Ludlow PD 104509

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SECTION 1

RESULTS

DataMaster DMT Serial Number 104509

Power Up	CAL Factor	In-House & 2nd Source Calibration Check			Simulator Assignment	Certification	0.01% Acet. in 0.08% EtOH	0.04% MeOH in H_2O	0.04% IPA in H_2O	0.01% Acet. in 0.04% EtOH	0.02% Acet. in 0.04% EtOH	0.04% MeOH in 0.08% EtOH	0.04% IPA in 0.08% EtOH
		NIST Temp. °C	Lot. #	Result (g/210L)									
Completed 09/19/11 Sh RKK	1.020160 RKK 9-19-11 Sh 09/20/11	34.0°	Sh 09/19/11 ~~11-39~~ RKK 11-39-100	0.100 RKK 9-19-11 Sh 09/20/11	G11311 09/20/11 Sh SH	RKK 9-19-11 Sh 09/20/11	100% RKK 9-19-11 Sh 09/20/11	100% 09/20/11 Sh RKK 9-21-11	100% 09/21/11 Sh RKK 9-21-11	100% 09/20/11 Sh RKK 9-21-11	100% 09/20/11 Sh RKK 9-21-11	100% 09/21/11 Sh RKK	100% 09/21/11 Sh RKK
		34.0	Guth 11050	0.099 RKK 9-19-11 Sh 09/20/11									

Linearity Test #1	Linearity Test #2	Linearity Test #3	Linearity Test #4	Linearity Test #5	Data Download	In-House & 2nd Source Calibration Check		
						NIST Temp.°C	Lot. #	Result (g/210L)
09/20/11 Sh RKK 9-21-11	09/20/11 Sh RKK 9-21-11	09/21/11 Sh RKK	09/22/11 Sh RKK 9-23-11	09/22/11 Sh	09/23/11 Sh RKK	34.1°C	GUTH 11050	0.100 09/23/11 Sh RKK
				Redone 09/23/11 Sh RKK 9-23-11		34.1°C	11-39-100	0.099 09/23/11 Sh RKK

Notes: Power-Up started 09/16/11 Sh RKK 9-19-19

H_2O for calibration NIST Temp = 34.0°C 09/19/11 Sh RKK 9-19-11

Calibration Solution NIST Temp = 34.0°C 09/19/11 Sh RKK 9-19-11

Linearity Test #5 was redone on 09/23/11 because the std. dev. on the 0.4% EtOH solution was out of our range. 09/23/11 Sh RKK 9-23-11

Analyst: 09/26/11 **Reviewer:** 9/27/11 **Reviewer:** RKK 9-27-11

Packing List

From: National Patent Analytical Systems Inc.
2090 Harrington Mem. Rd., Mansfield, Ohio 44903

Cust No. VT1678J Ord Date 9/8/11
Sales Order No. 44665

Ship Date 9/14/11
Packing List No. 68893

Cust Purch Ord No. KURT KIMBLE

Ship To:
Vermont Dept of Health
195 Colchester Avenue
Burlington Vt 05401

Bill To:
Vermont Dept of Health
P O Box 70
Burlington Vt 05402

25.00
Freight

Attn:

Ship Via FedEx

Comments Service for Instrument Serial Number 104509

Inv Part No	Quantity Ordered	This Shipment	Back Ordered	Total Ship To Date	Description	Customer Part No.	Drawing Part No. / Rev
9DMT	1.0	1		1.0	DATAMASTER DMT SERVICE RETURN		
S/N 104509						None Given	No Draw # / NONE
Serial Nos.							

Opened 09/16/11 [illegible]
[illegible] 9-16-11

National Patent
Analytical Systems, Inc.

On this date 9/8/11, NPAS received instrument # 104509.

The instrument was sent from the Vermont Department of Health (VDH) so that NPAS could install updated software as well as inspect the instrument. At NPAS' request VDH provided copies of the Technical Support Inquiries (TSI) regarding the instrument. The calibration history of the instrument remained in the instrument so that NPAS could review its history.

