



## GUTH LABORATORIES, INC.

590 NORTH 67th STREET ■ HARRISBURG, PA 17111-4611 ■ TELEPHONE: 717-664-6470

### CERTIFICATE OF ANALYSIS

Certified Alcohol Reference Solution for Simulator

Random Samples of Lot Number **17340** of Alcohol Reference Solution for Simulator were analyzed by gas chromatography on **October 10, 2017**, using a Perkin Elmer Gas Chromatograph Autosystem XL S/N: 610N9030209, and found to contain **0.2410%** (w/vol) ethyl alcohol. The expiration date for this lot number is **October 9, 2019** 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 **0.200 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 FN08101505 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: 10:40:36

SUPERVISOR NAME:  
 DEREK WALTON  
 OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.200

BLANK TEST	0.000	10:42
INTERNAL STANDARD	VERIFIED	10:42
EXTERNAL STANDARD	0.201	10:43
BLANK TEST	0.000	10:44
EXTERNAL STANDARD	0.200	10:44
BLANK TEST	0.000	10:45
EXTERNAL STANDARD	0.201	10:45
BLANK TEST	0.000	10:46
EXTERNAL STANDARD	0.201	10:47
BLANK TEST	0.000	10:48
EXTERNAL STANDARD	0.201	10:48
BLANK TEST	0.000	10:49

Average = 0.2008  
 Std Dev = 0.0004

Simulator DR5298  
 Calibrated 01/24/2018

Auth 0.200

Lot # 17340

Exp. 10/09/2019

0.2008

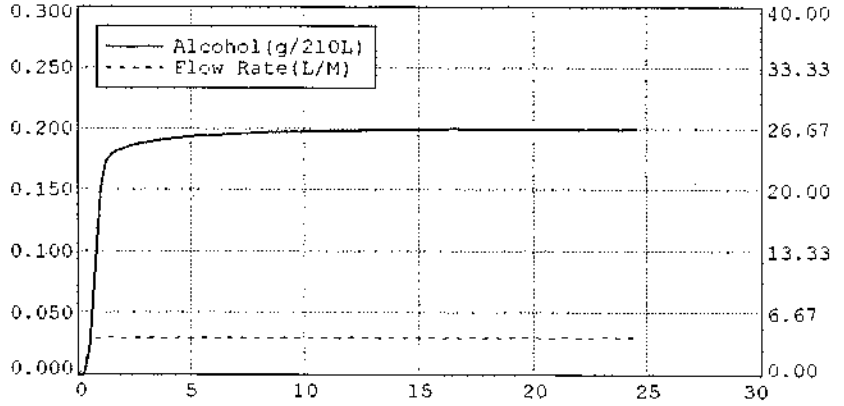
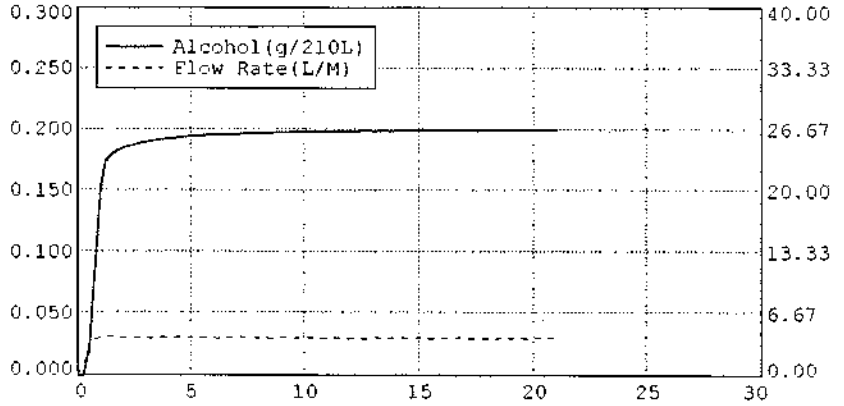
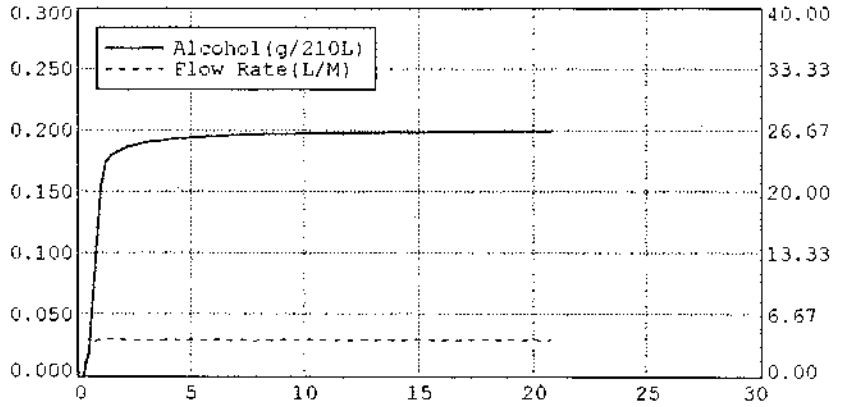
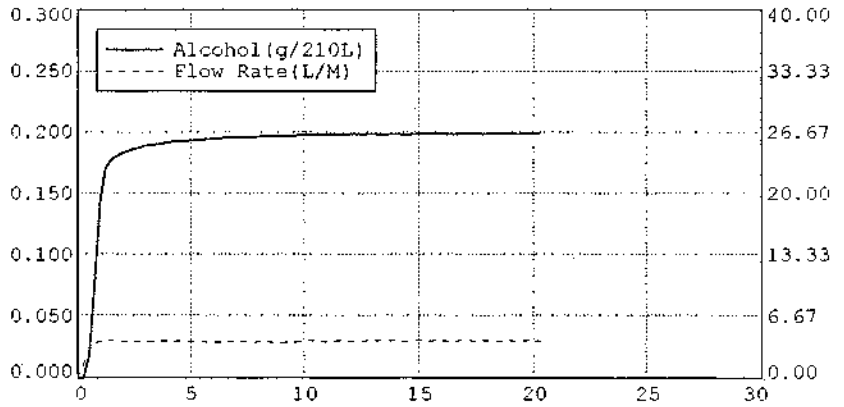
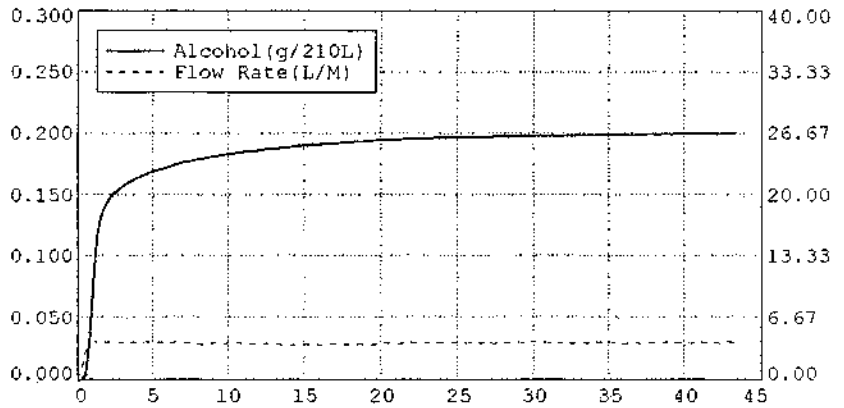
0.2030

0.2012

          
 Avg 0.202

Supervised by COB 4/10/18

*DW* 04/10/18



SUPERVISOR TEST

Alaska Department of Public Safety  
DATAMASTER dmt: 100411

Date: 04/10/2018  
Time: 10:40:52

SUPERVISOR NAME:  
DEREK WALTON  
OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION  
NOMINAL: 0.200

BLANK TEST	0.000	10:42
INTERNAL STANDARD	VERIFIED	10:42
EXTERNAL STANDARD	0.203	10:43
BLANK TEST	0.000	10:44
EXTERNAL STANDARD	0.203	10:44
BLANK TEST	0.000	10:45
EXTERNAL STANDARD	0.203	10:46
BLANK TEST	0.000	10:47
EXTERNAL STANDARD	0.203	10:47
BLANK TEST	0.000	10:48
EXTERNAL STANDARD	0.203	10:49
BLANK TEST	0.000	10:49

