DATAMASTER DMT 100154

VERMONT DEPARTMENT OF HEALTH LABORATORY

PERFORMANCE TESTING RESULTS

November 2010

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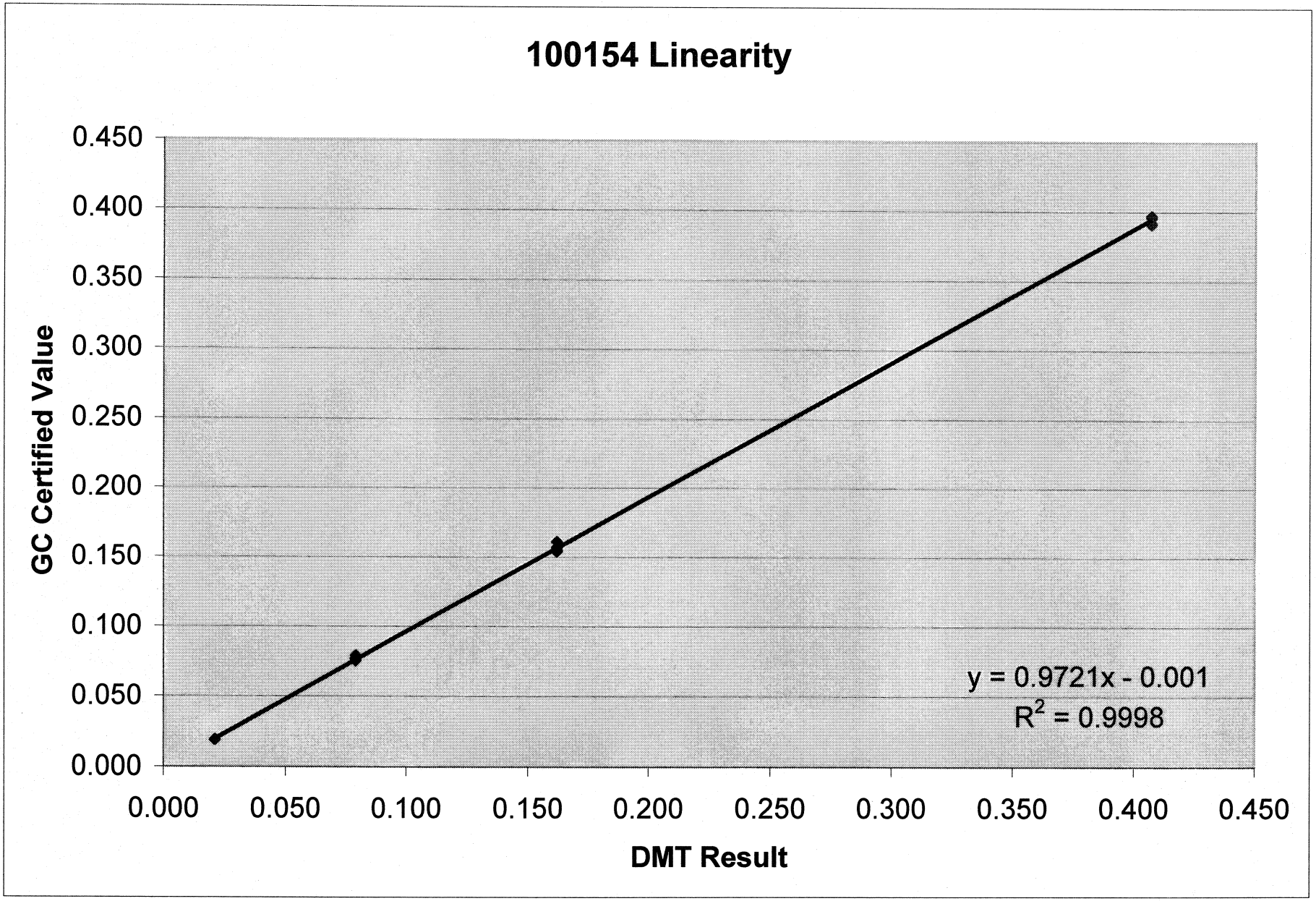
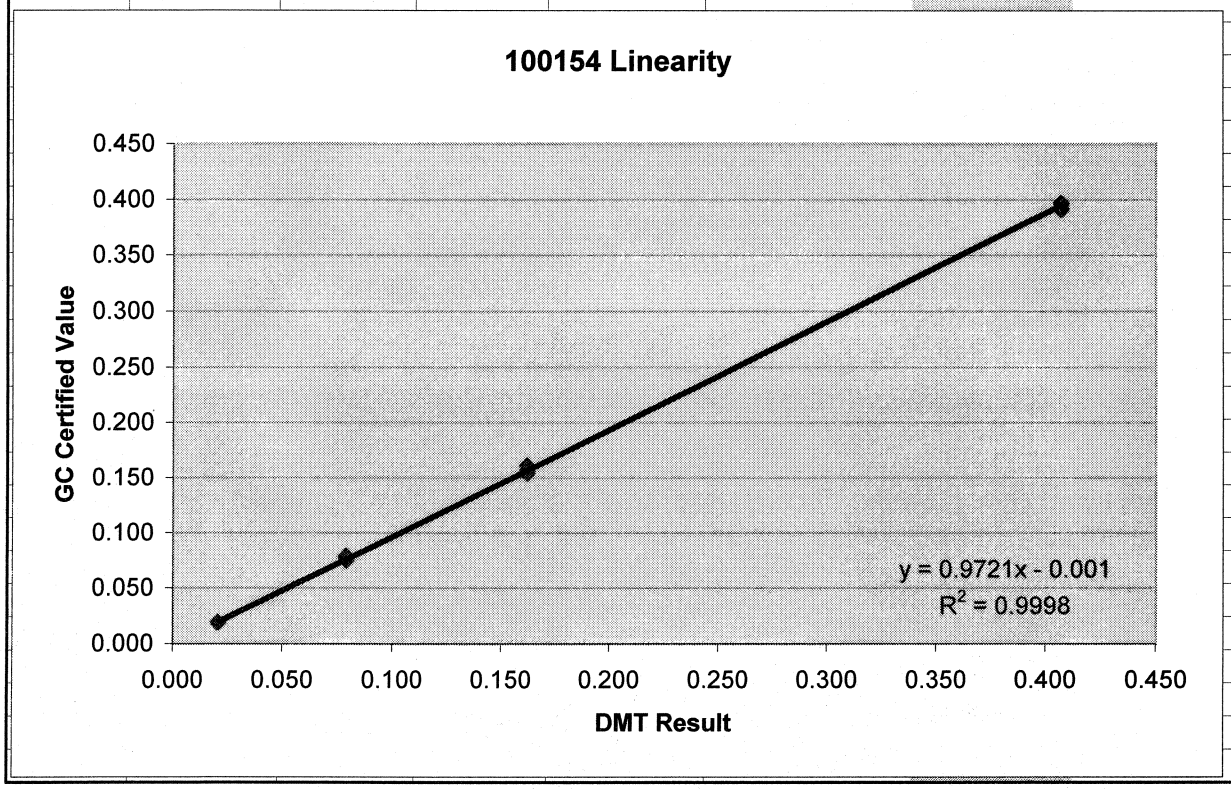
Section 1: Results