NPAS examined the internal configuration of the instrument and did / did not find physical manipulation or tampering of the components located within the instrument itself.

NPAS did performance and accuracy checks on a certified 0.100 ethanol standard. NPAS found that the instrument passed / failed the performance and accuracy checks.

NPAS reviewed the instrument as to its DataMaster DMT Inspection, QA and Conformance Testing Procedure and the instrument performed / did not perform within its procedure.

NPAS examined the calibration records and did / did not observe anomalies.

NPAS testing indicates that there is no reason why this instrument would not have performed accurately and reliably in the field.

Print Name of Evaluator: Michael J. Barbely Jr.

Signature of Evaluator and Date: Michael J. Barbely Jr. 9/14/11

Print Name of Reviewer: DAVID LADOMSKI

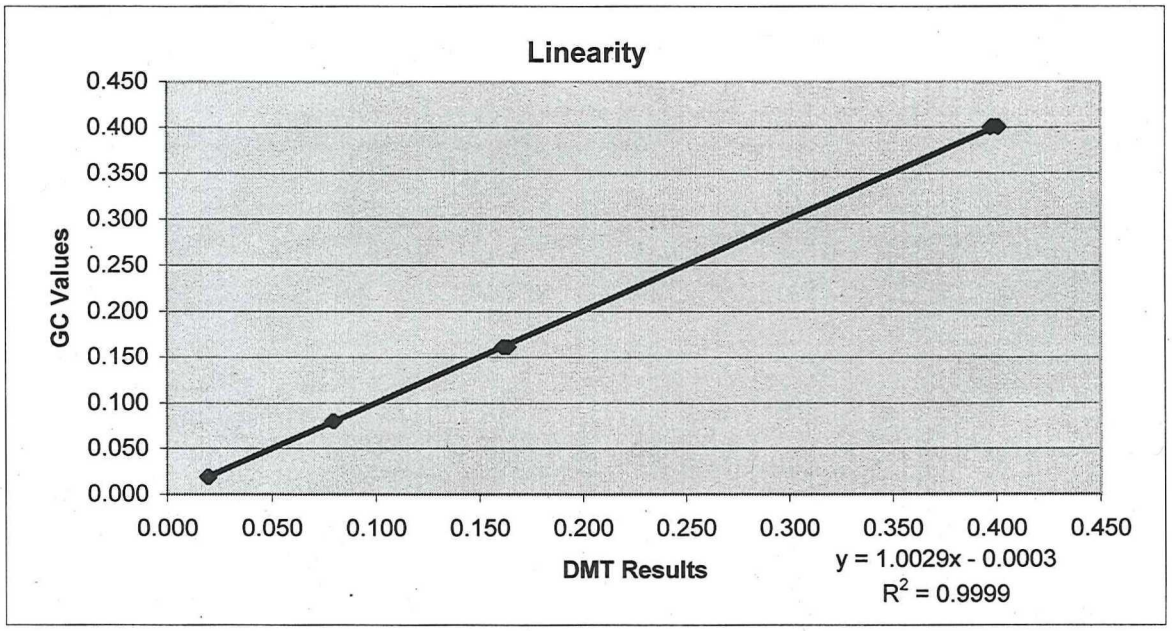
Signature of Reviewer and Date: David Ladomski 9/14/11