Average = 0.2030  
Std Dev = 0.0000

*Auth 0.200*

*Lot # 17340*

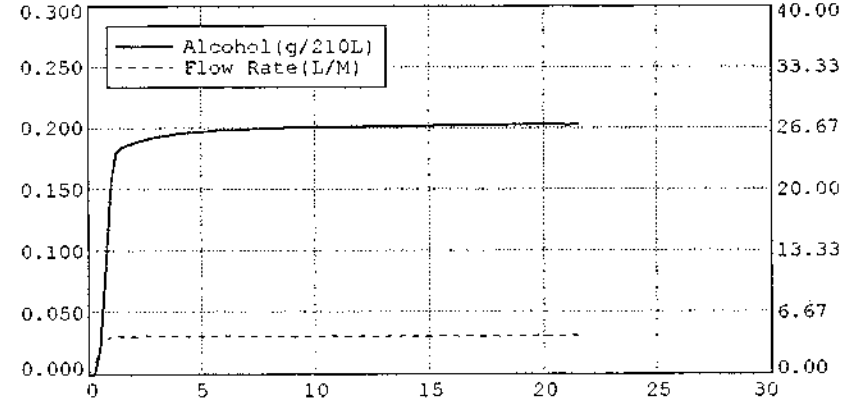
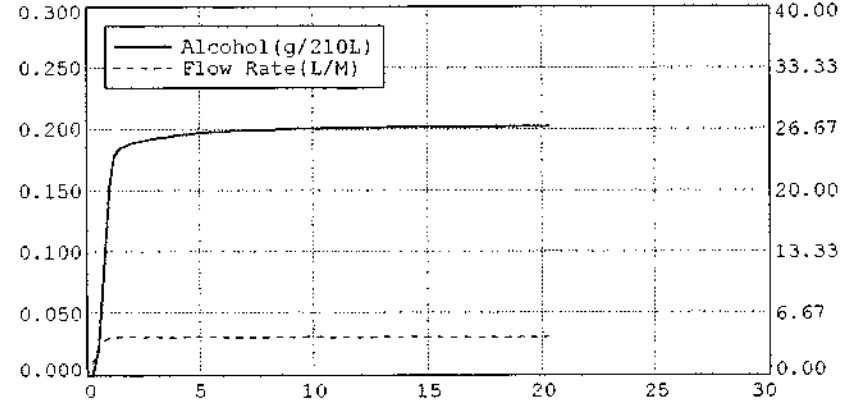
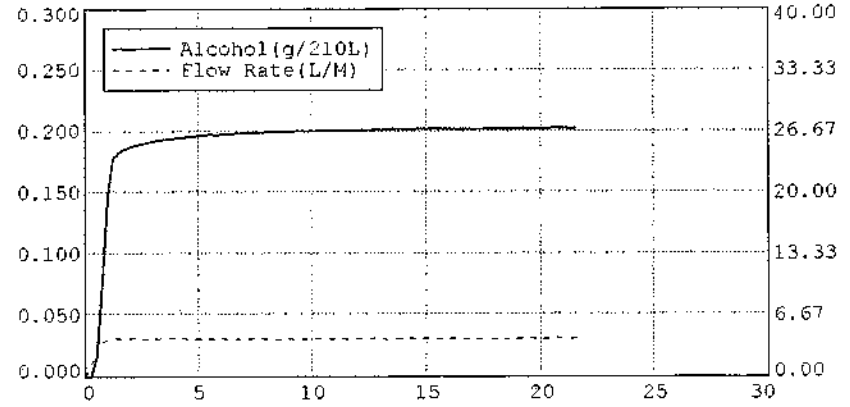
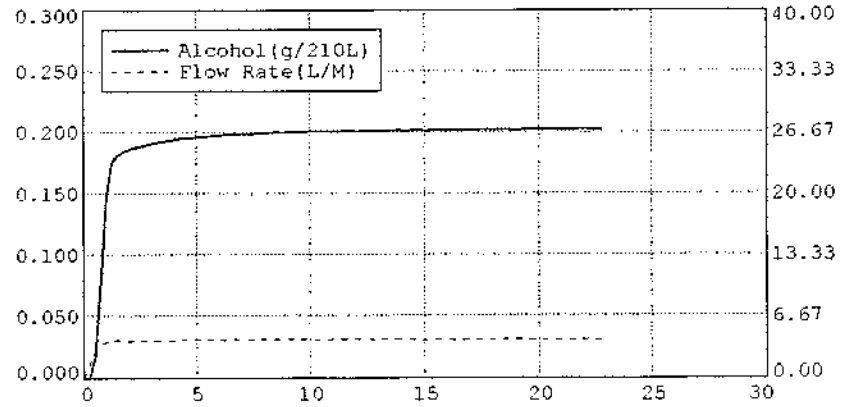
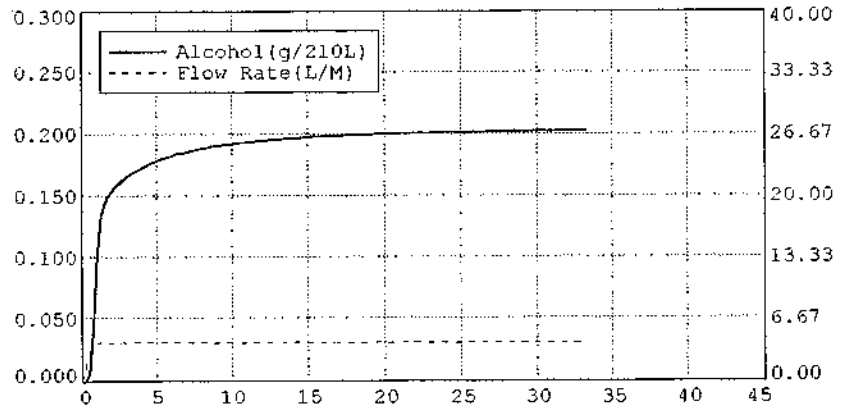
*Exp. 10/09/2019*

*0.2008*

*0.2030*

*0.2012*

*Arg 0.202*



**SUPERVISOR TEST**

Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

Date: 04/10/2018  
 Time: 11:16:32

SUPERVISOR NAME:  
 DEREK WALTON  
 OPERATOR'S #: 9508

EXTERNAL STANDARD INFORMATION  
 NOMINAL: 0.200

BLANK TEST	0.000	11:17
INTERNAL STANDARD	VERIFIED	11:17
EXTERNAL STANDARD	0.201	11:18
BLANK TEST	0.000	11:19
EXTERNAL STANDARD	0.202	11:19
BLANK TEST	0.000	11:20
EXTERNAL STANDARD	0.201	11:21
BLANK TEST	0.000	11:21
EXTERNAL STANDARD	0.201	11:22
BLANK TEST	0.000	11:23
EXTERNAL STANDARD	0.201	11:23
BLANK TEST	0.000	11:24

Average = 0.2012  
 Std Dev = 0.0004

*Auto 0.200*

*Lot # 17340*

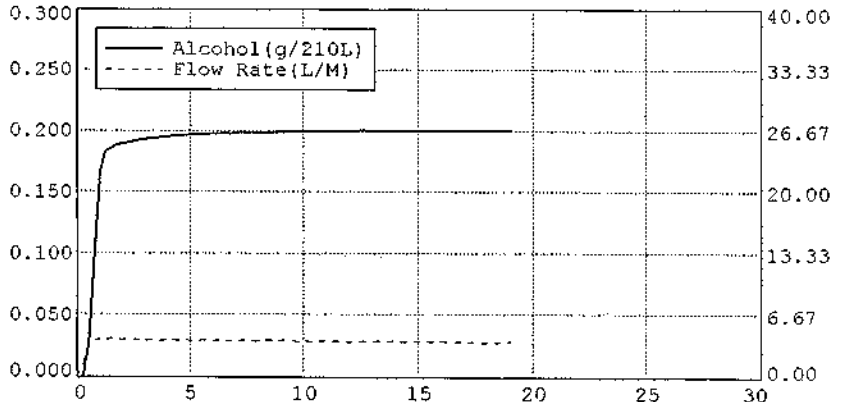
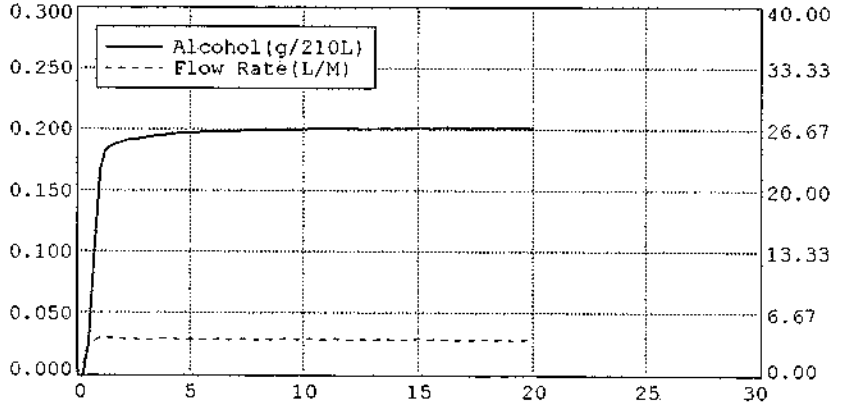
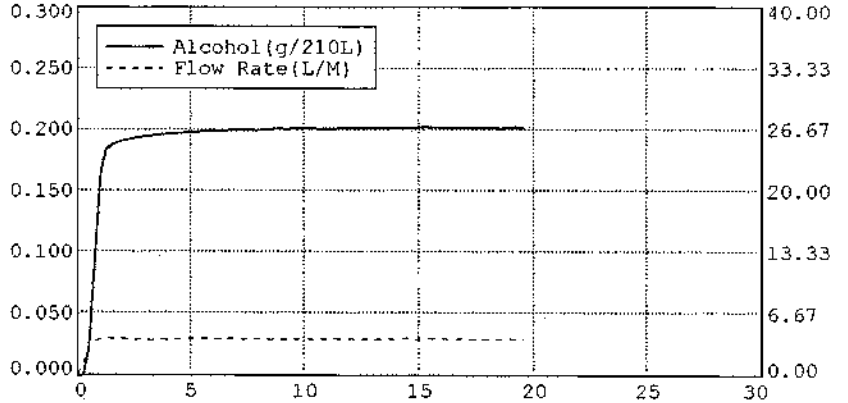
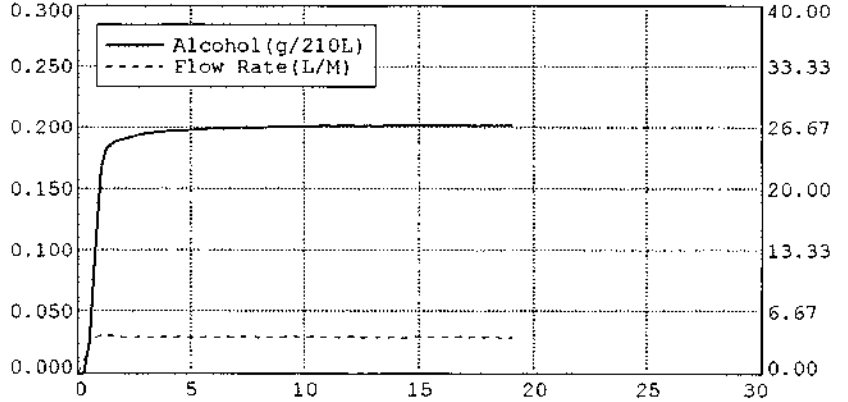
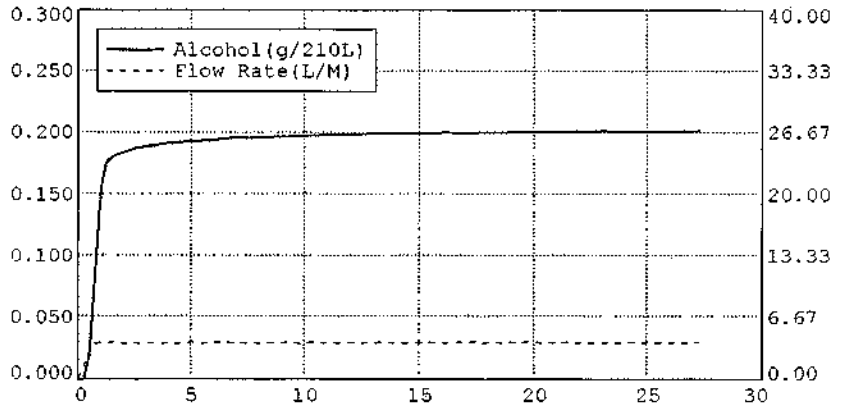
*Exp. 10/09/2019*