100154 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 = 0.9721x - 0.001
R2 = 0.9998

DMT Serial # 100154

Operator	Date	Lot #	GC Value	DMT Result	Std Dev	% Recovery	
SH	11/10/2010	11-13-020	0.021	0.019	0.0003	90.5	Outside 5%
		10-37-080	0.079	0.077	0.0000	97.5	Outside 10%
		11-06-160	0.162	0.157	0.0000	96.9	
		11-18-400	0.407	0.397	0.0012	97.5	
ALB	11/12/2010	11-06-160	0.162	0.155	0.0004	95.7	
		11-13-020	0.021	0.019	0.0003	90.5	
		11-18-400	0.407	0.396	0.0009	97.3	
		10-37-080	0.079	0.076	0.0005	96.2	
ALB	11/12/2010	10-37-080	0.079	0.075	0.0004	94.9	
		11-06-160	0.162	0.154	0.0003	95.1	
		11-13-020	0.021	0.019	0.0000	90.5	
		11-18-400	0.407	0.391	0.0012	96.1	
ALB	11/15/2010	11-13-020	0.021	0.019	0.0004	90.5	
		11-06-160	0.162	0.155	0.0004	95.7	
		10-37-080	0.079	0.075	0.0003	94.9	
		11-18-400	0.407	0.392	0.0011	96.3	
SH	11/16/2010	11-13-020	0.021	0.019	0.0004	90.5	
		10-37-080	0.079	0.079	0.0006	100.0	
		11-17-160	0.162	0.161	0.0004	99.4	
		11-18-400	0.407	0.397	0.0006	97.5	
SH	11/16/2010	11-13-020	0.021	0.019	0.0003	90.5	
		10-37-080	0.079	0.078	0.0004	98.7	
		11-17-160	0.162	0.161	0.0004	99.4	
		11-18-400	0.407	0.396	0.0008	97.3	
				Average	0.0005	95.2	
				Std Dev	0.0004	3.07	
				Range	0.0000 - 0.0012	90.5 - 100.0	



Y:\VDH\VDH All Share\Lab\Alcohol\Datamaster DMT electronic documents\100154\Testing Results.xls

Operator	Date	Concentration	Lot Number	DMT Result	Apparent EtOH	N = 10
SH	11/10/10	.01 Acetone in .08 EtOH	11-11-08A1	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	0.02	
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	09-30-08I	INTERFERENCE	0.09	

Section 2: NPAS Tests

National Patent
Analytical Systems, Inc.

Certificate of Calibration

100154

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.

6-2-10

Date

Charles E Townsend

Technician

CALIBRATION REPORT

DataMaster DMT: 100154
Calibration Date: 06/01/2010
Calibrated by: YGJ U YKUG
Lot: IH;OUH;UH

VERMONT
DEPARTMENT OF HEALTH

```
Ca  =  0.100000
CAL =  1.003136    0.800 <= CAL < 1.200
b1  =  0.000000    0.000 <=  b1 < 0.004
b2  =  0.002241    0.001 <=  b2 < 0.012
b3  =  0.000000    0.000 <=  b3 < 0.004
Xq  =  0.090430    0.050 <=  Xq < 0.200
a21 =  1.192339    1.050 <= a21 < 1.300
a31 =  0.475411    0.300 <= a31 < 0.800
```