RMC 9-16-11 Stan 09/16/11

2090 Harrington Memorial Road, Mansfield, Ohio 44901 Ph 419-526-6727 Fax 419-526-9446

DataMaster DMT Serial Number 104509

Operator	Date	GC Value	DMT Average	Std Dev	% Recovery
SRM	9/20/2011	0.019	0.019	0.000	100
SRM	9/20/2011	0.080	0.079	0.000	98
SRM	9/20/2011	0.161	0.164	0.000	101
SRM	9/20/2011	0.401	0.401	0.000	100
SRM	9/20/2011	0.019	0.019	0.000	100
SRM	9/20/2011	0.080	0.080	0.000	100
SRM	9/20/2011	0.161	0.162	0.000	100
SRM	9/20/2011	0.401	0.400	0.000	99
SRM	9/21/2011	0.019	0.020	0.001	105
SRM	9/21/2011	0.080	0.079	0.000	98
SRM	9/21/2011	0.161	0.162	0.000	100
SRM	9/21/2011	0.401	0.398	0.000	99
SRM	9/22/2011	0.019	0.019	0.000	100
SRM	9/22/2011	0.080	0.079	0.000	98
SRM	9/22/2011	0.161	0.161	0.000	100
SRM	9/22/2011	0.400	0.401	0.000	100
SRM	9/23/2011	0.019	0.019	0.000	100
SRM	9/23/2011	0.080	0.079	0.000	98
SRM	9/23/2011	0.161	0.161	0.000	100
SRM	9/23/2011	0.400	0.397	0.000	99
			Average	0.0001	100
			Std Dev	0.0002	
			Range	0.000 - 0.001	98 - 105



9-27-11

Log On Record History

Test Date	Test Time	Name
09/19/2011	05:42:38	Kirk Kimball
09/19/2011	06:10:13	Kirk Kimball
09/19/2011	08:07:38	Kirk Kimball
09/19/2011	09:24:50	Kirk Kimball
09/19/2011	12:34:10	Steven Merrill
09/20/2011	08:37:08	Steven Merrill
09/20/2011	10:23:18	Steven Merrill
09/20/2011	11:00:47	Steven Merrill
09/20/2011	12:14:57	Steven Merrill
09/20/2011	13:48:39	Steven Merrill
09/21/2011	07:50:22	Steven Merrill
09/22/2011	10:54:14	Steven Merrill
09/22/2011	11:24:26	Steven Merrill
09/22/2011	12:23:03	Steven Merrill
09/22/2011	13:19:29	Steven Merrill
09/22/2011	13:50:01	Steven Merrill
09/22/2011	15:14:02	Steven Merrill
09/23/2011	07:48:48	Steven Merrill
09/23/2011	08:21:10	Steven Merrill
09/23/2011	09:04:53	Steven Merrill
09/23/2011	12:51:59	Steven Merrill
09/23/2011	15:09:06	Kirk Kimball
09/23/2011	15:26:51	Steven Merrill

SECTION 2

POWER UP TESTS

DIAGNOSTIC RESULT

DataMaster DMT:104509
Location:
Calibration Date:
Certification Date:
Installation Date:
Test Date: 09/19/2011
Test Time: 06:10:15

VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 48.7°C
Breath Tube = 46.1°C
Digital Sim = 0.0°C

SETTINGS
Lamp Voltage = 1.69 V
Cooler Voltage = 1.67 V
Bias Voltage = 80 V
Chopper Freq = 533 Hz

PUMP INFO
Flow Rate = 6.037 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	-0.2187	-0.2150
MIN(V)	-0.2199	-0.2169

FILTER INFO
Filter 1 -0.216 Zero = true
Filter 2 0.401 Zero = true
Filter 3 -0.053 Zero = true

CALIBRATION CHECK
Xq = 0.088 0.69%

DIAGNOSTIC RESULT

DataMaster DMT:104509
Location:
Calibration Date:
Certification Date:
Installation Date:
Test Date: 09/19/2011
Test Time: 08:38:14

VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 49.0°C
Breath Tube = 47.1°C
Digital Sim = 0.0°C

SETTINGS
Lamp Voltage = 1.66 V
Cooler Voltage = 1.67 V
Bias Voltage = 80 V
Chopper Freq = 532 Hz

PUMP INFO
Flow Rate = 6.120 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.0183	0.0220
MIN(V)	0.0169	0.0205

FILTER INFO
Filter 1 0.022 Zero = true
Filter 2 0.614 Zero = true
Filter 3 0.182 Zero = true

