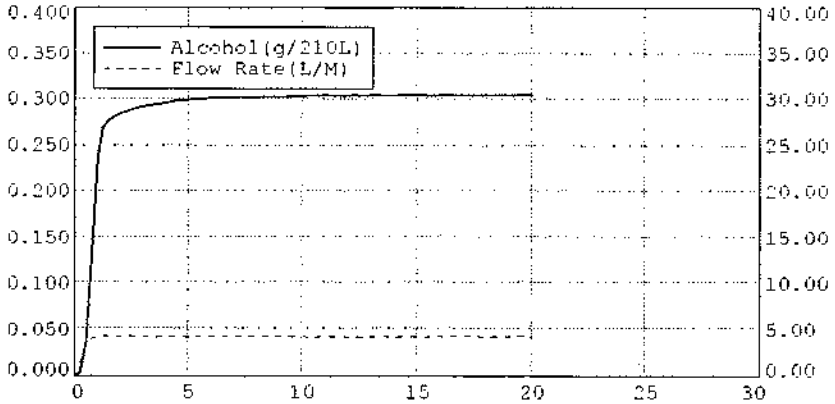
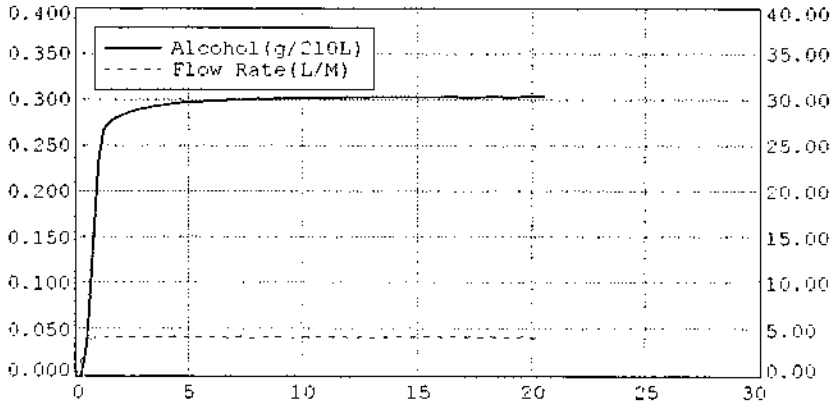
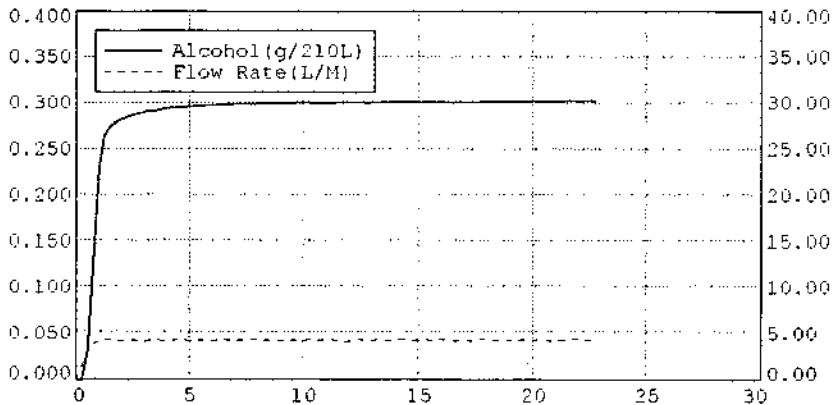
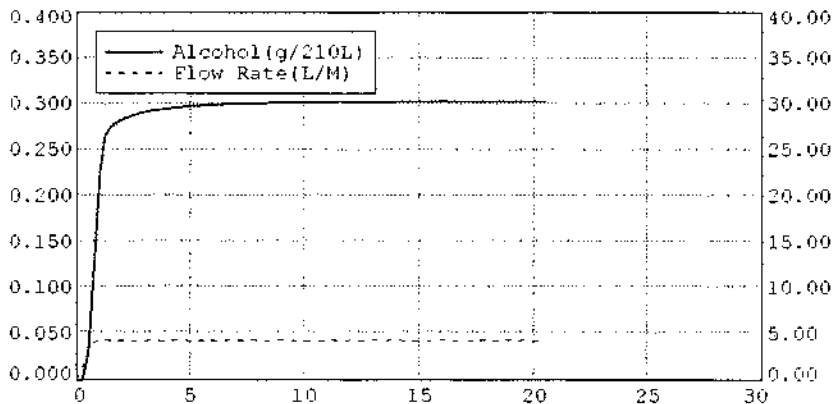
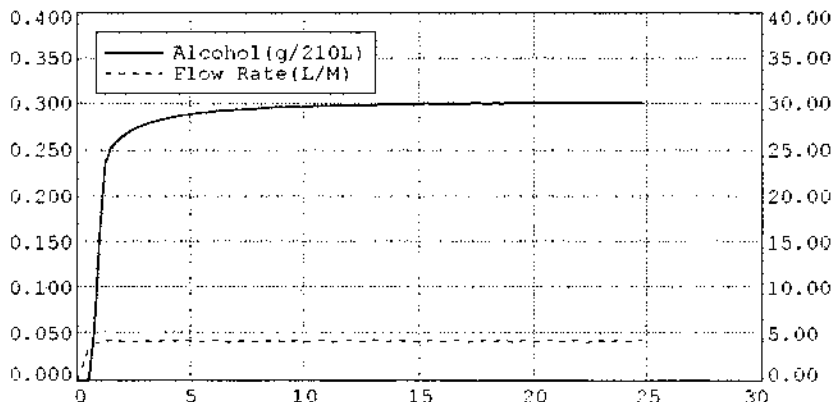
BLANK TEST	0.000	13:01
EXTERNAL STANDARD	VERIFIED	13:02
EXTERNAL STANDARD	0.300	13:02
BLANK TEST	0.000	13:03
EXTERNAL STANDARD	0.302	13:03
BLANK TEST	0.000	13:04
EXTERNAL STANDARD	0.301	13:05
BLANK TEST	0.000	13:06
EXTERNAL STANDARD	0.303	13:06
BLANK TEST	0.000	13:07
EXTERNAL STANDARD	0.306	13:08
BLANK TEST	0.000	13:09