*0.2008*

*0.2030*

*0.2012*

*Arg 0.202*



DIAGNOSTIC RECORD

-----  
Alaska Department of Public Safety  
DATAMASTER dmt: 100353  
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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  
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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

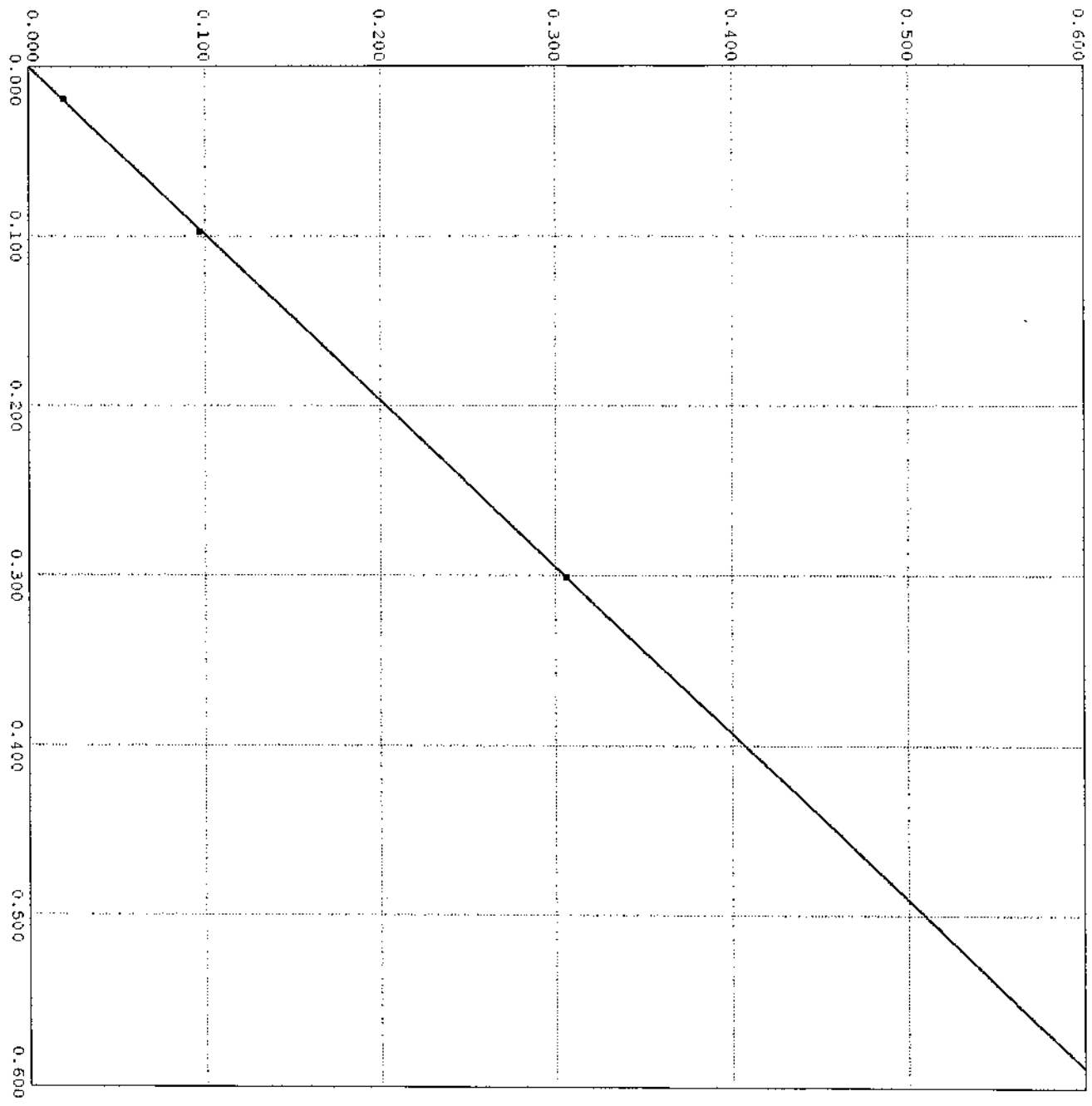
Alaska Department of Public Safety  
DATAMASTER dmt: 100353

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  
R<sup>2</sup> = 0.999949



*WDC*

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100353

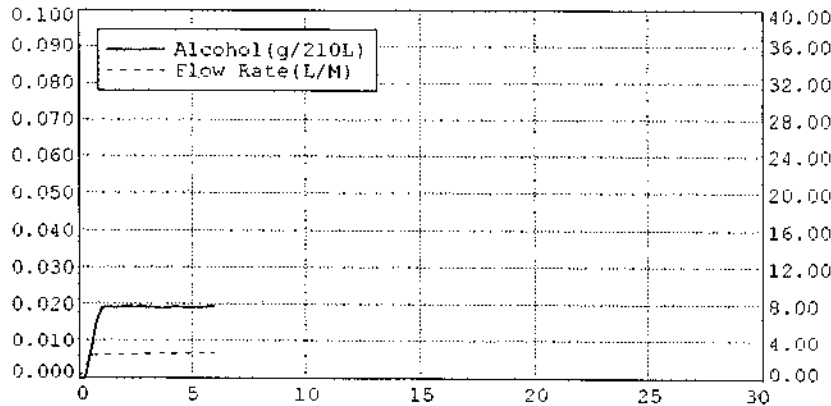
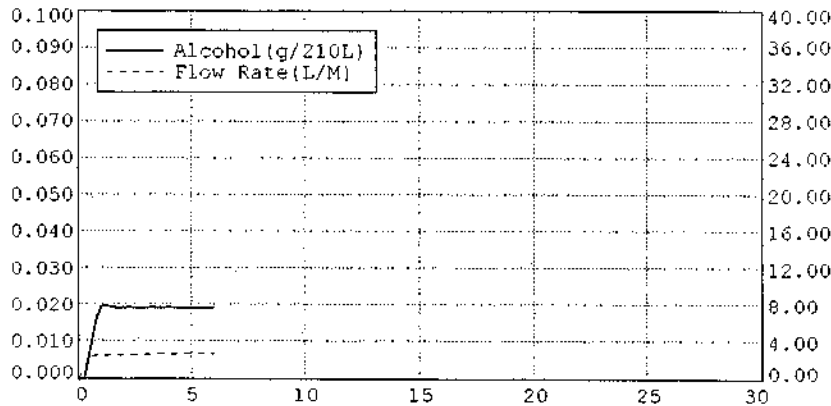
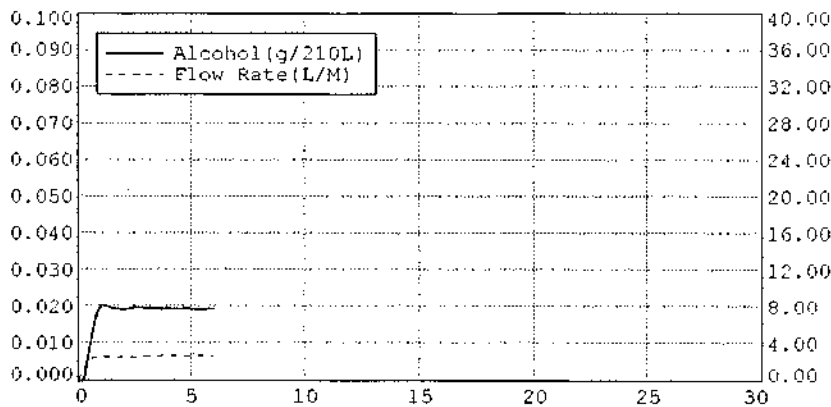
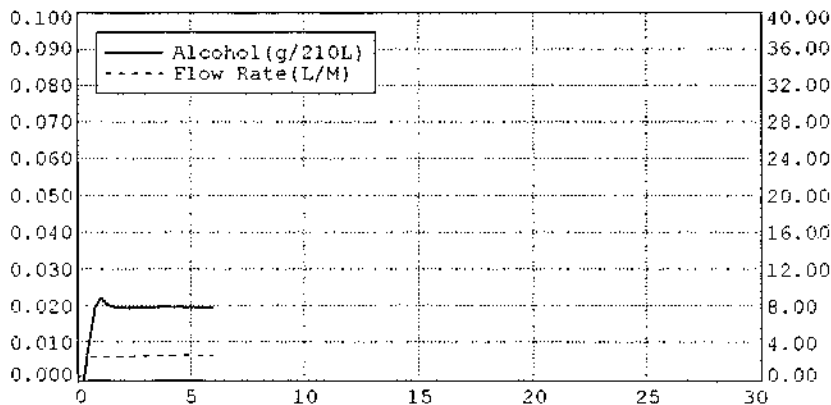
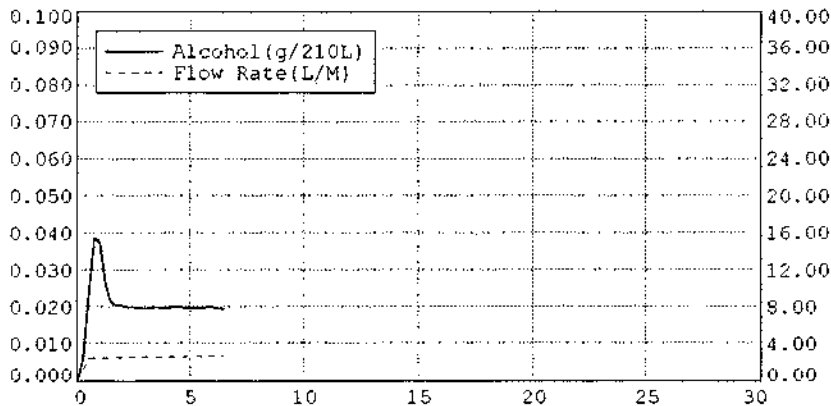
Date: 04/10/2018  
 Time: 09:46:15

