



**VERMONT FORENSIC LABORATORY**

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**DATAMASTER TECHNICAL SUPPORT INQUIRY**

<b>Agency/Site:</b> <u>South Burlington PD</u>	<b>DataMaster Serial #:</b> <u>100162</u>
<b>Date:</b> <u>12/19/2013</u>	<b>Requestor:</b> <u>Dave Solomon</u>
<b>Instrument Supervisor:</b> <u>Dave Solomon</u>	<b>Phone #:</b> <u>(802) 846-4111</u>
<b>Taken By:</b> <u>Robert Driscoll</u>	
<b>Problem:</b> <u>Interference detected on simulator solution.</u>	
<b>Laboratory Response:</b> <u>R. Driscoll to troubleshoot on site.</u>	
<b>Work Performed:</b> <u>DMT supervisor received "Simulator Out of Range" error during DUI subject test. He retried the test and the DMT showed an "Interference Detected" error on the simulator solution. He noted that the alcohol line was fluctuating while taking the simulator sample. R. Driscoll tried to run an Accuracy and Precision check and observed the same fluctuation (simulator timed out). When observing the Technician screen, the detector voltage was fluctuating beyond the +/- 0.003V allowance. New detector installed and instrument calibrated. During the certification, the DMT reported a "cal check error" so the calibration protocol was repeated. While performing a subsequent certification, the instrument had several blank errors and the detector voltage was fluctuating again. Removed and inspected the detector block. Found the chopper motor loose; tightened and reinstalled chopper wheel. Also installed an adjustable flow rate valve and set the volume to 1.5L. Instrument then calibrated, certified and is ready for installation at the agency.</u>	
<input type="checkbox"/> On Site <input checked="" type="checkbox"/> In-house	<b>Attachments:</b> <u>11</u> pages
<b>Performed By:</b> <u>Robert Driscoll</u> <i>RED</i>	<b>Date:</b> <u>12/23/2013</u>
<b>Final Review:</b> <u><i>[Signature]</i></u>	<b>Date:</b> <u>12/23/2013</u>

**Driscoll, Rob**

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**From:** Dave Solomon <dsolomon@sbpdvt.org>  
**Sent:** Thursday, December 19, 2013 3:55 AM  
**To:** Driscoll, Rob  
**Subject:** DMT issues  
**Attachments:** S45C-213121903280.pdf

Rob,

I know it's the holidays, and really did not want to bother you again, but I have some more concerns about our DMT. I changed the solution on 12/04/13 and the concentration was .099, running about .097 during the five tests. Prior to tonight, it appears to have been in range (.095-.097) for 8 DUI processing's. Tonight I was processing a female for DUI when the DMT got all funky during the testing for the simulator solution. The BAC for the solution went up to a high .08 range, stayed there for a few seconds, then slowly crept up to the low .09 level, which was out of range. It then shot up to about a .096-.097, then just as quickly dropped down to a .092 and then slowly back up to .095 before dropping again to .092 and going out of range. It seemed like it was processing the solution for an inordinate amount of time, but I am not sure how long. When I tried it a second time, the same thing happened during the testing for the simulator solution. It started very low, then shot up rapidly to .096-.097 and then just as quickly fell back down to the low .09 range. It crept back up and appeared to holding at .094 when the DMT detected interference (my radio was off and there was no other officer in the room, so I don't know what the issue was). It appeared the machine detected interference on 12/15/13 as well, but the officer was able to get a sample. I have never seen readings like that for the simulator solution and am not sure if I should change out the solution or have you check it. I have attached the two tickets from my case. As always, thank you for any help you can offer.