Performed by _____ **Date** 06/01/2010

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

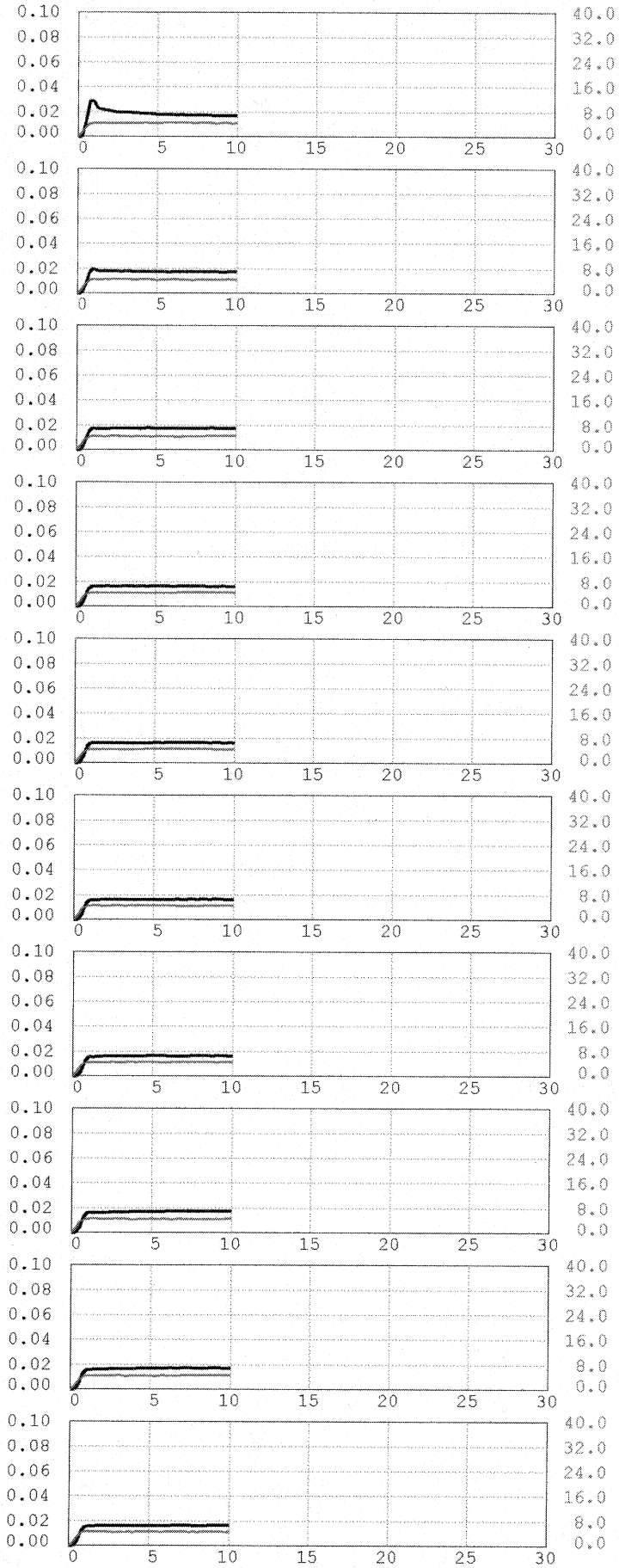
Date: 06/02/2010
Time: 07:28:46

SUPERVISOR NAME: RYFTYF U FLFYLY

SOLUTION LOT #: NJKLNLKN
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	07:29
CALIBRATION CHECK	PASSED	07:29
Xq = 0.0906 (0.19%)		
SIMULATOR VAPOR	INTERFERENCE	07:30
X[1] = 0.0187 (-0.0063) (-0.0041)		
SIMULATOR VAPOR	INTERFERENCE	07:31
X[1] = 0.0184 (-0.0062) (-0.0045)		
SIMULATOR VAPOR	INTERFERENCE	07:32
X[1] = 0.0185 (-0.0061) (-0.0046)		
SIMULATOR VAPOR	INTERFERENCE	07:33
X[1] = 0.0177 (-0.0070) (-0.0045)		
SIMULATOR VAPOR	INTERFERENCE	07:34
X[1] = 0.0176 (-0.0072) (-0.0054)		
SIMULATOR VAPOR	INTERFERENCE	07:34
X[1] = 0.0175 (-0.0071) (-0.0046)		
SIMULATOR VAPOR	INTERFERENCE	07:35
X[1] = 0.0178 (-0.0068) (-0.0053)		
SIMULATOR VAPOR	INTERFERENCE	07:36
X[1] = 0.0185 (-0.0062) (-0.0050)		
SIMULATOR VAPOR	INTERFERENCE	07:37
X[1] = 0.0182 (-0.0065) (-0.0053)		
SIMULATOR VAPOR	INTERFERENCE	07:38
X[1] = 0.0177 (-0.0069) (-0.0052)		
BLANK TEST	0.000	07:39

Average out of range!



DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location: BARRE TOWN PD
Calibration Date: 06/01/2010
Certification Date: 06/01/2010
Installation Date: 06/02/2010
Test Date: 06/02/2010
Time: 08:10

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.20°C
Breath Tube    = 41.44°C

SETTINGS
Lamp Voltage   = 1.83 V
Cooler Voltage = 1.66 V
Bias Voltage   = 80.7 V
Chopper Freq   = 531.4 Hz

PUMP INFO
Flow Rate = 5.867 L/M

DETECTOR INFO
PUMP    ON       OFF
MAX(V) -0.0900  -0.0886
MIN(V) -0.0917  -0.0900

FILTER INFO
Filter 1 -0.088  Zero = true
Filter 2  0.213  Zero = true
Filter 3  1.325  Zero = true