CALIBRATION CHECK
Xq = 0.089 0.10%

DIAGNOSTIC RESULT

DataMaster DMT:104509
Location:
Calibration Date:
Certification Date:
Installation Date:
Test Date: 09/19/2011
Test Time: 09:24:51

VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 49.2°C
Breath Tube = 46.6°C
Digital Sim = 33.5°C

SETTINGS
Lamp Voltage = 1.66 V
Cooler Voltage = 1.67 V
Bias Voltage = 80 V
Chopper Freq = 533 Hz

PUMP INFO
Flow Rate = 6.097 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.0280	0.0307
MIN(V)	0.0266	0.0291

FILTER INFO
Filter 1 0.029 Zero = true
Filter 2 0.620 Zero = true
Filter 3 0.192 Zero = true

CALIBRATION CHECK
Xq = 0.088 0.39%

CALIBRATION REPORT

DataMaster DMT: 104509
Calibration Date: 09/19/2011
Calibrated by: KIRK L KIMBALL
Lot: 11-37-100

Ca	= 0.100			
CAL	= 1.020160	0.800	<= CAL	< 1.200
b1	= 0.000	0.000	<= b1	< 0.004
b2	= 0.003	0.002	<= b2	< 0.010
b3	= 0.000	0.000	<= b3	< 0.004
Xq	= 0.089	0.050	<= Xq	< 0.200
a21	= 1.243957	1.050	<= a21	< 1.300
a31	= 0.535265	0.300	<= a31	< 0.800

Performed by KLK Date 09/19/2011

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104509

Date: 09/19/2011
Time: 09:39:43

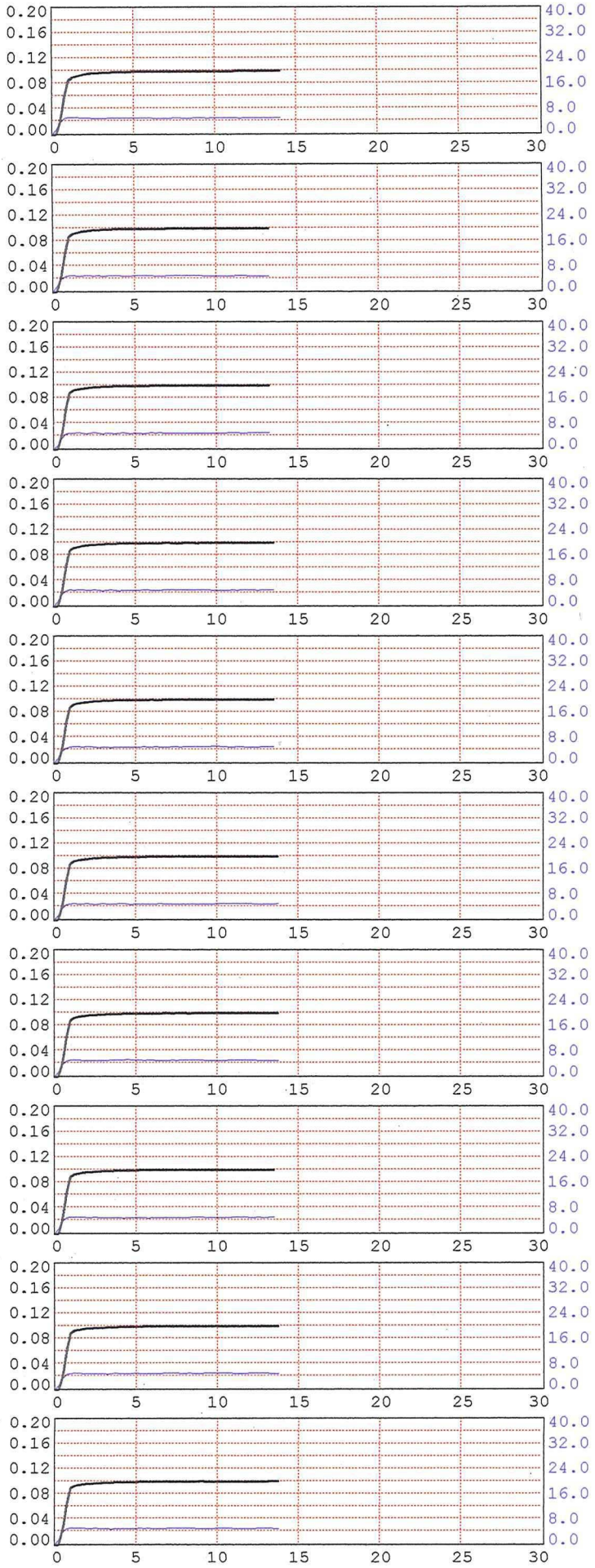
SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 11-39-100
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	09:40
CALIBRATION CHECK	PASSED	09:40
SIMULATOR VAPOR 33.8°C	0.100	09:41
SIMULATOR VAPOR 33.8°C	0.100	09:42
SIMULATOR VAPOR 33.7°C	0.100	09:43
SIMULATOR VAPOR 33.8°C	0.100	09:44
SIMULATOR VAPOR 33.8°C	0.100	09:45
SIMULATOR VAPOR 33.7°C	0.100	09:46
SIMULATOR VAPOR 33.7°C	0.100	09:47
SIMULATOR VAPOR 33.7°C	0.100	09:48
SIMULATOR VAPOR 33.8°C	0.100	09:49
SIMULATOR VAPOR 33.7°C	0.100	09:50
BLANK TEST	0.000	09:51