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

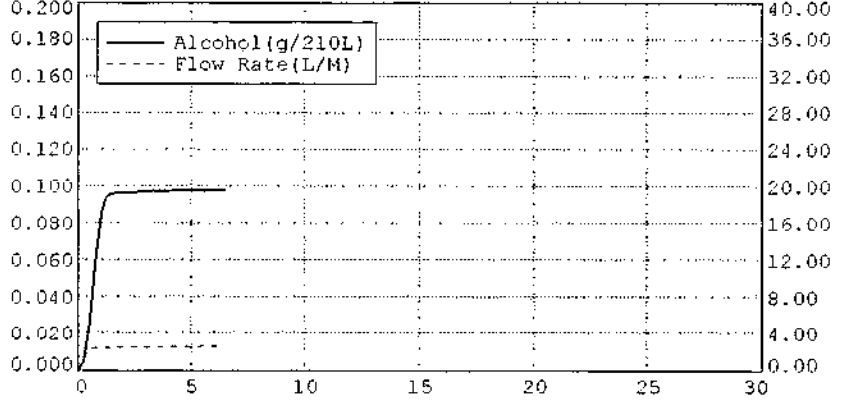
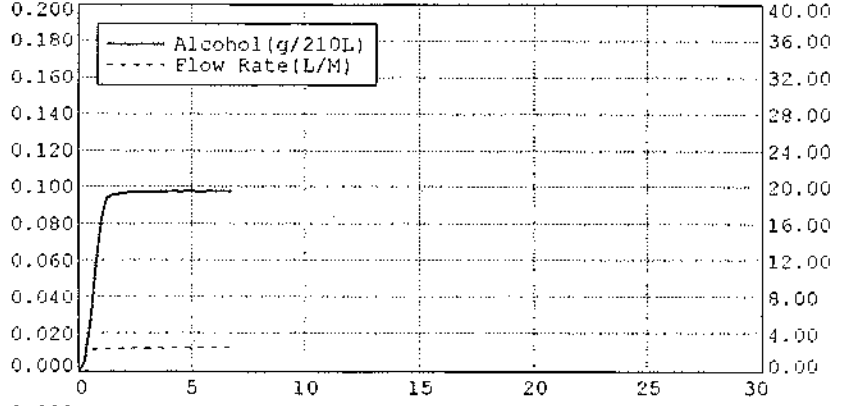
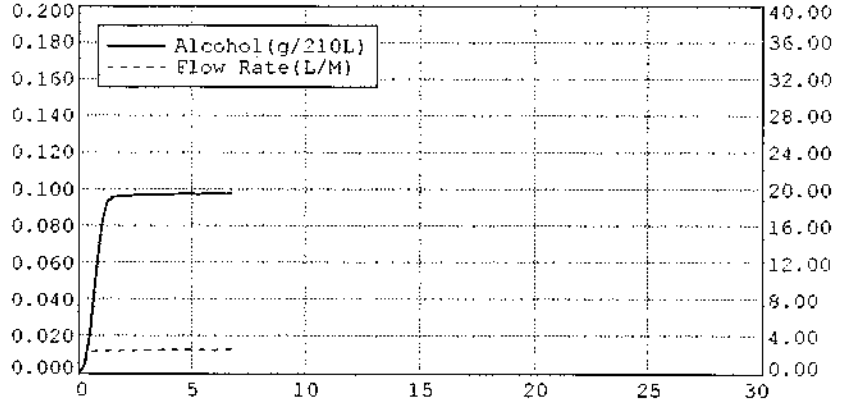
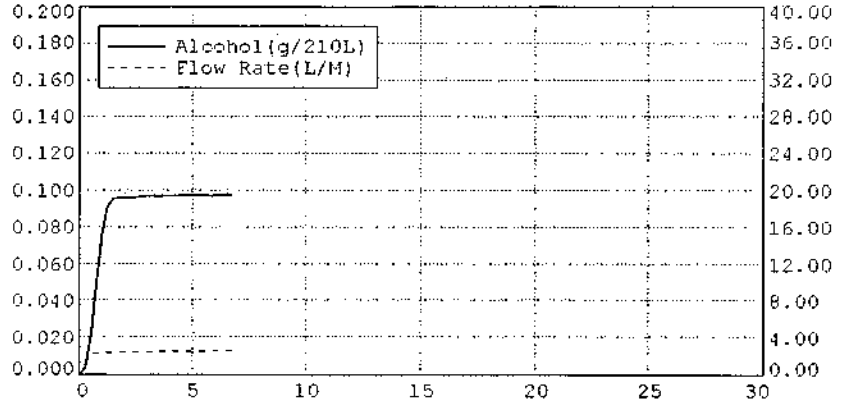
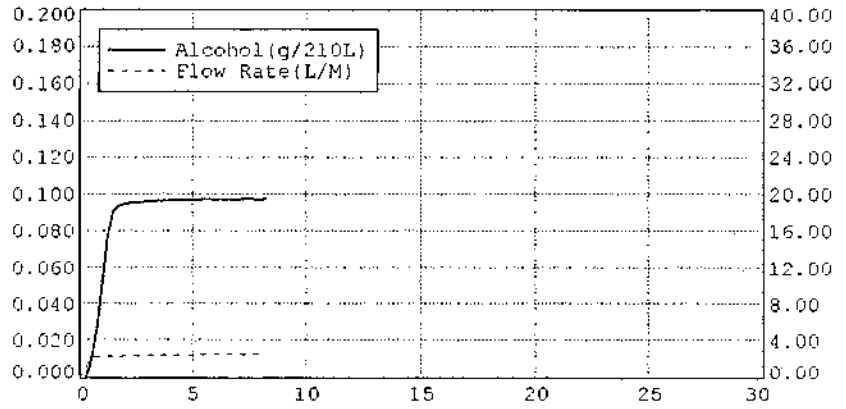
Date: 04/10/2018  
 Time: 09:57:22

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

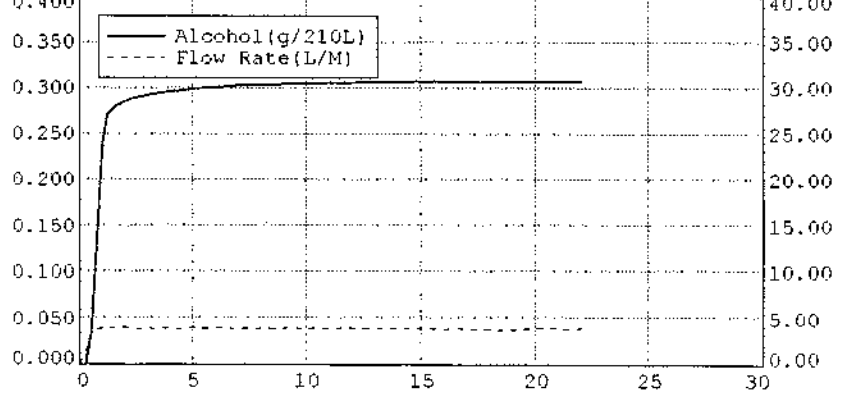
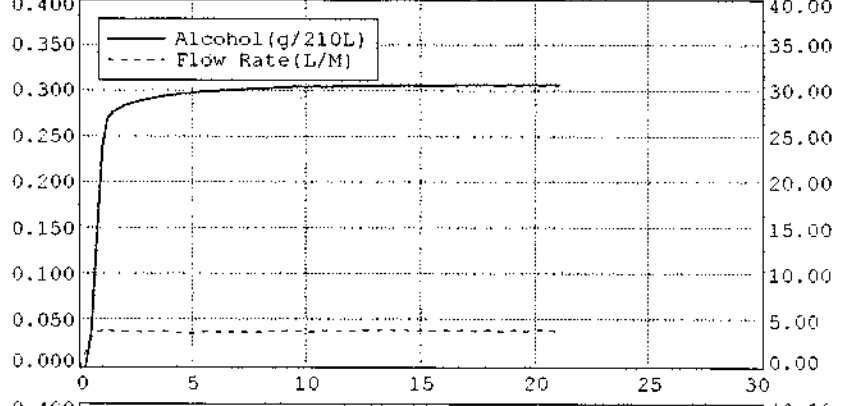
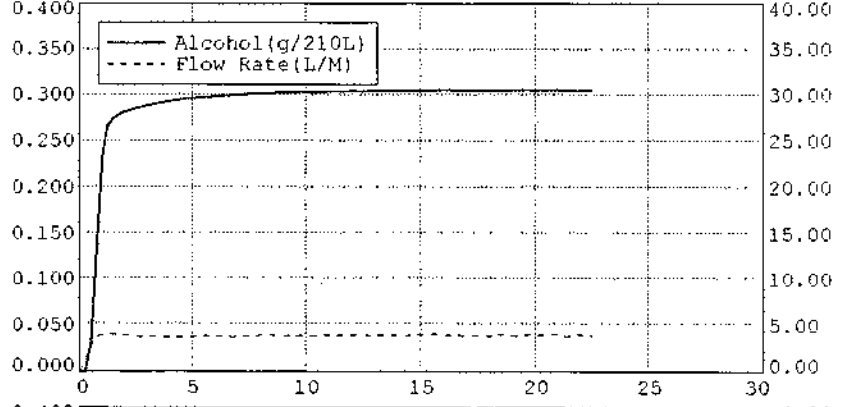
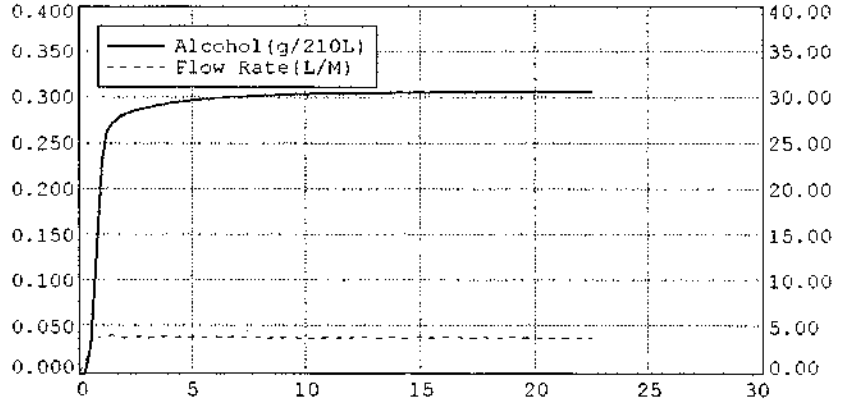
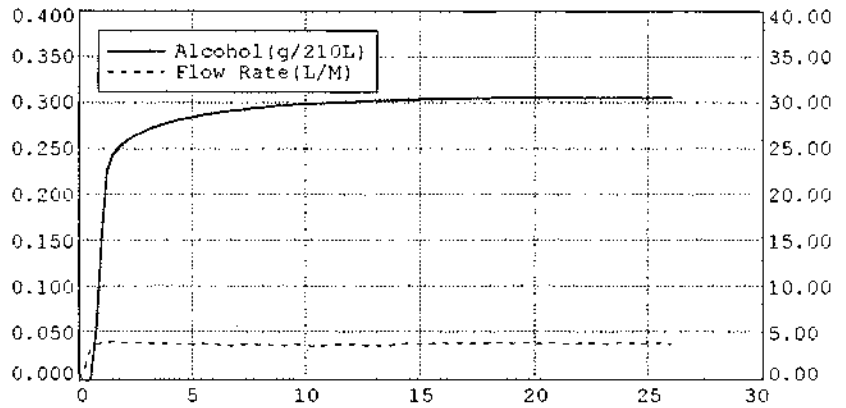
Date: 04/10/2018  
Time: 10:07:13