CALIBRATION CHECK
Xq = 0.0907  0.39%
```

ACCURACY AND PRECISION TEST

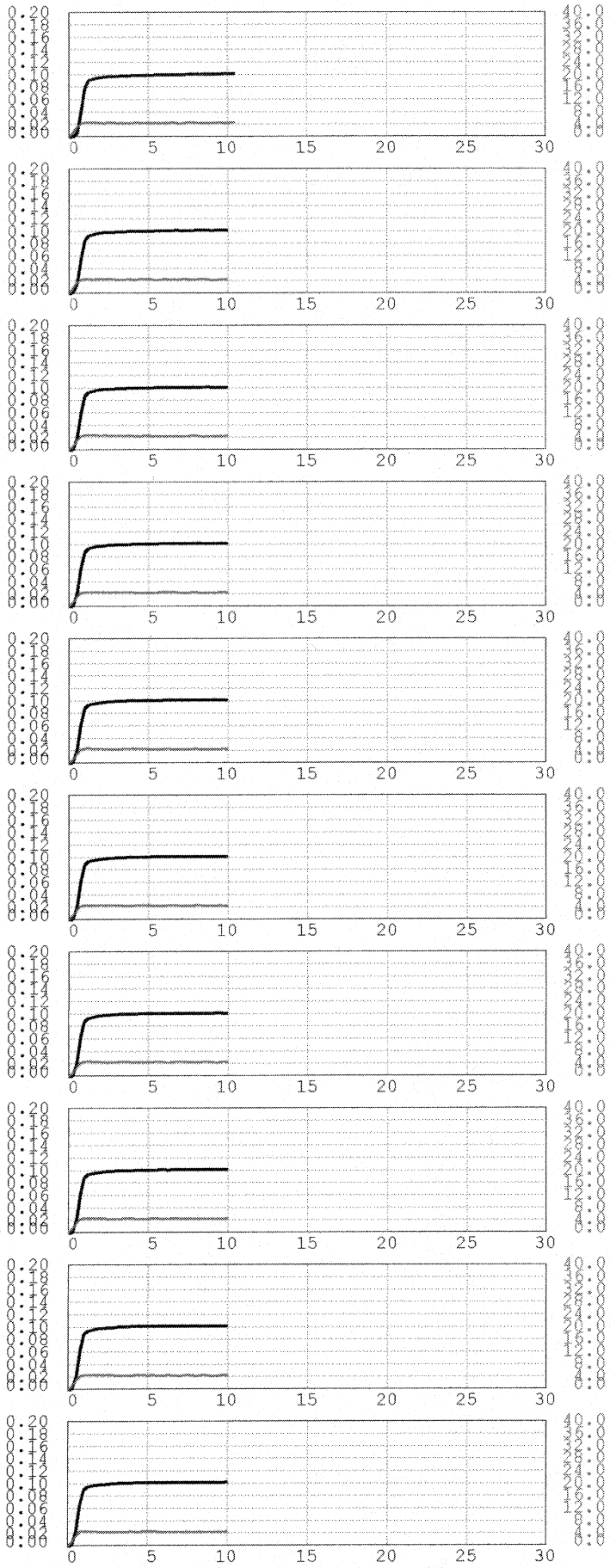
STATE OF VERMONT

DataMaster DMT: 100154

Date: 06/03/2010
Time: 08:54:49

BLANK TEST		0.000	08:55
CALIBRATION CHECK		PASSED	08:55
Xq = 0.0902 (0.19%)			
SIMULATOR VAPOR		0.101	08:56
X[1] = 0.1013	(-0.0003)	(0.0002)	
SIMULATOR VAPOR		0.101	08:57
X[1] = 0.1013	(-0.0006)	(0.0001)	
SIMULATOR VAPOR		0.101	08:58
X[1] = 0.1016	(-0.0007)	(-0.0004)	
SIMULATOR VAPOR		0.102	08:59
X[1] = 0.1022	(-0.0004)	(0.0001)	
SIMULATOR VAPOR		0.101	09:00
X[1] = 0.1017	(-0.0007)	(-0.0006)	
SIMULATOR VAPOR		0.101	09:01
X[1] = 0.1019	(-0.0003)	(0.0004)	
SIMULATOR VAPOR		0.101	09:02
X[1] = 0.1017	(-0.0007)	(0.0000)	
SIMULATOR VAPOR		0.101	09:03
X[1] = 0.1017	(-0.0008)	(-0.0007)	
SIMULATOR VAPOR		0.101	09:04
X[1] = 0.1018	(-0.0015)	(-0.0006)	
SIMULATOR VAPOR		0.102	09:05
X[1] = 0.1026	(-0.0002)	(0.0000)	
BLANK TEST		0.000	09:05

Average = 0.101
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

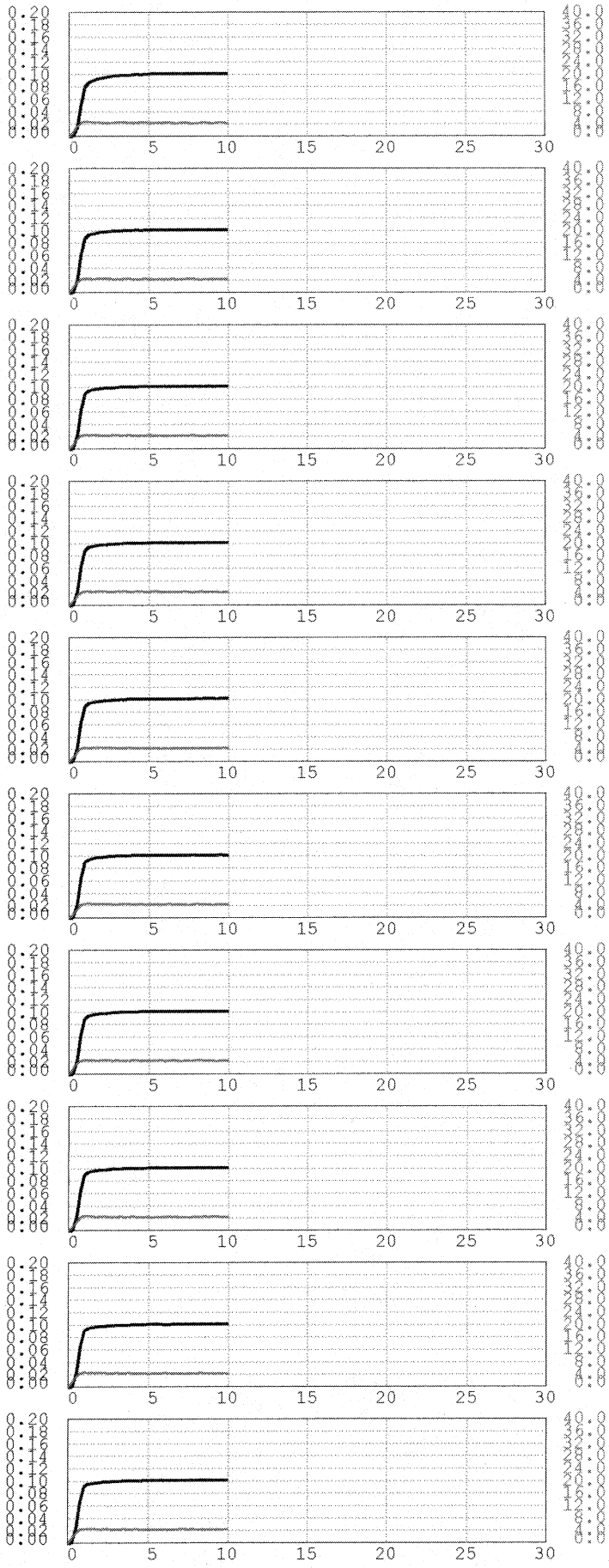
STATE OF VERMONT

DataMaster DMT: 100154

Date: 06/03/2010
Time: 09:21:51

BLANK TEST		0.000	09:22
CALIBRATION CHECK		PASSED	09:22
Xq = 0.0906 (0.19%)			
SIMULATOR VAPOR		0.102	09:23
X[1] = 0.1021	(-0.0001)	(0.0011)	
SIMULATOR VAPOR		0.102	09:24