Average = 0.3024  
 St. Dev = 0.0023

Simulator S/N: SD1176

Calibrated: 06/01/2018

JW 03/04/2019





DIAGNOSTIC RECORD

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

Date: 03/04/2019  
Time: 15:13:07

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     = 46.9°C                   PASSED  
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage    = 1.69 V                   PASSED  
(1.01 V - 2.37 V)  
Cooler Voltage = 1.84 V                   PASSED  
(1.00 V - 2.32 V)  
Bias Voltage    = 79 V                    PASSED  
(47 V - 111 V)  
Chopper Freq   = 537 Hz                   PASSED  
(475 Hz - 575 Hz)  
Barometer       = 30.2 in

PUMP INFO

Flow Rate = 4.682 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 = 0.101 2.04% (0.00% - 4.00%)

In-house OC

Jm 03/04/2019

Technician Screen

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

Date: 03/04/2019  
Time: 3:11 PM

Temperatures (°C)

Sample Cell: 48.6°C  
Breath Tube: 46.8°C

Current Barometer 30.2 in  
Volume (ltr) 0.00

Settings

Lamp: 1.69 V  
Bias: 79 V  
Cooler: 1.84 V  
Chopper: 535 Hz

Voltages (V)

Flow: 1.06 V  
Detector: 0.004 V

LINEARITY CHECK

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

