DATAMASTER DMT 100139

VERMONT DEPARTMENT OF HEALTH LABORATORY

PERFORMANCE TESTING RESULTS

August 2010

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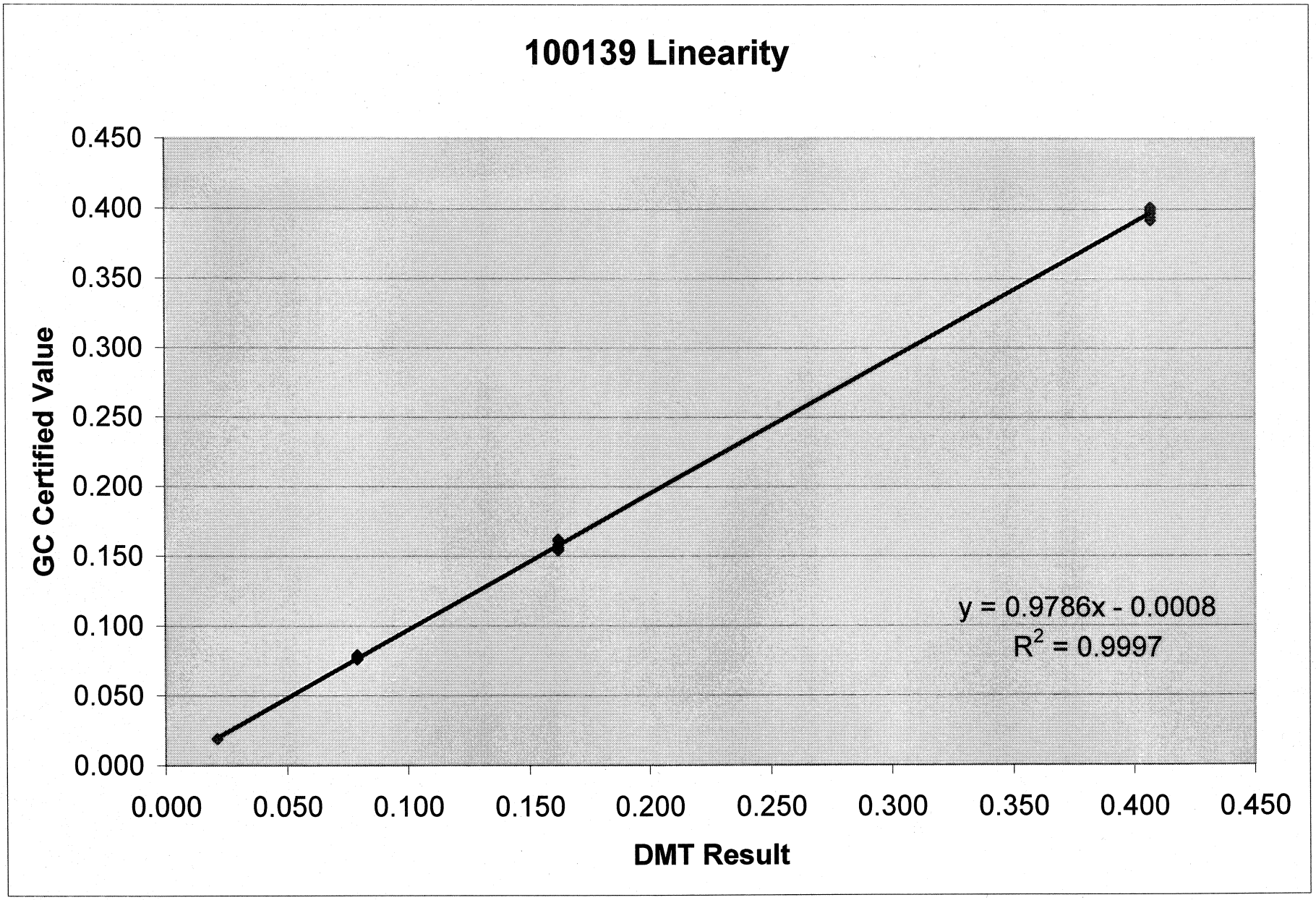
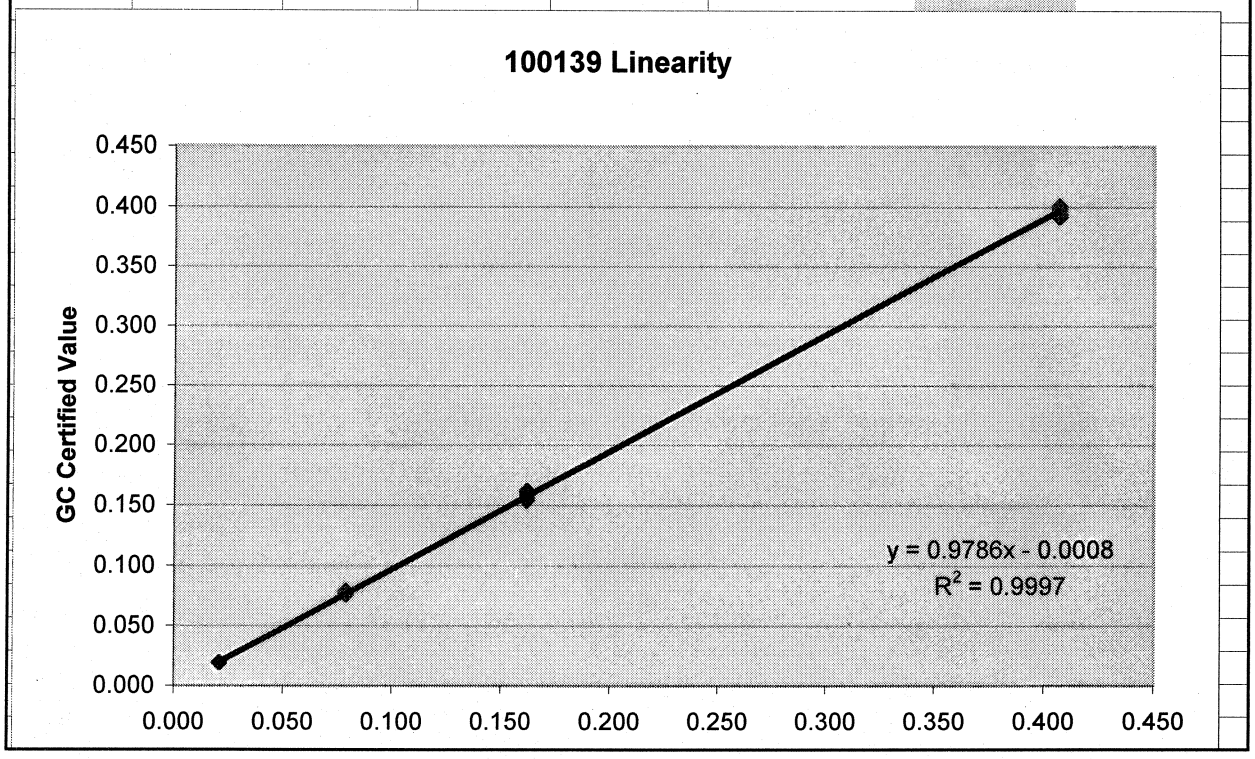
Section 1: Results


100139 Linearity
GC Certified Value
0.450
0.400
0.350
0.300
0.250
0.200
0.150
0.100
0.050
0.000
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
0.450
DMT Result
y = 0.9786x - 0.0008
R2 = 0.9997

DMT Serial # 100139

Operator	Date	Lot #	GC Value	DMT Result	Std Dev	% Recovery	
SH	11/10/2010	11-13-020	0.021	0.019	0.0005	90.5	Outside 5%
		10-37-080	0.079	0.078	0.0003	98.7	Outside 10%
		11-06-160	0.162	0.158	0.0005	97.5	
		11-18-400	0.407	0.401	0.0007	98.5	
ALB	11/12/2010	11-13-020	0.021	0.019	0.0004	90.5	
		11-18-400	0.407	0.401	0.0004	98.5	
		10-37-080	0.079	0.077	0.0005	97.5	
		11-06-160	0.162	0.156	0.0005	96.3	
ALB	11/12/2010	11-06-160	0.162	0.155	0.0006	95.7	
		11-13-020	0.021	0.019	0.0005	90.5	
		11-18-400	0.407	0.394	0.0006	96.8	
		10-37-080	0.079	0.076	0.0006	96.2	
ALB	11/15/2010	10-37-080	0.079	0.076	0.0007	96.2	
		11-18-400	0.407	0.392	0.0013	96.3	
		11-13-020	0.021	0.019	0.0004	90.5	
		11-06-160	0.162	0.154	0.0011	95.1	
SH	11/16/2010	11-13-020	0.021	0.019	0.0004	90.5	
		10-37-080	0.079	0.079	0.0011	100.0	
		11-17-160	0.162	0.162	0.0009	100.0	
		11-18-400	0.407	0.399	0.0013	98.0	
SH	11/16/2010	11-13-020	0.021	0.019	0.0005	90.5	
		10-37-080	0.079	0.078	0.0009	98.7	
		11-17-160	0.162	0.161	0.0013	99.4	
		11-18-400	0.407	0.397	0.0010	97.5	
				Average	0.0007	95.8	
				Std Dev	0.0003	3.40	
				Range	0.0003 - .0013	90.5 - 100.0	



Y:\VDH\VDH All Share\Lab\Alcohol\Datamaster DMT electronic documents\100139\testing results.xls

Operator	Date	Concentration	Lot Number	DMT Result	Apparent EtOH	N = 10
SH	11/10/10	.01 Acetone in .08 EtOH	11-11-08A	INTERFERENCE	0.08	
SH	11/10/10	.01 Acetone in .04 EtOH	10-35-04A1	INTERFERENCE	0.04	
SH	11/10/10	.02 Acetone in .04 EtOH	10-35-04A2	INTERFERENCE	0.03	
SH	11/10/10	.04 MeOH in water	11-08-04M	INTERFERENCE	0.02	
SH	11/10/10	.04 MeOH in .08 EtOH	10-10-08M4	INTERFERENCE	0.1	
SH	11/10/10	.04 IPA in water	10-26-04I	INTERFERENCE	0.02	
SH	11/10/10	.04 IPA in .08 EtOH	09-30-08I4	INTERFERENCE	0.09	

Section 2: NPAS Tests

National Patent
Analytical Systems, Inc.

Certificate of Calibration

100139
Instrument Serial Number

09380
Standard Reference Number

The above instrument has been calibrated and is hereby certified for use in determining alcohol breath concentration when used in accordance with the operating guidelines by a properly trained operator.

3-22-10
Date

Technician

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

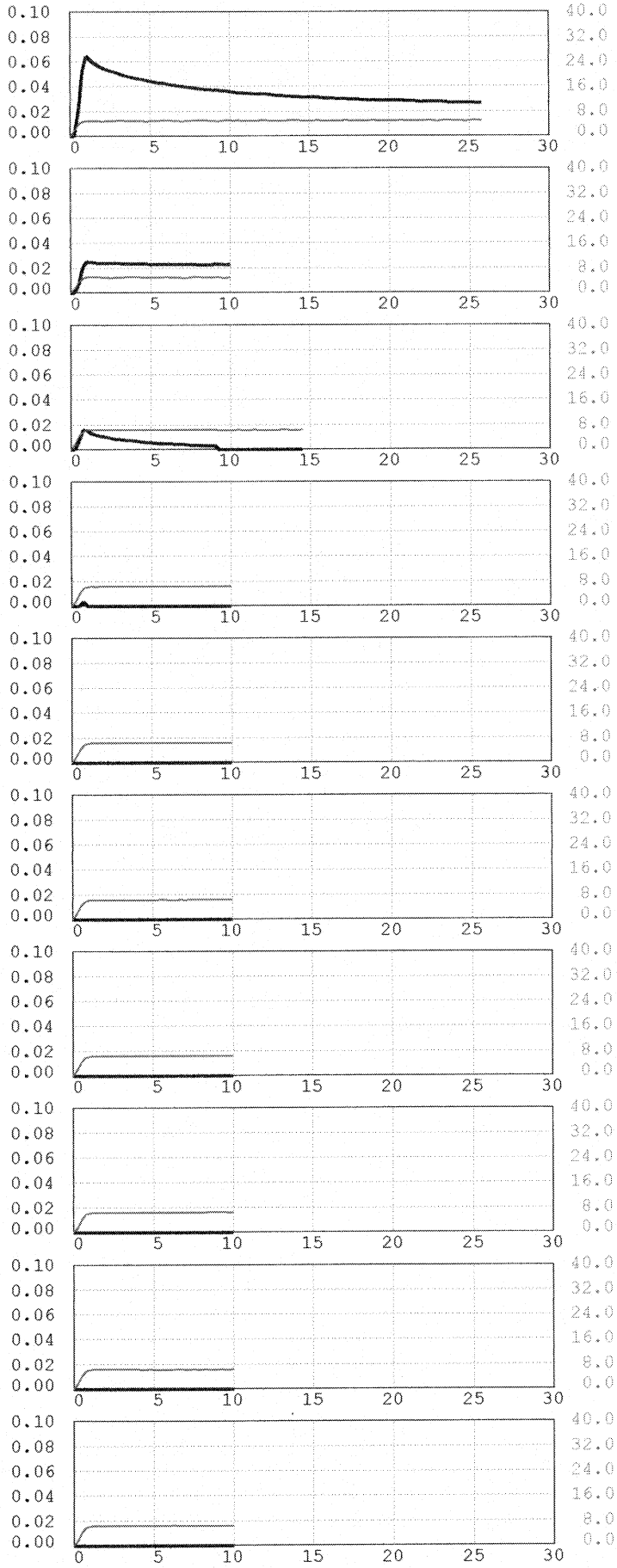
Date: 03/23/2010
Time: 15:40:01

SUPERVISOR NAME: T T T

SOLUTION LOT #: 987
SOLUTION CONCENTRATION: 0.025

BLANK TEST	0.000	15:40
CALIBRATION CHECK	PASSED	15:41
Xq = 0.0826 (1.82%)		
SIMULATOR VAPOR	INTERFERENCE	15:41
X[1] = 0.0277 (-0.0057) (-0.0070)		
SIMULATOR VAPOR	INTERFERENCE	15:42
X[1] = 0.0242 (-0.0064) (-0.0068)		
SIMULATOR VAPOR	0.000	15:43
X[1] = 0.0029 (0.0014) (-0.0013)		
SIMULATOR VAPOR	0.000	15:44
X[1] = 0.0006 (0.0007) (0.0002)		
SIMULATOR VAPOR	0.000	15:45
X[1] = 0.0000 (0.0000) (0.0000)		
SIMULATOR VAPOR	0.000	15:46
X[1] = 0.0005 (0.0006) (-0.0005)		
SIMULATOR VAPOR	0.000	15:47
X[1] = 0.0000 (0.0000) (0.0000)		
SIMULATOR VAPOR	0.000	15:48
X[1] = 0.0002 (0.0002) (0.0000)		
SIMULATOR VAPOR	0.000	15:49
X[1] = 0.0006 (0.0006) (0.0000)		
SIMULATOR VAPOR	0.000	15:50
X[1] = 0.0000 (0.0000) (0.0000)		
BLANK TEST	0.000	15:51

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

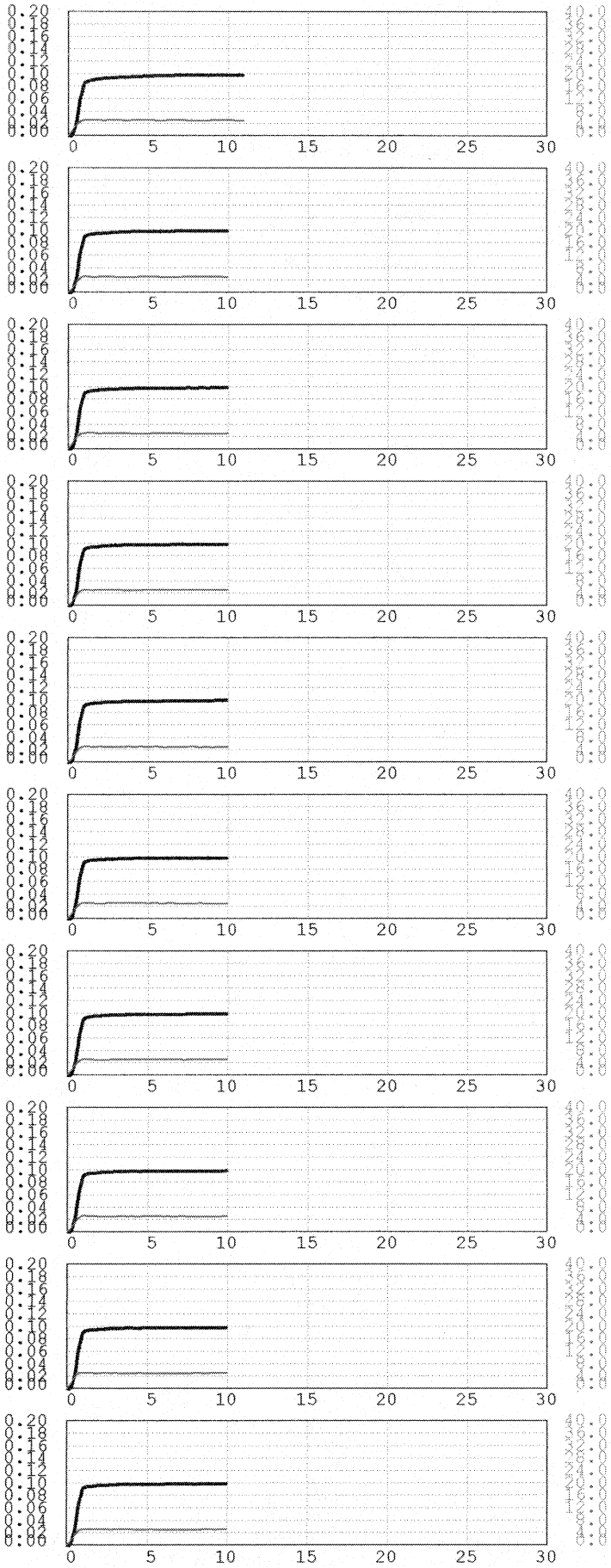
Date: 03/23/2010
Time: 15:27:22

SUPERVISOR NAME: T T T

SOLUTION LOT #: 8765
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	15:28
CALIBRATION CHECK	PASSED	15:28
Xq = 0.0811 (0.00%)		
SIMULATOR VAPOR	0.099	15:28
X[1] = 0.0992 (-0.0021) (-0.0010)		
SIMULATOR VAPOR	0.099	15:29
X[1] = 0.0995 (-0.0024) (-0.0005)		
SIMULATOR VAPOR	0.099	15:30
X[1] = 0.0990 (-0.0026) (-0.0001)		
SIMULATOR VAPOR	0.099	15:31
X[1] = 0.0997 (-0.0021) (-0.0009)		
SIMULATOR VAPOR	0.100	15:32
X[1] = 0.1002 (-0.0019) (-0.0012)		
SIMULATOR VAPOR	0.099	15:33
X[1] = 0.0993 (-0.0025) (-0.0008)		
SIMULATOR VAPOR	0.099	15:34
X[1] = 0.0995 (-0.0022) (0.0002)		
SIMULATOR VAPOR	0.099	15:35
X[1] = 0.0992 (-0.0028) (-0.0008)		
SIMULATOR VAPOR	0.099	15:36
X[1] = 0.0993 (-0.0024) (-0.0003)		
SIMULATOR VAPOR	0.099	15:37
X[1] = 0.0995 (-0.0024) (0.0002)		
BLANK TEST	0.000	15:38

Average = 0.099
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

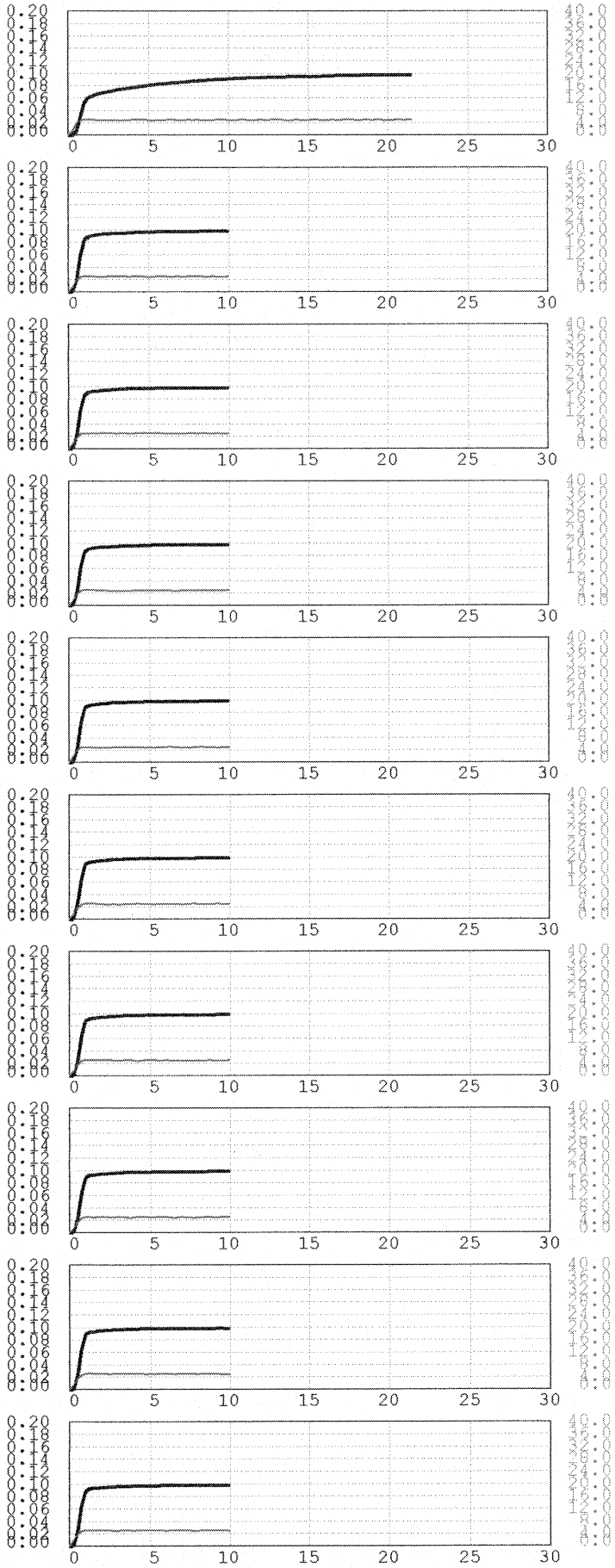
Date: 03/23/2010
Time: 15:14:15

SUPERVISOR NAME: T T T

SOLUTION LOT #: 987654
SOLUTION CONCENTRATION: 0.100

BLANK TEST		0.000	15:15
CALIBRATION CHECK		PASSED	15:15
Xq = 0.0811 (0.11%)			
SIMULATOR VAPOR		0.098	15:15
X[1] = 0.0984	(-0.0021)	(-0.0016)	
SIMULATOR VAPOR		0.098	15:16
X[1] = 0.0986	(-0.0017)	(-0.0012)	
SIMULATOR VAPOR		0.099	15:17
X[1] = 0.0994	(-0.0024)	(-0.0018)	
SIMULATOR VAPOR		0.099	15:18
X[1] = 0.0995	(-0.0023)	(-0.0012)	
SIMULATOR VAPOR		0.099	15:19
X[1] = 0.0996	(-0.0023)	(-0.0018)	
SIMULATOR VAPOR		0.099	15:20
X[1] = 0.0998	(-0.0020)	(-0.0017)	
SIMULATOR VAPOR		0.099	15:21
X[1] = 0.0997	(-0.0018)	(-0.0011)	
SIMULATOR VAPOR		0.099	15:22
X[1] = 0.0998	(-0.0022)	(-0.0006)	
SIMULATOR VAPOR		0.099	15:23
X[1] = 0.0995	(-0.0024)	(-0.0009)	
SIMULATOR VAPOR		0.099	15:24
X[1] = 0.0990	(-0.0022)	(-0.0003)	
BLANK TEST		0.000	15:25