X[1] = 0.1021	(-0.0007)	(0.0004)	
SIMULATOR VAPOR		0.102	09:25
X[1] = 0.1021	(-0.0004)	(0.0006)	
SIMULATOR VAPOR		0.101	09:26
X[1] = 0.1018	(-0.0009)	(-0.0003)	
SIMULATOR VAPOR		0.102	09:27
X[1] = 0.1023	(-0.0006)	(0.0001)	
SIMULATOR VAPOR		0.102	09:28
X[1] = 0.1026	(-0.0010)	(0.0004)	
SIMULATOR VAPOR		0.102	09:29
X[1] = 0.1020	(-0.0004)	(0.0003)	
SIMULATOR VAPOR		0.102	09:30
X[1] = 0.1022	(-0.0008)	(0.0004)	
SIMULATOR VAPOR		0.101	09:31
X[1] = 0.1019	(-0.0005)	(0.0002)	
SIMULATOR VAPOR		0.102	09:32
X[1] = 0.1020	(-0.0005)	(0.0007)	
BLANK TEST		0.000	09:32

Average = 0.101
Std Dev = 0.0004



DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location: BARRE TOWN PD
Calibration Date: 06/01/2010
Certification Date: 06/01/2010
Installation Date: 06/02/2010
Test Date: 06/03/2010
Time: 09:36

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.03°C
Breath Tube    = 46.87°C

SETTINGS
Lamp Voltage   = 1.78 V
Cooler Voltage = 1.66 V
Bias Voltage   = 80.7 V
Chopper Freq   = 529.0 Hz

PUMP INFO
Flow Rate = 5.661 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.1933   0.1933
MIN(V)   0.1898   0.1915

FILTER INFO
Filter 1  0.192  Zero = true
Filter 2  0.490  Zero = true
Filter 3  1.514  Zero = true

CALIBRATION CHECK
Xq = 0.0903  0.10%
```