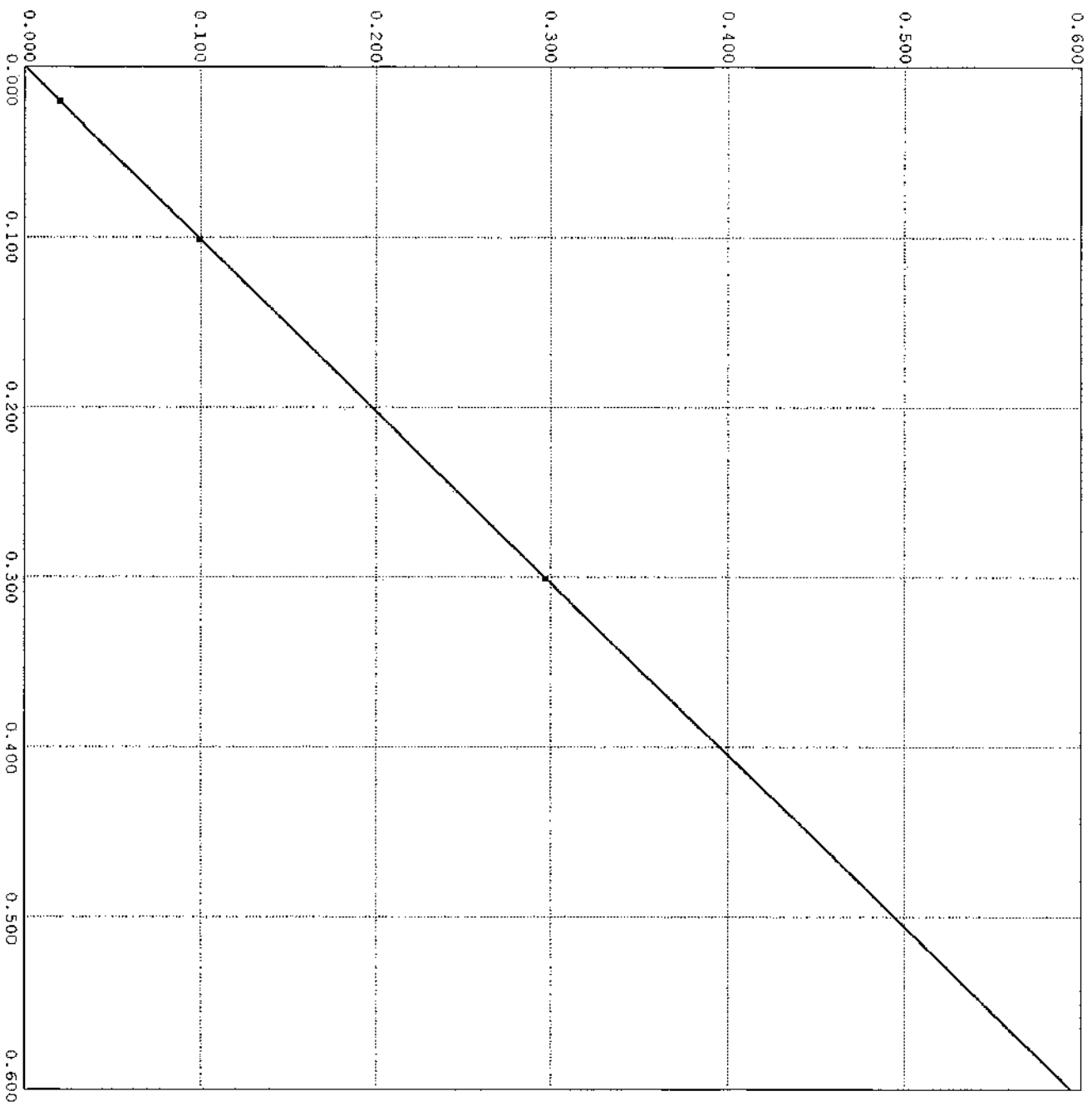
Date: 03/04/2019  
Time: 15:15:49

SUPERVISOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

TARGET	AVERAGE	STD. DEV.
0.020	0.0208	0.0004
0.101	0.1002	0.0004
0.300	0.2978	0.0013

SLOPE = 0.989979  
R<sup>2</sup> = 0.999992

*DM*



LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

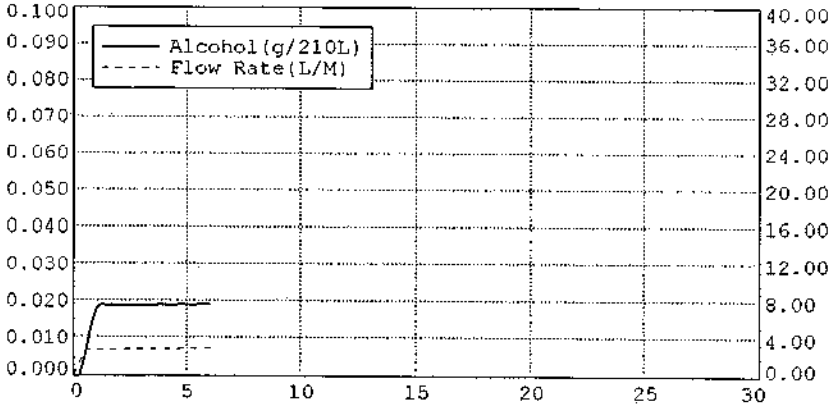
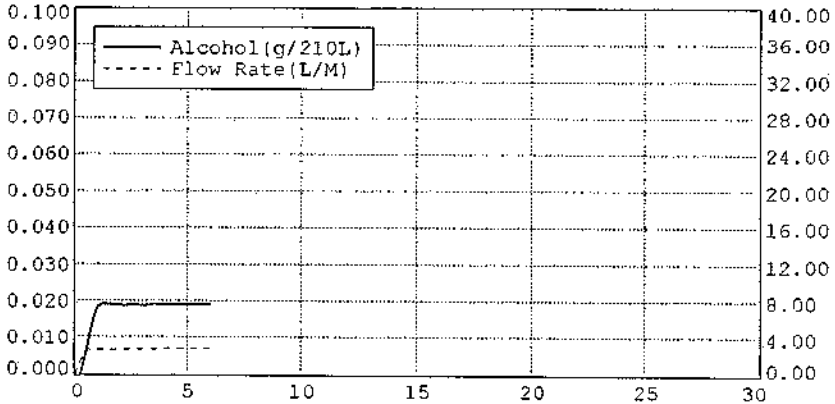
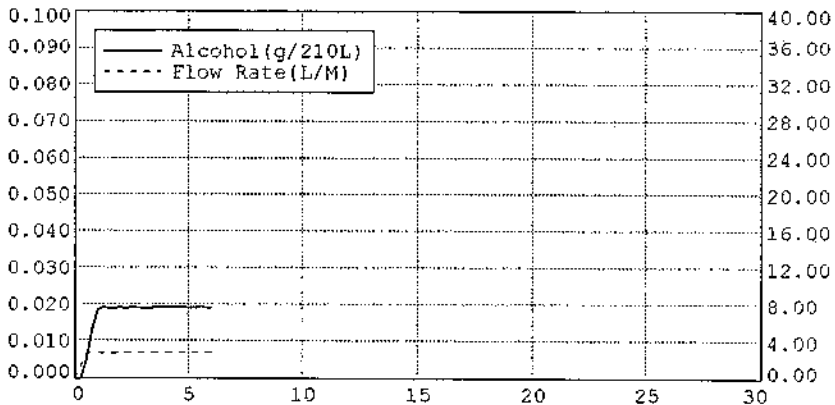
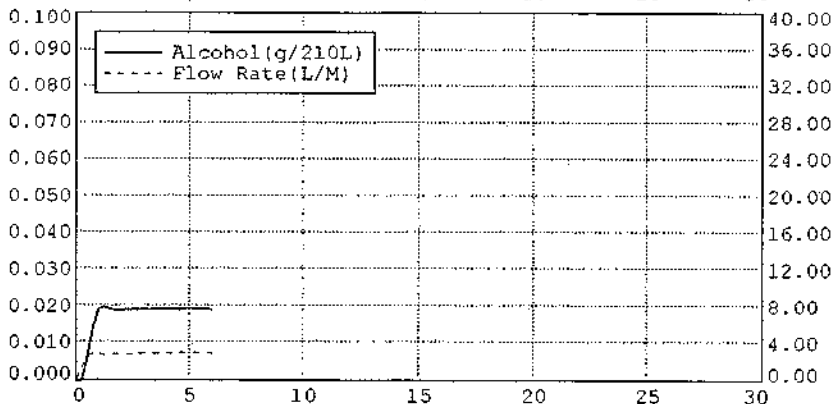
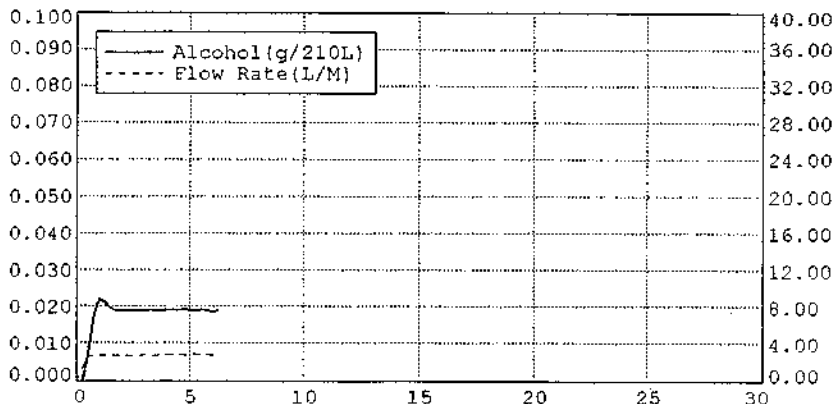
Date: 03/04/2019  
 Time: 15:15:51