Average = 0.098
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

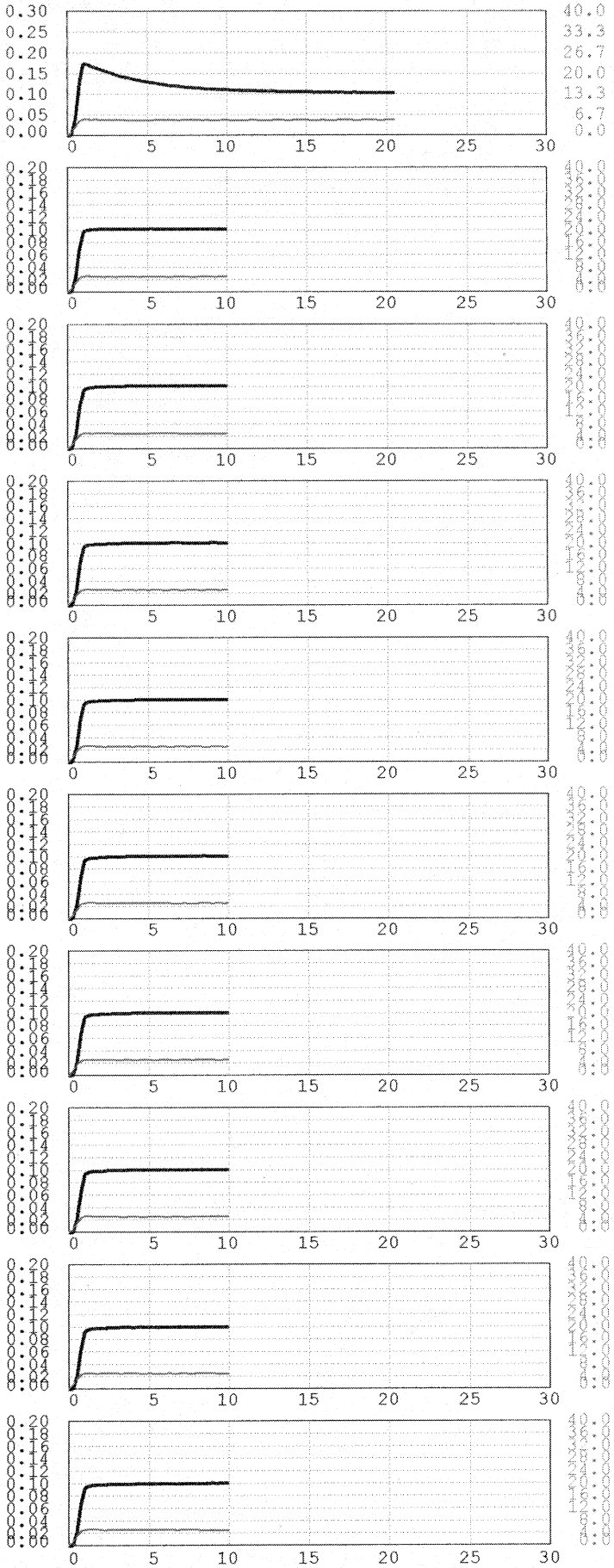
Date: 03/22/2010
Time: 10:46:46

SUPERVISOR NAME: T T T

SOLUTION LOT #: 87654R
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	10:47
CALIBRATION CHECK	PASSED	10:47
Xq = 0.0813 (0.21%)		
SIMULATOR VAPOR	0.103	10:48
X[1] = 0.1037 (-0.0009) (0.0018)		
SIMULATOR VAPOR	0.101	10:49
X[1] = 0.1019 (-0.0013) (0.0010)		
SIMULATOR VAPOR	0.101	10:50
X[1] = 0.1019 (-0.0014) (0.0009)		
SIMULATOR VAPOR	0.101	10:51
X[1] = 0.1012 (-0.0012) (0.0013)		
SIMULATOR VAPOR	0.100	10:52
X[1] = 0.1009 (-0.0015) (0.0006)		
SIMULATOR VAPOR	0.101	10:53
X[1] = 0.1016 (-0.0011) (0.0013)		
SIMULATOR VAPOR	0.101	10:54
X[1] = 0.1011 (-0.0013) (0.0015)		
SIMULATOR VAPOR	0.100	10:55
X[1] = 0.1009 (-0.0013) (0.0013)		
SIMULATOR VAPOR	0.100	10:56
X[1] = 0.1003 (-0.0013) (0.0011)		
SIMULATOR VAPOR	0.100	10:57
X[1] = 0.1006 (-0.0018) (0.0008)		
BLANK TEST	0.000	10:57

Average = 0.100
Std Dev = 0.0009



CALIBRATION REPORT

DataMaster DMT: 100139
Calibration Date: 03/22/2010
Calibrated by: T T T
Lot: 098765

VERMONT
DEPARTMENT OF HEALTH

```
Ca  =  0.101000
CAL =  0.974811    0.800 <= CAL < 1.200
b1  =  0.000000    0.000 <=  b1 < 0.004
b2  =  0.004830    0.001 <=  b2 < 0.012
b3  =  0.000000    0.000 <=  b3 < 0.004
Xq  =  0.081198    0.050 <=  Xq < 0.200
a21 =  1.161698    1.050 <= a21 < 1.300
a31 =  0.437775    0.300 <= a31 < 0.800
```

Performed by _____ Date 03/22/2010

DUI Subject Test

STATE OF VERMONT

DataMaster DMT: 100139
ADDISON COUNTY SO
Certification Date: 03/22/2010
Installation Date: 03/22/2010

Date: 03/22/2010
Time: 13:05:27

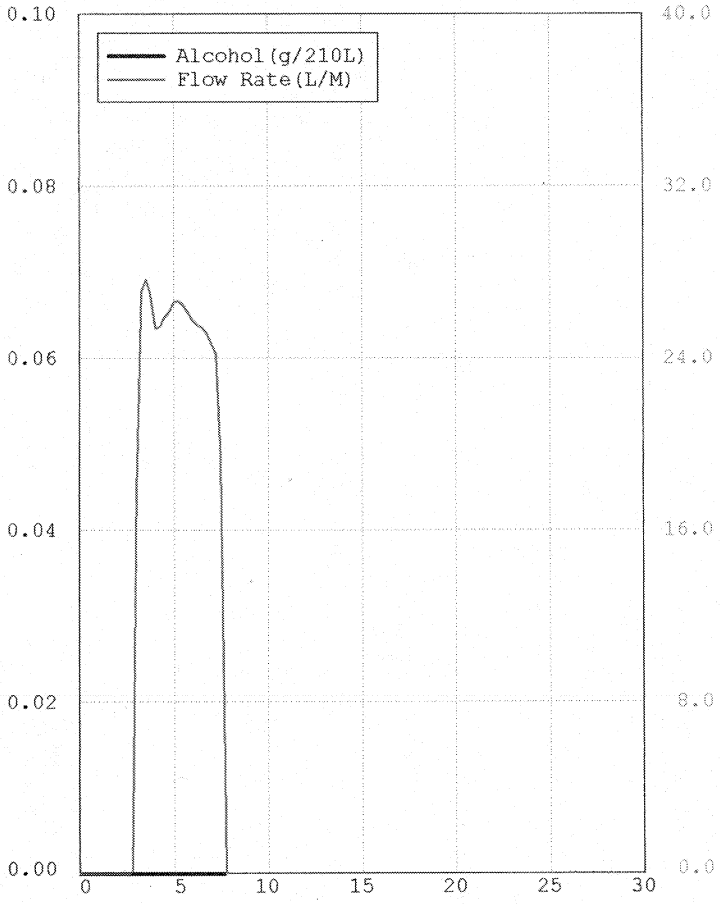
Subject Name: T T T
Date of Birth: 11/11/1911 Age: 98
Gender: M
License #:

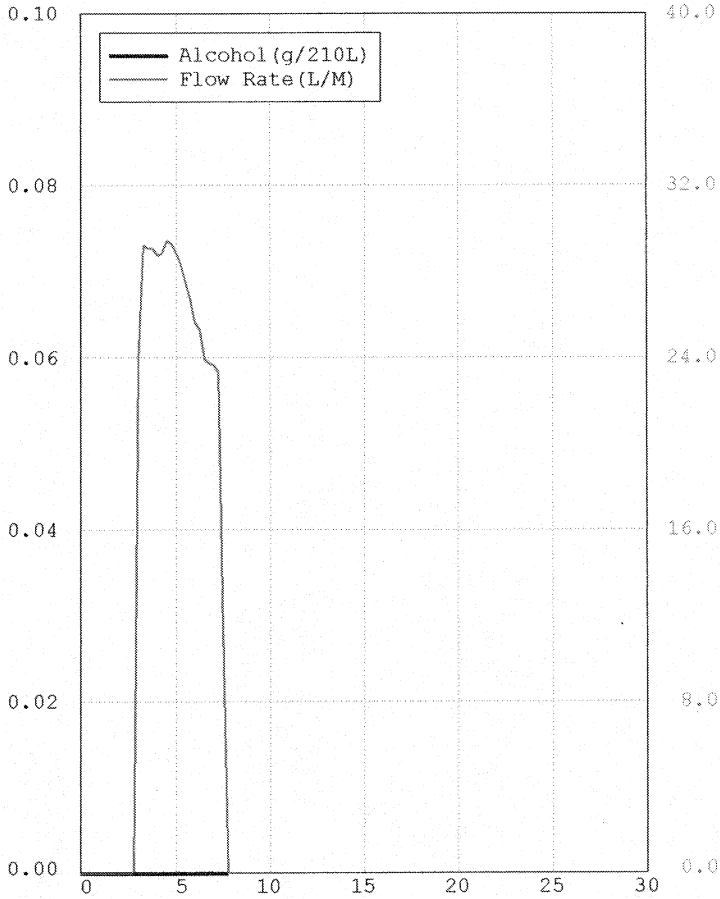
Case #: T
Time of Operation: 11:00
Location of Incident:
Town: ADDISON
County: ADDISON

Test Operator Name: T T T
Agency: ADDISON COUNTY SO

Obs. Period Start:		13:05
BLANK TEST	0.000	13:06
CALIBRATION CHECK	PASSED	13:06
Xq = 0.0817 (0.64%)		
SIMULATOR VAPOR	0.099	13:06
X[1] = 0.0998 (-0.0012) (0.0025)		
BLANK TEST	0.000	13:07
SUBJECT SAMPLE (Vol=1.9L)	0.000	13:07
X[1] = 0.0000 (0.0000) (0.0000)		
BLANK TEST	0.000	13:08
CALIBRATION CHECK	PASSED	13:08
Xq = 0.0829 (2.14%)		
SIMULATOR VAPOR	0.101	13:09
X[1] = 0.1019 (-0.0002) (0.0009)		
BLANK TEST	0.000	13:10
SUBJECT SAMPLE (Vol=2.0L)	0.000	13:10
X[1] = 0.0000 (-0.0001) (0.0000)		

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105





INSTALLATION REPORT

DataMaster DMT: 100139
Location: ADDISON COUNTY SO
Calibration Date: 03/22/2010
Certification Date: 03/22/2010
Installation Date: 03/22/2010
Installed By: T T T

VERMONT
DEPARTMENT OF HEALTH

Site meets specification in doc P-ALC-210

Diagnostic Results

VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.97°C
Breath Tube = 48.08°C

SETTINGS
Lamp Voltage = 1.85 V
Cooler Voltage = 1.66 V
Bias Voltage = 80.8 V
Chopper Freq = 539.2 Hz

PUMP INFO
Flow Rate = 6.118 L/M

DETECTOR INFO
PUMP ON OFF
MAX(V) 0.0610 0.0630
MIN(V) 0.0587 0.0608

FILTER INFO
Filter 1 0.063 Zero = true
Filter 2 0.372 Zero = true
Filter 3 1.029 Zero = true

CALIBRATION CHECK
Xq = 0.0810 0.22%

INSTALLATION PASSED

Accuracy and Precision Check

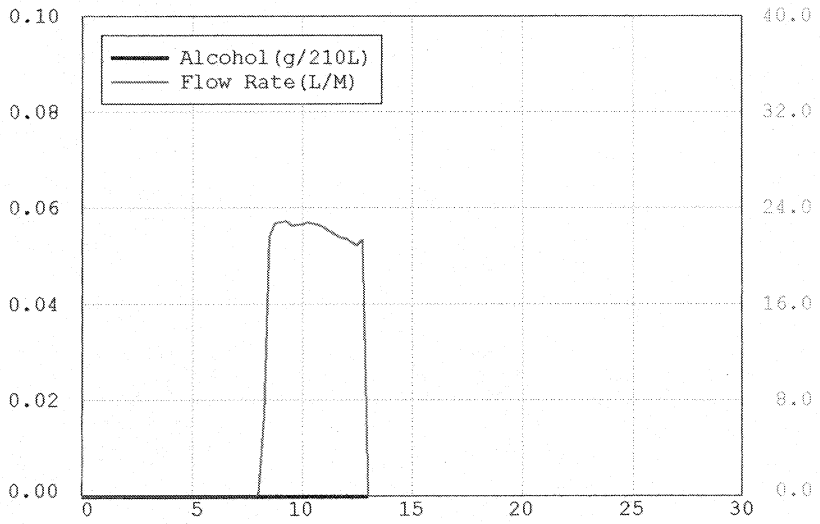
Concentration = 0.100 g/210L
Lot # = 9O87654
Average = 0.100 g/210L
Std Dev = 0.001

RFI Interference Test

RFI detected

Sample Acceptance Test

Passed



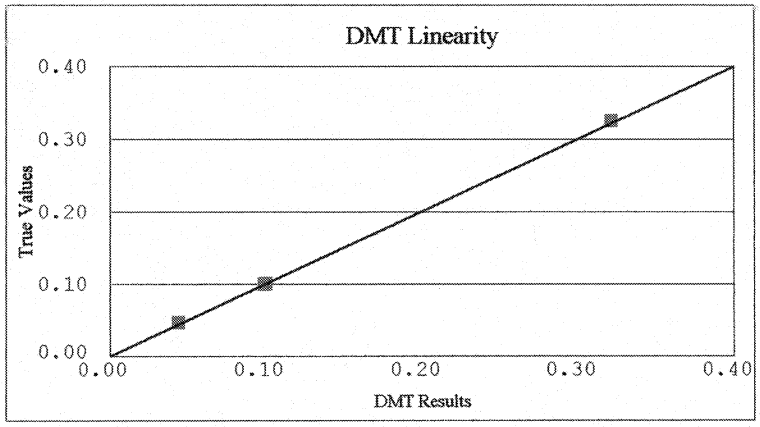
Performed by _____ Date 03/22/2010

Reviewed by _____ Date _____

Linearity Check Results

True Value	Reported Average	Std Dev
0.047 g/210L	0.044 g/210L	0.001
Lot # 876543456		
0.100 g/210L	0.099 g/210L	0.001
Lot # 9I87654		
0.101 g/210L	0.100 g/210L	0.000
Lot # 987654		
0.325 g/210L	0.321 g/210L	0.001
Lot # 98564		

$R^2 = 0.9999$



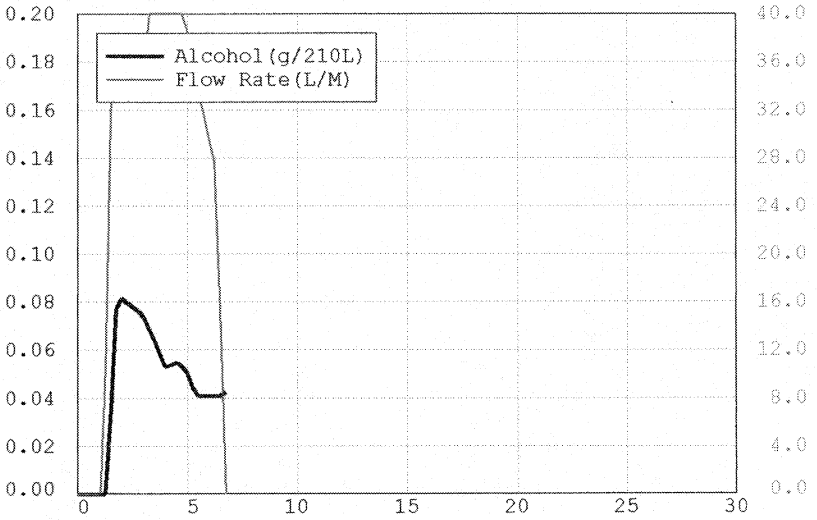
Acetone Interference Test

Lot # 3E4R5

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

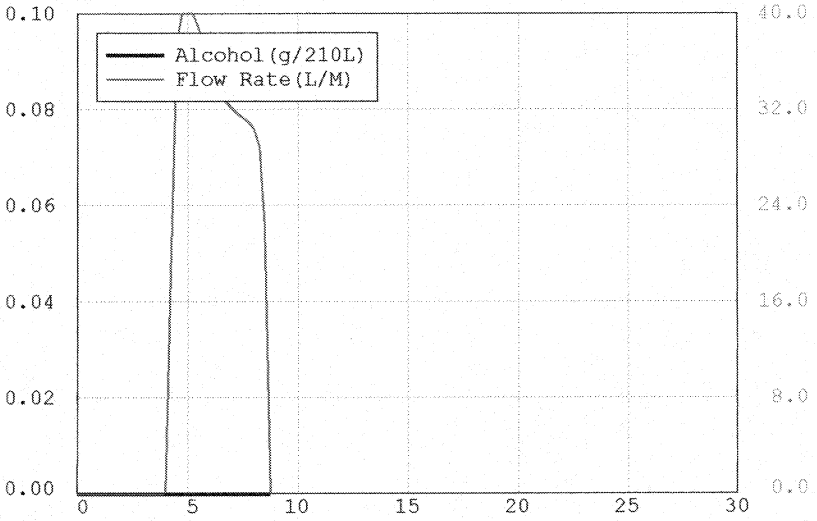


RF Interference Test

RFI detected

Sample Acceptance Test

Passed



CERTIFICATION PASSED

Performed by * _____ **Date** 03/22/2010

Reviewed by _____ **Date** _____

CERTIFICATION REPORT

DataMaster DMT: 100139
Calibration Date: 03/22/2010
Certification Date: 03/22/2010
Certified by: T T T

VERMONT
DEPARTMENT OF HEALTH

Diagnostic Results

VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.74°C
Breath Tube = 47.72°C

SETTINGS
Lamp Voltage = 1.85 V
Cooler Voltage = 1.66 V
Bias Voltage = 80.8 V
Chopper Freq = 538.3 Hz

PUMP INFO
Flow Rate = 6.003 L/M

DETECTOR INFO
PUMP ON OFF
MAX(V) 0.0289 0.0313
MIN(V) 0.0270 0.0299

FILTER INFO
Filter 1 0.031 Zero = true
Filter 2 0.338 Zero = true
Filter 3 0.989 Zero = true

CALIBRATION CHECK
Xq = 0.0804 0.96%

Options

Printer: yes
Number of Copies: 1
Number of Supervisor Tests: 10
Tolerance Check: no
Data Collection: yes
Units: g/210L
Simulator Check: no
Uses Wet Bath Simulator: yes
Simulator Nominal: 0.101
Digital Simulator: none
Simulator Before: yes
Simulator Between: yes
Simulator After: no
Number of Subject Tests: 2
AskQuestions: yes
Query Refusal: yes
Alcohol Display: yes
Show Two Digits: no
Volume Display: yes
Number of Calibration Tests: 1
Calibrate with Wet Bath: yes
Calibration Nominal: 0.100

CALIBRATION REPORT

DataMaster DMT: 100139
Calibration Date: 03/22/2010
Calibrated by: T T T
Lot: 098765

VERMONT
DEPARTMENT OF HEALTH

```
Ca  =  0.101000
CAL =  0.974811    0.800 <= CAL < 1.200
b1  =  0.000000    0.000 <=  b1 < 0.004
b2  =  0.004830    0.001 <=  b2 < 0.012
b3  =  0.000000    0.000 <=  b3 < 0.004
Xq  =  0.081198    0.050 <=  Xq < 0.200
a21 =  1.161698    1.050 <= a21 < 1.300
a31 =  0.437775    0.300 <= a31 < 0.800
```

Performed by x

Date 03/22/2010

OPTIONS PRINT OUT

DataMaster DMT: 100139
Location: ADDISON COUNTY SO
Calibration Date: 03/22/2010
Certification Date: 03/22/2010
Installation Date: 03/22/2010

VERMONT
DEPARTMENT OF HEALTH

```
Printer: yes
Number of Copies: 3
Number of Supervisor Tests: 10
Tolerance Check: yes
Data Collection: yes
Units: g/210L
Simulator Check: yes
Uses Wet Bath Simulator: yes
Simulator Nominal: 0.100
Digital Simulator: guth
Simulator Before: yes
Simulator Between: yes
Simulator After: no
Number of Subject Tests: 2
AskQuestions: yes
Query Refusal: yes
Alcohol Display: yes
Show Two Digits: no
Volume Display: yes
Number of Calibration Tests: 1
Calibrate with Wet Bath: yes
Calibration Nominal: 0.100
```

DIAGNOSTIC RESULT

DataMaster DMT: 100139
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/12/2010
Time: 13:44

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.91°C
Breath Tube    = 48.10°C

SETTINGS
Lamp Voltage   = 1.80 V
Cooler Voltage = 1.69 V
Bias Voltage   = 80.1 V
Chopper Freq   = 544.2 Hz

PUMP INFO
Flow Rate = 6.304 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.0079   0.0114
MIN(V)   0.0055   0.0096

FILTER INFO
Filter 1  0.011  Zero = true
Filter 2  0.349  Zero = true
Filter 3  0.977  Zero = true

CALIBRATION CHECK
Xq = 0.0813  0.43%
```

Section 3: Power-Up Tests

CALIBRATION REPORT

DataMaster DMT: 100139
Calibration Date: 11/09/2010
Calibrated by: STEVEN E HARNOIS
Lot: 11-12-100

VERMONT
DEPARTMENT OF HEALTH