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

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Alaska Department of Public Safety  
DATAMASTER dmt: 100411  
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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

Xq = 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

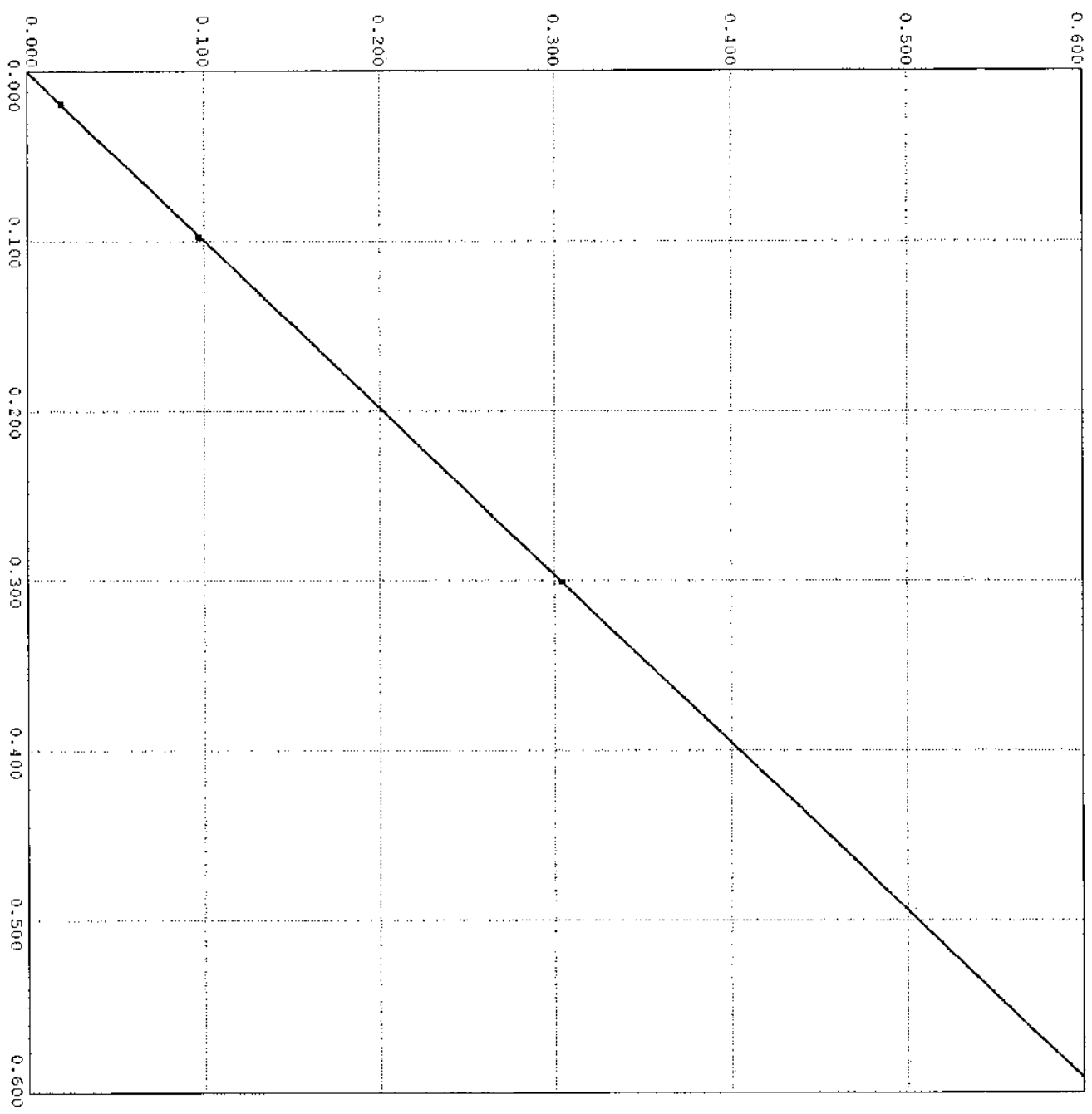
Alaska Department of Public Safety  
DATAMASTER dmt: 100411

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  
R<sup>2</sup> = 0.999989



*2008*

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100411

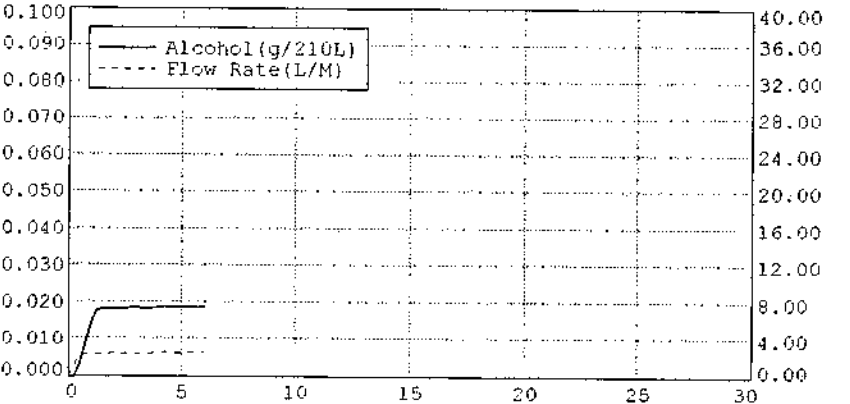
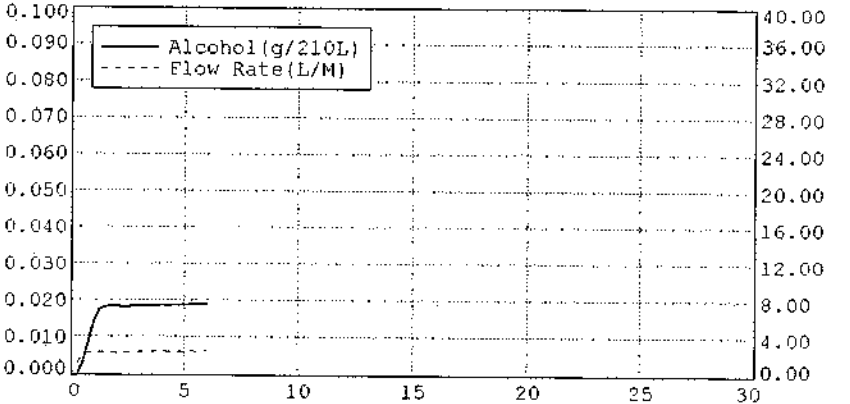
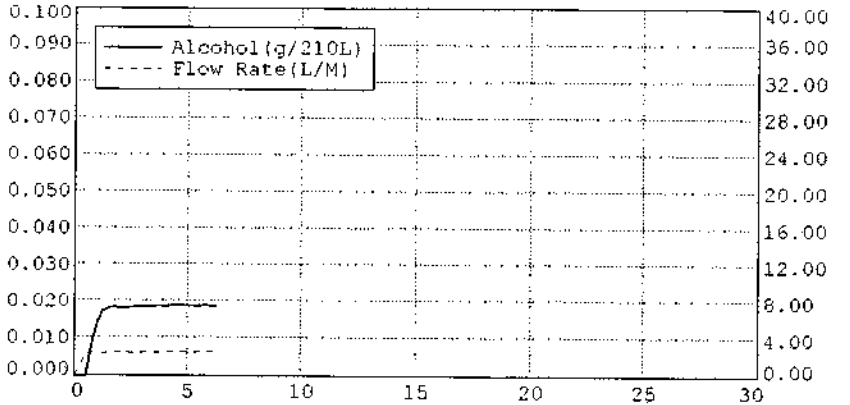
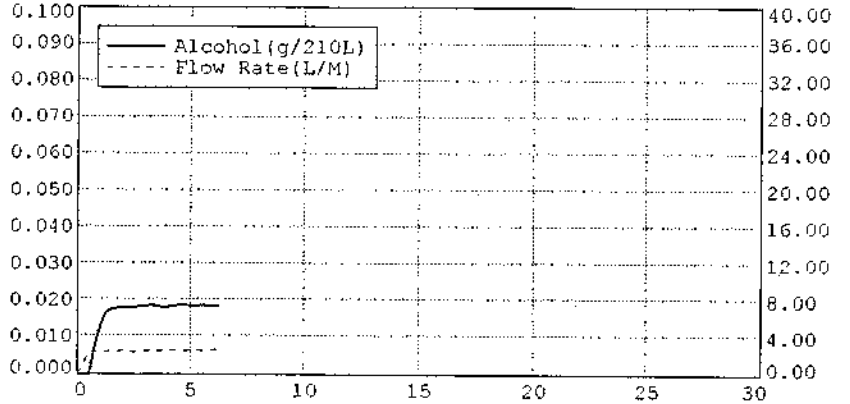
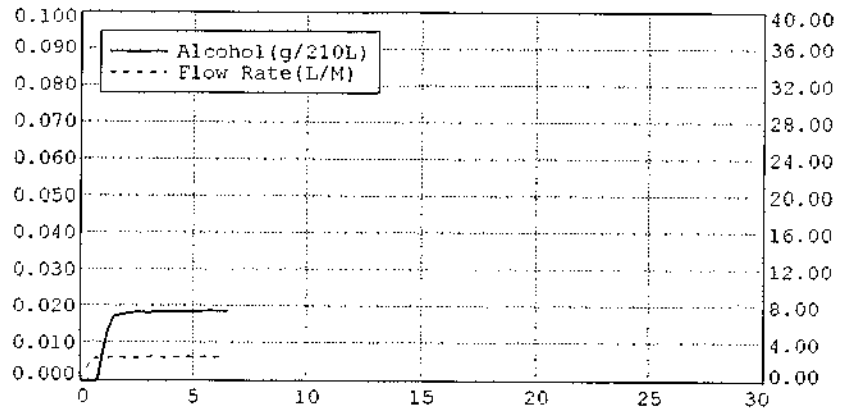
Date: 04/10/2018  
 Time: 09:17:36