Section 3: Power-Up Tests

CALIBRATION REPORT

DataMaster DMT: 100154
Calibration Date: 11/09/2010
Calibrated by: STEVEN E HARNOIS
Lot: 11-12-100

VERMONT
DEPARTMENT OF HEALTH

```
Ca  =  0.100000
CAL =  0.968753    0.800 <= CAL < 1.200
b1  =  0.000000    0.000 <=  b1 < 0.004
b2  =  0.005416    0.001 <=  b2 < 0.012
b3  =  0.000000    0.000 <=  b3 < 0.004
Xq  =  0.086330    0.050 <=  Xq < 0.200
a21 =  1.183581    1.050 <= a21 < 1.300
a31 =  0.469937    0.300 <= a31 < 0.800
```

Performed by _____ Date 11/09/2010

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

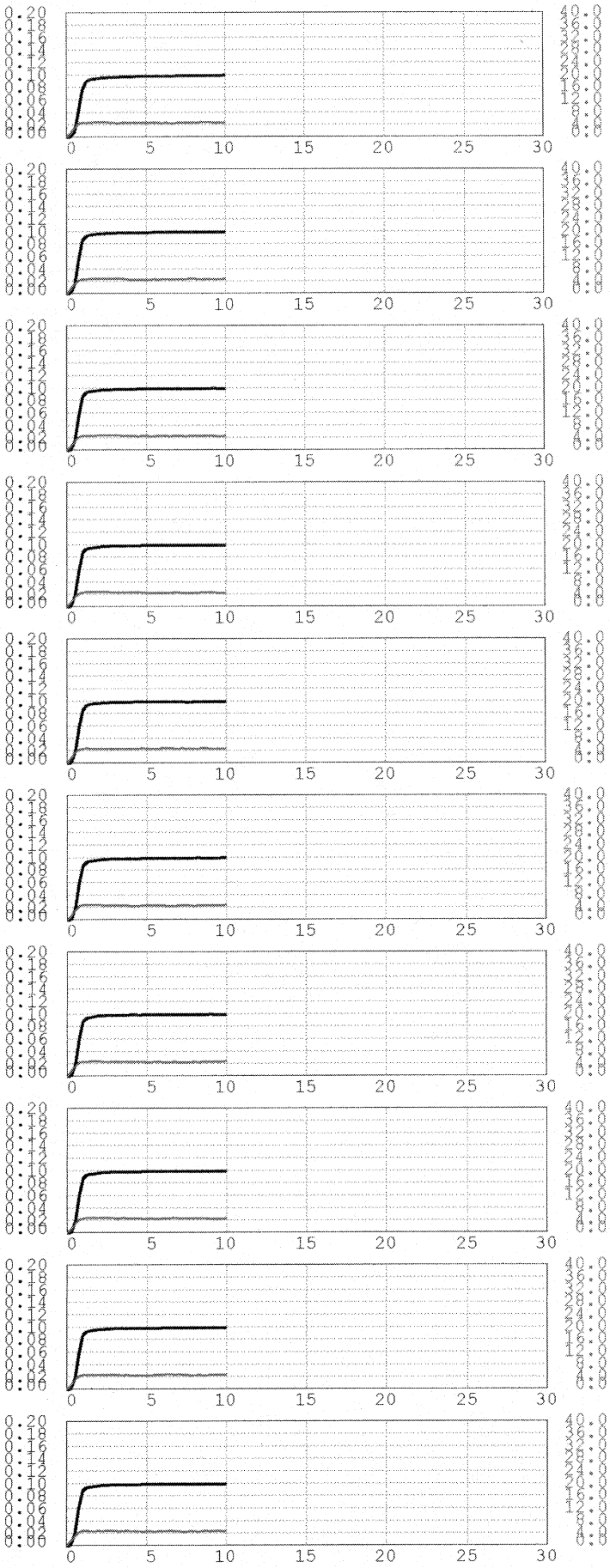
Date: 11/09/2010
Time: 09:03:43

SUPERVISOR NAME: SEH CALCHECK

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

BLANK TEST	0.000	09:04
CALIBRATION CHECK	PASSED	09:04
SIMULATOR VAPOR	0.099	09:05
SIMULATOR VAPOR	0.099	09:06
SIMULATOR VAPOR	0.099	09:07
SIMULATOR VAPOR	0.099	09:08
SIMULATOR VAPOR	0.099	09:09
SIMULATOR VAPOR	0.100	09:09
SIMULATOR VAPOR	0.099	09:10
SIMULATOR VAPOR	0.099	09:11
SIMULATOR VAPOR	0.099	09:12
SIMULATOR VAPOR	0.099	09:13
BLANK TEST	0.000	09:14

Average = 0.099
Std Dev = 0.0003



CERTIFICATION REPORT

DataMaster DMT: 100154
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Certified by: STEVEN E HARNOIS

VERMONT
DEPARTMENT OF HEALTH

Diagnostic Results

VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.20°C
Breath Tube = 47.74°C

SETTINGS
Lamp Voltage = 1.72 V
Cooler Voltage = 1.71 V
Bias Voltage = 80.7 V
Chopper Freq = 546.3 Hz

PUMP INFO
Flow Rate = 5.820 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.0366	0.0384
MIN(V)	0.0350	0.0368

FILTER INFO
Filter 1 0.038 Zero = true
Filter 2 0.377 Zero = true
Filter 3 1.417 Zero = true

CALIBRATION CHECK
Xq = 0.0869 0.71%

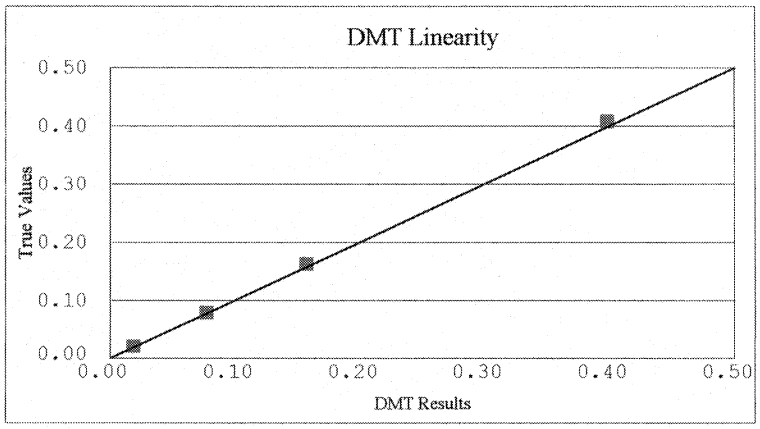
Options

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: 0.100
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 Lot # 11-13-020	0.019 g/210L	0.001
0.079 g/210L Lot # 10-37-080	0.077 g/210L	0.001
0.162 g/210L Lot # 11-06-160	0.157 g/210L	0.000
0.407 g/210L Lot # 11-18-400	0.398 g/210L	0.001