Dave

SGT DAVID SOLOMON  
SOUTH BURLINGTON POLICE DEPARTMENT  
PATROL DIVISION  
19 GREGORY DR.  
SOUTH BURLINGTON, VT 05403  
802-846-4203 - Direct Line  
802-846-4111 - Dispatch  
802-846-4102 - Fax

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DUI SUBJECT TEST

STATE OF VERMONT

DataMeter DMT: 100162  
Location: South Burlington PD  
Certification Date: 10/16/2012  
Installation Date: 10/16/2012

Date: 12/19/2013  
Time: 02:09:52

SUBJECT NAME:

DOB: [REDACTED] AGE: [REDACTED]  
GENDER: [REDACTED]  
LICENSE #: [REDACTED]

CASE #: [REDACTED]  
TIME OF OPERATION: [REDACTED]  
LOCATION OF INCIDENT:  
I-89  
TOWN: WILLISTON  
COUNTY: CHITTENDEN

TEST OPERATOR NAME:  
DAVID SOLOMON  
AGENCY: SOUTH BURLINGTON PD

Obs. Period Start: 01:53

BLANK TEST	0.000	02:10
CALIBRATION CHECK	PASSED	02:10
SIMULATOR VAPOR 34.0°C	0.092	02:11

Simulator Out of Range

All alcohol values reported in g/210L  
Sim. Vapor Concentration 0.099  
Sim. Vapor Range 0.094 - 0.104  
Lot #: 13-19-100



DUI SUBJECT TEST

STATE OF VERMONT

DataMater DMT: 100162  
Location: South Burlington PD  
Certification Date: 10/16/2012  
Installation Date: 10/16/2012

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Date: 12/19/2013  
Time: 02:13:06

SUBJECT NAME:

[REDACTED]  
DOB: [REDACTED] AGE: [REDACTED]  
GENDER: [REDACTED]  
LICENSE #: [REDACTED]

CASE #: [REDACTED]  
TIME OF OPERATION: [REDACTED]  
LOCATION OF INCIDENT:  
I-89  
TOWN: WILLISTON  
COUNTY: CHITTENDEN

TEST OPERATOR NAME:  
DAVID SOLOMON  
AGENCY: SOUTH BURLINGTON PD

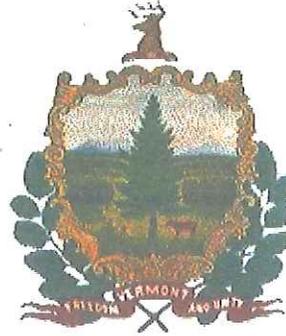
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Obs. Period Start: 01:53  
BLANK TEST 0.000 02:14  
CALIBRATION CHECK PASSED 02:14  
SIMULATOR VAPOR 34.0°C INTERFERENCE 02:14

Interference Detected

All alcohol values reported in g/210L  
Sim. Vapor Concentration 0.099  
Sim. Vapor Range 0.094 - 0.104  
Lot #: 13-19-100

# CALIBRATION REPORT

DataMaster DMT: 100162  
Calibration Date: 12/23/2013  
Calibrated by: ROBERT DRISCOLL  
Lot: 13-02-100



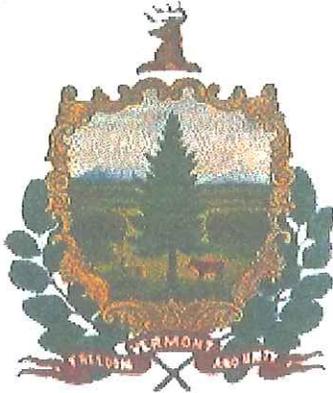
Ca	=	0.098		
CAL	=	0.940683	0.800	<= CAL < 1.200
b1	=	0.000	0.000	<= b1 < 0.004
b2	=	0.008	0.002	<= b2 < 0.010
b3	=	0.000	0.000	<= b3 < 0.004
Xq	=	0.079	0.050	<= Xq < 0.200
a21	=	1.194931	1.050	<= a21 < 1.300
a31	=	0.421216	0.300	<= a31 < 0.800

Performed by

Rob Res

Date

12/23/2013



### ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 100162

Date: 12/23/2013

Time: 09:02:53

SUPERVISOR NAME:

RCD CAL CHECK

SOLUTION LOT #: GUTH 13100

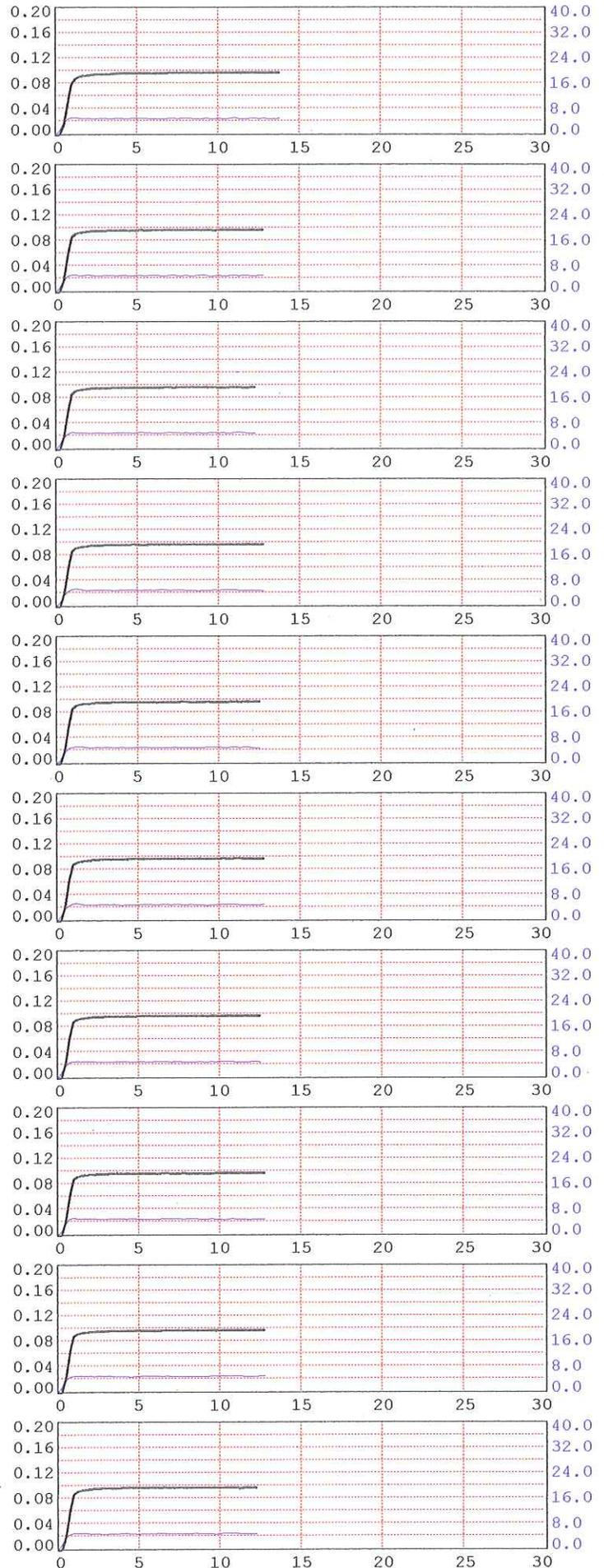
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	09:03
CALIBRATION CHECK	PASSED	09:03
SIMULATOR VAPOR 33.8°C	0.097	09:04
SIMULATOR VAPOR 33.9°C	0.097	09:05
SIMULATOR VAPOR 33.9°C	0.097	09:06
SIMULATOR VAPOR 33.9°C	0.097	09:07
SIMULATOR VAPOR 33.9°C	0.097	09:08
SIMULATOR VAPOR 33.9°C	0.097	09:09
SIMULATOR VAPOR 33.8°C	0.097	09:10
SIMULATOR VAPOR 33.8°C	0.097	09:11
SIMULATOR VAPOR 33.9°C	0.097	09:12
SIMULATOR VAPOR 33.9°C	0.097	09:13
BLANK TEST	0.000	09:14

Average = 0.097

Std Dev = 0.000

*Certification aborted due to "Cal. check error"  
Instrument was recalibrated  
RCD 12/23/13*



# CALIBRATION REPORT

DataMaster DMT: 100162  
Calibration Date: 12/23/2013  
Calibrated by: ROBERT DRISCOLL  
Lot: 13-02-100