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

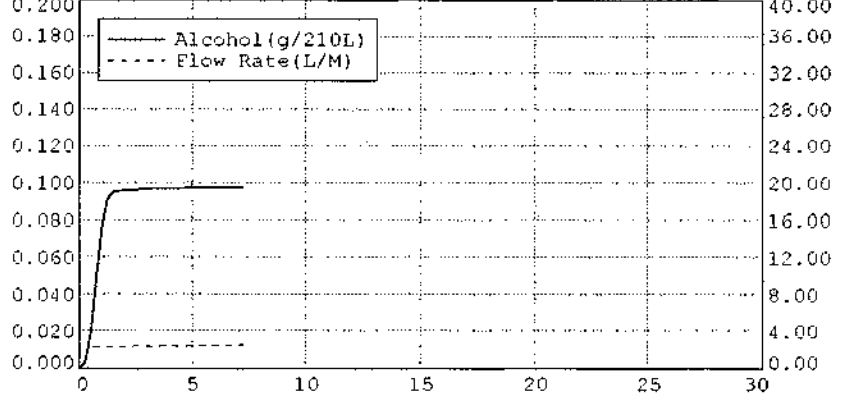
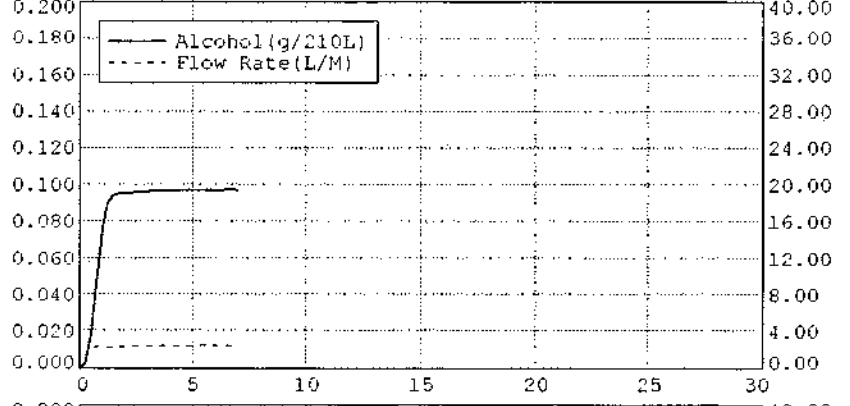
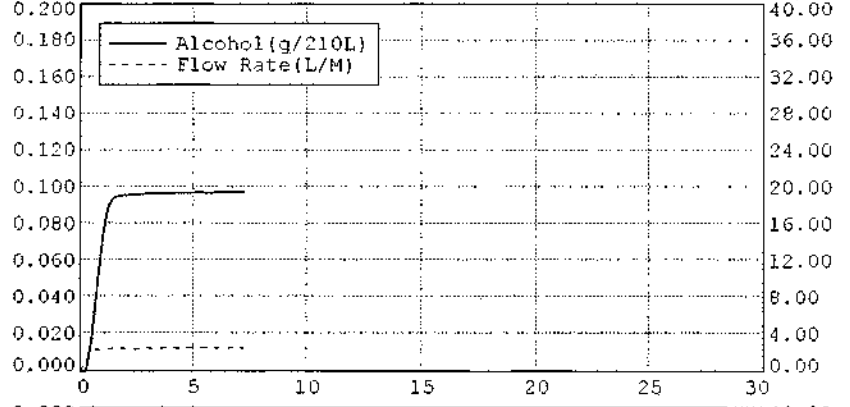
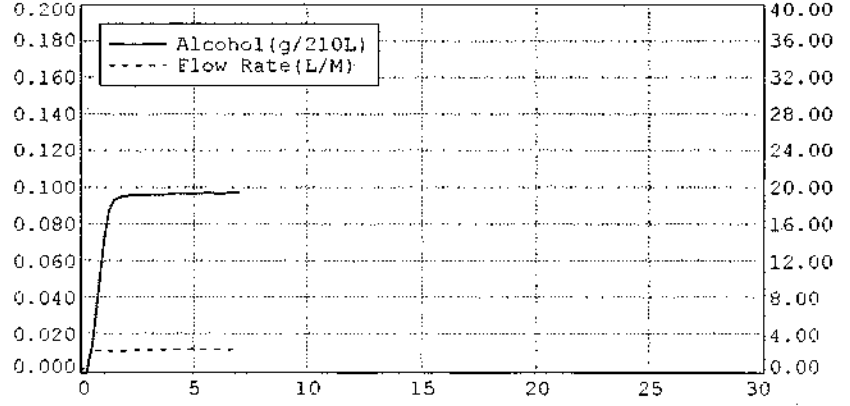
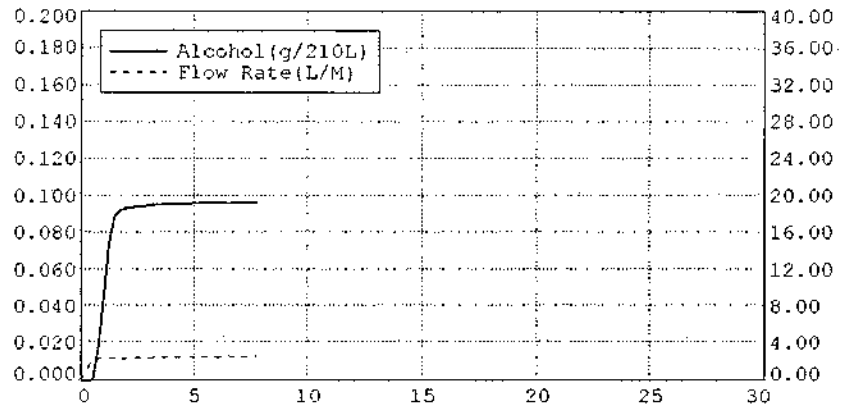
Date: 04/10/2018  
 Time: 09:30:07