$R^2 = 1.0000$



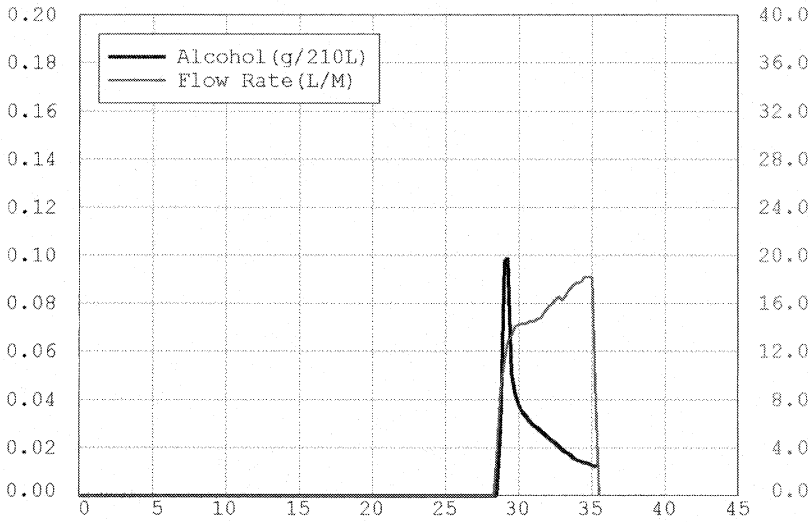
Acetone Interference Test

Lot # 11-11-08A1

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

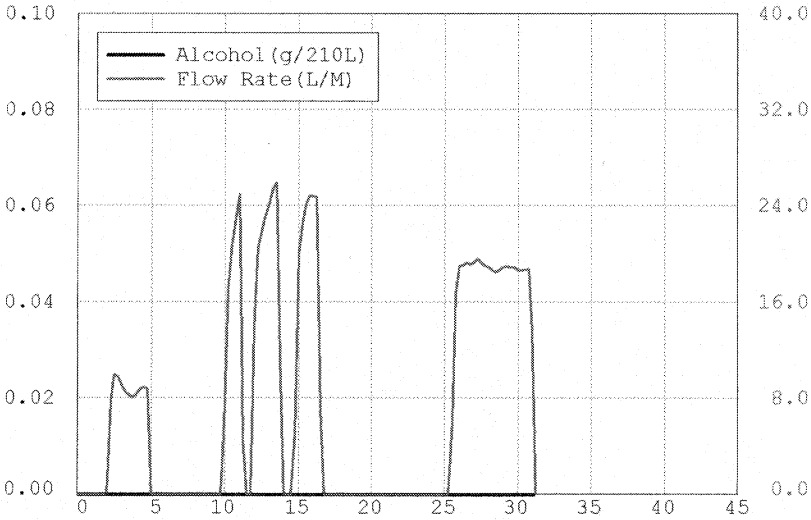


RF Interference Test

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: 100154

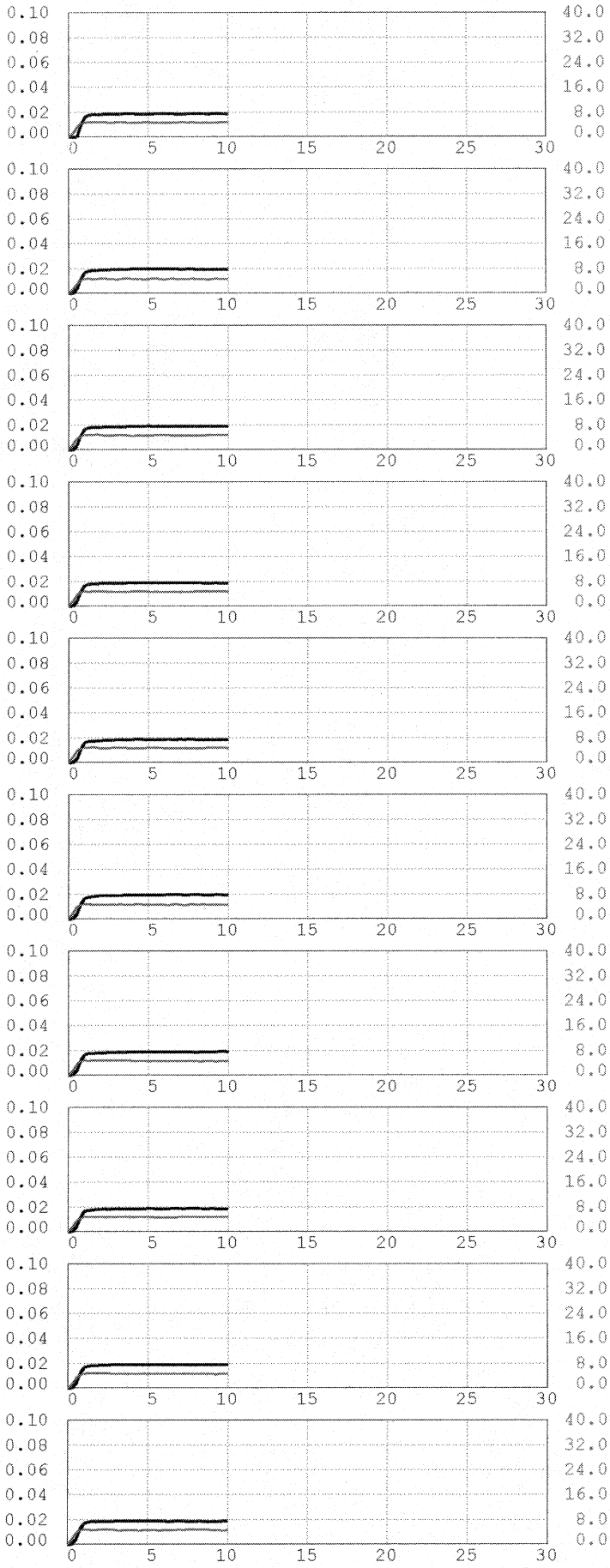
Date: 11/10/2010
Time: 14:11:07

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	14:12
CALIBRATION CHECK	PASSED	14:12
SIMULATOR VAPOR	0.019	14:12
SIMULATOR VAPOR	0.020	14:13
SIMULATOR VAPOR	0.019	14:14
SIMULATOR VAPOR	0.019	14:15
SIMULATOR VAPOR	0.019	14:16
SIMULATOR VAPOR	0.019	14:17
SIMULATOR VAPOR	0.019	14:18
SIMULATOR VAPOR	0.019	14:19
SIMULATOR VAPOR	0.019	14:20
SIMULATOR VAPOR	0.019	14:21
BLANK TEST	0.000	14:21