```
Ca  =  0.100000
CAL =  0.968856    0.800 <= CAL < 1.200
b1  =  0.000000    0.000 <=  b1 < 0.004
b2  =  0.004380    0.001 <=  b2 < 0.012
b3  =  0.000000    0.000 <=  b3 < 0.004
Xq  =  0.081720    0.050 <=  Xq < 0.200
a21 =  1.184168    1.050 <= a21 < 1.300
a31 =  0.425286    0.300 <= a31 < 0.800
```

Performed by _____ Date 11/09/2010

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

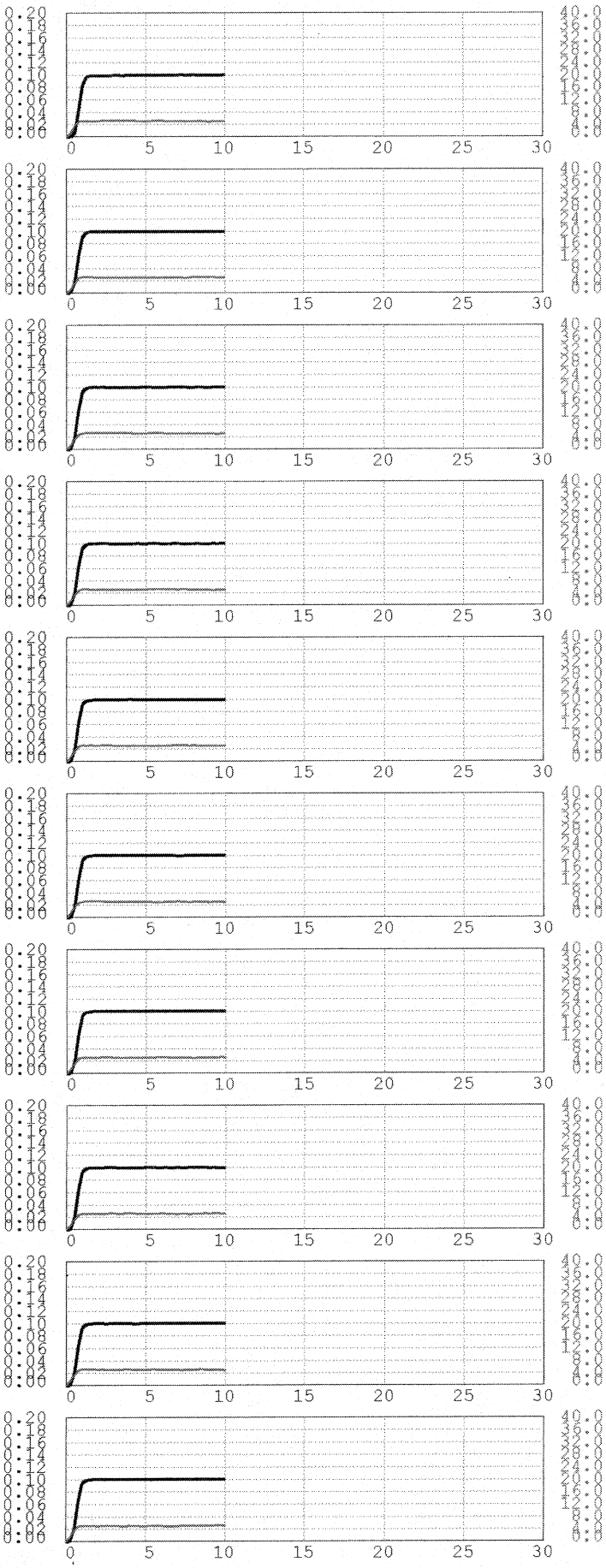
Date: 11/09/2010
Time: 09:59:16

SUPERVISOR NAME: SEH CAL CHECK

SOLUTION LOT #: 11-10-100
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	10:00
CALIBRATION CHECK	PASSED	10:00
SIMULATOR VAPOR	0.100	10:00
SIMULATOR VAPOR	0.100	10:01
SIMULATOR VAPOR	0.100	10:02
SIMULATOR VAPOR	0.100	10:03
SIMULATOR VAPOR	0.100	10:04
SIMULATOR VAPOR	0.101	10:05
SIMULATOR VAPOR	0.100	10:06
SIMULATOR VAPOR	0.100	10:07
SIMULATOR VAPOR	0.100	10:08
SIMULATOR VAPOR	0.101	10:09
BLANK TEST	0.000	10:10

Average = 0.100
Std Dev = 0.0004



CERTIFICATION REPORT

DataMaster DMT: 100139
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Certified by: STEVEN E HARNOIS

VERMONT
DEPARTMENT OF HEALTH

Diagnostic Results

VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.03°C
Breath Tube = 48.11°C

SETTINGS
Lamp Voltage = 1.80 V
Cooler Voltage = 1.69 V
Bias Voltage = 80.1 V
Chopper Freq = 545.3 Hz

PUMP INFO
Flow Rate = 6.372 L/M

DETECTOR INFO
PUMP ON OFF
MAX(V) 0.0413 0.0425
MIN(V) 0.0392 0.0404

FILTER INFO
Filter 1 0.042 Zero = true
Filter 2 0.381 Zero = true
Filter 3 1.021 Zero = true

CALIBRATION CHECK
Xq = 0.0825 1.06%

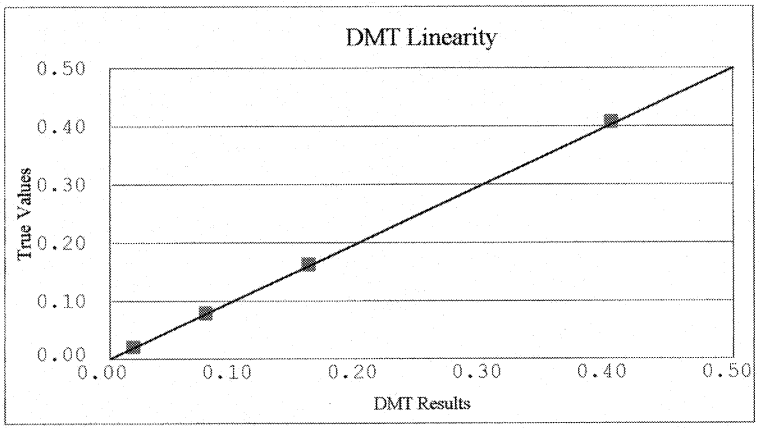
Options

Printer: yes
Number of Copies: 1
Number of Supervisor Tests: 10
Tolerance Check: yes
Data Collection: yes
Units: g/210L
Simulator Check: yes
Uses Wet Bath Simulator: yes
Simulator Nominal: 0.100
Digital Simulator: none
Simulator Before: yes
Simulator Between: yes
Simulator After: no
Number of Subject Tests: 2
AskQuestions: yes
Query Refusal: yes
Alcohol Display: yes
Show Two Digits: no
Volume Display: yes
Number of Calibration Tests: 1
Calibrate with Wet Bath: yes
Calibration Nominal: 0.100

Linearity Check Results

True Value	Reported Average	Std Dev
0.021 g/210L	0.019 g/210L	0.001
Lot # 11-13-020		
0.079 g/210L	0.077 g/210L	0.000
Lot # 10-37-080		
0.162 g/210L	0.159 g/210L	0.001
Lot # 11-06-160		
0.407 g/210L	0.402 g/210L	0.001
Lot # 11-18-400		

$R^2 = 1.0000$



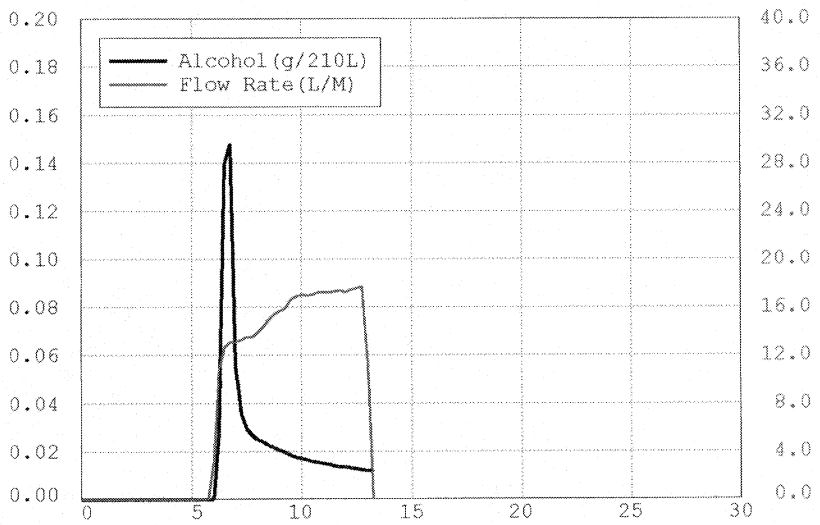
Acetone Interference Test

Lot # 11-11-08A1

Interference Detected

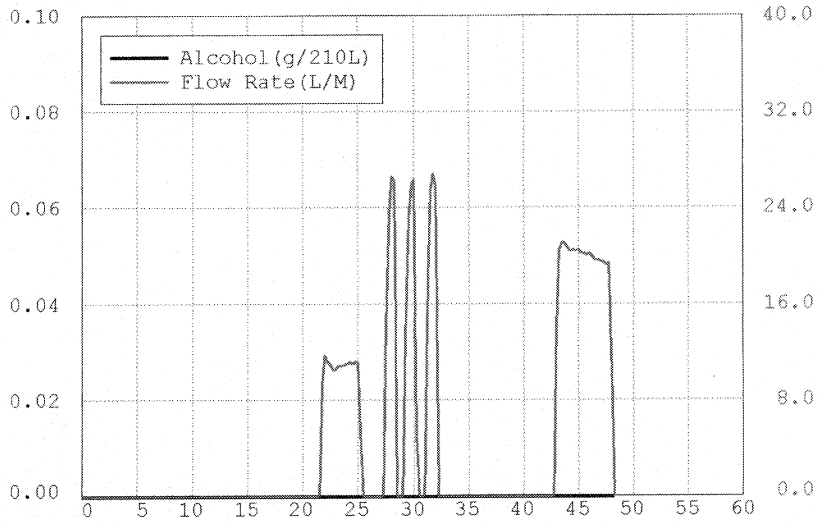
Mouth Alcohol Test

Mouth Alcohol Detected



RF Interference Test

RFI detected



Sample Acceptance Test

Passed

CERTIFICATION PASSED

Performed by _____ **Date** 11/09/2010

Reviewed by _____ **Date** _____

Section 4: Linearity

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

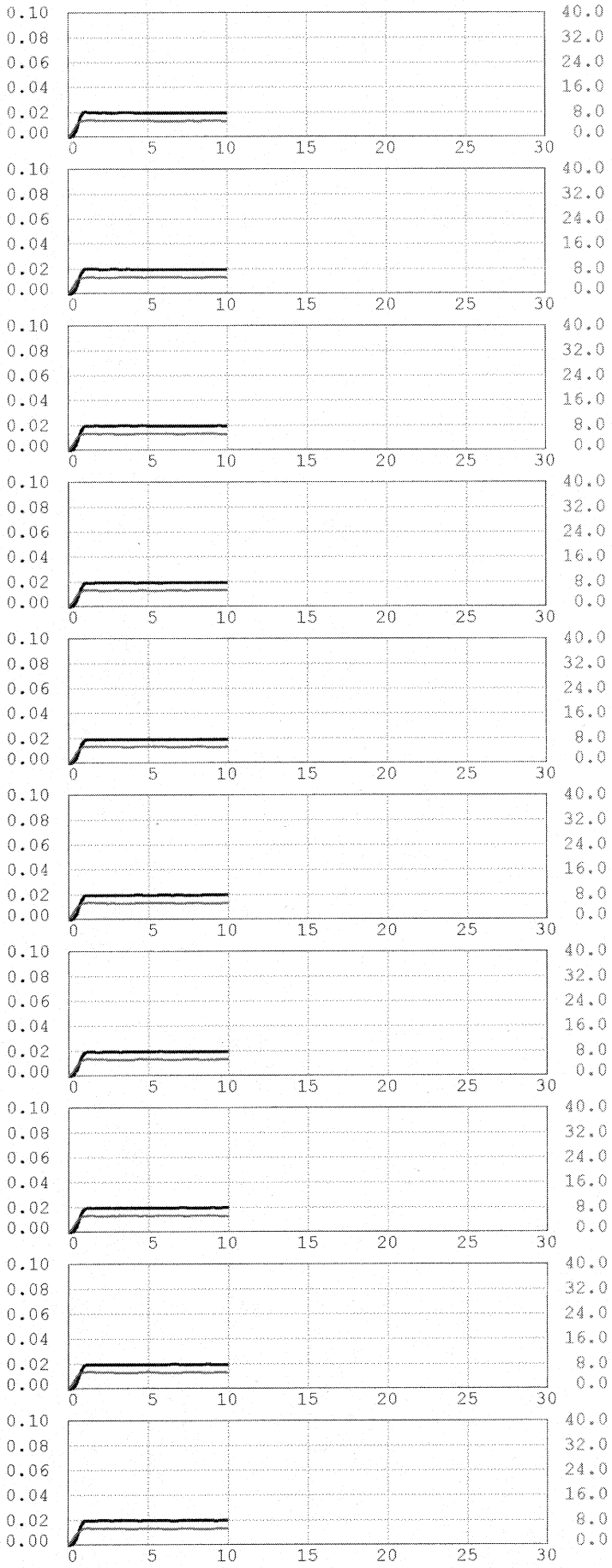
Date: 11/10/2010
Time: 11:04:01

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-13-020
SOLUTION CONCENTRATION: 0.021

BLANK TEST	0.000	11:04
CALIBRATION CHECK	PASSED	11:05
SIMULATOR VAPOR	0.019	11:05
SIMULATOR VAPOR	0.019	11:06
SIMULATOR VAPOR	0.020	11:07
SIMULATOR VAPOR	0.020	11:08
SIMULATOR VAPOR	0.019	11:09
SIMULATOR VAPOR	0.020	11:10
SIMULATOR VAPOR	0.019	11:11
SIMULATOR VAPOR	0.020	11:12
SIMULATOR VAPOR	0.019	11:13
SIMULATOR VAPOR	0.020	11:14
BLANK TEST	0.000	11:14

Average = 0.019
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

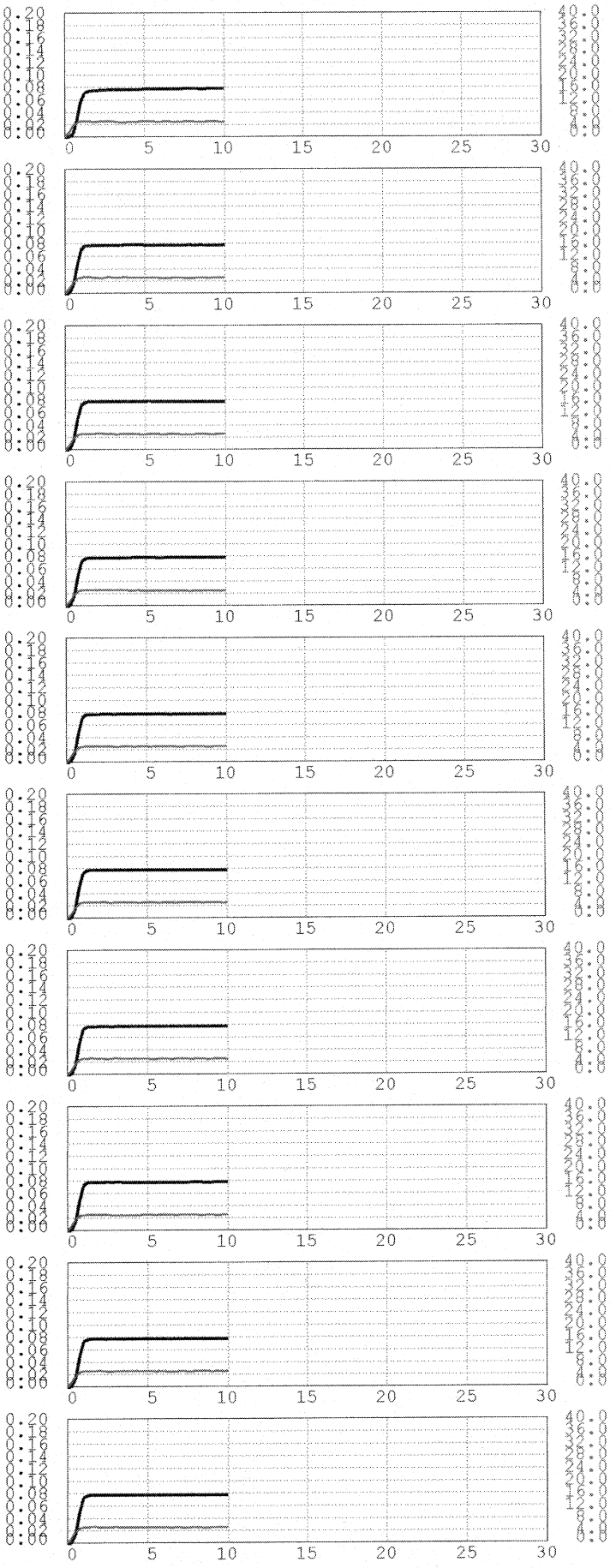
Date: 11/10/2010
Time: 11:16:44

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-37-080
SOLUTION CONCENTRATION: 0.079

BLANK TEST	0.000	11:17
CALIBRATION CHECK	PASSED	11:17
SIMULATOR VAPOR	0.078	11:18
SIMULATOR VAPOR	0.078	11:19
SIMULATOR VAPOR	0.078	11:20
SIMULATOR VAPOR	0.079	11:21
SIMULATOR VAPOR	0.078	11:22
SIMULATOR VAPOR	0.078	11:23
SIMULATOR VAPOR	0.078	11:24
SIMULATOR VAPOR	0.078	11:25
SIMULATOR VAPOR	0.078	11:25
SIMULATOR VAPOR	0.078	11:26
BLANK TEST	0.000	11:27

Average = 0.078
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

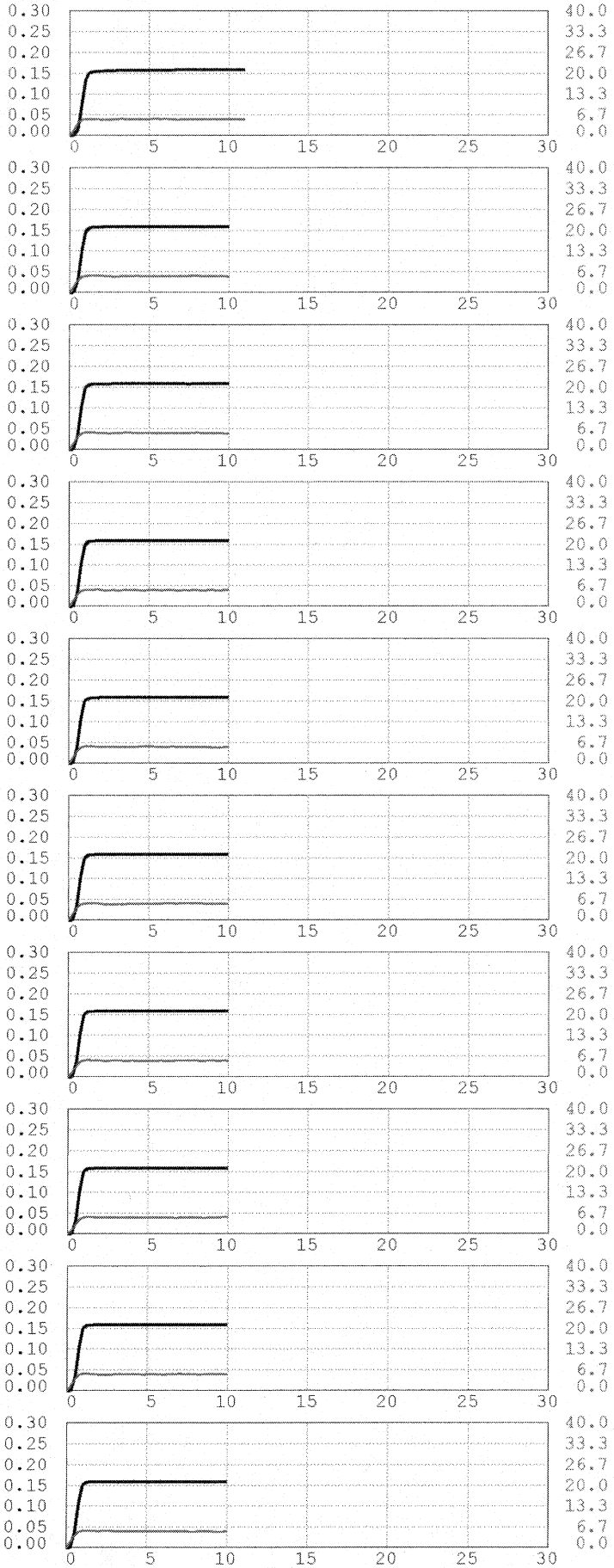
Date: 11/10/2010
Time: 13:54:27

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-06-160
SOLUTION CONCENTRATION: 0.162

BLANK TEST	0.000	13:55
CALIBRATION CHECK	PASSED	13:55
SIMULATOR VAPOR	0.158	13:55
SIMULATOR VAPOR	0.158	13:56
SIMULATOR VAPOR	0.158	13:57
SIMULATOR VAPOR	0.159	13:58
SIMULATOR VAPOR	0.158	13:59
SIMULATOR VAPOR	0.159	14:00
SIMULATOR VAPOR	0.159	14:01
SIMULATOR VAPOR	0.159	14:02
SIMULATOR VAPOR	0.158	14:03
SIMULATOR VAPOR	0.159	14:04
BLANK TEST	0.000	14:05

Average = 0.158
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

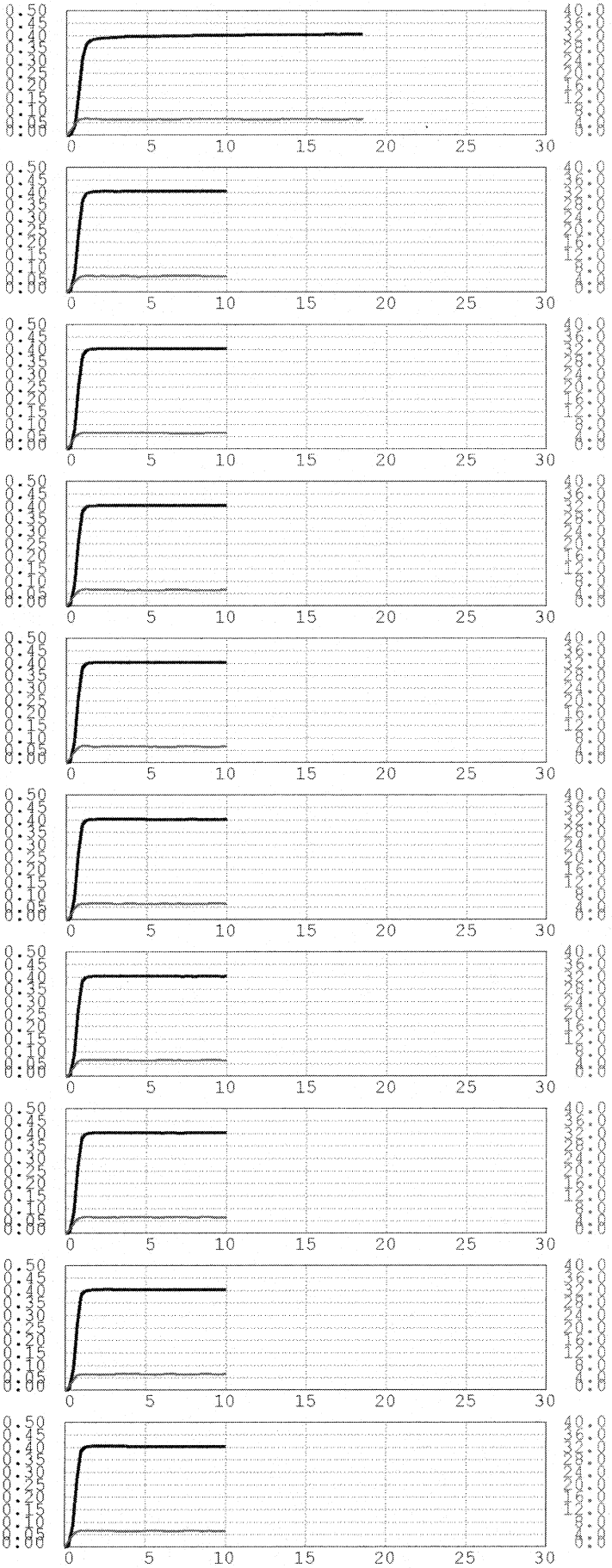
Date: 11/10/2010
Time: 14:06:34

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-18-400
SOLUTION CONCENTRATION: 0.407

BLANK TEST	0.000	14:07
CALIBRATION CHECK	PASSED	14:07
SIMULATOR VAPOR	0.403	14:08
SIMULATOR VAPOR	0.403	14:09
SIMULATOR VAPOR	0.402	14:10
SIMULATOR VAPOR	0.402	14:11
SIMULATOR VAPOR	0.402	14:12
SIMULATOR VAPOR	0.401	14:13
SIMULATOR VAPOR	0.401	14:14
SIMULATOR VAPOR	0.401	14:15
SIMULATOR VAPOR	0.402	14:16
SIMULATOR VAPOR	0.402	14:17
BLANK TEST	0.000	14:17

Average = 0.401
Std Dev = 0.0007



DIAGNOSTIC RESULT

DataMaster DMT: 100139
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/12/2010
Time: 08:20

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.09°C
Breath Tube    = 48.08°C

SETTINGS
Lamp Voltage   = 1.80 V
Cooler Voltage = 1.69 V
Bias Voltage   = 80.1 V
Chopper Freq   = 548.4 Hz

PUMP INFO
Flow Rate = 6.489 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)   0.0329    0.0358
MIN(V)   0.0313    0.0341

FILTER INFO
Filter 1  0.035  Zero = true
Filter 2  0.373  Zero = true
Filter 3  1.012  Zero = true

CALIBRATION CHECK
Xq = 0.0823  0.74%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

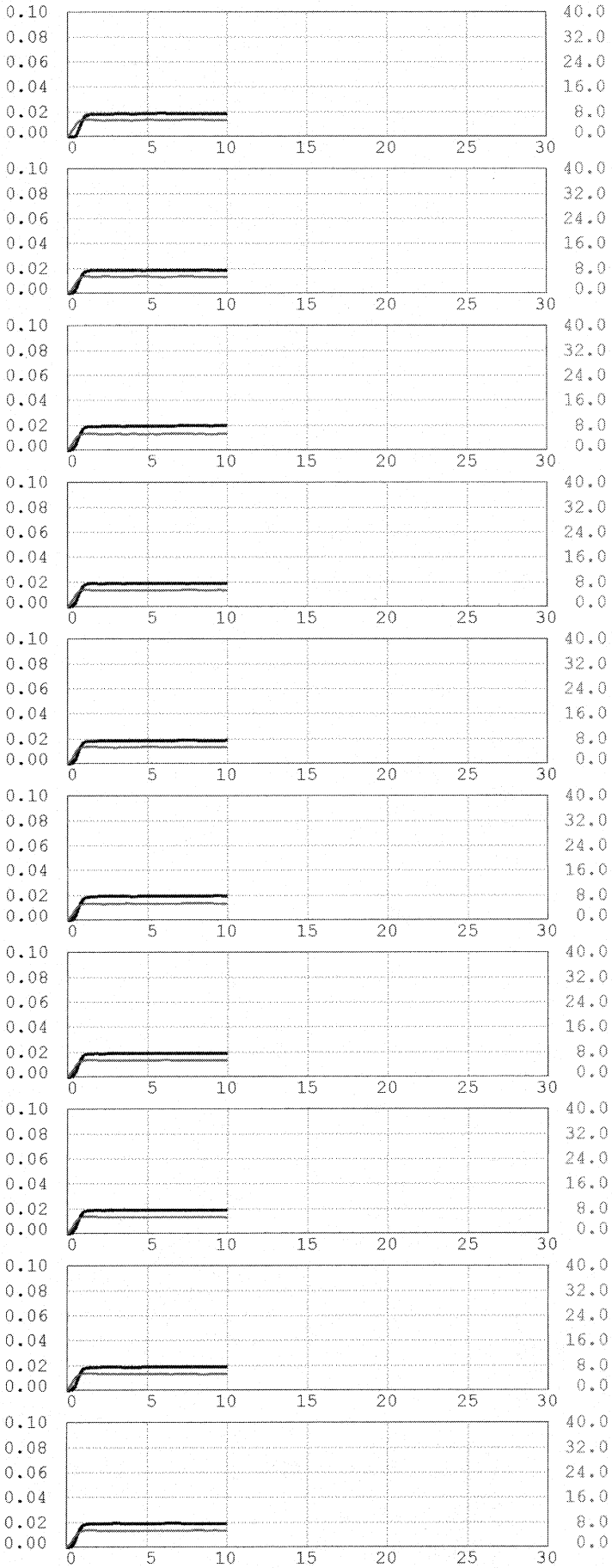
Date: 11/12/2010
Time: 08:36:45

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 11-13-020
SOLUTION CONCENTRATION: 0.021

BLANK TEST	0.000	08:37
CALIBRATION CHECK	PASSED	08:37
SIMULATOR VAPOR	0.019	08:38
SIMULATOR VAPOR	0.019	08:39
SIMULATOR VAPOR	0.020	08:40
SIMULATOR VAPOR	0.019	08:41
SIMULATOR VAPOR	0.019	08:41
SIMULATOR VAPOR	0.020	08:42
SIMULATOR VAPOR	0.019	08:43
SIMULATOR VAPOR	0.019	08:44
SIMULATOR VAPOR	0.019	08:45
SIMULATOR VAPOR	0.019	08:46
BLANK TEST	0.000	08:47

Average = 0.019
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

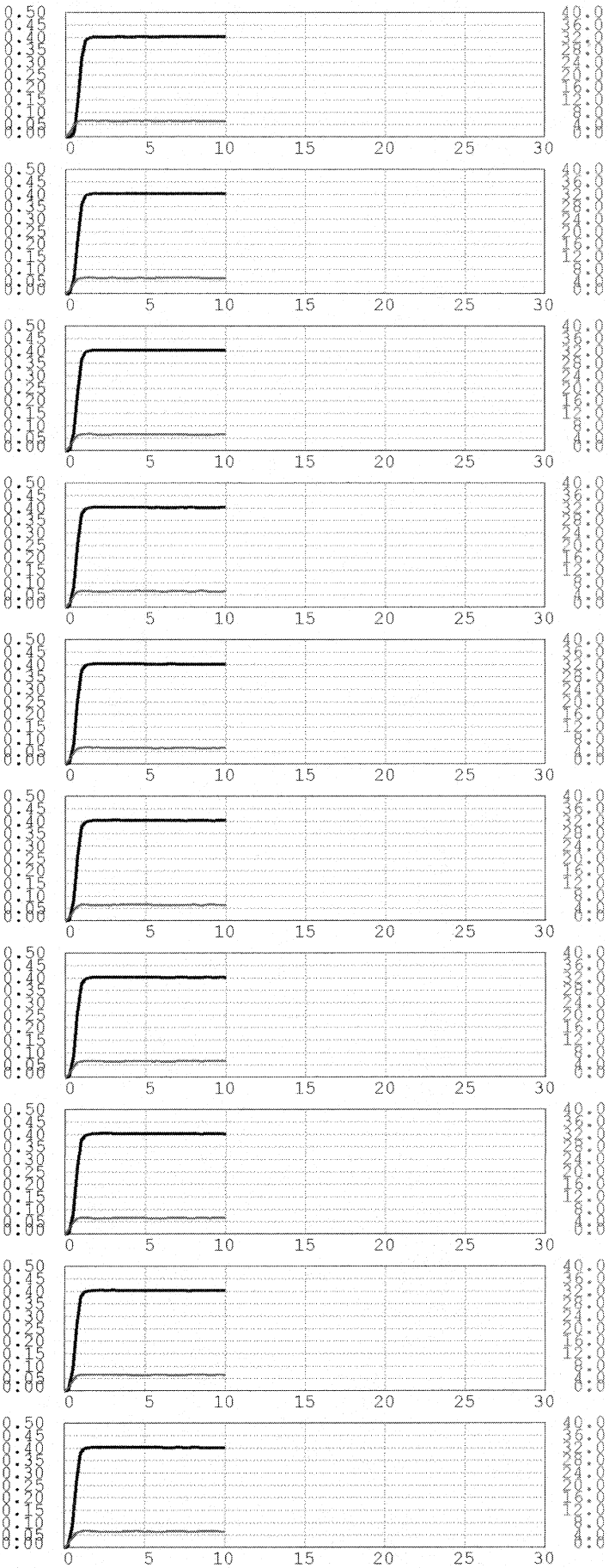
