



**VERMONT FORENSIC LABORATORY**

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**DATAMASTER TECHNICAL SUPPORT INQUIRY**

Agency/Site: South Burlington PD DataMaster Serial #: 100162

Date: 11/25/2013 Requestor: Dave Solomon

Instrument Supervisor: Dave Solomon Phone #: (802) 846-4111

Taken By: Robert Driscoll

Problem: DataMaster DMT simulator solution quickly going out of range.  
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Laboratory Response: Will troubleshoot on site.  
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Work Performed: Leak checked simulator and found to be tight. Ran an Accuracy and Precision check on the simulator solution and looked for any signs of leaks. The airflow was constant as it should be and did not jump around. Ran a Diagnostic check to verify the instrument is within acceptable tolerances; everything was within specifications. Replaced simulator port o-rings as a precaution and will continue to monitor simulator solution usage.  
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On Site     In-house    Attachments: 8 pages

Performed By: Robert Driscoll *RD*    Date: 12/3/2013  
Final Review: [Signature]    Date: 12/3/2013

## Driscoll, Rob

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**From:** Dave Solomon <dsolomon@sbpdvt.org>  
**Sent:** Monday, November 25, 2013 7:08 PM  
**To:** Driscoll, Rob  
**Subject:** RE: Simulator solution questions

Thanks Rob, as always, your time is appreciated.

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**From:** Driscoll, Rob [<mailto:Rob.Driscoll@state.vt.us>]  
**Sent:** Monday, November 25, 2013 7:35 AM  
**To:** Dave Solomon  
**Subject:** RE: Simulator solution questions

Dave,

The only thing I can think is that the simulator is leaking and depleting the ethanol form the solution. I will stop by today or tomorrow to leak-check the simulator and replace it if necessary. I hope this will help.

Regards,  
Rob

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**From:** Dave Solomon [<mailto:dsolomon@sbpdvt.org>]  
**Sent:** Monday, November 25, 2013 5:39 AM  
**To:** Driscoll, Rob  
**Subject:** Simulator solution questions

Rob,

I have changed the simulator solution in out DMT 4 times since 10/25. Three times, including the most recent, the average BAC at the time of the change is either at or just above the minimum threshold. When this happens, the solution is lasting a week at most before it times out and needs to be changed again. Is this a case of solution samples running low BACs or could it be machine/operator issues? It's been a bit frustrating for me and the officers using the machine. The one time the solution was not so low at the time of change, it lasted almost three weeks (which makes me happy!) I have attached the copies for the last four changes. Thanks for any help or insight.

Dave

SGT DAVID SOLOMON  
SOUTH BURLINGTON POLICE DEPARTMENT  
PATROL DIVISION  
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# SOLUTION CHANGE

DataMaster DMT: 100162  
Location: South Burlington PD  
Date: 10/25/2013  
Performed by: DAVID SOLOMON



## Accuracy and Precision Check

Concentration = 0.100 g/210L  
Lot # = 13-13-100  
Range = 0.095 - 0.105  
Average = 0.096 g/210L  
Std Dev = 0.0000

Simulator Temperature: 34°C

Performed by

MG71

Date

10/25/2013

# SOLUTION CHANGE

DataMaster DMT: 100162  
Location: South Burlington PD  
Date: 11/02/2013  
Performed by: DAVID SOLOMON



## Accuracy and Precision Check

Concentration = 0.100 g/210L  
Lot # = 13-13-100  
Range = 0.095 - 0.105  
Average = 0.098 g/210L  
Std Dev = 0.0000

Simulator Temperature: 33.9°C

Performed by

M671

Date

11/02/2013

# SOLUTION CHANGE

DataMaster DMT: 100162  
Location: South Burlington PD  
Date: 11/19/2013  
Performed by: DAVID SOLOMON



## Accuracy and Precision Check

Concentration = 0.099 g/210L  
Lot # = 13-16-100  
Range = 0.094 - 0.104  
Average = 0.095 g/210L  
Std Dev = 0.0000

Simulator Temperature: 33.9°C

Performed by

M671

Date

11/19/2013

# SOLUTION CHANGE

DataMaster DMT: 100162  
Location: South Burlington PD  
Date: 11/24/2013  
Performed by: DAVID SOLOMON



## Accuracy and Precision Check

Concentration = 0.099 g/210L  
Lot # = 13-16-100  
Range = 0.094 - 0.104  
Average = 0.094 g/210L  
Std Dev = 0.0000

Simulator Temperature: 33.9°C

Performed by

M671

Date

11/24/2013



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 100162  
 Location: South Burlington PD