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

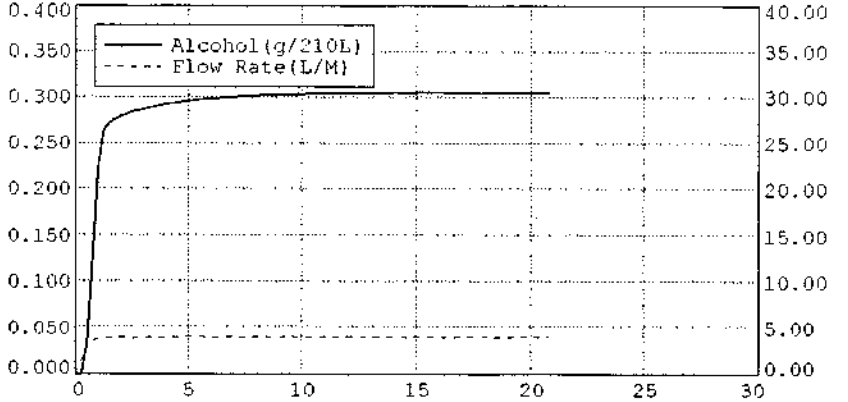
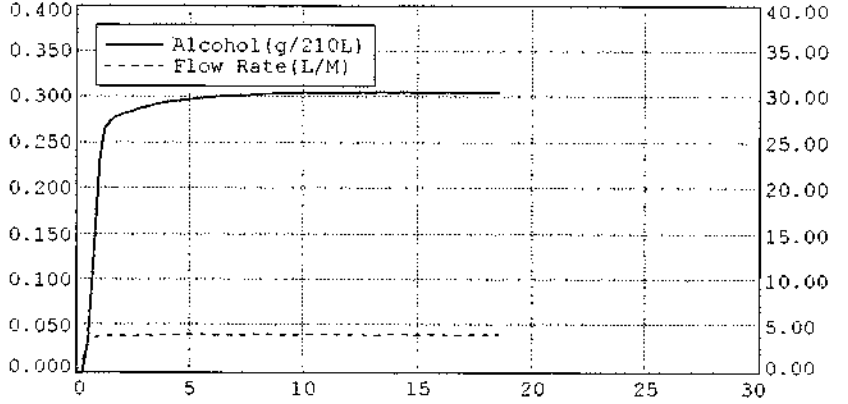
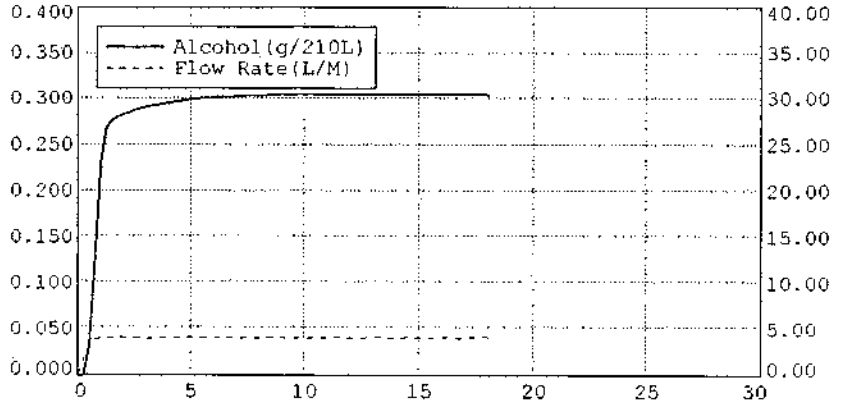
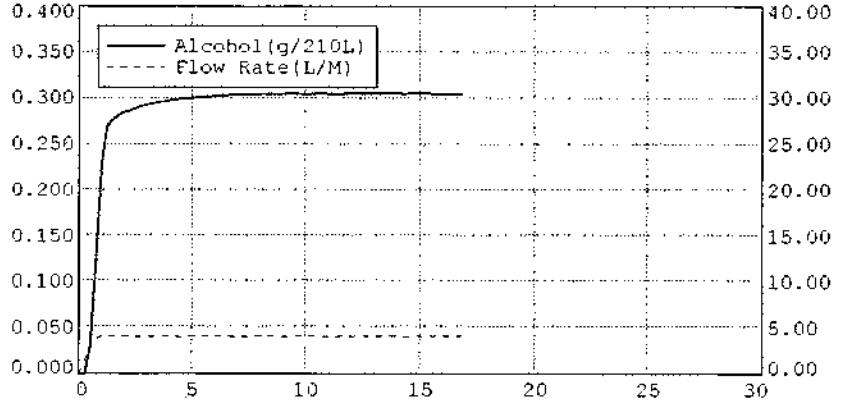
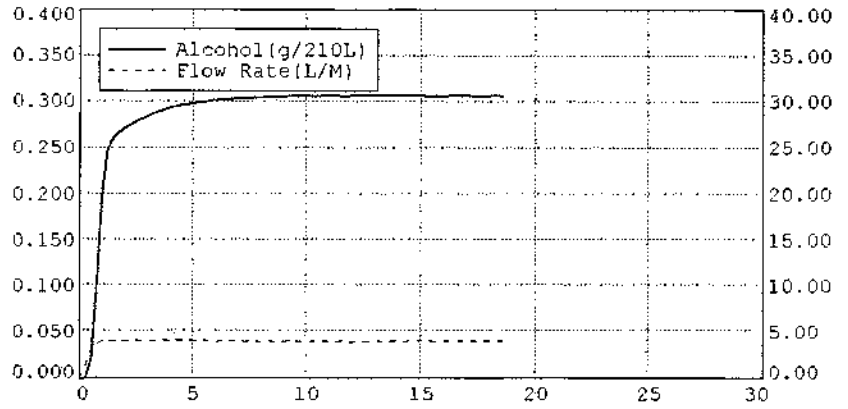
Date: 04/10/2018  
 Time: 09:51:26

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

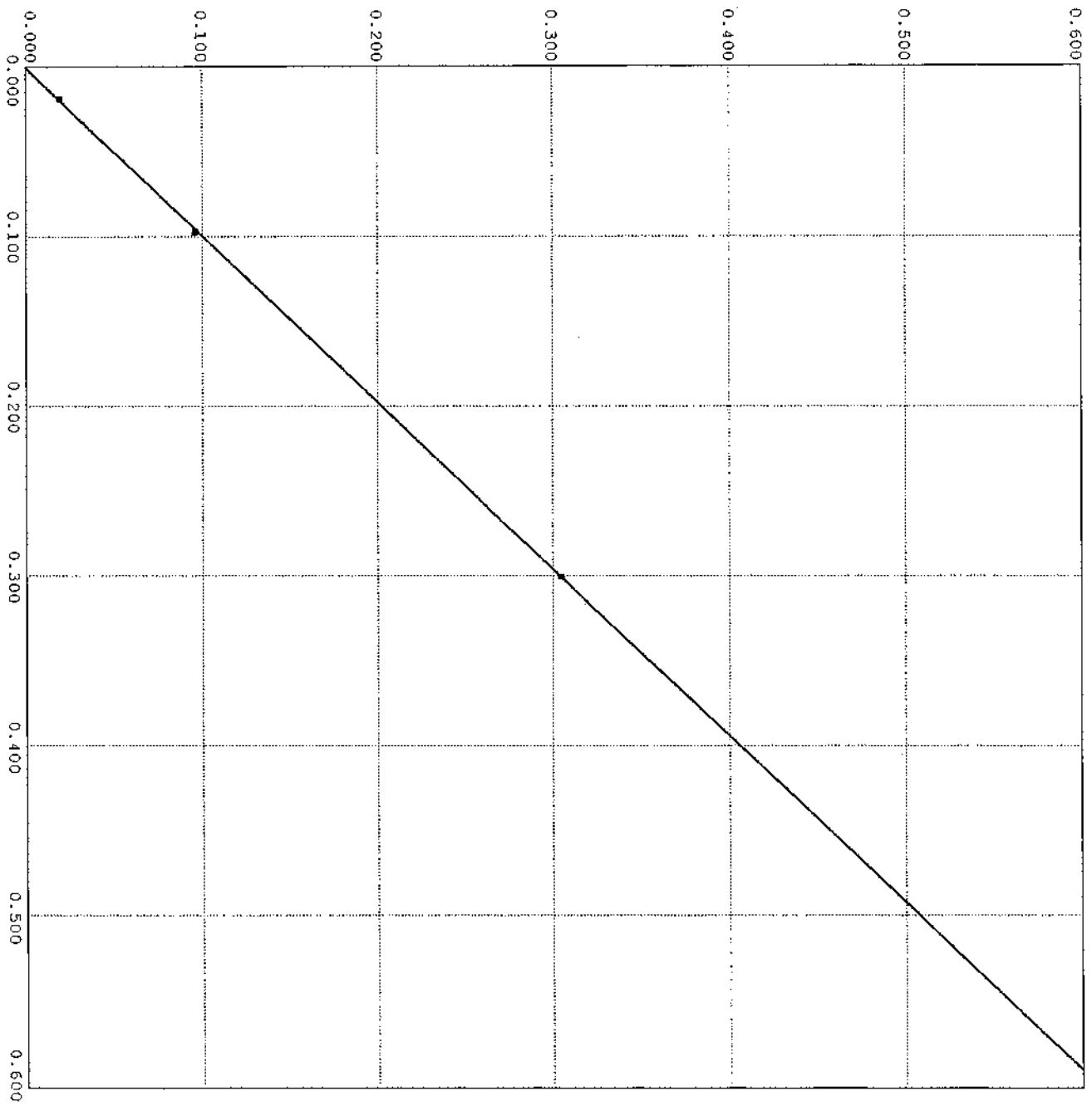
Alaska Department of Public Safety  
DATAMASTER dmt: 100671