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.020  
 TARGET AT 30.18: 0.020  
 LOT #: AG805804  
 EXPIRATION: 02/27/2020  
 TANK PRESSURE: 870 psi

BLANK TEST	0.000	15:17
INTERNAL STANDARD	VERIFIED	15:17
EXTERNAL STANDARD	0.021	15:17
BLANK TEST	0.000	15:18
EXTERNAL STANDARD	0.021	15:18
BLANK TEST	0.000	15:19
EXTERNAL STANDARD	0.021	15:19
BLANK TEST	0.000	15:20
EXTERNAL STANDARD	0.021	15:20
BLANK TEST	0.000	15:21
EXTERNAL STANDARD	0.020	15:21
BLANK TEST	0.000	15:22

Average = 0.0208  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 2

Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

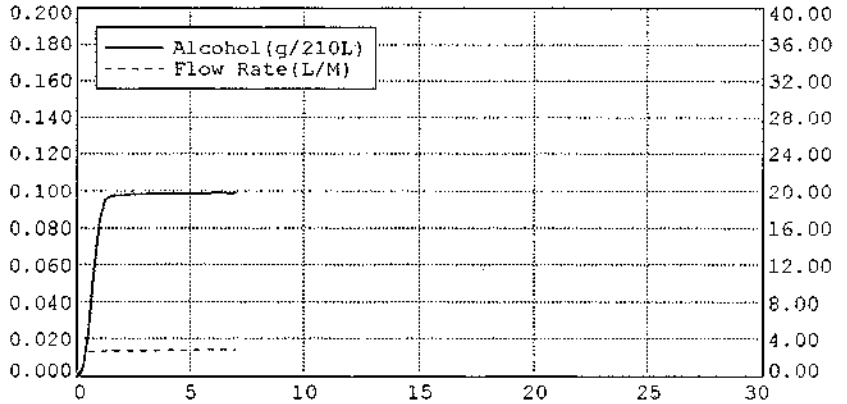
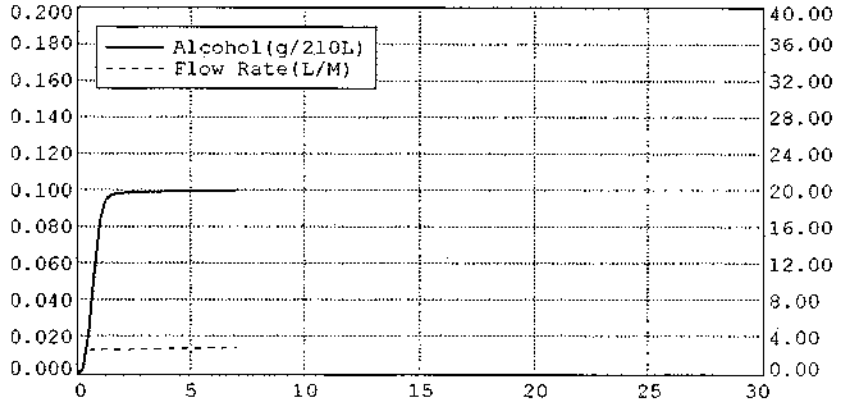
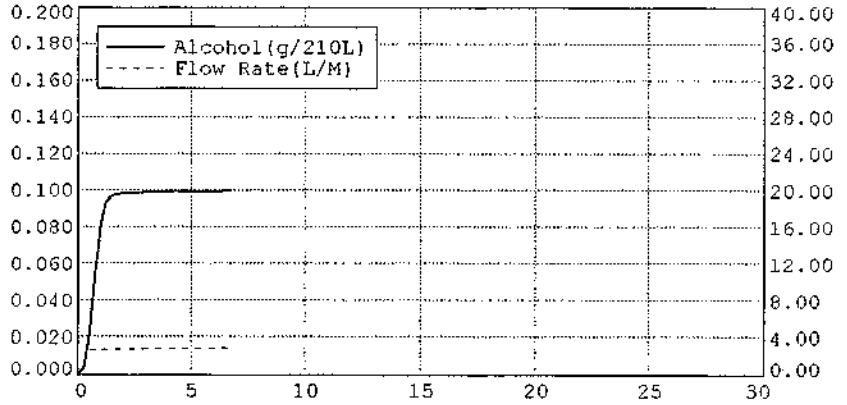
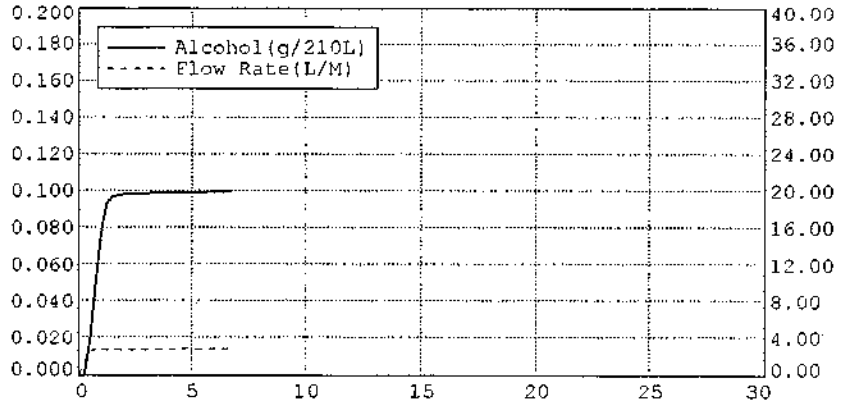
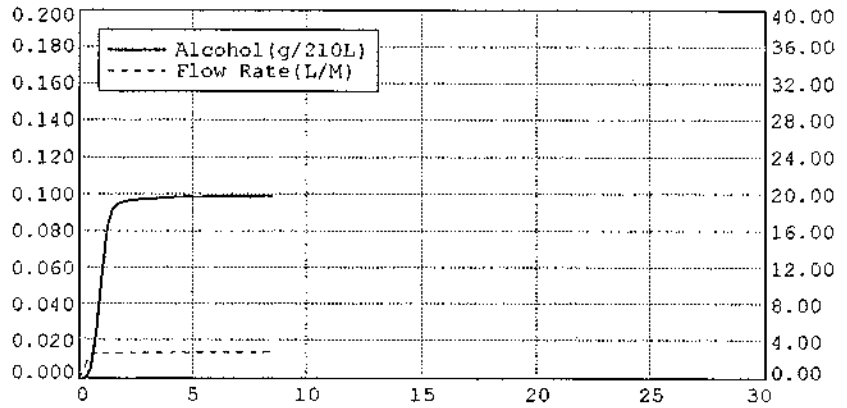
Date: 03/04/2019  
 Time: 15:25:33