Date: 11/12/2010
Time: 09:02:46

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 11-18-400
SOLUTION CONCENTRATION: 0.407

BLANK TEST	0.000	09:03
CALIBRATION CHECK	PASSED	09:03
SIMULATOR VAPOR	0.400	09:04
SIMULATOR VAPOR	0.401	09:05
SIMULATOR VAPOR	0.401	09:06
SIMULATOR VAPOR	0.401	09:07
SIMULATOR VAPOR	0.401	09:08
SIMULATOR VAPOR	0.401	09:09
SIMULATOR VAPOR	0.401	09:10
SIMULATOR VAPOR	0.401	09:11
SIMULATOR VAPOR	0.402	09:12
SIMULATOR VAPOR	0.401	09:13
BLANK TEST	0.000	09:14

Average = 0.401
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

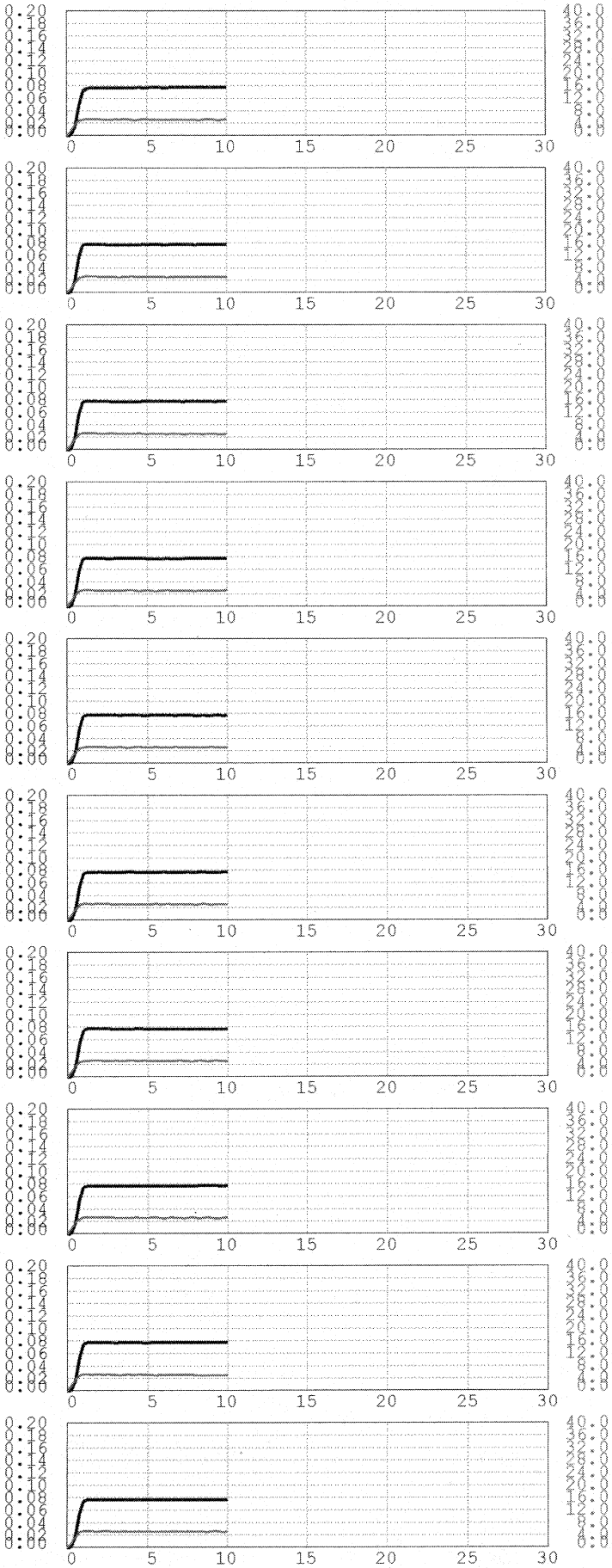
Date: 11/12/2010
Time: 09:16:39

SUPERVISOR NAME: ALB LINEARITYQ

SOLUTION LOT #: 10-37-080
SOLUTION CONCENTRATION: 0.079

BLANK TEST	0.000	09:17
CALIBRATION CHECK	PASSED	09:17
SIMULATOR VAPOR	0.078	09:17
SIMULATOR VAPOR	0.078	09:18
SIMULATOR VAPOR	0.078	09:19
SIMULATOR VAPOR	0.078	09:20
SIMULATOR VAPOR	0.077	09:21
SIMULATOR VAPOR	0.077	09:22
SIMULATOR VAPOR	0.077	09:23
SIMULATOR VAPOR	0.077	09:24
SIMULATOR VAPOR	0.078	09:25
SIMULATOR VAPOR	0.077	09:26
BLANK TEST	0.000	09:27

Average = 0.077
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

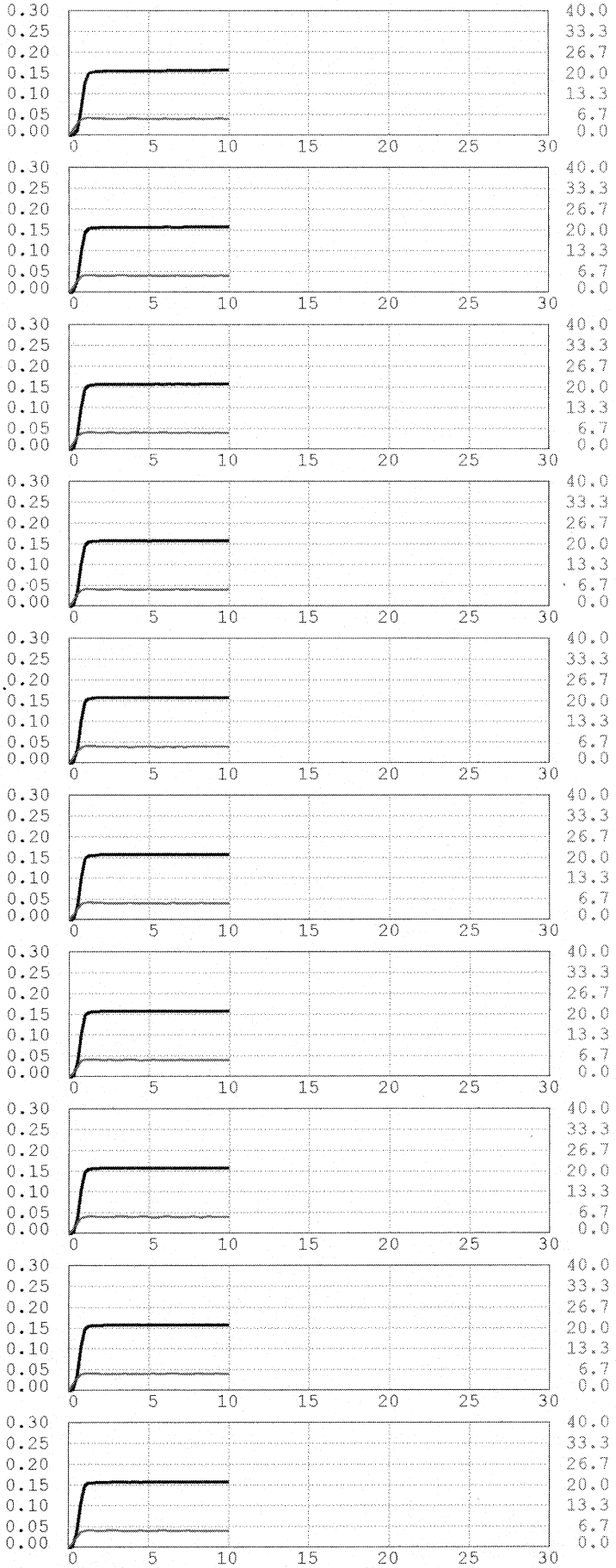
Date: 11/12/2010
Time: 09:37:12

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 11-06-160
SOLUTION CONCENTRATION: 0.162

BLANK TEST	0.000	09:38
CALIBRATION CHECK	PASSED	09:38
SIMULATOR VAPOR	0.156	09:38
SIMULATOR VAPOR	0.156	09:39
SIMULATOR VAPOR	0.156	09:40
SIMULATOR VAPOR	0.156	09:41
SIMULATOR VAPOR	0.157	09:42
SIMULATOR VAPOR	0.157	09:43
SIMULATOR VAPOR	0.157	09:44
SIMULATOR VAPOR	0.157	09:45
SIMULATOR VAPOR	0.157	09:46
SIMULATOR VAPOR	0.156	09:47
BLANK TEST	0.000	09:48

Average = 0.156
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

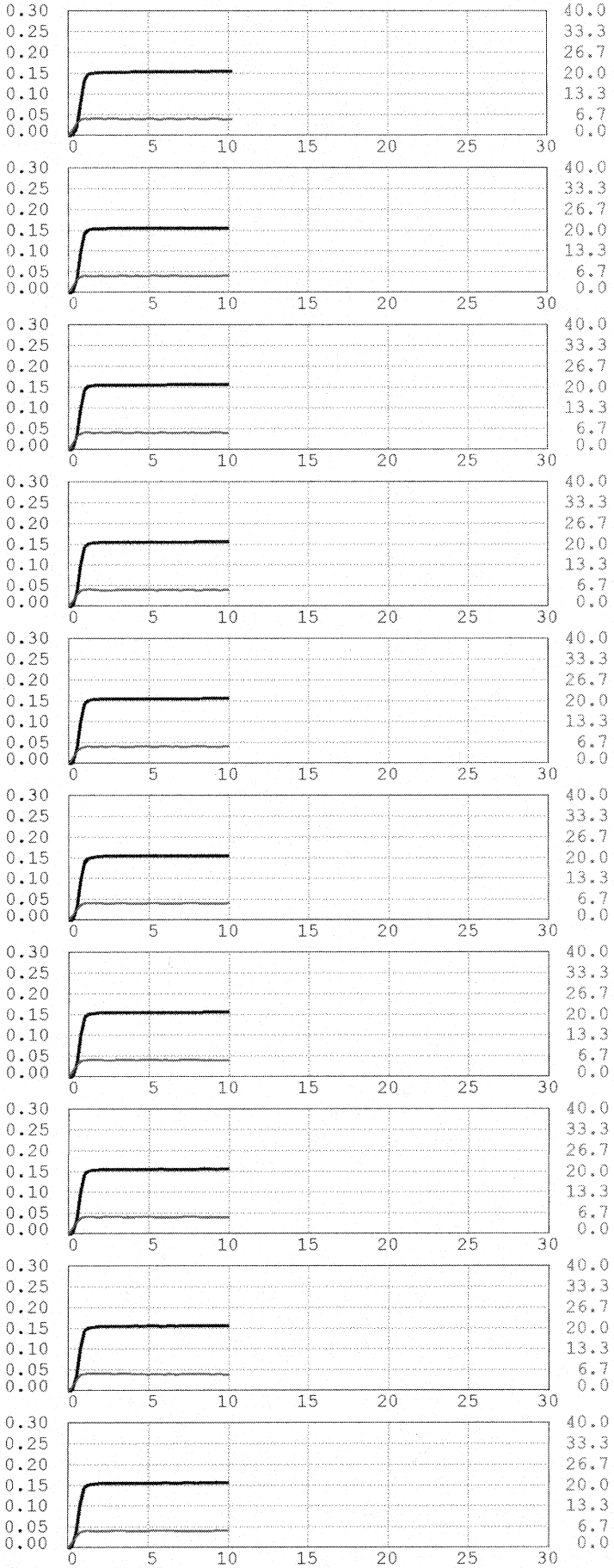
Date: 11/12/2010
Time: 13:48:39

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 11-06-160
SOLUTION CONCENTRATION: 0.162

BLANK TEST	0.000	13:49
CALIBRATION CHECK	PASSED	13:49
SIMULATOR VAPOR	0.154	13:49
SIMULATOR VAPOR	0.155	13:50
SIMULATOR VAPOR	0.156	13:51
SIMULATOR VAPOR	0.156	13:52
SIMULATOR VAPOR	0.156	13:53
SIMULATOR VAPOR	0.155	13:55
SIMULATOR VAPOR	0.156	13:56
SIMULATOR VAPOR	0.156	13:57
SIMULATOR VAPOR	0.156	13:58
SIMULATOR VAPOR	0.156	13:59
BLANK TEST	0.000	13:59

Average = 0.155
Std Dev = 0.0006



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

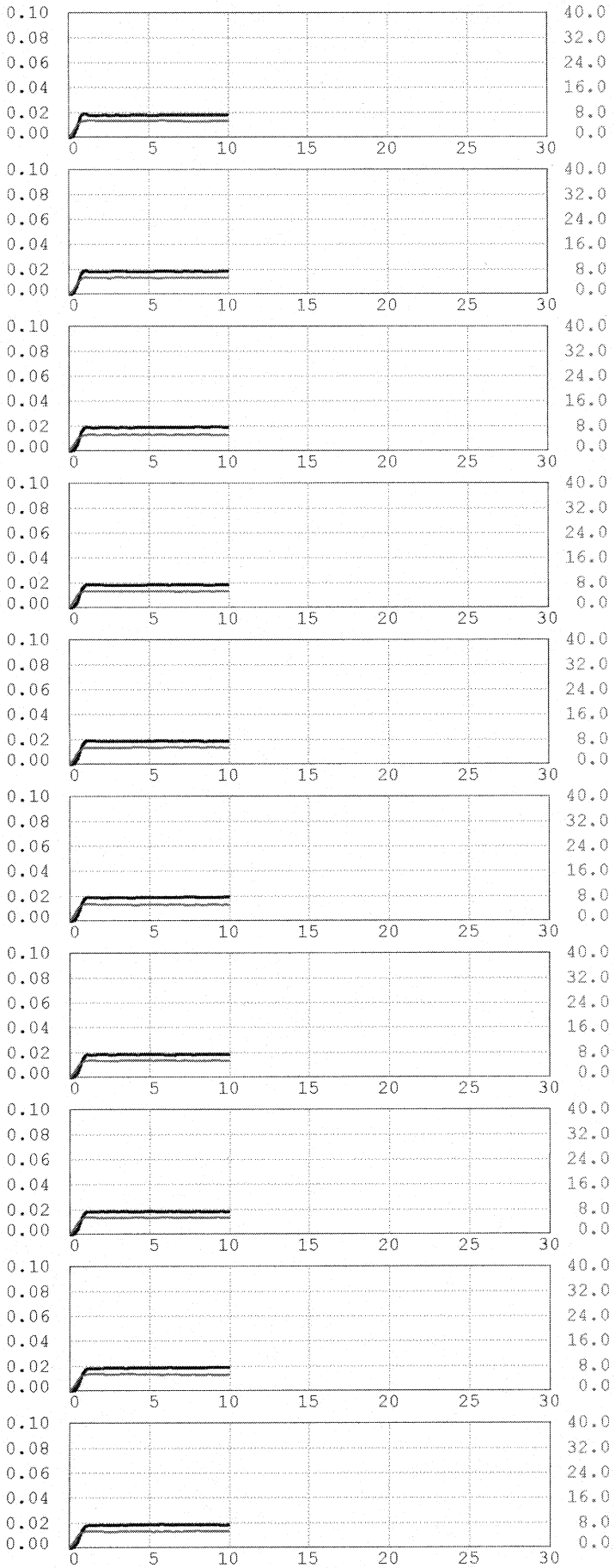
Date: 11/12/2010
Time: 14:16:48

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 11-13-020
SOLUTION CONCENTRATION: 0.021

BLANK TEST	0.000	14:17
CALIBRATION CHECK	PASSED	14:17
SIMULATOR VAPOR	0.018	14:18
SIMULATOR VAPOR	0.019	14:19
SIMULATOR VAPOR	0.020	14:20
SIMULATOR VAPOR	0.019	14:21
SIMULATOR VAPOR	0.019	14:22
SIMULATOR VAPOR	0.020	14:23
SIMULATOR VAPOR	0.019	14:24
SIMULATOR VAPOR	0.019	14:25
SIMULATOR VAPOR	0.019	14:26
SIMULATOR VAPOR	0.019	14:27
BLANK TEST	0.000	14:27

Average = 0.019
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

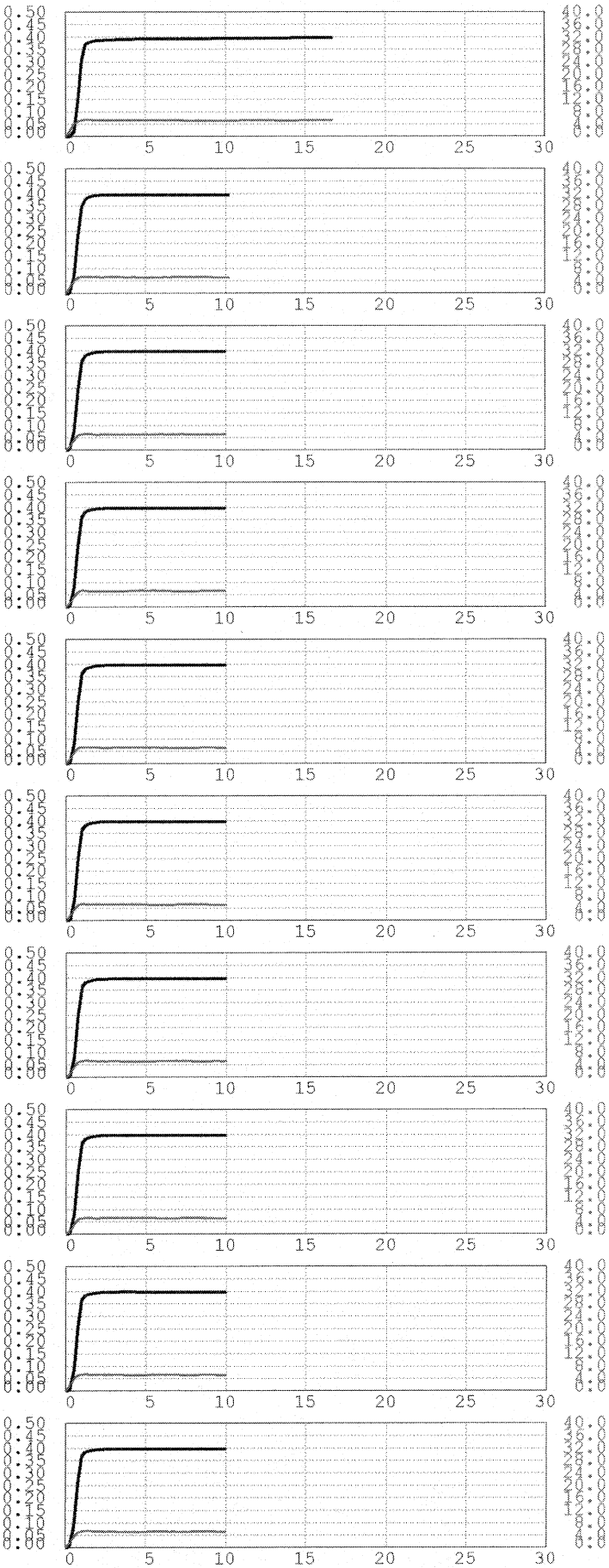
Date: 11/12/2010
Time: 14:31:11

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 11-18-400
SOLUTION CONCENTRATION: 0.407

BLANK TEST	0.000	14:32
CALIBRATION CHECK	PASSED	14:32
SIMULATOR VAPOR	0.394	14:32
SIMULATOR VAPOR	0.393	14:33
SIMULATOR VAPOR	0.394	14:34
SIMULATOR VAPOR	0.394	14:35
SIMULATOR VAPOR	0.394	14:36
SIMULATOR VAPOR	0.395	14:37
SIMULATOR VAPOR	0.395	14:38
SIMULATOR VAPOR	0.395	14:39
SIMULATOR VAPOR	0.395	14:40
SIMULATOR VAPOR	0.395	14:41
BLANK TEST	0.000	14:42

Average = 0.394
Std Dev = 0.0006



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

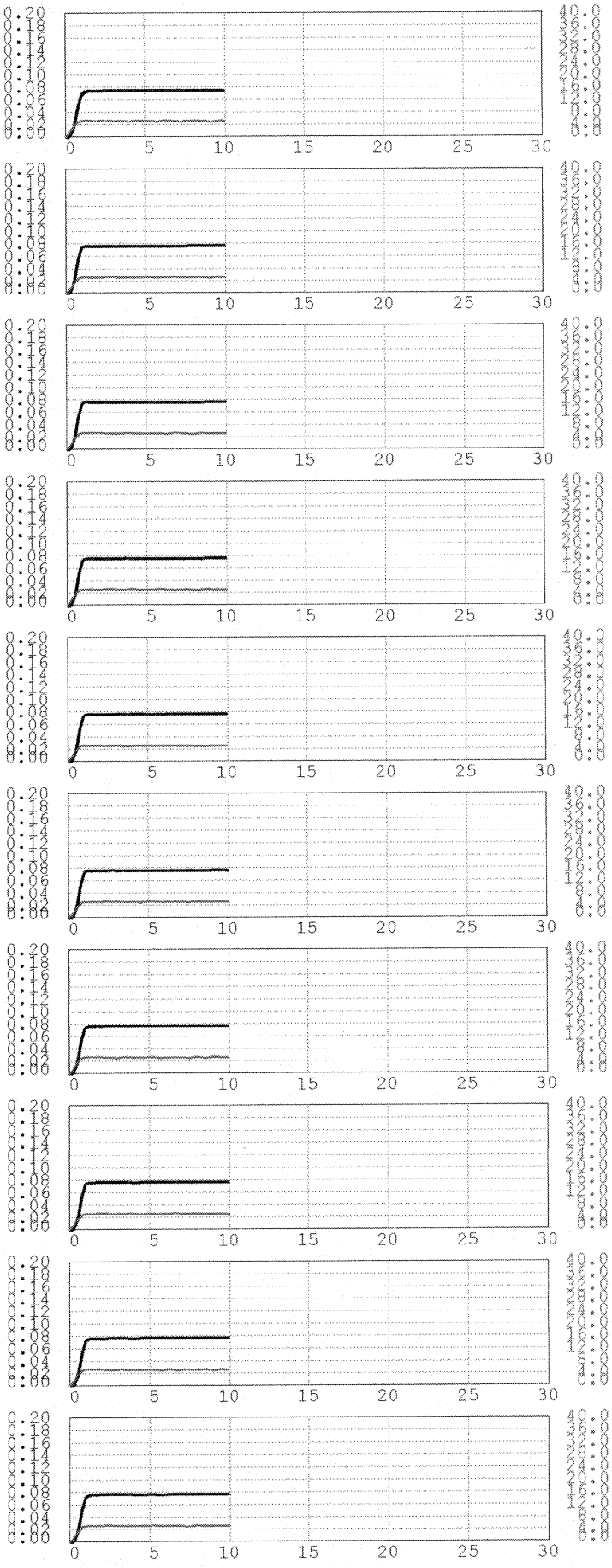
Date: 11/12/2010
Time: 14:46:27

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 10-37-080
SOLUTION CONCENTRATION: 0.079

BLANK TEST	0.000	14:47
CALIBRATION CHECK	PASSED	14:47
SIMULATOR VAPOR	0.075	14:47
SIMULATOR VAPOR	0.077	14:48
SIMULATOR VAPOR	0.076	14:49
SIMULATOR VAPOR	0.076	14:50
SIMULATOR VAPOR	0.077	14:51
SIMULATOR VAPOR	0.076	14:52
SIMULATOR VAPOR	0.077	14:53
SIMULATOR VAPOR	0.077	14:54
SIMULATOR VAPOR	0.077	14:55
SIMULATOR VAPOR	0.076	14:56
BLANK TEST	0.000	14:57

Average = 0.076
Std Dev = 0.0006



DIAGNOSTIC RESULT

DataMaster DMT: 100139
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/15/2010
Time: 14:34

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.09°C
Breath Tube    = 48.10°C

SETTINGS
Lamp Voltage   = 1.80 V
Cooler Voltage = 1.69 V
Bias Voltage   = 80.0 V
Chopper Freq   = 541.0 Hz

PUMP INFO
Flow Rate = 6.310 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V) -0.0159  -0.0122
MIN(V) -0.0173  -0.0144

FILTER INFO
Filter 1 -0.012  Zero = true
Filter 2  0.331  Zero = true
Filter 3  0.946  Zero = true

CALIBRATION CHECK
Xq = 0.0823  0.74%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

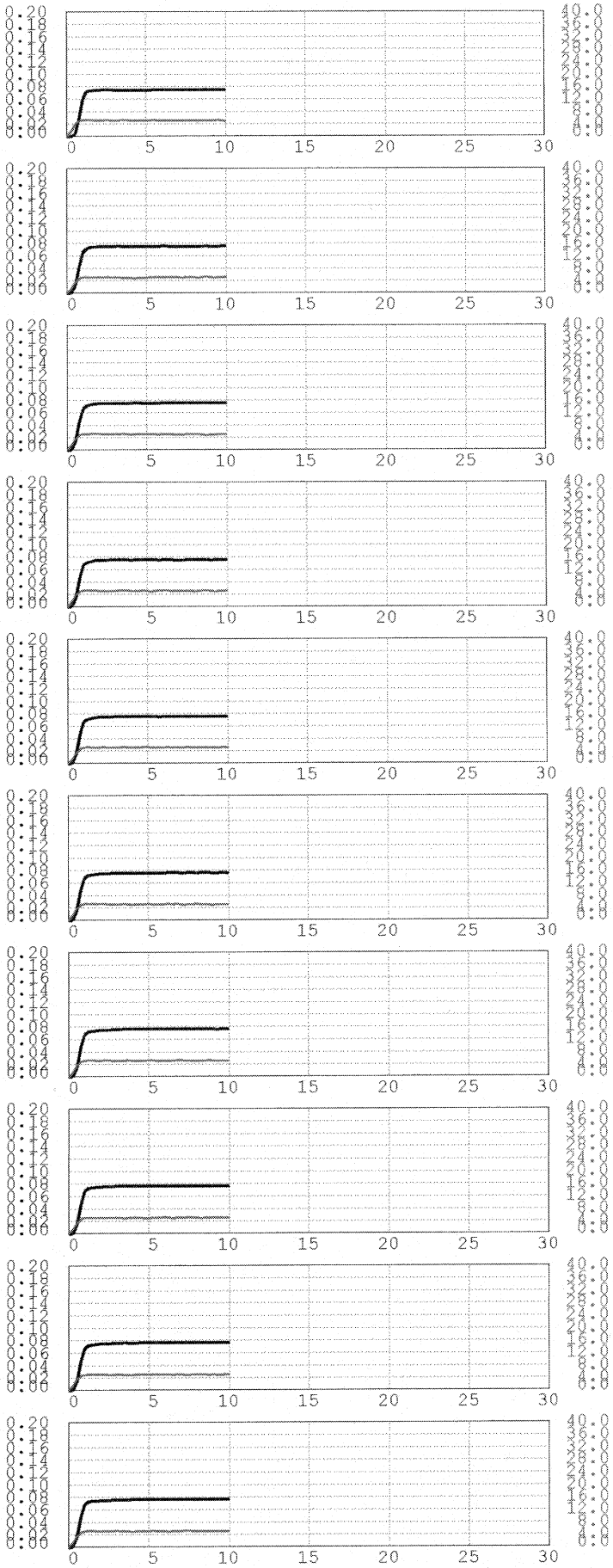
Date: 11/15/2010
Time: 14:40:19

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 10-37-080
SOLUTION CONCENTRATION: 0.079

BLANK TEST	0.000	14:41
CALIBRATION CHECK	PASSED	14:41
SIMULATOR VAPOR	0.076	14:41
SIMULATOR VAPOR	0.076	14:42
SIMULATOR VAPOR	0.077	14:43
SIMULATOR VAPOR	0.076	14:44
SIMULATOR VAPOR	0.076	14:45
SIMULATOR VAPOR	0.077	14:46
SIMULATOR VAPOR	0.077	14:47
SIMULATOR VAPOR	0.078	14:48
SIMULATOR VAPOR	0.078	14:49
SIMULATOR VAPOR	0.077	14:50
BLANK TEST	0.000	14:51

Average = 0.076
Std Dev = 0.0007



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

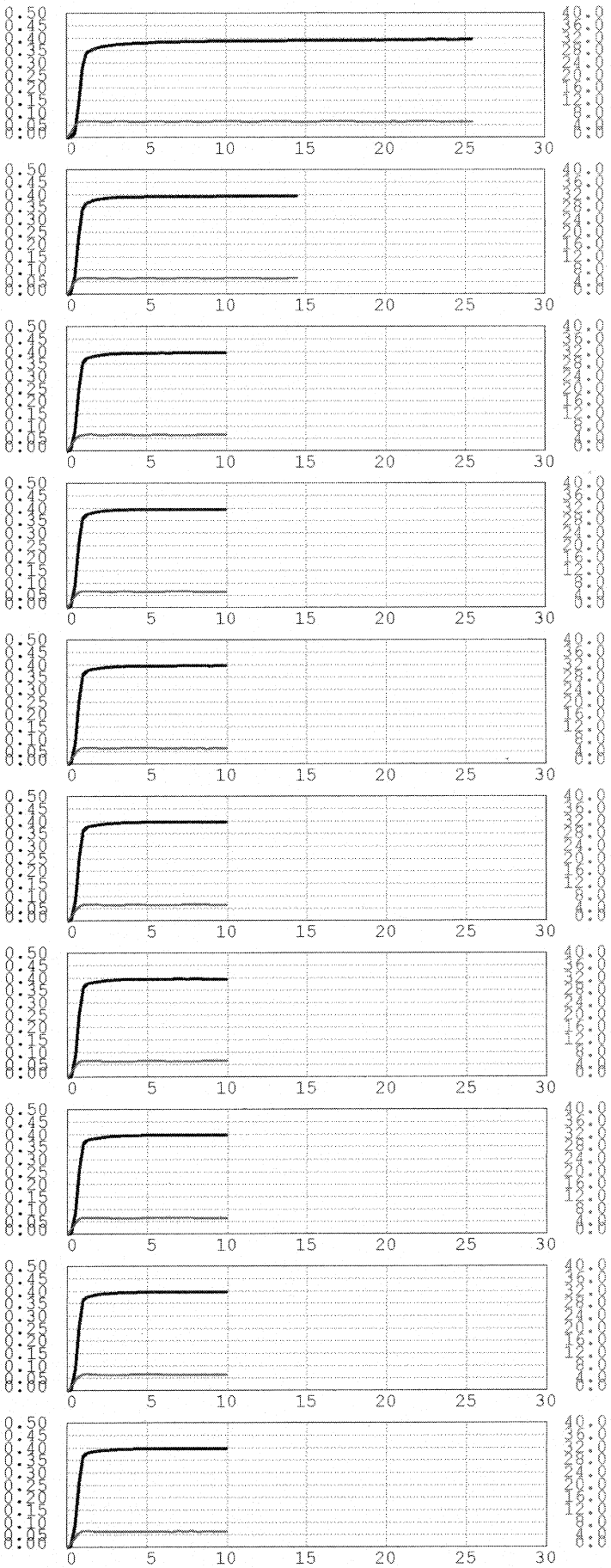
Date: 11/15/2010
Time: 14:53:20

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 11-18-400
SOLUTION CONCENTRATION: 0.407

BLANK TEST	0.000	14:54
CALIBRATION CHECK	PASSED	14:54
SIMULATOR VAPOR	0.391	14:54
SIMULATOR VAPOR	0.392	14:56
SIMULATOR VAPOR	0.391	14:57
SIMULATOR VAPOR	0.392	14:58
SIMULATOR VAPOR	0.393	14:59
SIMULATOR VAPOR	0.393	15:00
SIMULATOR VAPOR	0.393	15:01
SIMULATOR VAPOR	0.393	15:02
SIMULATOR VAPOR	0.395	15:03
SIMULATOR VAPOR	0.395	15:04
BLANK TEST	0.000	15:04

Average = 0.392
Std Dev = 0.0013



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

Date: 11/15/2010
Time: 15:21:42

SUPERVISOR NAME: ALB LINEARITY

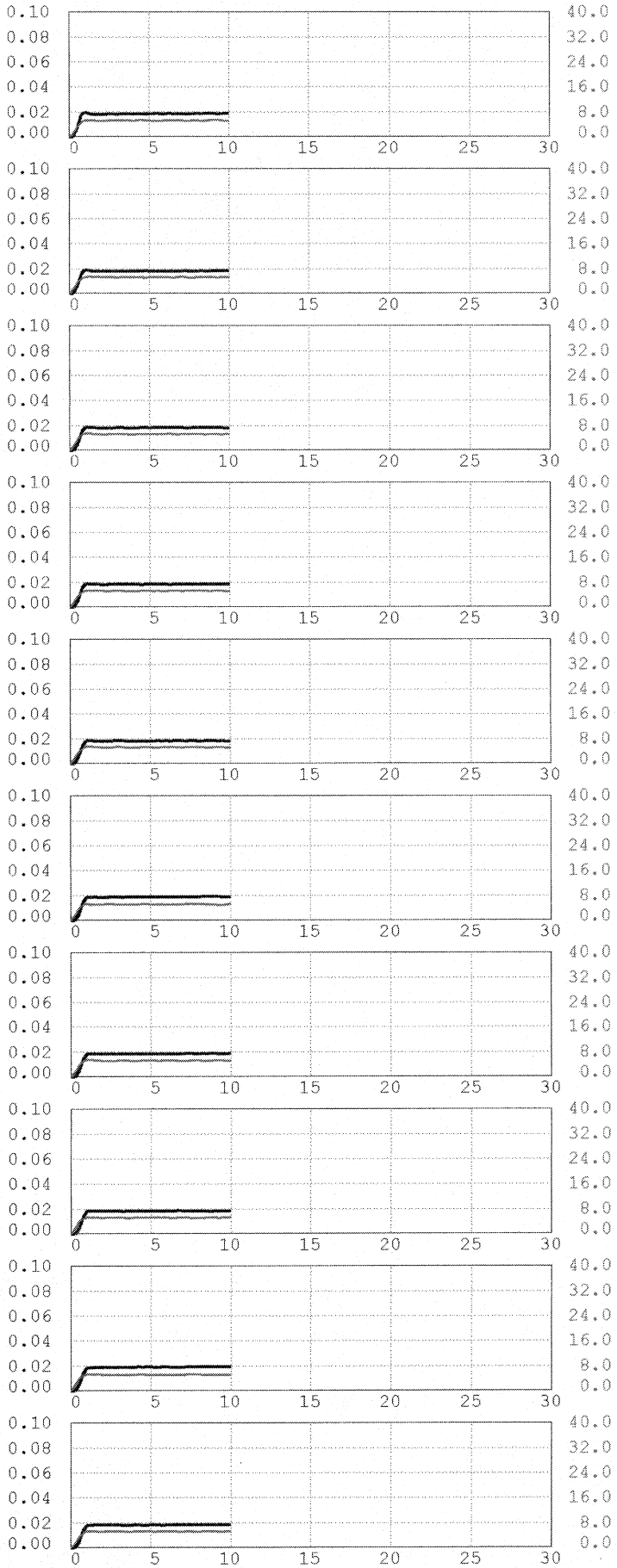
SOLUTION LOT #: 11-13-020
SOLUTION CONCENTRATION: 0.021

BLANK TEST	0.000	15:22
CALIBRATION CHECK	PASSED	15:22
SIMULATOR VAPOR	0.019	15:23
SIMULATOR VAPOR	0.019	15:24
SIMULATOR VAPOR	0.019	15:25
SIMULATOR VAPOR	0.019	15:25
SIMULATOR VAPOR	0.019	15:26
SIMULATOR VAPOR	0.020	15:27
SIMULATOR VAPOR	0.019	15:28