Average = 0.100
Std Dev = 0.000

In house Cal Check KJK 9-19-11



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104509

Date: 09/19/2011
Time: 10:22:20

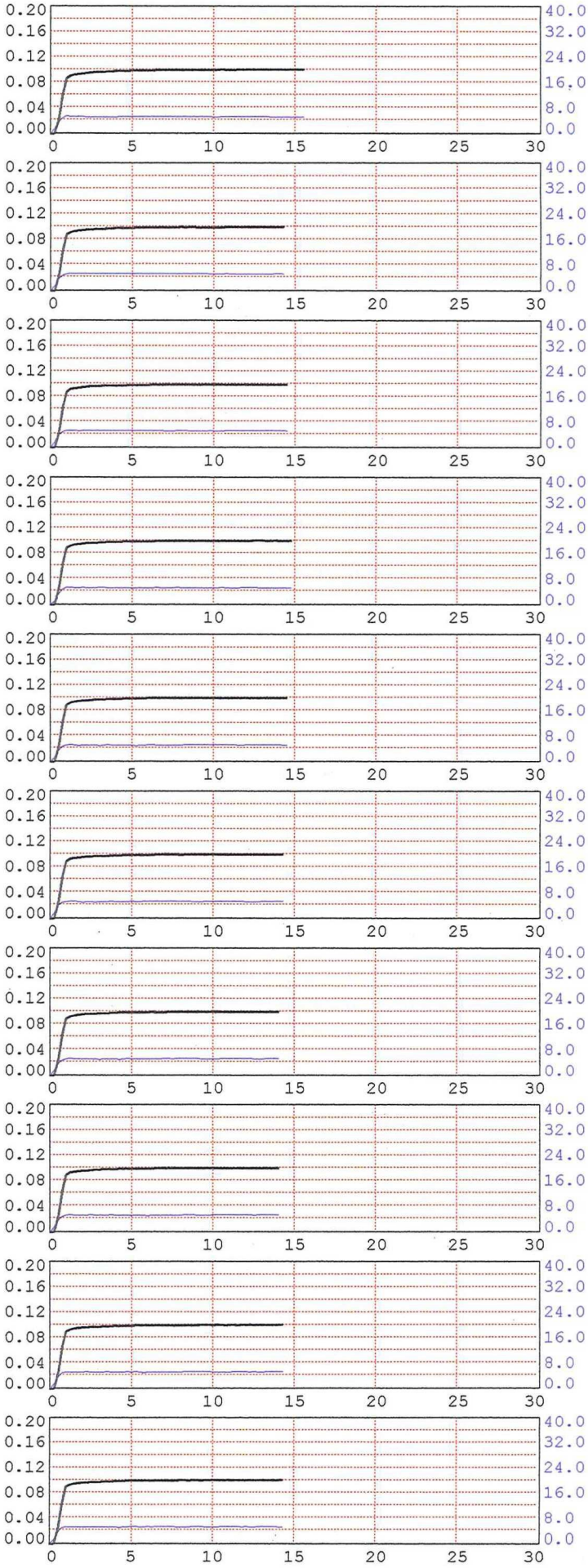
SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: GUTH 11050
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	10:23
CALIBRATION CHECK	PASSED	10:23
SIMULATOR VAPOR 33.7°C	0.100	10:23
SIMULATOR VAPOR 33.8°C	0.100	10:24
SIMULATOR VAPOR 33.8°C	0.099	10:25
SIMULATOR VAPOR 33.8°C	0.100	10:26
SIMULATOR VAPOR 33.8°C	0.100	10:28
SIMULATOR VAPOR 33.8°C	0.100	10:29
SIMULATOR VAPOR 33.7°C	0.100	10:30
SIMULATOR VAPOR 33.7°C	0.100	10:31
SIMULATOR VAPOR 33.7°C	0.100	10:32
SIMULATOR VAPOR 33.8°C	0.100	10:33
BLANK TEST	0.000	10:34