Ca	=	0.098		
CAL	=	0.946814	0.800	<= CAL < 1.200
b1	=	0.001	0.000	<= b1 < 0.004
b2	=	0.008	0.002	<= b2 < 0.010
b3	=	0.000	0.000	<= b3 < 0.004
Xq	=	0.079	0.050	<= Xq < 0.200
a21	=	1.201554	1.050	<= a21 < 1.300
a31	=	0.440806	0.300	<= a31 < 0.800

Performed by *RD*

Date 12/23/2013



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 100162

Date: 12/23/2013

Time: 10:00:14

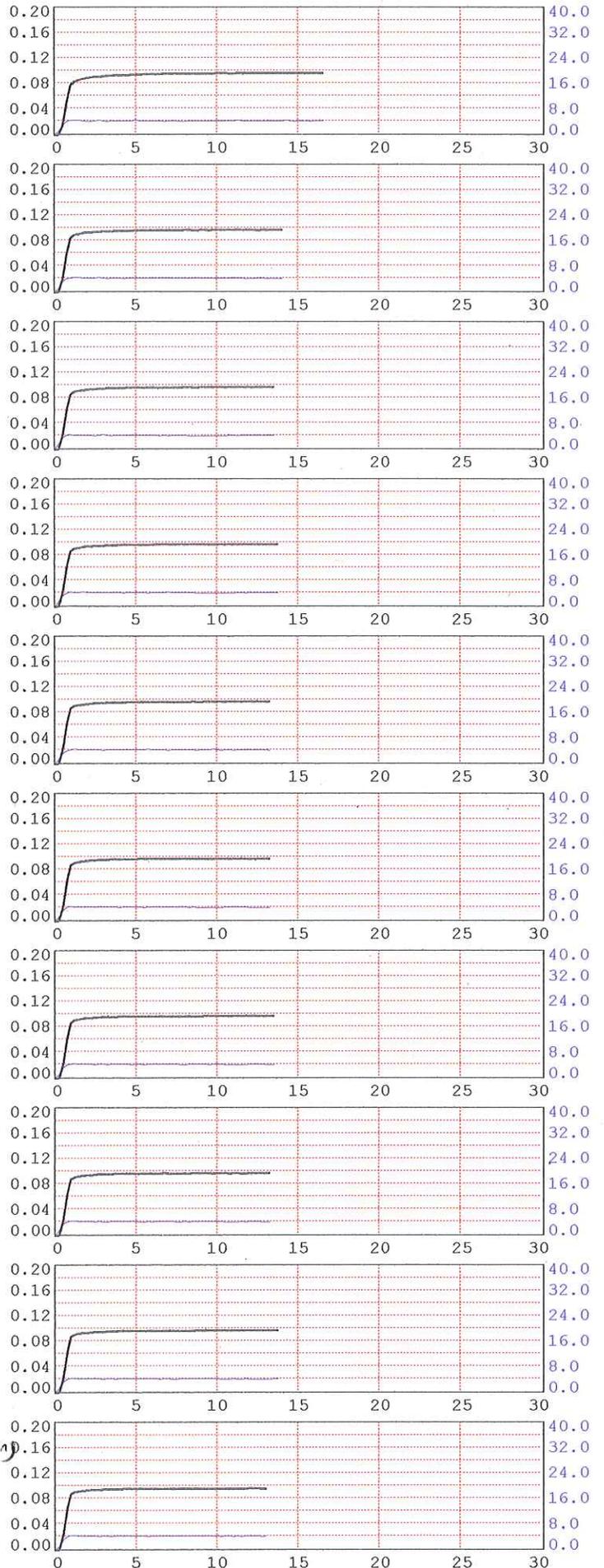
SUPERVISOR NAME:  
RCD CAL CHECK

SOLUTION LOT #: GUTH 13100  
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	10:01
CALIBRATION CHECK	PASSED	10:01
SIMULATOR VAPOR 33.9°C	0.097	10:01
SIMULATOR VAPOR 33.8°C	0.097	10:02
SIMULATOR VAPOR 33.9°C	0.097	10:03
SIMULATOR VAPOR 33.9°C	0.098	10:04
SIMULATOR VAPOR 33.8°C	0.097	10:05
SIMULATOR VAPOR 33.9°C	0.098	10:07
SIMULATOR VAPOR 33.9°C	0.097	10:08
SIMULATOR VAPOR 33.9°C	0.097	10:09
SIMULATOR VAPOR 33.9°C	0.097	10:10
SIMULATOR VAPOR 33.9°C	0.096	10:11
BLANK TEST	0.000	10:12