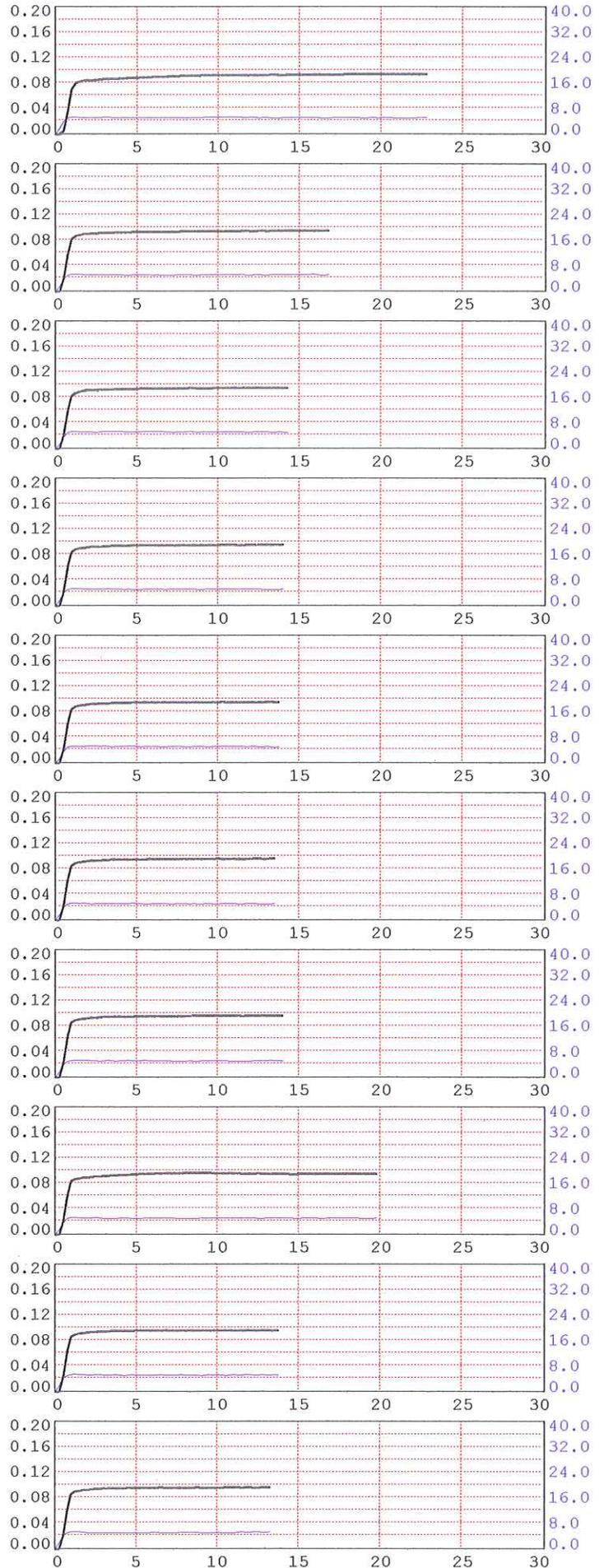
Date: 11/25/2013  
 Time: 14:21:16

SUPERVISOR NAME:  
 ROBERT DRISCOLL

SOLUTION LOT #: 13-16-100  
 SOLUTION CONCENTRATION: 0.099

BLANK TEST	0.000	14:22
CALIBRATION CHECK	PASSED	14:22
SIMULATOR VAPOR 34.1°C	0.095	14:22
SIMULATOR VAPOR 34.0°C	0.095	14:23
SIMULATOR VAPOR 34.0°C	0.096	14:24
SIMULATOR VAPOR 34.1°C	0.096	14:26
SIMULATOR VAPOR 34.1°C	0.096	14:27
SIMULATOR VAPOR 34.0°C	0.096	14:28
SIMULATOR VAPOR 34.0°C	0.097	14:29
SIMULATOR VAPOR 34.0°C	0.098	14:30
SIMULATOR VAPOR 34.0°C	0.096	14:31
SIMULATOR VAPOR 34.0°C	0.096	14:32
BLANK TEST	0.000	14:33

Average = 0.096  
 Std Dev = 0.000



# DIAGNOSTIC RESULT

DataMaster DMT:100162  
Location: South Burlington PD  
Calibration Date: 10/16/2012  
Certification Date:10/16/2012  
Installation Date: 10/16/2012  
Test Date: 11/25/2013  
Test Time: 14:36:02



## VERSIONS

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

## TEMPERATURES

Sample Chamber = 48.6°C  
Breath Tube = 44.3°C  
Digital Sim = 34.0°C

## SETTINGS

Lamp Voltage = 1.82 V  
Cooler Voltage = 1.75 V  
Bias Voltage = 80 V  
Chopper Freq = 540 Hz

## PUMP INFO

Flow Rate = 6.411 L/M

## DETECTOR INFO

PUMP	ON	OFF
MAX (V)	-0.0624	-0.0589
MIN (V)	-0.0638	-0.0604

## FILTER INFO

Filter 1	-0.060	Zero = true
Filter 2	0.322	Zero = true
Filter 3	0.993	Zero = true

## CALIBRATION CHECK

Xq = 0.077 0.23%