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  
R<sup>2</sup> = 0.999926



*DDW*

LINEARITY CHECK: Control Test 1

Alaska Department of Public Safety  
 DATAMASTER dmt: 100671

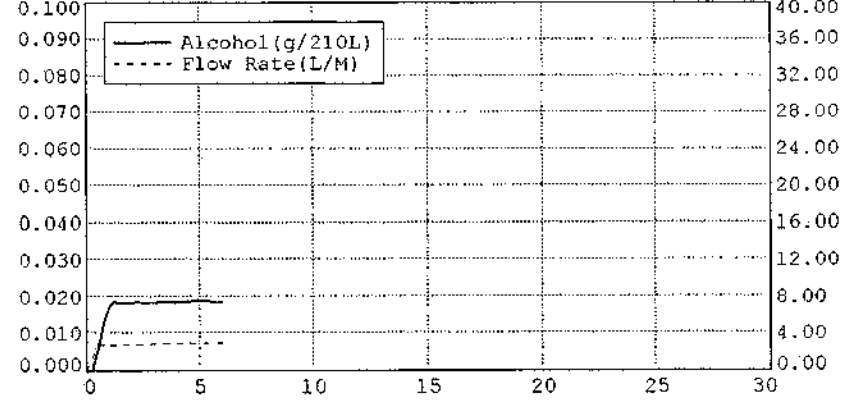
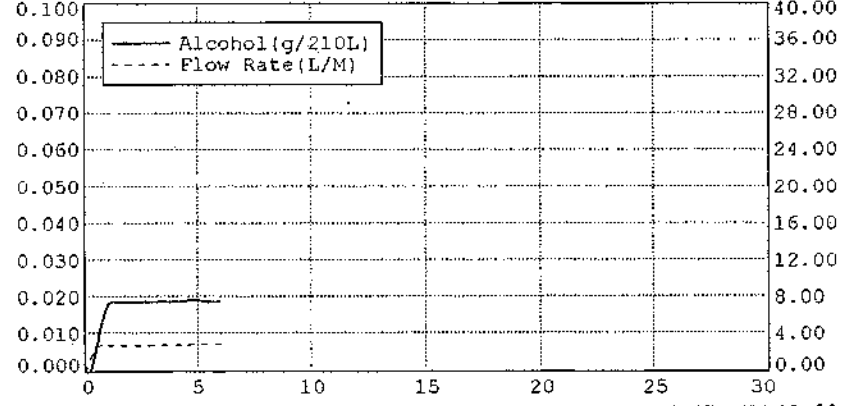
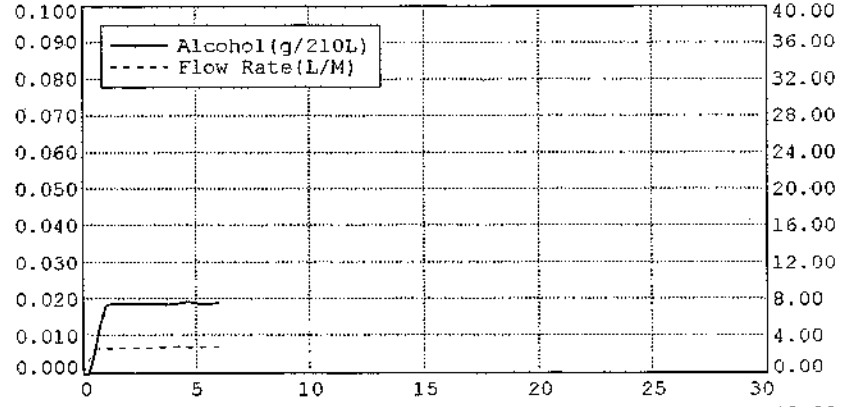
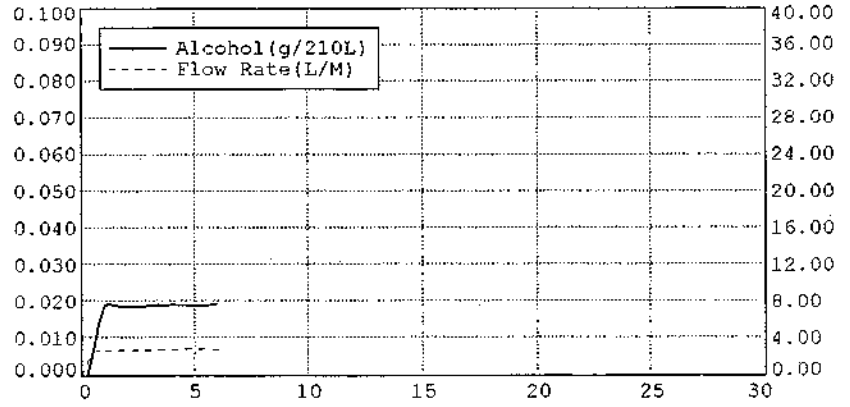
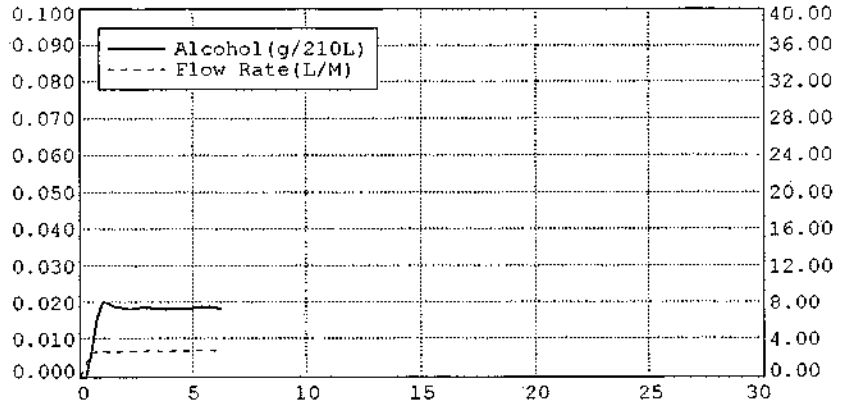
Date: 04/10/2018  
 Time: 10:07:26

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

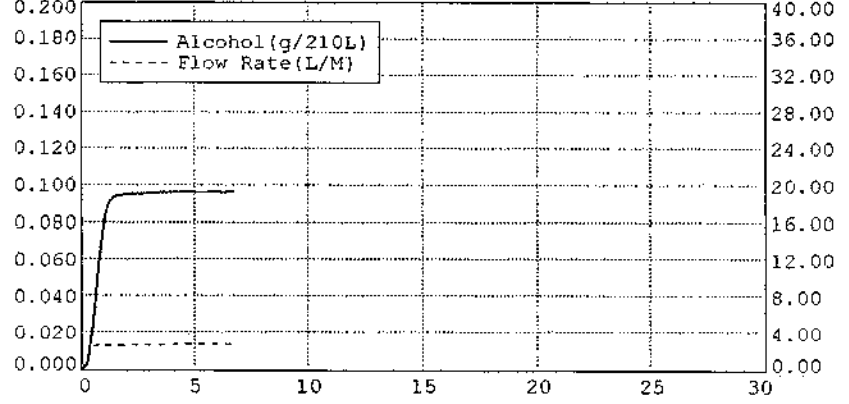
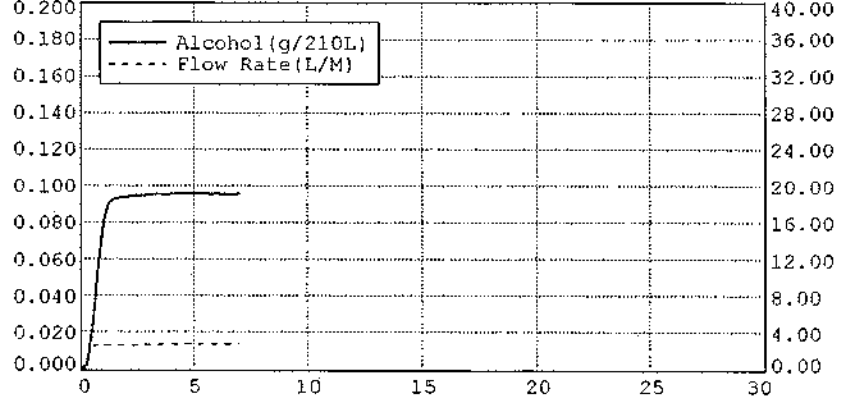
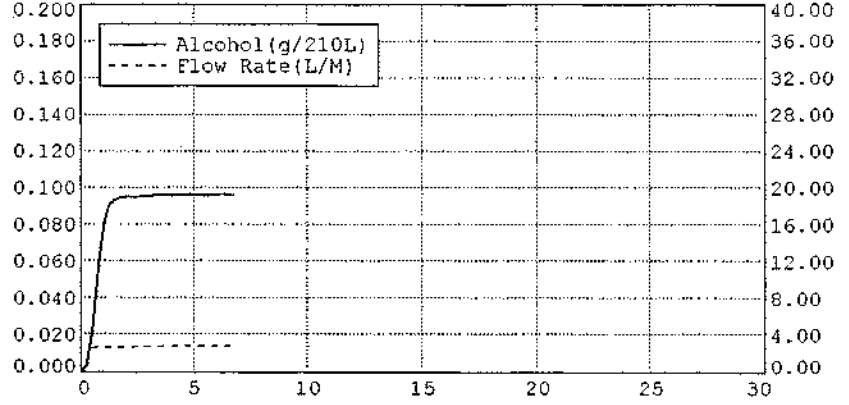
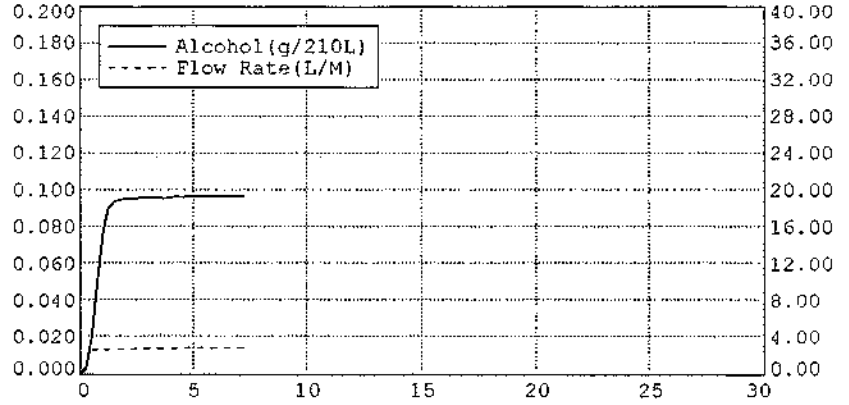
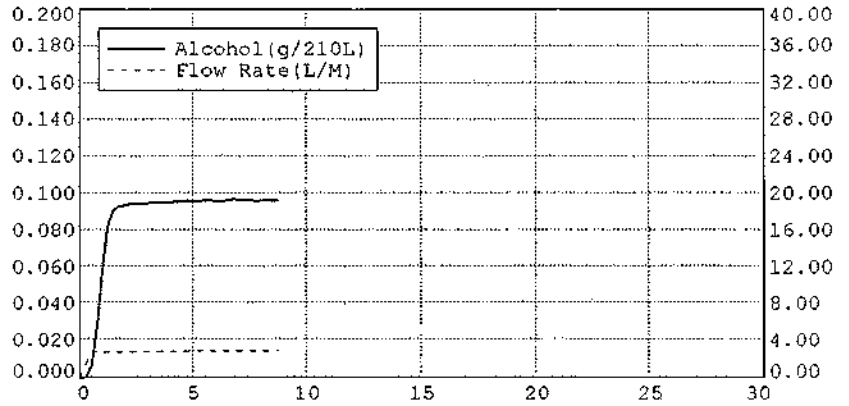
Date: 04/10/2018  
 Time: 10:29:54

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