Average = 0.097  
Std Dev = 0.000

"Blank" errors during Certification. Found detector fluctuating. Removed and inspected filter block. Found loose shopper motor. Repaired and recalibrated, certified, and awaiting installation RCD 12/23/13



# CALIBRATION REPORT

DataMaster DMT: 100162  
Calibration Date: 12/23/2013  
Calibrated by: ROBERT DRISCOLL  
Lot: 13-02-100



Ca	=	0.098			
CAL	=	0.947608	0.800	<=	CAL < 1.200
b1	=	0.001	0.000	<=	b1 < 0.004
b2	=	0.007	0.002	<=	b2 < 0.010
b3	=	0.000	0.000	<=	b3 < 0.004
Xq	=	0.082	0.050	<=	Xq < 0.200
a21	=	1.210311	1.050	<=	a21 < 1.300
a31	=	0.429765	0.300	<=	a31 < 0.800

Performed by

 RO

Date 12/23/2013



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 100162

Date: 12/23/2013

Time: 12:17:55

SUPERVISOR NAME:

RCD CAL CHECK

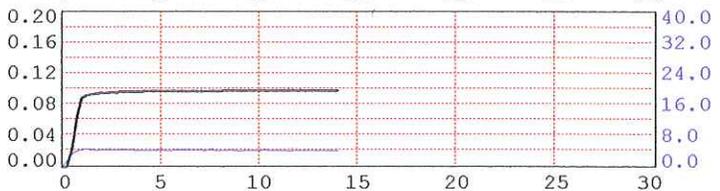
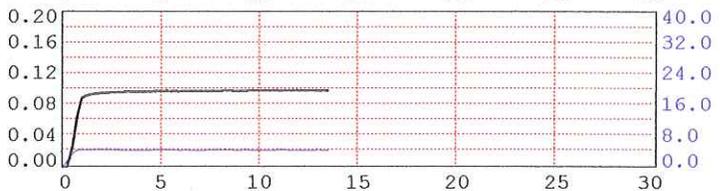
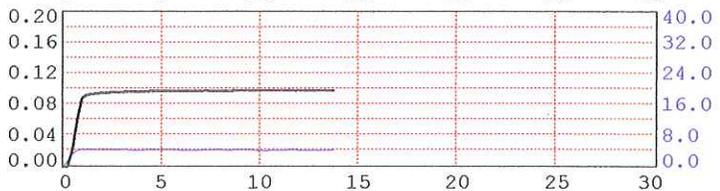
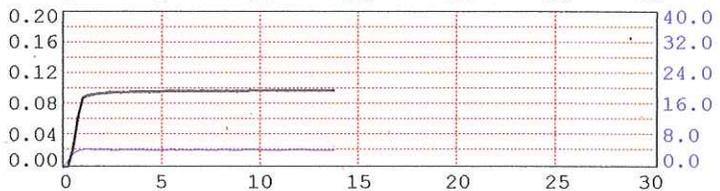
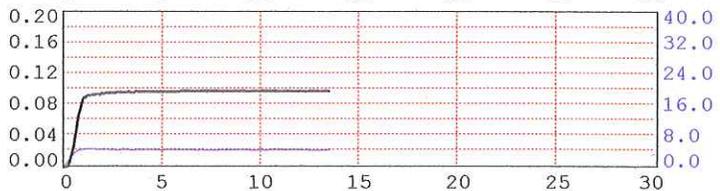
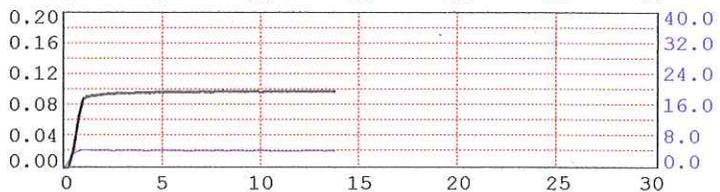
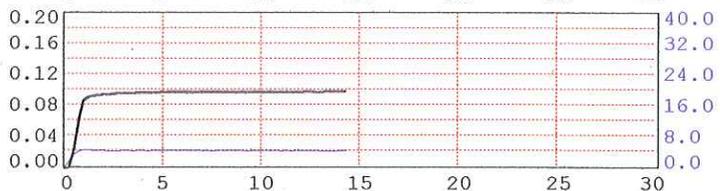
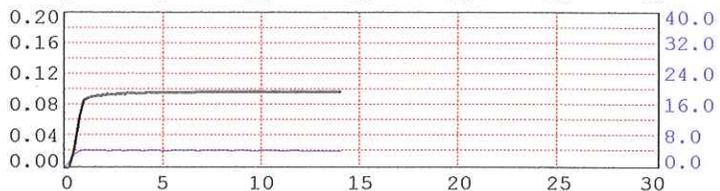
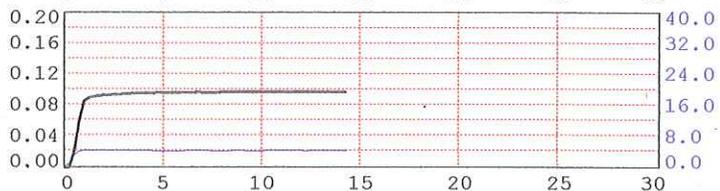
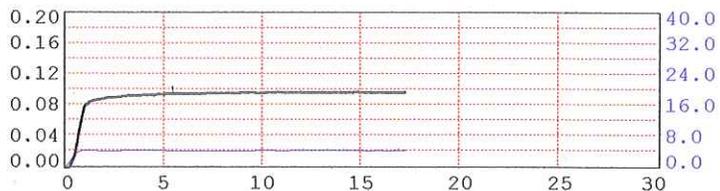
SOLUTION LOT #: GUTH 13100

SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	12:18
CALIBRATION CHECK	PASSED	12:18
SIMULATOR VAPOR 33.9°C	0.097	12:19
SIMULATOR VAPOR 33.8°C	0.097	12:20
SIMULATOR VAPOR 33.9°C	0.097	12:21
SIMULATOR VAPOR 33.9°C	0.098	12:22
SIMULATOR VAPOR 33.9°C	0.098	12:23
SIMULATOR VAPOR 33.9°C	0.097	12:24
SIMULATOR VAPOR 33.8°C	0.098	12:25
SIMULATOR VAPOR 33.9°C	0.098	12:26
SIMULATOR VAPOR 33.9°C	0.098	12:27
SIMULATOR VAPOR 33.8°C	0.098	12:29
BLANK TEST	0.000	12:29

Average = 0.097

Std Dev = 0.000



# CERTIFICATION REPORT

DataMaster DMT: 100162  
Calibration Date: 12/23/2013  
Certification Date: 12/23/2013  
Certified by: ROBERT DRISCOLL



## Diagnostic Results

### VERSIONS

DMT: 1.01  
PIC: 2.06  
Modem: 2.4  
Questions: 2.1

### TEMPERATURES

Sample Chamber = 48.8°C  
Breath Tube = 44.8°C  
Digital Sim = 33.8°C

### SETTINGS

Lamp Voltage = 1.75 V  
Cooler Voltage = 1.74 V  
Bias Voltage = 80 V  
Chopper Freq = 537 Hz

### PUMP INFO

Flow Rate = 5.318 L/M

### DETECTOR INFO

PUMP	ON	OFF
MAX (V)	0.0217	0.0240
MIN (V)	0.0201	0.0230

### FILTER INFO

Filter 1	0.024	Zero = true
Filter 2	0.447	Zero = true
Filter 3	1.043	Zero = true

### CALIBRATION CHECK

Xq = 0.082 0.21%

## 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