Average = 0.099
Std Dev = 0.000

2nd Source Cal Check
KLK
9-19-11



CERTIFICATION REPORT

DataMaster DMT: 104509
Calibration Date: 09/19/2011
Certification Date: 09/19/2011
Certified by: KIRK L KIMBALL

Diagnostic Results

```
VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 49.3°C
Breath Tube    = 46.8°C
Digital Sim    = 33.7°C

SETTINGS
Lamp Voltage   = 1.66 V
Cooler Voltage = 1.67 V
Bias Voltage   = 80 V
Chopper Freq   = 533 Hz

PUMP INFO
Flow Rate = 6.124 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)   0.0429    0.0455
MIN(V)   0.0411    0.0441

FILTER INFO
Filter 1   0.045  Zero = true
Filter 2   0.631  Zero = true
Filter 3   0.217  Zero = true

CALIBRATION CHECK
Xq  = 0.089  0.20%
```

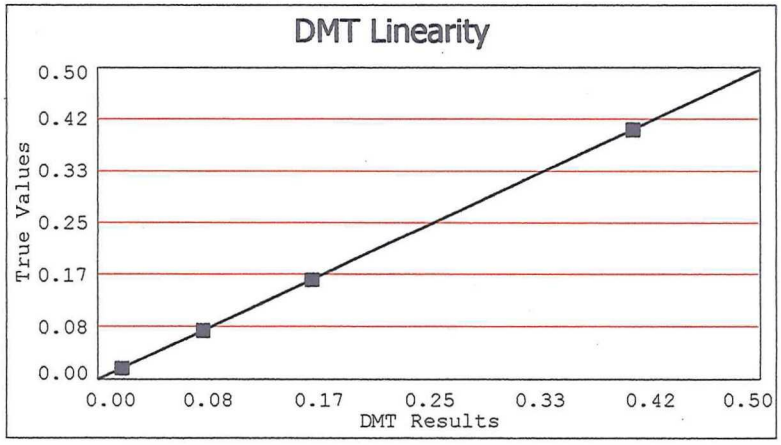
Options

```
OPTIONS
Units
   Alcohol................... g/210L
Simulator
   Tolerance Check........... yes
   Standard Type............ wet
   Nominal................... 0.100
   Digital Simulator........ Guth34CNP
Subject
   Ask Questions............ yes
   Number of Tests........... 2
   Alcohol Display........... yes
   Volume Display............ yes
   Query Refusal............ yes
   Copies.................... 3
   Simulator Before......... yes
   Simulator Between........ yes
   Simulator After........... no
   Observation Time......... 0
Supervisor
   Number of Tests........... 10
Calibration
   Standard Type............ wet
   Nominal................... 0.100
   Nominal(Dry Gas)......... 0.100
   Number of Tests........... 1
Printer
   Printer On............... yes
Software Configuration
   Data Collection........... yes
```