SIMULATOR VAPOR	0.019	15:29
SIMULATOR VAPOR	0.020	15:30
SIMULATOR VAPOR	0.019	15:31
BLANK TEST	0.000	15:32

Average = 0.019
Std Dev = 0.0004

Solutions depleted, linearity failed

11/17 passing OK



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

Date: 11/15/2010
Time: 15:34:51

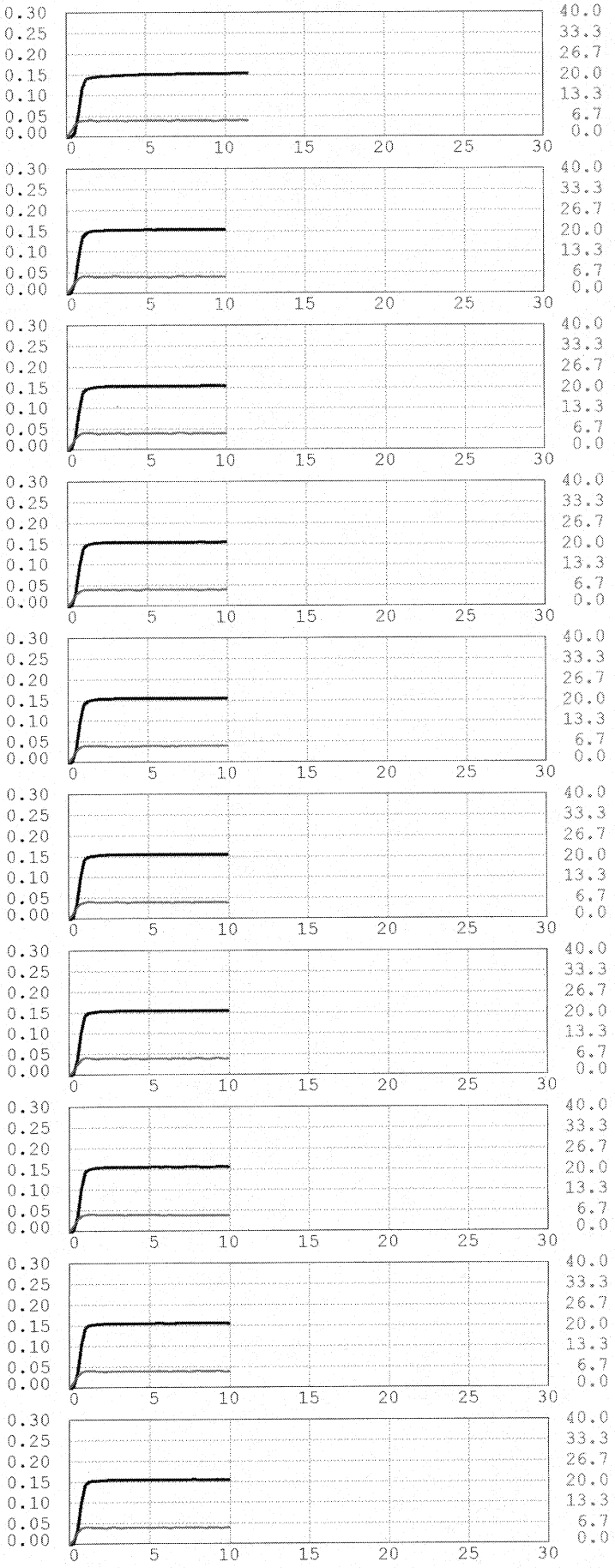
SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 11-06-160
SOLUTION CONCENTRATION: 0.162

BLANK TEST	0.000	15:35
CALIBRATION CHECK	PASSED	15:35
SIMULATOR VAPOR	0.152	15:36
SIMULATOR VAPOR	0.153	15:37
SIMULATOR VAPOR	0.153	15:38
SIMULATOR VAPOR	0.154	15:39
SIMULATOR VAPOR	0.155	15:40
SIMULATOR VAPOR	0.154	15:41
SIMULATOR VAPOR	0.154	15:42
SIMULATOR VAPOR	0.156	15:43
SIMULATOR VAPOR	0.155	15:44
SIMULATOR VAPOR	0.155	15:45
BLANK TEST	0.000	15:45

Average = 0.154
Std Dev = 0.0011

~~Solutions depleted, linearity failed 11/17/10~~
OK, passing 11/17



DIAGNOSTIC RESULT

DataMaster DMT: 100139
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/16/2010
Time: 07:53

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.09°C
Breath Tube    = 48.08°C

SETTINGS
Lamp Voltage   = 1.80 V
Cooler Voltage = 1.69 V
Bias Voltage   = 80.1 V
Chopper Freq   = 546.5 Hz

PUMP INFO
Flow Rate = 6.398 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)   0.0175    0.0197
MIN(V)   0.0157    0.0177

FILTER INFO
Filter 1  0.018  Zero = true
Filter 2  0.360  Zero = true
Filter 3  0.987  Zero = true

CALIBRATION CHECK
Xq = 0.0826  1.17%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

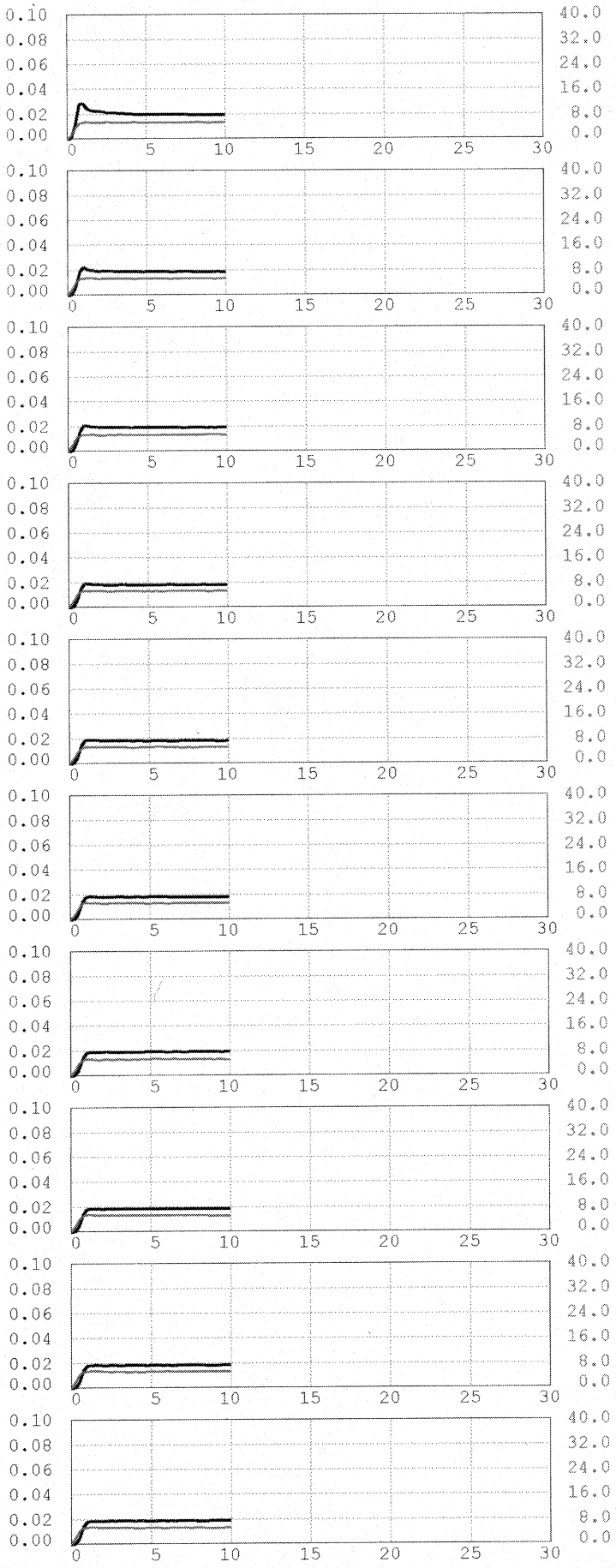
Date: 11/16/2010
Time: 08:33:23

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-13-020
SOLUTION CONCENTRATION: 0.021

BLANK TEST	0.000	08:34
CALIBRATION CHECK	PASSED	08:34
SIMULATOR VAPOR	0.020	08:34
SIMULATOR VAPOR	0.019	08:35
SIMULATOR VAPOR	0.020	08:36
SIMULATOR VAPOR	0.019	08:37
SIMULATOR VAPOR	0.019	08:38
SIMULATOR VAPOR	0.019	08:39
SIMULATOR VAPOR	0.020	08:40
SIMULATOR VAPOR	0.019	08:41
SIMULATOR VAPOR	0.019	08:42
SIMULATOR VAPOR	0.019	08:43
BLANK TEST	0.000	08:44

Average = 0.019
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

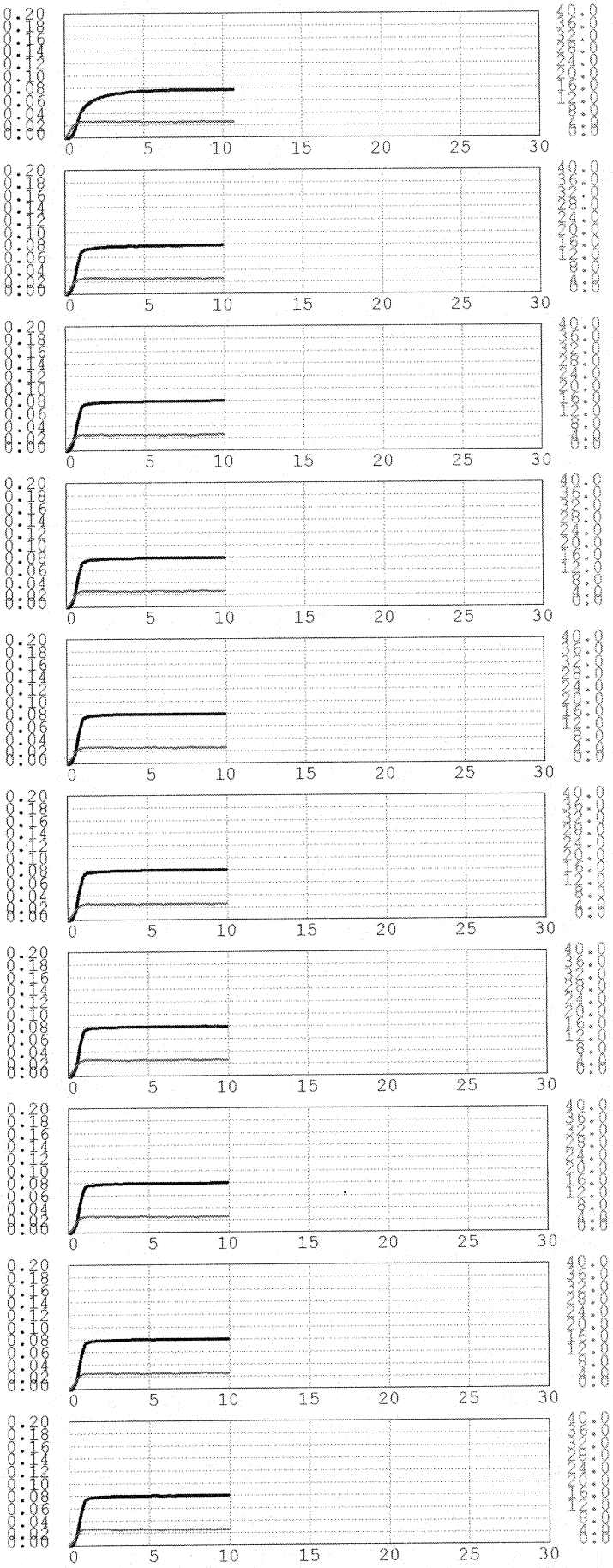
Date: 11/16/2010
Time: 08:49:48

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-37-080
SOLUTION CONCENTRATION: 0.079

BLANK TEST	0.000	08:50
CALIBRATION CHECK	PASSED	08:50
SIMULATOR VAPOR	0.077	08:51
SIMULATOR VAPOR	0.079	08:52
SIMULATOR VAPOR	0.080	08:53
SIMULATOR VAPOR	0.080	08:54
SIMULATOR VAPOR	0.080	08:55
SIMULATOR VAPOR	0.081	08:56
SIMULATOR VAPOR	0.080	08:57
SIMULATOR VAPOR	0.080	08:58
SIMULATOR VAPOR	0.081	08:59
SIMULATOR VAPOR	0.080	08:59
BLANK TEST	0.000	09:00

Average = 0.079
Std Dev = 0.0011



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

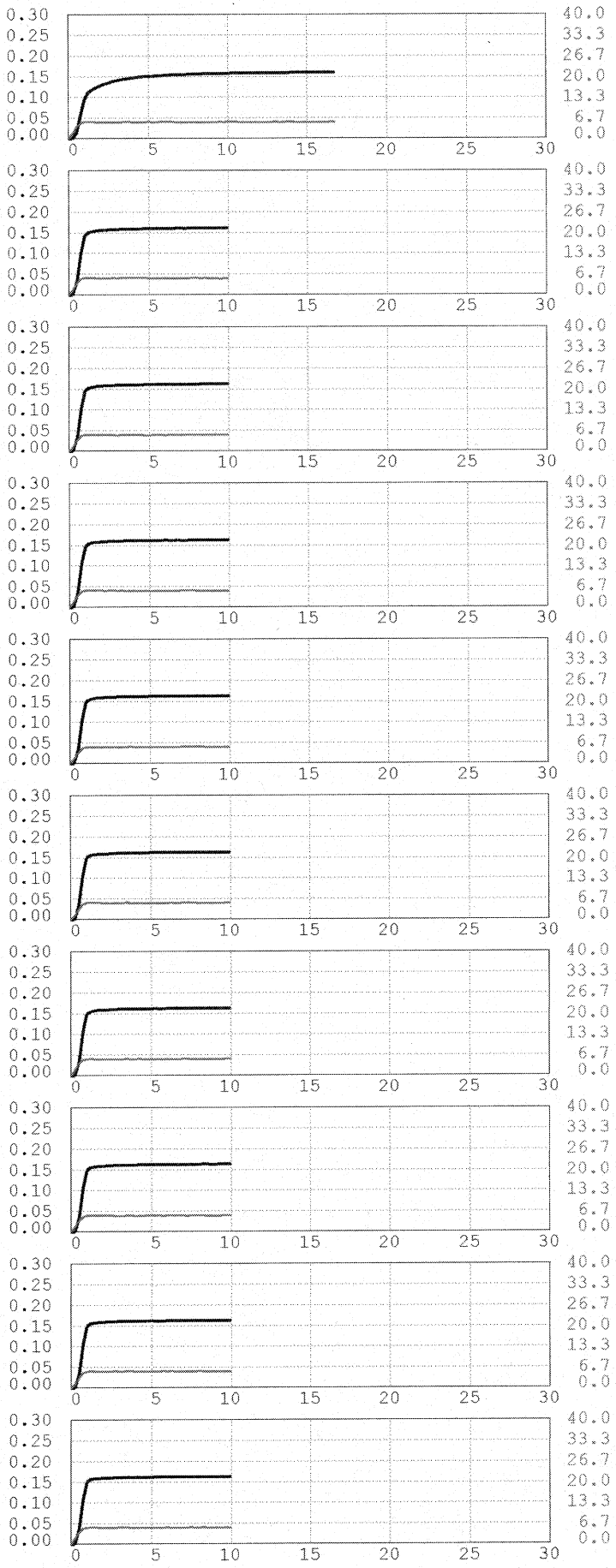
Date: 11/16/2010
Time: 09:16:06

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-17-160
SOLUTION CONCENTRATION: 0.162

BLANK TEST	0.000	09:17
CALIBRATION CHECK	PASSED	09:17
SIMULATOR VAPOR	0.160	09:17
SIMULATOR VAPOR	0.161	09:18
SIMULATOR VAPOR	0.162	09:19
SIMULATOR VAPOR	0.162	09:20
SIMULATOR VAPOR	0.162	09:21
SIMULATOR VAPOR	0.163	09:22
SIMULATOR VAPOR	0.162	09:23
SIMULATOR VAPOR	0.163	09:24
SIMULATOR VAPOR	0.163	09:25
SIMULATOR VAPOR	0.163	09:26
BLANK TEST	0.000	09:27

Average = 0.162
Std Dev = 0.0009



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

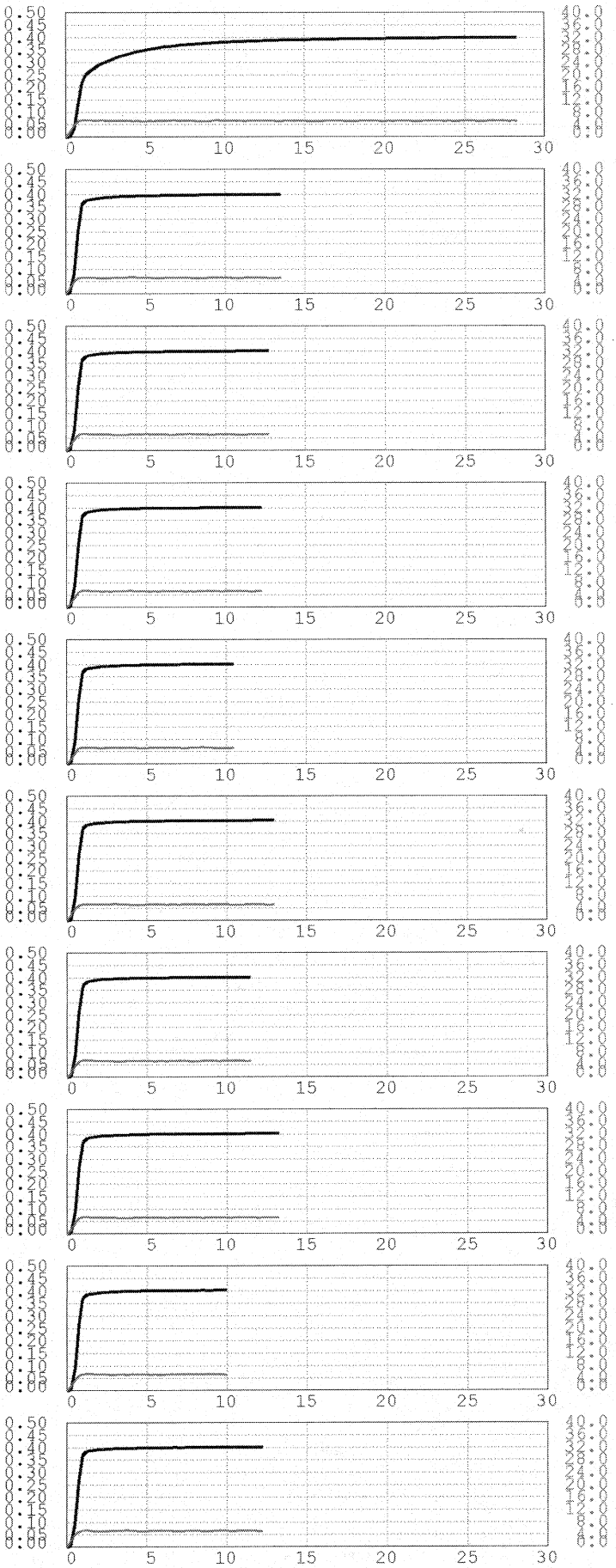
Date: 11/16/2010
Time: 09:33:09

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-18-400
SOLUTION CONCENTRATION: 0.407

BLANK TEST	0.000	09:34
CALIBRATION CHECK	PASSED	09:34
SIMULATOR VAPOR	0.398	09:34
SIMULATOR VAPOR	0.397	09:35
SIMULATOR VAPOR	0.399	09:36
SIMULATOR VAPOR	0.400	09:37
SIMULATOR VAPOR	0.399	09:38
SIMULATOR VAPOR	0.401	09:39
SIMULATOR VAPOR	0.400	09:40
SIMULATOR VAPOR	0.401	09:42
SIMULATOR VAPOR	0.401	09:42
SIMULATOR VAPOR	0.400	09:44
BLANK TEST	0.000	09:44

Average = 0.399
Std Dev = 0.0013



DIAGNOSTIC RESULT

DataMaster DMT: 100139
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/16/2010
Time: 09:49

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.09°C
Breath Tube    = 46.29°C

SETTINGS
Lamp Voltage   = 1.80 V
Cooler Voltage = 1.69 V
Bias Voltage   = 80.1 V
Chopper Freq   = 547.1 Hz

PUMP INFO
Flow Rate = 6.389 L/M

DETECTOR INFO
PUMP    ON        OFF
MAX(V)  0.0380    0.0404
MIN(V)  0.0364    0.0386

FILTER INFO
Filter 1  0.040  Zero = true
Filter 2  0.378  Zero = true
Filter 3  1.012  Zero = true

CALIBRATION CHECK
Xq = 0.0825  1.06%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

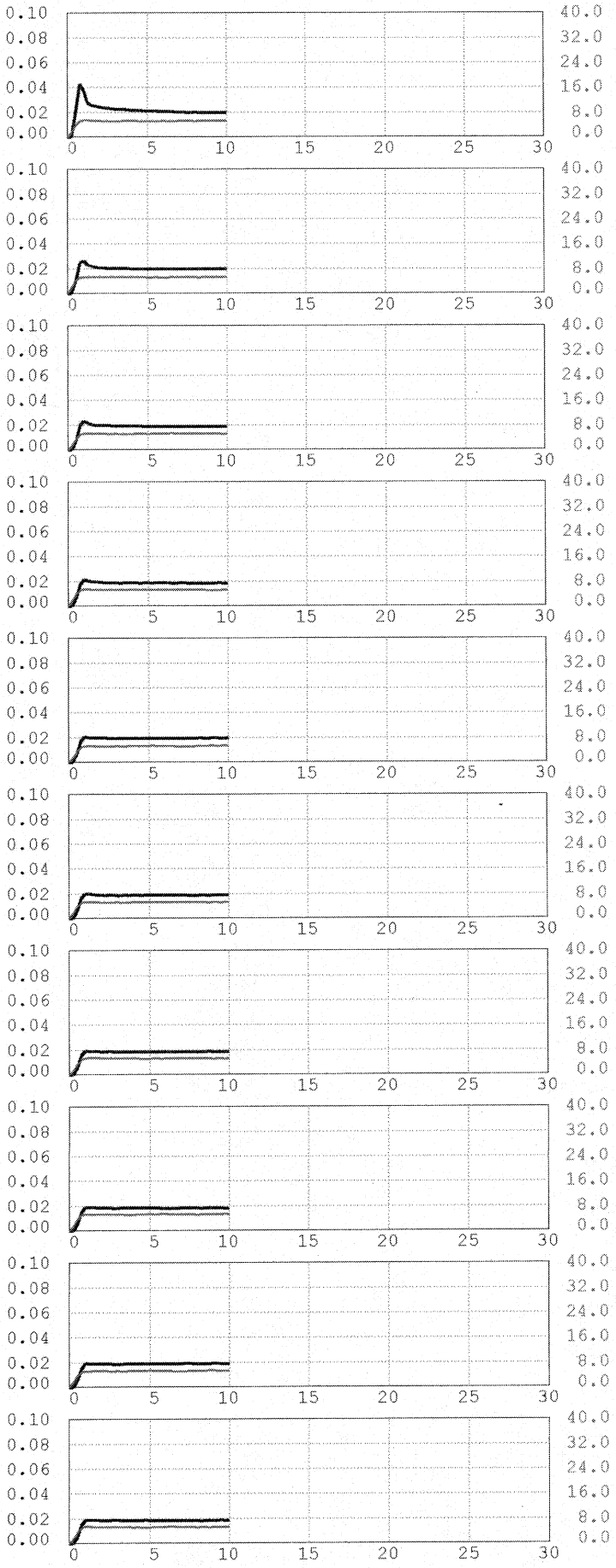
Date: 11/16/2010
Time: 10:09:38

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-13-020
SOLUTION CONCENTRATION: 0.021

BLANK TEST	0.000	10:10
CALIBRATION CHECK	PASSED	10:10
SIMULATOR VAPOR	0.020	10:10
SIMULATOR VAPOR	0.020	10:11
SIMULATOR VAPOR	0.019	10:12
SIMULATOR VAPOR	0.019	10:13
SIMULATOR VAPOR	0.020	10:14
SIMULATOR VAPOR	0.019	10:15
SIMULATOR VAPOR	0.019	10:16
SIMULATOR VAPOR	0.019	10:17
SIMULATOR VAPOR	0.020	10:18
SIMULATOR VAPOR	0.019	10:19
BLANK TEST	0.000	10:20

Average = 0.019
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

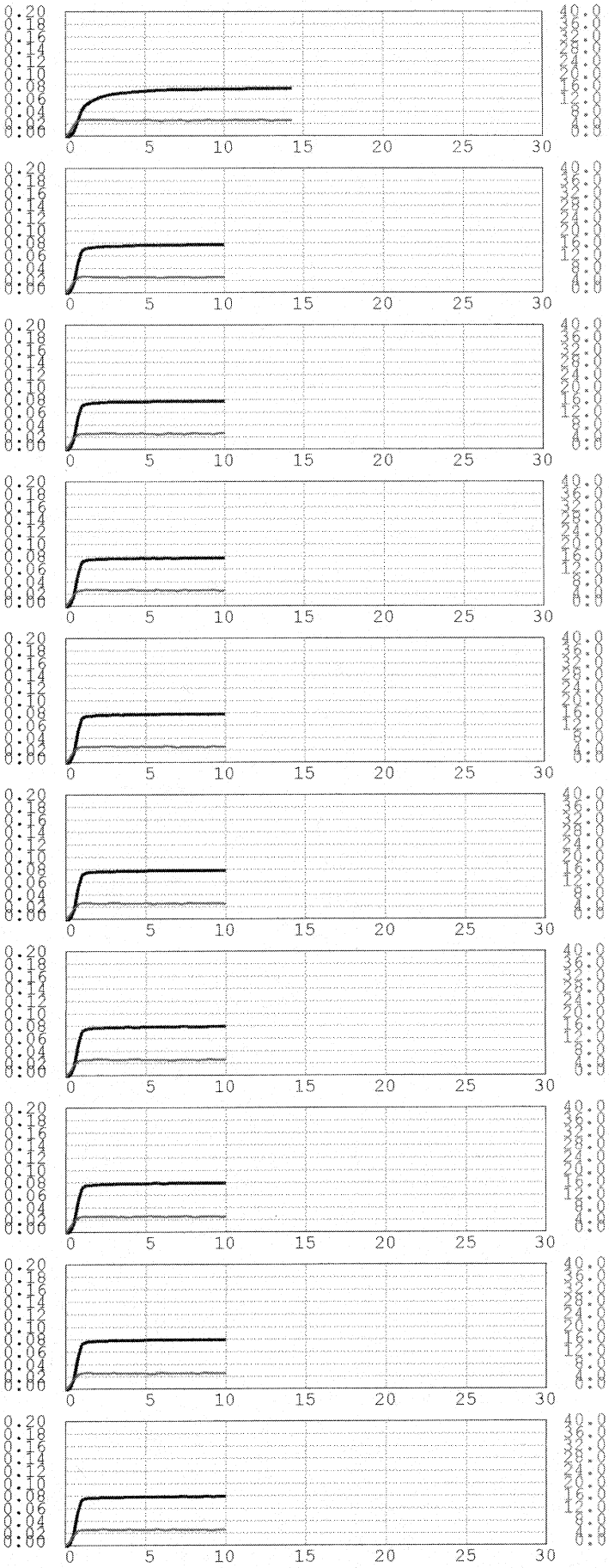
Date: 11/16/2010
Time: 10:22:09

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-37-080
SOLUTION CONCENTRATION: 0.079

BLANK TEST	0.000	10:23
CALIBRATION CHECK	PASSED	10:23
SIMULATOR VAPOR	0.077	10:23
SIMULATOR VAPOR	0.078	10:24
SIMULATOR VAPOR	0.078	10:25
SIMULATOR VAPOR	0.078	10:26
SIMULATOR VAPOR	0.079	10:27
SIMULATOR VAPOR	0.079	10:28
SIMULATOR VAPOR	0.079	10:29
SIMULATOR VAPOR	0.080	10:30
SIMULATOR VAPOR	0.080	10:31
SIMULATOR VAPOR	0.079	10:32
BLANK TEST	0.000	10:33

Average = 0.078
Std Dev = 0.0009



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

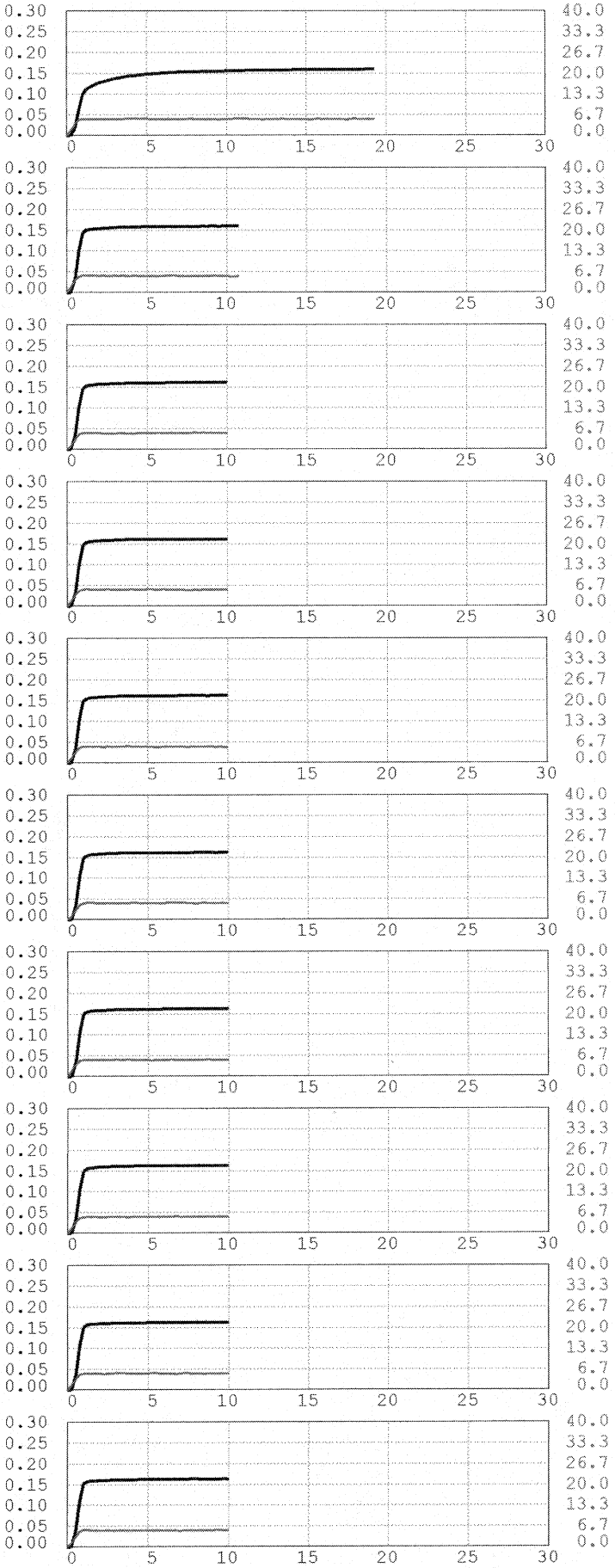
Date: 11/16/2010
Time: 10:45:49

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-17-160
SOLUTION CONCENTRATION: 0.162

BLANK TEST	0.000	10:46
CALIBRATION CHECK	PASSED	10:46
SIMULATOR VAPOR	0.159	10:47
SIMULATOR VAPOR	0.160	10:48
SIMULATOR VAPOR	0.161	10:49
SIMULATOR VAPOR	0.162	10:50
SIMULATOR VAPOR	0.162	10:51
SIMULATOR VAPOR	0.162	10:52
SIMULATOR VAPOR	0.162	10:53
SIMULATOR VAPOR	0.163	10:54
SIMULATOR VAPOR	0.163	10:55
SIMULATOR VAPOR	0.163	10:56
BLANK TEST	0.000	10:56

Average = 0.161
Std Dev = 0.0013



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

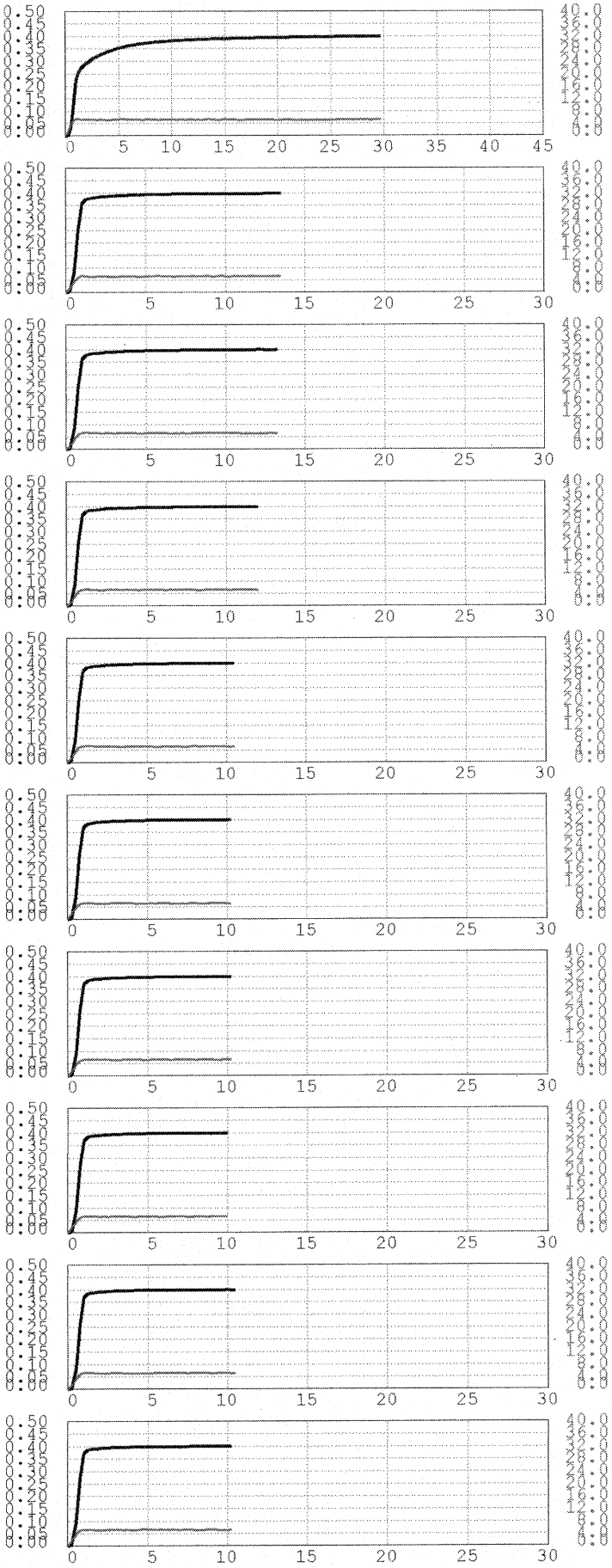
Date: 11/16/2010
Time: 10:58:47