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.100  
 TARGET AT 30.18: 0.101  
 LOT #: AG805903  
 EXPIRATION: 02/28/2020  
 TANK PRESSURE: 844 psi

BLANK TEST	0.000	15:43
INTERNAL STANDARD	VERIFIED	15:43
EXTERNAL STANDARD	0.100	15:43
BLANK TEST	0.000	15:44
EXTERNAL STANDARD	0.100	15:44
BLANK TEST	0.000	15:45
EXTERNAL STANDARD	0.101	15:46
BLANK TEST	0.000	15:46
EXTERNAL STANDARD	0.100	15:47
BLANK TEST	0.000	15:48
EXTERNAL STANDARD	0.100	15:48
BLANK TEST	0.000	15:49

Average = 0.1002  
 Std Dev = 0.0004



LINEARITY CHECK: Control Test 3

Alaska Department of Public Safety  
DATAMASTER dmt: 100671

Date: 03/04/2019  
Time: 15:59:33

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.300  
LOT #: 17350  
EXPIRATION: 10/11/2019

BLANK TEST	0.000	16:01
INTERNAL STANDARD	VERIFIED	16:01
EXTERNAL STANDARD	0.296	16:02
BLANK TEST	0.000	16:03
EXTERNAL STANDARD	0.297	16:03
BLANK TEST	0.000	16:04
EXTERNAL STANDARD	0.298	16:04
BLANK TEST	0.000	16:05
EXTERNAL STANDARD	0.299	16:06
BLANK TEST	0.000	16:07
EXTERNAL STANDARD	0.299	16:07
BLANK TEST	0.000	16:08

Average = 0.2978  
Std Dev = 0.0013

Simulator S/N: SD1176

Calibrated: 06/01/2018

JMY 03/04/2019