Linearity Check Results

True Value	Reported Average	Std Dev
0.019 g/210L Lot # 12-07-020	0.018 g/210L	0.0000
0.080 g/210L Lot # 12-11-080	0.079 g/210L	0.0000
0.161 g/210L Lot # 12-12-160	0.161 g/210L	0.0000
0.401 g/210L Lot # 12-08-400	0.403 g/210L	0.0000

$R^2 = 1$



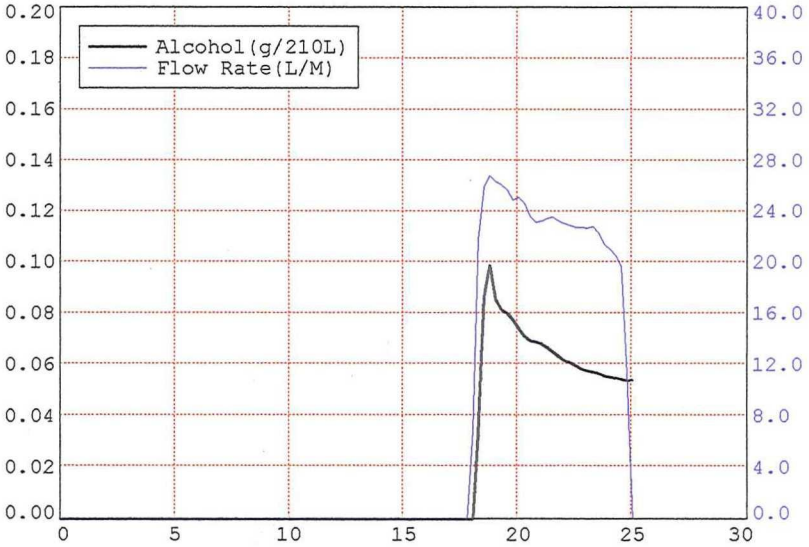
Acetone Interference Test

Lot # 12-09-080A1

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

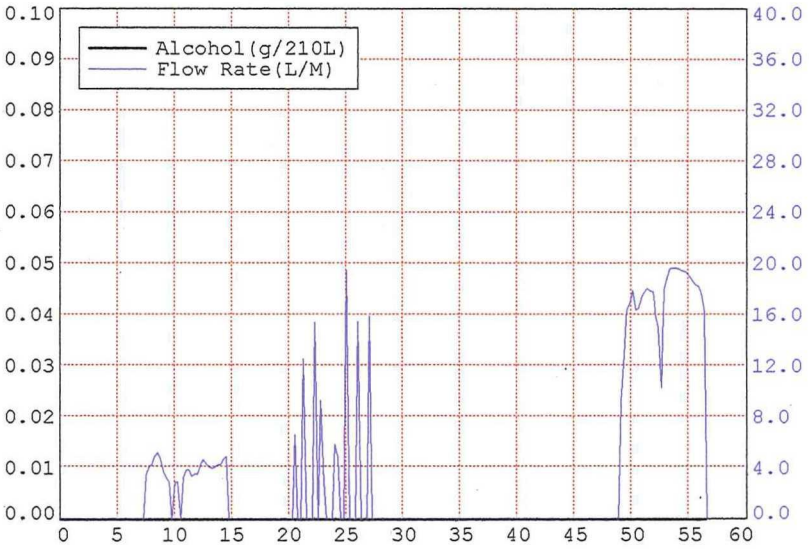


RF Detection Test

Passed

Sample Acceptance Test

Passed



CERTIFICATION PASSED

Performed by _____ Date 09/19/2011

Reviewed by _____ Date 9/27/11

9-22-11