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-18-400
SOLUTION CONCENTRATION: 0.407

BLANK TEST	0.000	10:59
CALIBRATION CHECK	PASSED	10:59
SIMULATOR VAPOR	0.398	11:00
SIMULATOR VAPOR	0.396	11:01
SIMULATOR VAPOR	0.398	11:02
SIMULATOR VAPOR	0.398	11:03
SIMULATOR VAPOR	0.396	11:04
SIMULATOR VAPOR	0.398	11:05
SIMULATOR VAPOR	0.398	11:06
SIMULATOR VAPOR	0.398	11:07
SIMULATOR VAPOR	0.399	11:08
SIMULATOR VAPOR	0.399	11:09
BLANK TEST	0.000	11:10

Average = 0.397
Std Dev = 0.0010



Section 5: Interference

DIAGNOSTIC RESULT

DataMaster DMT: 100139
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/10/2010
Time: 07:31

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.80°C
Breath Tube    = 48.09°C

SETTINGS
Lamp Voltage   = 1.80 V
Cooler Voltage = 1.68 V
Bias Voltage   = 80.1 V
Chopper Freq   = 546.2 Hz

PUMP INFO
Flow Rate = 6.240 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)   0.0331    0.0364
MIN(V)   0.0317    0.0350

FILTER INFO
Filter 1  0.035  Zero = true
Filter 2  0.375  Zero = true
Filter 3  1.012  Zero = true

CALIBRATION CHECK
Xq = 0.0816  0.11%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

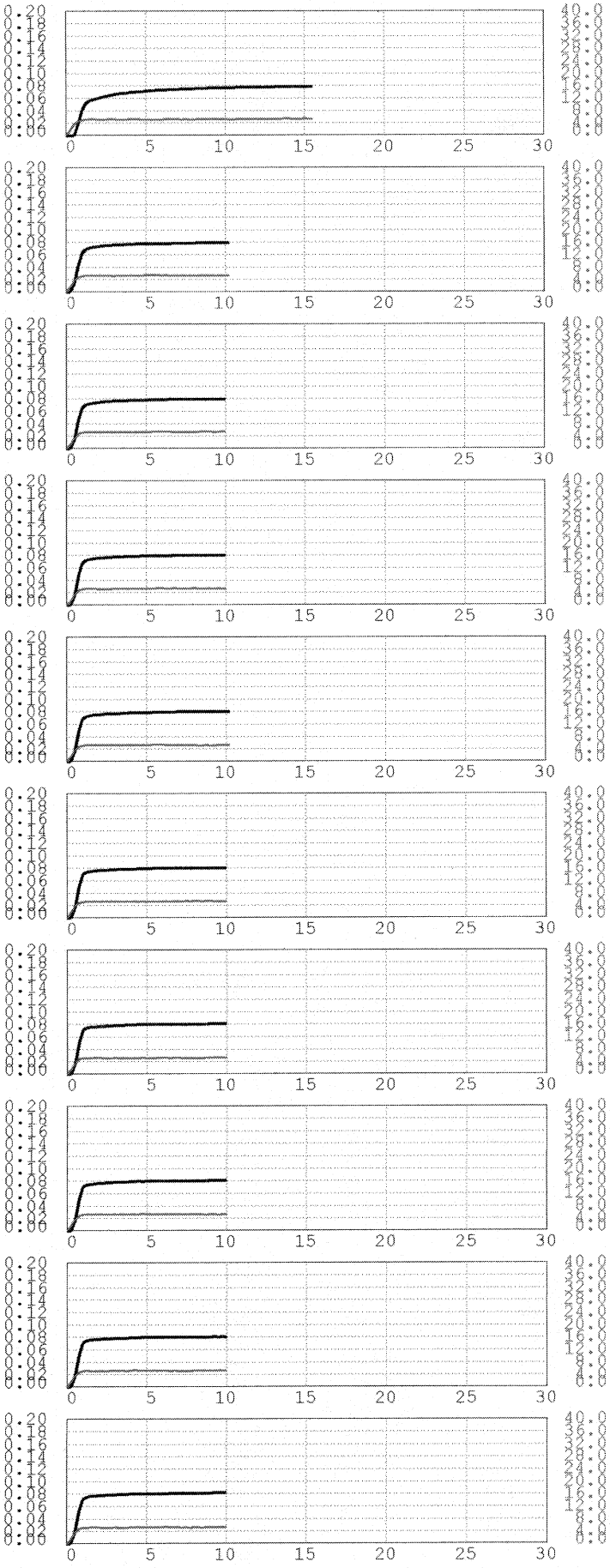
Date: 11/10/2010
Time: 07:34:45

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-11-08A1
SOLUTION CONCENTRATION: 0.080

BLANK TEST	0.000	07:35
CALIBRATION CHECK	PASSED	07:35
SIMULATOR VAPOR	INTERFERENCE	07:36
SIMULATOR VAPOR	INTERFERENCE	07:37
SIMULATOR VAPOR	INTERFERENCE	07:38
SIMULATOR VAPOR	INTERFERENCE	07:39
SIMULATOR VAPOR	INTERFERENCE	07:40
SIMULATOR VAPOR	INTERFERENCE	07:41
SIMULATOR VAPOR	INTERFERENCE	07:42
SIMULATOR VAPOR	INTERFERENCE	07:43
SIMULATOR VAPOR	INTERFERENCE	07:44
SIMULATOR VAPOR	INTERFERENCE	07:45
BLANK TEST	0.000	07:45

.01 Acetone in .08 EtOH
2/17/11



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

Date: 11/10/2010
Time: 08:23:42

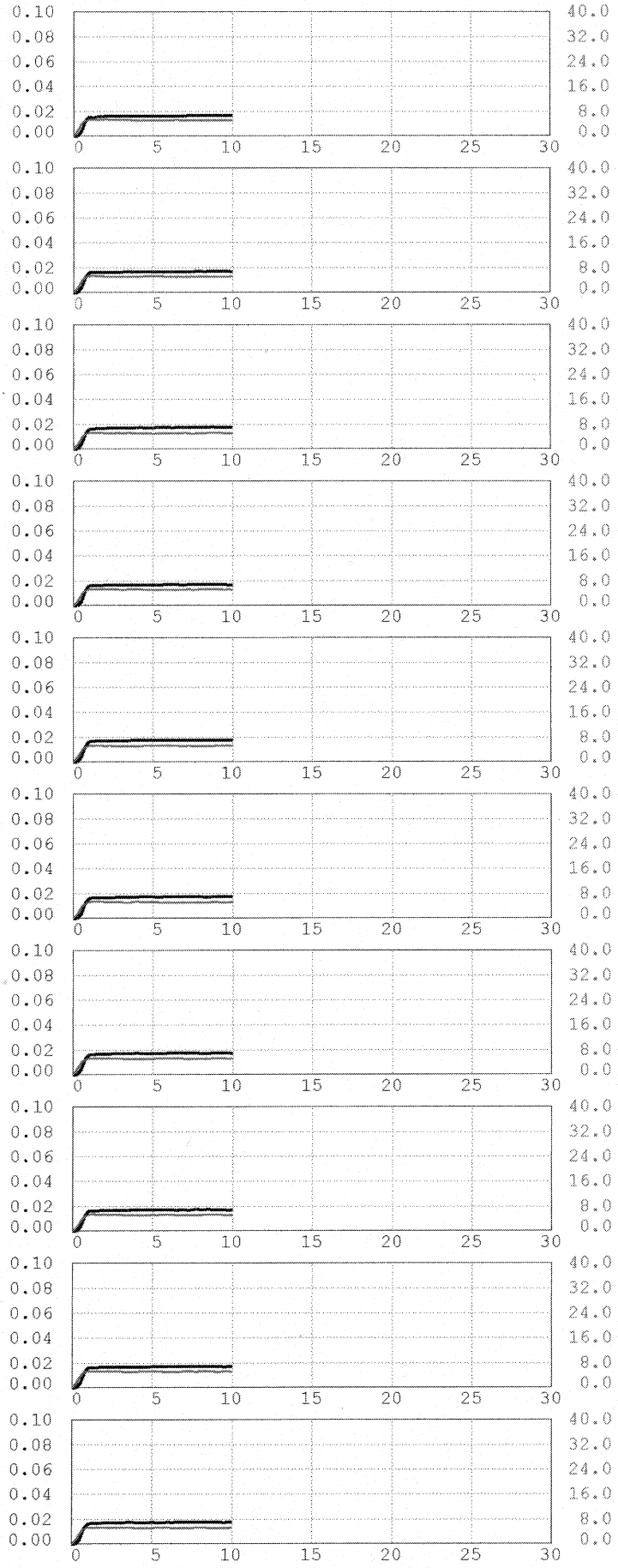
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-08-04M
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	08:24
CALIBRATION CHECK	PASSED	08:24
SIMULATOR VAPOR	INTERFERENCE	08:25
SIMULATOR VAPOR	INTERFERENCE	08:26
SIMULATOR VAPOR	INTERFERENCE	08:26
SIMULATOR VAPOR	INTERFERENCE	08:27
SIMULATOR VAPOR	INTERFERENCE	08:28
SIMULATOR VAPOR	INTERFERENCE	08:29
SIMULATOR VAPOR	INTERFERENCE	08:30
SIMULATOR VAPOR	INTERFERENCE	08:31
SIMULATOR VAPOR	INTERFERENCE	08:32
SIMULATOR VAPOR	INTERFERENCE	08:33
BLANK TEST	0.000	08:34

Average out of range!

.04 MeOH in H2O 2/17/11



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

Date: 11/10/2010
Time: 08:40:45

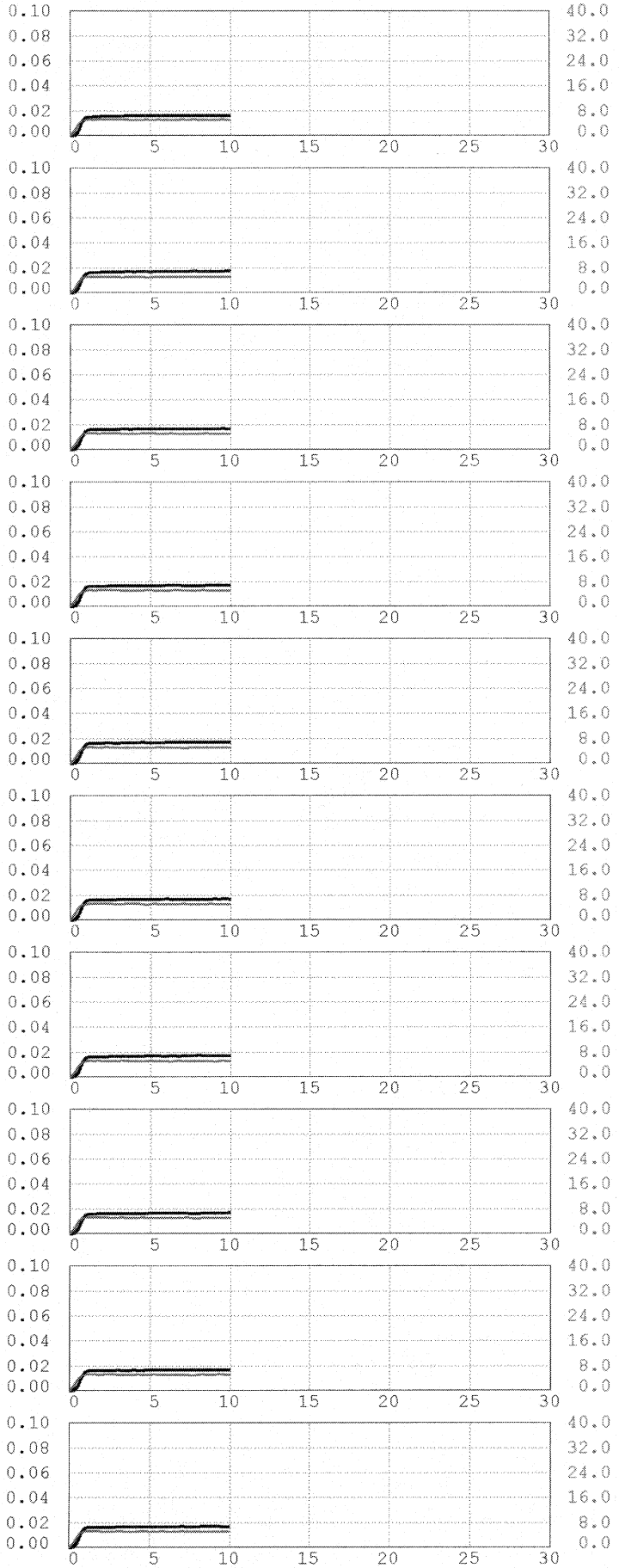
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-26-04I
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	08:41
CALIBRATION CHECK	PASSED	08:41
SIMULATOR VAPOR	INTERFERENCE	08:42
SIMULATOR VAPOR	INTERFERENCE	08:43
SIMULATOR VAPOR	INTERFERENCE	08:44
SIMULATOR VAPOR	INTERFERENCE	08:45
SIMULATOR VAPOR	INTERFERENCE	08:45
SIMULATOR VAPOR	INTERFERENCE	08:46
SIMULATOR VAPOR	INTERFERENCE	08:47
SIMULATOR VAPOR	INTERFERENCE	08:48
SIMULATOR VAPOR	INTERFERENCE	08:49
SIMULATOR VAPOR	INTERFERENCE	08:50
BLANK TEST	0.000	08:51

Average out of range!

.04IPA



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

Date: 11/10/2010
Time: 09:14:15

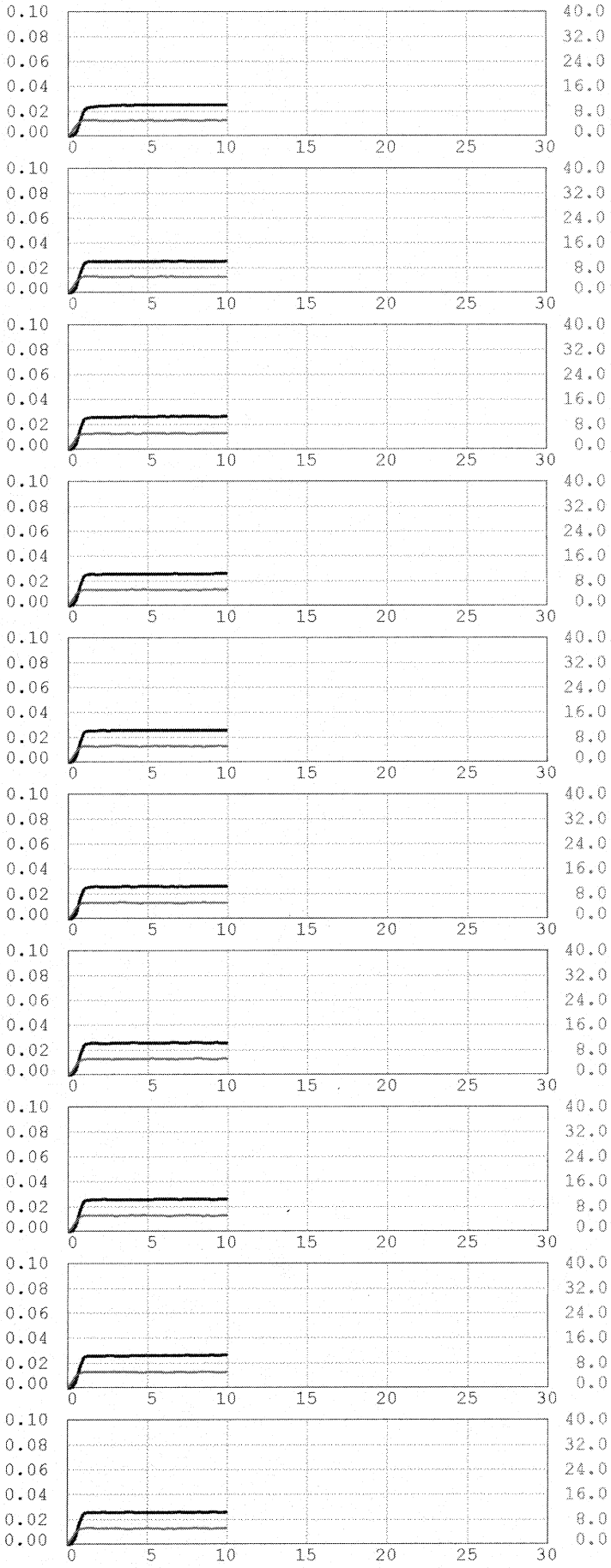
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-35-04A2
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	09:15
CALIBRATION CHECK	PASSED	09:15
SIMULATOR VAPOR	INTERFERENCE	09:15
SIMULATOR VAPOR	INTERFERENCE	09:16
SIMULATOR VAPOR	INTERFERENCE	09:17
SIMULATOR VAPOR	INTERFERENCE	09:18
SIMULATOR VAPOR	INTERFERENCE	09:19
SIMULATOR VAPOR	INTERFERENCE	09:20
SIMULATOR VAPOR	INTERFERENCE	09:21
SIMULATOR VAPOR	INTERFERENCE	09:22
SIMULATOR VAPOR	INTERFERENCE	09:23
SIMULATOR VAPOR	INTERFERENCE	09:24
BLANK TEST	0.000	09:25

Average out of range!

.02 Acetone in .04 EtOH 2/7/11



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

Date: 11/10/2010
Time: 09:34:56

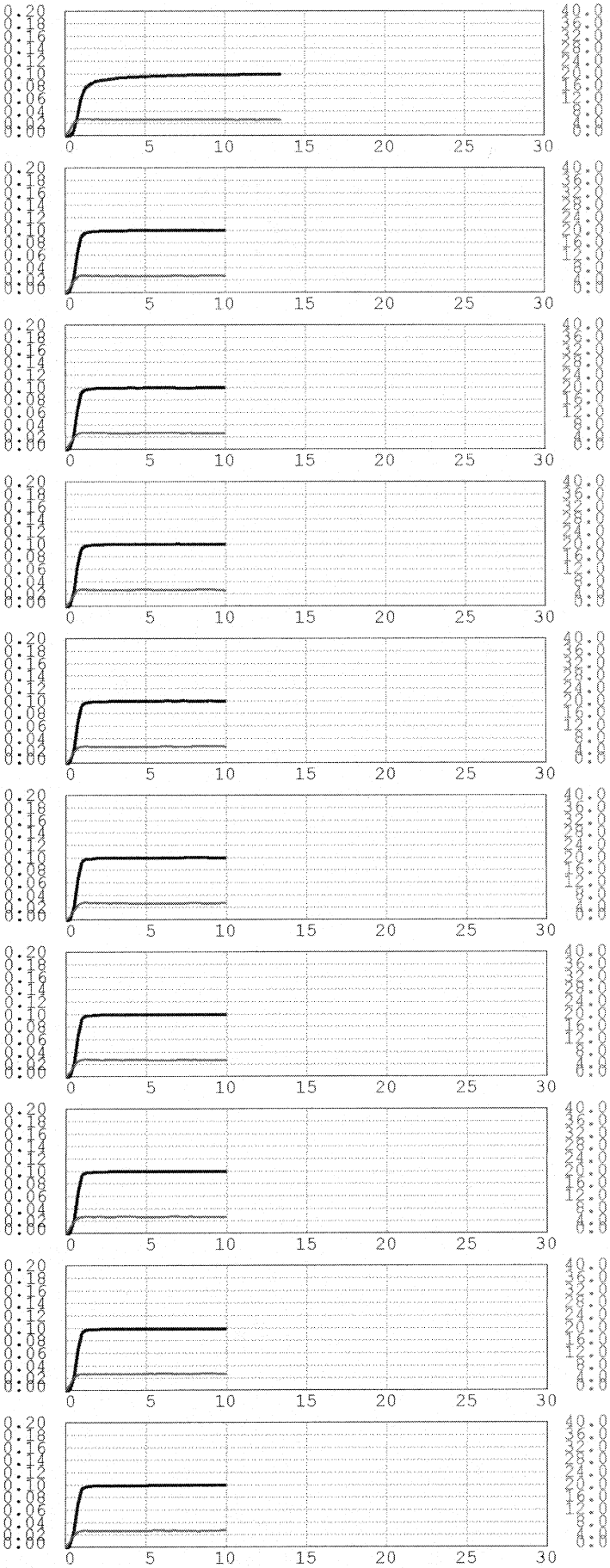
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-10-08M4
SOLUTION CONCENTRATION: 0.080

BLANK TEST	0.000	09:35
CALIBRATION CHECK	PASSED	09:35
SIMULATOR VAPOR	INTERFERENCE	09:36
SIMULATOR VAPOR	INTERFERENCE	09:37
SIMULATOR VAPOR	INTERFERENCE	09:38
SIMULATOR VAPOR	INTERFERENCE	09:39
SIMULATOR VAPOR	INTERFERENCE	09:40
SIMULATOR VAPOR	INTERFERENCE	09:41
SIMULATOR VAPOR	INTERFERENCE	09:42
SIMULATOR VAPOR	INTERFERENCE	09:43
SIMULATOR VAPOR	INTERFERENCE	09:44
SIMULATOR VAPOR	INTERFERENCE	09:45
BLANK TEST	0.000	09:45

Average out of range!

.04 Neott
in .08 Etoh



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

Date: 11/10/2010
Time: 09:48:20

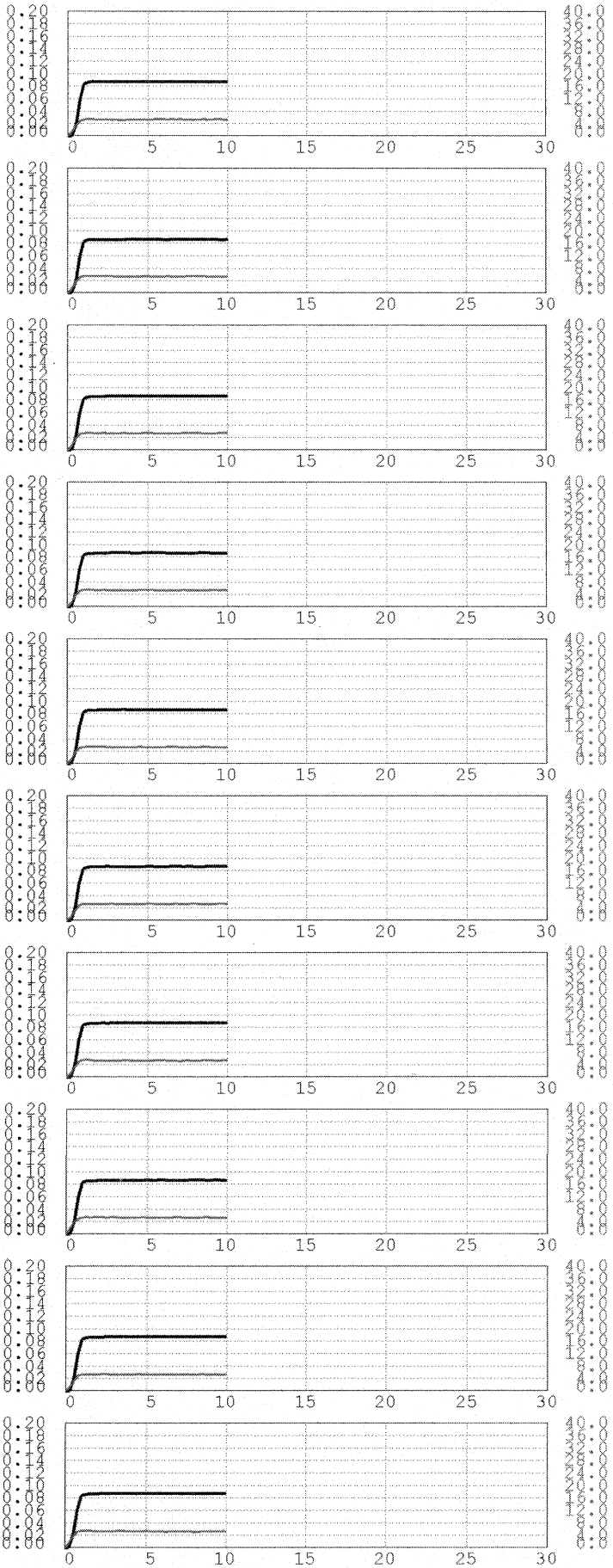
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 09-30-08I4 a
SOLUTION CONCENTRATION: 0.080

BLANK TEST	0.000	09:49
CALIBRATION CHECK	PASSED	09:49
SIMULATOR VAPOR	INTERFERENCE	09:49
SIMULATOR VAPOR	INTERFERENCE	09:50
SIMULATOR VAPOR	INTERFERENCE	09:51
SIMULATOR VAPOR	INTERFERENCE	09:52
SIMULATOR VAPOR	INTERFERENCE	09:53
SIMULATOR VAPOR	INTERFERENCE	09:54
SIMULATOR VAPOR	INTERFERENCE	09:55
SIMULATOR VAPOR	INTERFERENCE	09:56
SIMULATOR VAPOR	INTERFERENCE	09:57
SIMULATOR VAPOR	INTERFERENCE	09:58
BLANK TEST	0.000	09:59

Average out of range!

.08 EtOH
.04 IPA
2/7/11 A



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

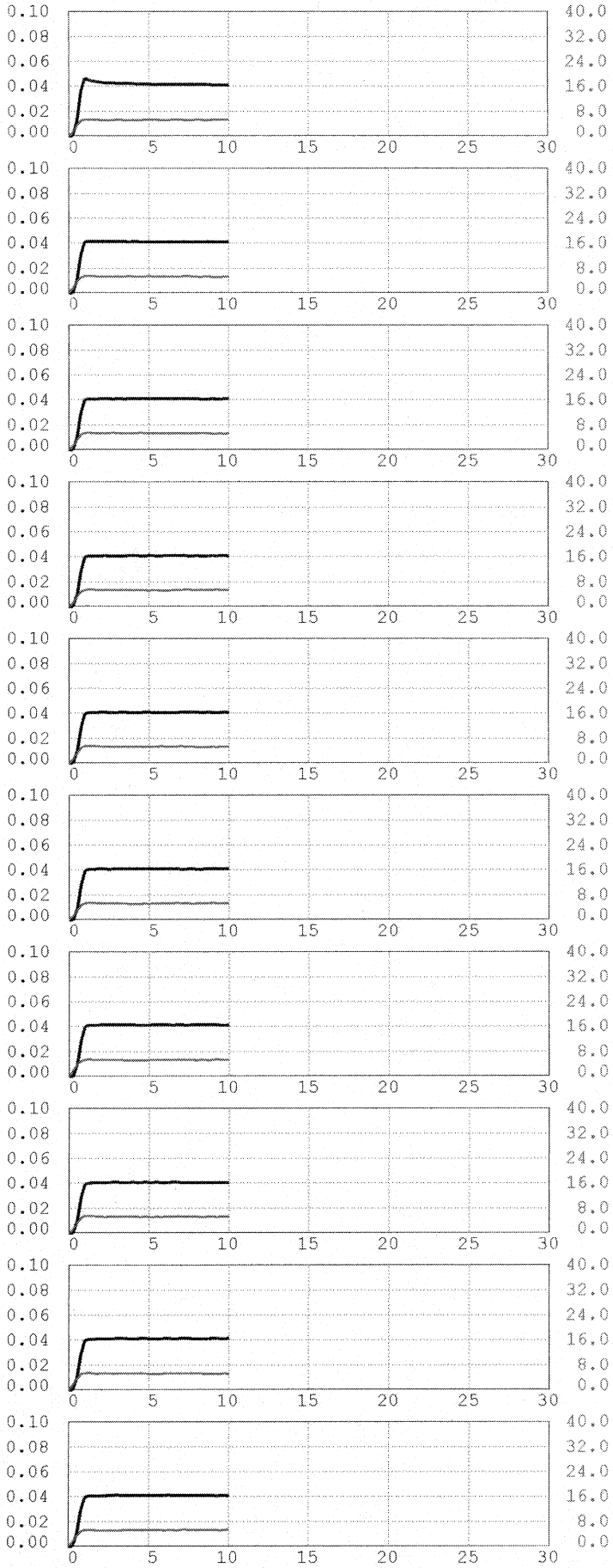
Date: 11/10/2010
Time: 10:30:22

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-35-04A1
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	10:31
CALIBRATION CHECK	PASSED	10:31
SIMULATOR VAPOR	INTERFERENCE	10:31
SIMULATOR VAPOR	INTERFERENCE	10:32
SIMULATOR VAPOR	INTERFERENCE	10:33
SIMULATOR VAPOR	INTERFERENCE	10:34
SIMULATOR VAPOR	INTERFERENCE	10:35
SIMULATOR VAPOR	INTERFERENCE	10:36
SIMULATOR VAPOR	INTERFERENCE	10:37
SIMULATOR VAPOR	INTERFERENCE	10:38
SIMULATOR VAPOR	INTERFERENCE	10:39
SIMULATOR VAPOR	INTERFERENCE	10:40
BLANK TEST	0.000	10:41

.01 Acetone
in .04 EtOH
2/17/11



Section 6: Low Level Accuracy

This Instrument not tested for this specification

Section 7: Breath Volume

This Instrument not tested for this specification

Section 8: Software Testing

This Instrument not tested for this specification

Section 9: Error Reports

100139

March/April 2010

~~October 2009~~

~~Third~~ 4th Round Testing Protocol for DMT Instruments

Power Up Procedure:

3/31 AcB

a) Open unit and inspect connections. Ensure all tubing is secure. Check that all cables are properly seated and tied down or strapped together as necessary. Check that all screws are in place and snug; this will require the removal of the side pieces to allow the technician access. Correct as needed.

b) Manually turn the filter wheel. The filter wheel should turn smoothly and should not rub or wobble. Correct as needed.

c) Power on the instrument. Allow approximately one hour for it to come to temperature.

d) Access the SETUP menu. On the MISC tab, type "State of Vermont" in the NAME field. In the EXPLORE box, highlight STYLUS and press the OK button to activate the stylus settings. Recalibrate the stylus. Once complete, exit the SETUP menu by pressing the OK button to save the settings. If you exit the SETUP menu using the CANCEL button, none of the changes will be saved.

e) Enter the TECH screen. Scroll through all of the filter settings to ensure the filter wheel is activating properly.

0930 V= -0.117

f) Optimize the detector voltage
-Adjust the cooler voltage setting to 1.70Vdc +/-0.10.
-Manually manipulate the detector position to get the detector voltage as low as possible.
-Adjust the Lamp voltage setting so that the detector voltage displayed is approximately +0.000 +/- 0.100.
-Note the initial noise of the detector voltage once unit has had a minute to equilibrate. Noise tolerance at NPAS is +/-0.003 on a detector.
-Save the voltage settings
-Per VDHL protocol (P-Alc-116 Power-Up SOP), the detector voltage must read 0.000V with a tolerance of +/- 0.100V. Correct as needed.

3/31 (R)

g) While still in the TECH screen, press SET in the RF Sensitivity box to automatically set the RF sensitivity level. Press SAVE to save the settings. Confirm the setting by keying a radio near the instrument. Correct as needed.

h) Using the large syringe, push 1.5L of air into the breath tube. Monitor the volume of air displayed on the TECH screen. The instrument should read 1.5L +/- 0.2L. If the instrument is out of range, adjust the distance between the "T" fittings on the breath exhaust tubing. Retest until the volume reads appropriately.

i) Once all the TECH settings are correct, re-save every setting. Exit the TECH screen.

j) Close up the instrument using locking screws on the top four holes. Attach the stylus to the DMT using a locking screw in the center right screw hole nearest the simulator tower. Attach the keyboard to the top of the instrument using sticky-back velcro. Wrap a small piece of velcro around the top of the stylus and affix the other side to the front of the instrument so the stylus can rest on the front of the unit.

k) Calibrate the instrument following the Calibration Protocol using Calibration Solution (0.100 EtOH). During Calibration and Certification, it may be necessary to turn off the simulator temperature monitoring if using Guth 2100 Simulators as these do not have BNC connectors for temperature monitoring. To do this, open the SETUP menu. In the Simulator box, select NONE as the type of

simulator. Press OK to exit. Document the room temperature and humidity level at the time of calibration in the communication notebook.

l) Certify the instrument following the Certification Protocol.

m) Preliminary interference testing. Run the following concentrations as an Accuracy and Precision Test with n=10. The instrument must report Interference at least 80% of the time.

0.01% Acetone in 0.08% EtOH
0.04% MeOH in Water
0.04% Isopropanol in Water

The instrument is now ready for performance testing. If any of the above steps fail or there is **any** problem with the instrument, the DataMaster Team should be consulted as to the action required. It may be necessary to return an instrument to the manufacture for refurbishment prior to use by VDHL. All adjustments and repairs to an instrument should be documented in the instrument's testing notebook located in the testing binder. All reports generated during the Power Up Procedure should be filed in the power up section of that instrument's testing binder. If the instrument has passed, it should now be Installed to VDHL.

RFT

Performance Testing

a) Linearity Test: Four concentrations of EtOH solutions will be used, 0.020, 0.080, 0.160, and 0.400. Each solution will be run using the Accuracy and Precision test (n=10). All four concentrations will be run consecutively and will count as one linearity test. Five linearity tests will be run on each instrument. Linearity tests should not be completed back to back. Testing should allow for inter- and intra- day performance.

b) Low Level Performance: A solution of 0.040EtOH will be tested using the Accuracy and Precision test (n=10) once

c) Interference Test: The following concentrations will be tested using the Accuracy and Precision test (n=10). The instrument should report Interference at least 80% of the time.

0.01% Acetone in 0.04% EtOH
0.02% Acetone in 0.04% EtOH
0.04% MeOH in 0.08% EtOH
0.04% Isopropanol in 0.08% EtOH

d) Limited Volume Testing:

Target Volume	Flow (lpm)	Time (sec.)	1	2	3	4	5	6	7	Ave.	% s.d.
1.5 L	8.2	11									
	15	6									
	22.5	4									
2.0 L	10	12									
	15	8									
	24	5									

Pressure: _____ Flow rate +/- _____ time +/- _____

R

INSTALLATION REPORT

DataMaster DMT: 100139
Location: VPA - VDHL
Calibration Date: 03/31/2010
Certification Date: 03/31/2010
Installation Date: 04/05/2010
Installed By: SEH TRAINING INSTALL

VERMONT DEPARTMENT OF HEALTH

Site meets specification in doc P-ALC-210

Diagnostic Results

VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.68°C
Breath Tube = 48.07°C
Digital Sim = 34.0°C

SETTINGS
Lamp Voltage = 1.85 V
Cooler Voltage = 1.66 V
Bias Voltage = 80.9 V
Chopper Freq = 541.2 Hz

PUMP INFO
Flow Rate = 6.387 L/M

DETECTOR INFO
PUMP ON OFF
MAX(V) -0.0504 -0.0472
MIN(V) -0.0520 -0.0488

FILTER INFO
Filter 1 -0.049 Zero = true
Filter 2 0.267 Zero = true
Filter 3 0.942 Zero = true

CALIBRATION CHECK
Xq = 0.0806 0.54%

INSTALLATION PASSED

Accuracy and Precision Check

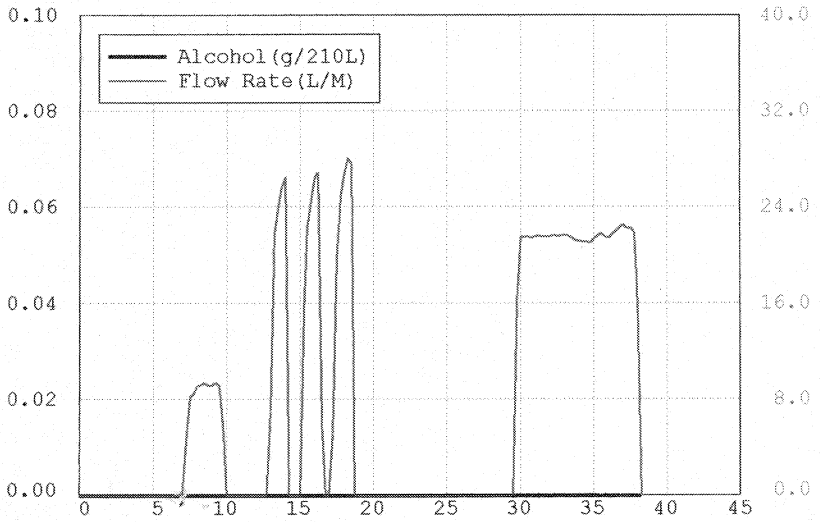
Concentration = 0.100 g/210L
Lot # = 10-23-100
Average = 0.099 g/210L
Std Dev = 0.001

RFI Interference Test

RFI detected

Sample Acceptance Test

Passed



Performed by x _____ Date 04/05/2010

Reviewed by _____ Date _____

CALIBRATION REPORT

DataMaster DMT: 100139
Calibration Date: 03/31/2010
Calibrated by: AMANDA BOLDUC
Lot: 10-22-100

VERMONT
DEPARTMENT OF HEALTH

```
Ca   =  0.101000
CAL  =  0.986308    0.800 <= CAL < 1.200
b1   =  0.000000    0.000 <=  b1 < 0.004
b2   =  0.004642    0.001 <=  b2 < 0.012
b3   =  0.000000    0.000 <=  b3 < 0.004
Xq   =  0.081109    0.050 <=  Xq < 0.200
a21  =  1.178648    1.050 <= a21 < 1.300
a31  =  0.440123    0.300 <= a31 < 0.800
```

Performed by _____ Date 03/31/2010

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

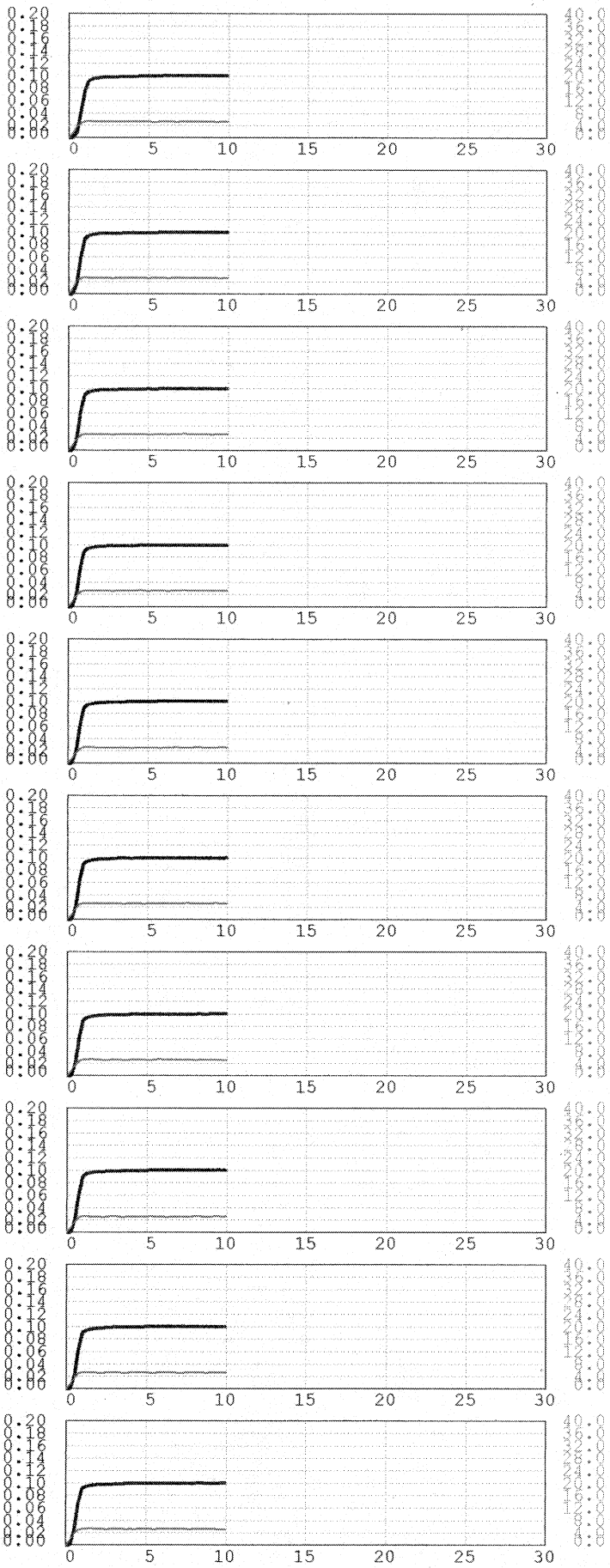
Date: 03/31/2010
Time: 12:08:00

SUPERVISOR NAME: ALB CAL CHECK

SOLUTION LOT #: 10-23-100
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	12:08
CALIBRATION CHECK	PASSED	12:09
SIMULATOR VAPOR	0.101	12:09
SIMULATOR VAPOR	0.100	12:10
SIMULATOR VAPOR	0.100	12:11
SIMULATOR VAPOR	0.100	12:12
SIMULATOR VAPOR	0.101	12:13
SIMULATOR VAPOR	0.100	12:14
SIMULATOR VAPOR	0.100	12:15
SIMULATOR VAPOR	0.101	12:16
SIMULATOR VAPOR	0.100	12:17
SIMULATOR VAPOR	0.100	12:18
BLANK TEST	0.000	12:19

Average = 0.100
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100139

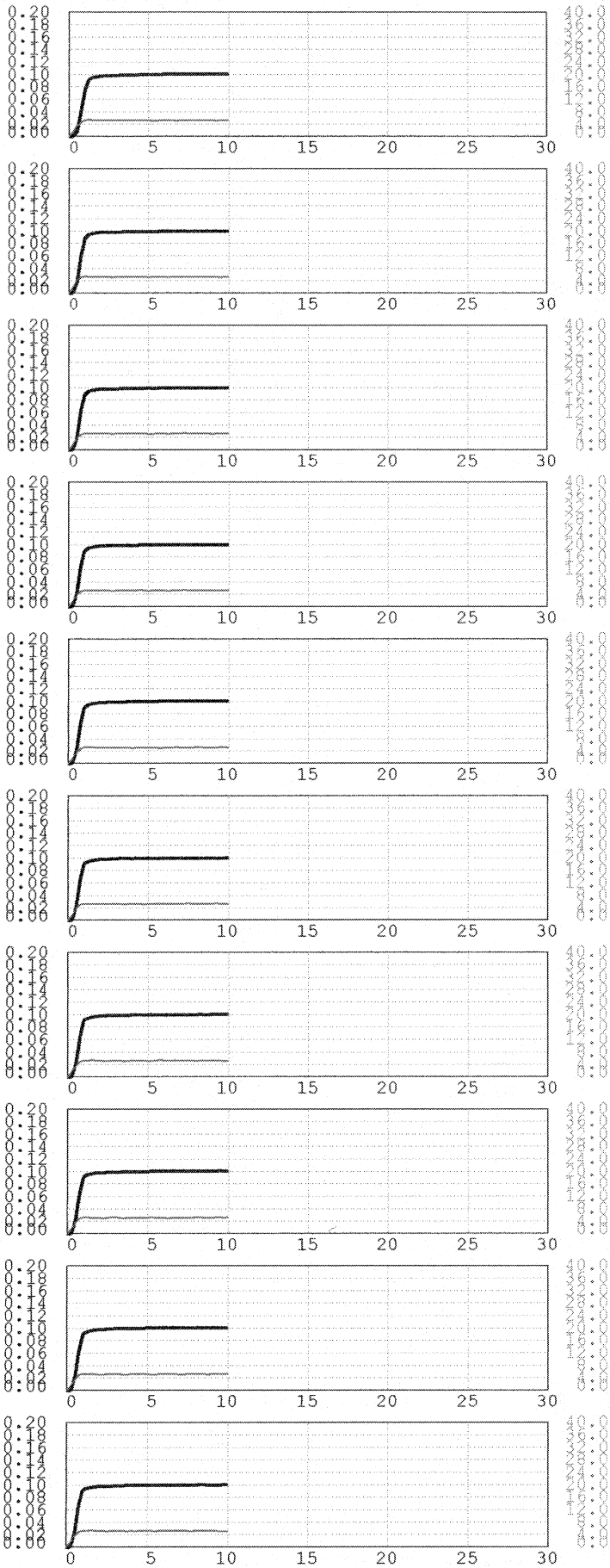
Date: 03/31/2010
Time: 12:08:00

SUPERVISOR NAME: ALB CAL CHECK

SOLUTION LOT #: 10-23-100
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	12:08
CALIBRATION CHECK	PASSED	12:09
SIMULATOR VAPOR	0.101	12:09
SIMULATOR VAPOR	0.100	12:10
SIMULATOR VAPOR	0.100	12:11
SIMULATOR VAPOR	0.100	12:12
SIMULATOR VAPOR	0.101	12:13
SIMULATOR VAPOR	0.100	12:14
SIMULATOR VAPOR	0.100	12:15
SIMULATOR VAPOR	0.101	12:16
SIMULATOR VAPOR	0.100	12:17
SIMULATOR VAPOR	0.100	12:18
BLANK TEST	0.000	12:19

Average = 0.100
Std Dev = 0.0004



CERTIFICATION REPORT

DataMaster DMT: 100139
Calibration Date: 03/31/2010
Certification Date: 03/31/2010
Certified by: AMANDA BOLDUC

VERMONT
DEPARTMENT OF HEALTH

Diagnostic Results

VERSIONS
DMT 1.04
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.03°C
Breath Tube = 48.10°C

SETTINGS
Lamp Voltage = 1.85 V
Cooler Voltage = 1.66 V
Bias Voltage = 80.9 V
Chopper Freq = 537.8 Hz

PUMP INFO
Flow Rate = 6.318 L/M

DETECTOR INFO
PUMP ON OFF
MAX(V) -0.0187 -0.0175
MIN(V) -0.0209 -0.0191

FILTER INFO
Filter 1 -0.019 Zero = true
Filter 2 0.293 Zero = true
Filter 3 0.967 Zero = true

CALIBRATION CHECK
Xq = 0.0807 0.43%

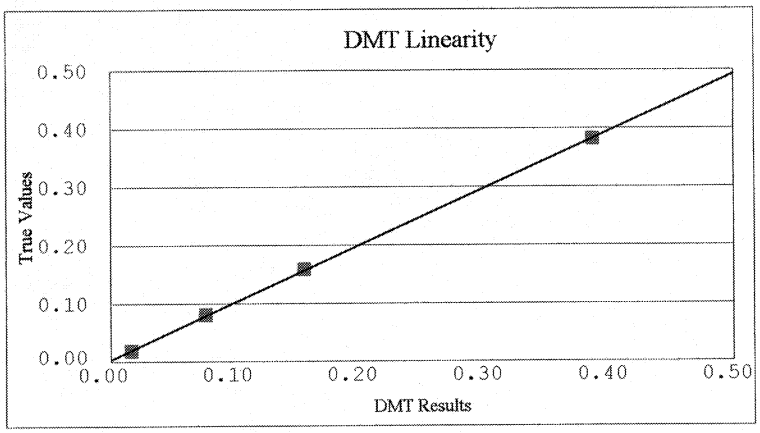
Options

Printer: yes
Number of Copies: 3
Number of Supervisor Tests: 10
Tolerance Check: yes
Data Collection: yes
Units: g/210L
Simulator Check: yes
Uses Wet Bath Simulator: yes
Simulator Nominal: 0.101
Digital Simulator: none
Simulator Before: yes
Simulator Between: yes
Simulator After: no
Number of Subject Tests: 2
AskQuestions: yes
Query Refusal: yes
Alcohol Display: yes
Show Two Digits: no
Volume Display: yes
Number of Calibration Tests: 1
Calibrate with Wet Bath: yes
Calibration Nominal: 0.100

Linearity Check Results

True Value	Reported Average	Std Dev
0.019 g/210L Lot # 10-21-020	0.017 g/210L	0.000
0.081 g/210L Lot # 10-19-080	0.077 g/210L	0.000
0.159 g/210L Lot # 10-20-160	0.156 g/210L	0.001
0.382 g/210L Lot # 09-36-400	0.387 g/210L	0.001

$R^2 = 0.9999$



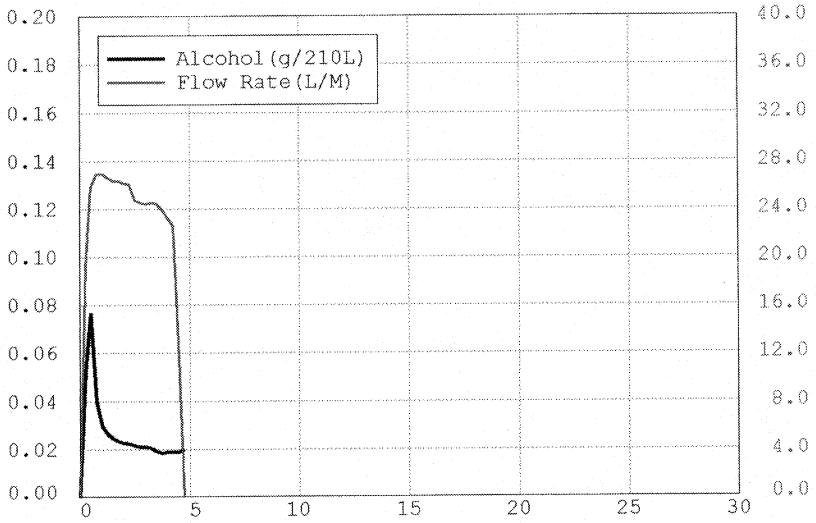
Acetone Interference Test

Lot # 10-24-08A

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

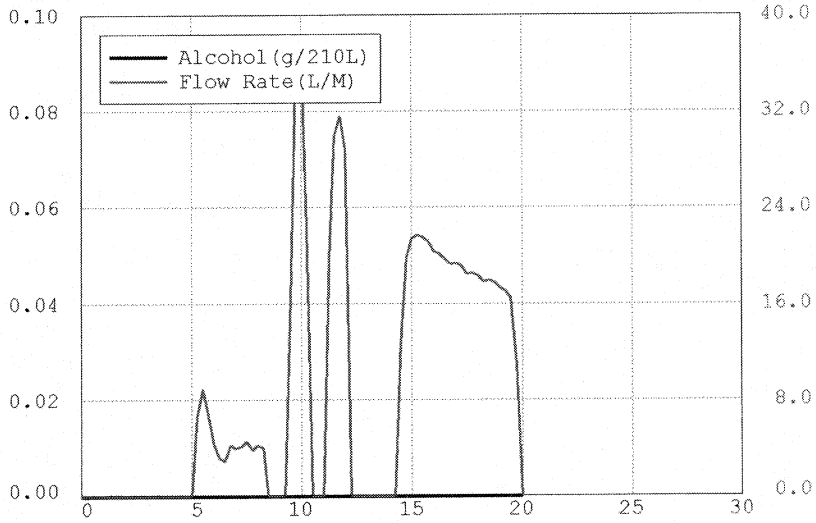


RF Interference Test

RFI detected

Sample Acceptance Test

Passed



Linearity testing completed on 3/31/10. Acetone, mouth alc, RFI and spl acc completed on 4/2/10

CERTIFICATION PASSED

Performed by _____ **Date** 04/02/2010

Reviewed by _____ **Date** 4/2/10

Section 10: Live Subject Tests

This Instrument not tested for this specification

Section 11: Communication Notes

March/April 2010

100139
11-8-10

~~October 2009~~

~~Third~~ 4th Round Testing Protocol for DMT Instruments

Power Up Procedure:

a) Open unit and inspect connections. Ensure all tubing is secure. Check that all cables are properly seated and tied down or strapped together as necessary. Check that all screws are in place and snug; this will require the removal of the side pieces to allow the technician access. Correct as needed.

b) Manually turn the filter wheel. The filter wheel should turn smoothly and should not rub or wobble. Correct as needed.

c) Power on the instrument. Allow approximately one hour for it to come to temperature.

d) Access the SETUP menu. On the MISC tab, type "State of Vermont" in the NAME field. In the EXPLORE box, highlight STYLUS and press the OK button to activate the stylus settings. Recalibrate the stylus. Once complete, exit the SETUP menu by pressing the OK button to save the settings. If you exit the SETUP menu using the CANCEL button, none of the changes will be saved.

e) Enter the TECH screen. Scroll through all of the filter settings to ensure the filter wheel is activating properly.

f) Optimize the detector voltage
-Adjust the cooler voltage setting to 1.70Vdc +/-0.10.
-Manually manipulate the detector position to get the detector voltage as low as possible.
-Adjust the Lamp voltage setting so that the detector voltage displayed is approximately +0.000 +/- 0.100.
-Note the initial noise of the detector voltage once unit has had a minute to equilibrate. Noise tolerance at NPAS is +/-0.003 on a detector.
-Save the voltage settings
-Per VDHL protocol (P-Alc-116 Power-Up SOP), the detector voltage must read 0.000V with a tolerance of +/- 0.100V. Correct as needed.

11/8/10

g) While still in the TECH screen, press SET in the RF Sensitivity box to automatically set the RF sensitivity level. Press SAVE to save the settings. Confirm the setting by keying a radio near the instrument. Correct as needed.

h) Using the large syringe, push 1.5L of air into the breath tube. Monitor the volume of air displayed on the TECH screen. The instrument should read 1.5L +/- 0.2L. If the instrument is out of range, adjust the distance between the "T" fittings on the breath exhaust tubing. Retest until the volume reads appropriately.

i) Once all the TECH settings are correct, re-save every setting. Exit the TECH screen.

j) Close up the instrument using locking screws on the top four holes. Attach the stylus to the DMT using a locking screw in the center right screw hole nearest the simulator tower. Attach the keyboard to the top of the instrument using sticky-back velcro. Wrap a small piece of velcro around the top of the stylus and affix the other side to the front of the instrument so the stylus can rest on the front of the unit.

k) Calibrate the instrument following the Calibration Protocol using Calibration Solution (0.100 EtOH). During Calibration and Certification, it may be necessary to turn off the simulator temperature monitoring if using Guth 2100 Simulators as these do not have BNC connectors for temperature monitoring. To do this, open the SETUP menu. In the Simulator box, select NONE as the type of

11/9/10

100139

SA 11/9/10

simulator. Press OK to exit. Document the room temperature and humidity level at the time of calibration in the communication notebook.

l) Certify the instrument following the Certification Protocol.

m) Preliminary interference testing. Run the following concentrations as an Accuracy and Precision Test with n=10. The instrument must report Interference at least 80% of the time.

0.01% Acetone in 0.08% EtOH
0.04% MeOH in Water
0.04% Isopropanol in Water

11/10/10 SA

The instrument is now ready for performance testing. If any of the above steps fail or there is **any** problem with the instrument, the DataMaster Team should be consulted as to the action required. It may be necessary to return an instrument to the manufacture for refurbishment prior to use by VDHL. All adjustments and repairs to an instrument should be documented in the instrument's testing notebook located in the testing binder. All reports generated during the Power Up Procedure should be filed in the power up section of that instrument's testing binder. If the instrument has passed, it should now be Installed to VDHL.

DRAFT

11/10 SH
11/12 [illegible]
11/12 ⊙
11/16 SH
11/16/10 SH 100139

Performance Testing

a) Linearity Test: Four concentrations of EtOH solutions will be used, 0.020, 0.080, 0.160, and 0.400. Each solution will be run using the Accuracy and Precision test (n=10). All four concentrations will be run consecutively and will count as one linearity test. Five linearity tests will be run on each instrument. Linearity tests should not be completed back to back. Testing should allow for inter- and intra- day performance.

SH 11/16/10

b) ~~Low Level Performance: A solution of 0.040EtOH will be tested using the Accuracy and Precision test~~ (n=10) once

c) Interference Test: The following concentrations will be tested using the Accuracy and Precision test (n=10). The instrument should report Interference at least 80% of the time.

11/10/10 SH

0.01% Acetone in 0.04% EtOH
0.02% Acetone in 0.04% EtOH
0.04% MeOH in 0.08% EtOH
0.04% Isopropanol in 0.08% EtOH

d) Limited Volume Testing:

Target Volume	Flow (lpm)	Time (sec.)	1	2	3	4	5	6	7	Ave.	% s.d.
~~1.5 L~~	~~8.2~~	~~11~~									
	15	6									
	22.5	4									
2.0 L	10	12									
	15	8									
	24	5									

Pressure: _____ Flow rate +/- _____ time +/- _____

Instrument used for training. Restarted all testing 11/8/10 [signature] 2/17/11