Average = 0.019
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

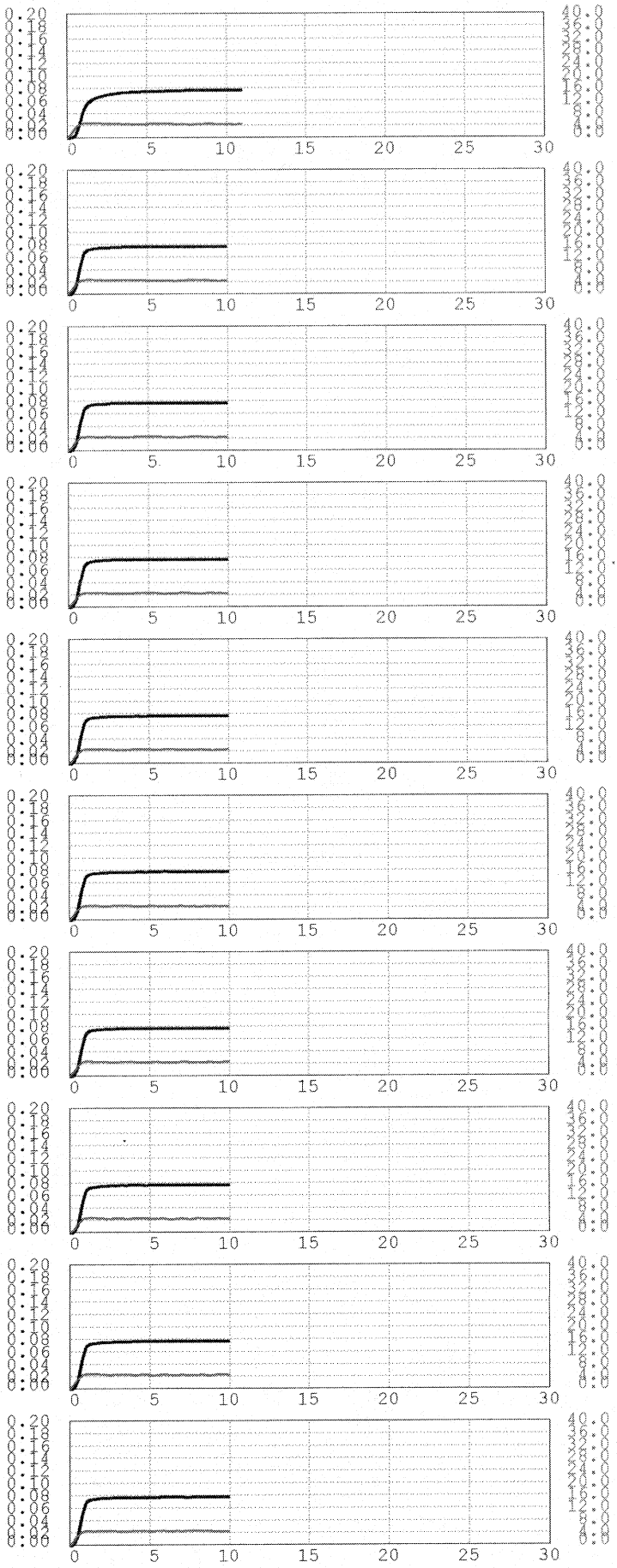
Date: 11/10/2010
Time: 14:33:43

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	14:34
CALIBRATION CHECK	PASSED	14:34
SIMULATOR VAPOR	0.077	14:35
SIMULATOR VAPOR	0.077	14:36
SIMULATOR VAPOR	0.077	14:37
SIMULATOR VAPOR	0.077	14:38
SIMULATOR VAPOR	0.077	14:39
SIMULATOR VAPOR	0.077	14:39
SIMULATOR VAPOR	0.077	14:40
SIMULATOR VAPOR	0.077	14:41
SIMULATOR VAPOR	0.077	14:42
SIMULATOR VAPOR	0.077	14:43
BLANK TEST	0.000	14:44

Average = 0.077
Std Dev = 0.0000



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

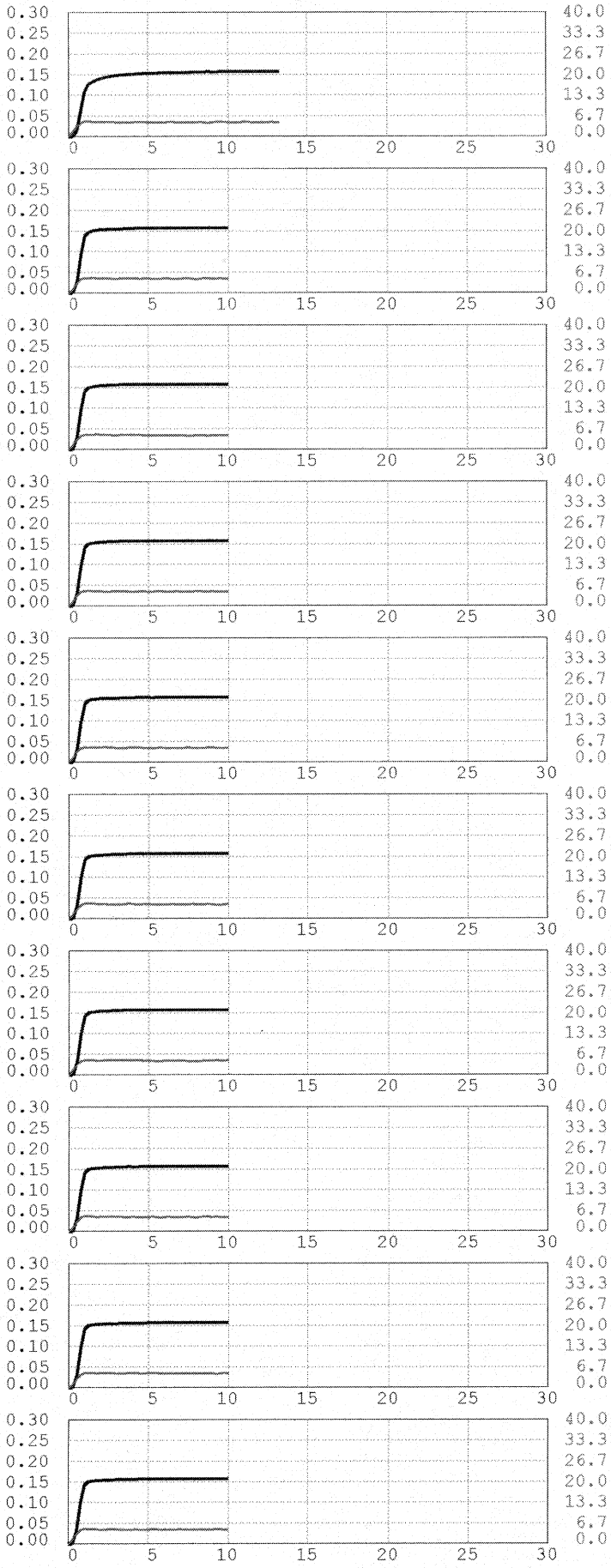
Date: 11/10/2010
Time: 14:46:43

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	14:47
CALIBRATION CHECK	PASSED	14:47
SIMULATOR VAPOR	0.157	14:48
SIMULATOR VAPOR	0.157	14:49
SIMULATOR VAPOR	0.157	14:50
SIMULATOR VAPOR	0.157	14:51
SIMULATOR VAPOR	0.157	14:52
SIMULATOR VAPOR	0.157	14:53
SIMULATOR VAPOR	0.157	14:54
SIMULATOR VAPOR	0.157	14:55
SIMULATOR VAPOR	0.157	14:56
SIMULATOR VAPOR	0.157	14:57
BLANK TEST	0.000	14:57

Average = 0.157
Std Dev = 0.0000



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

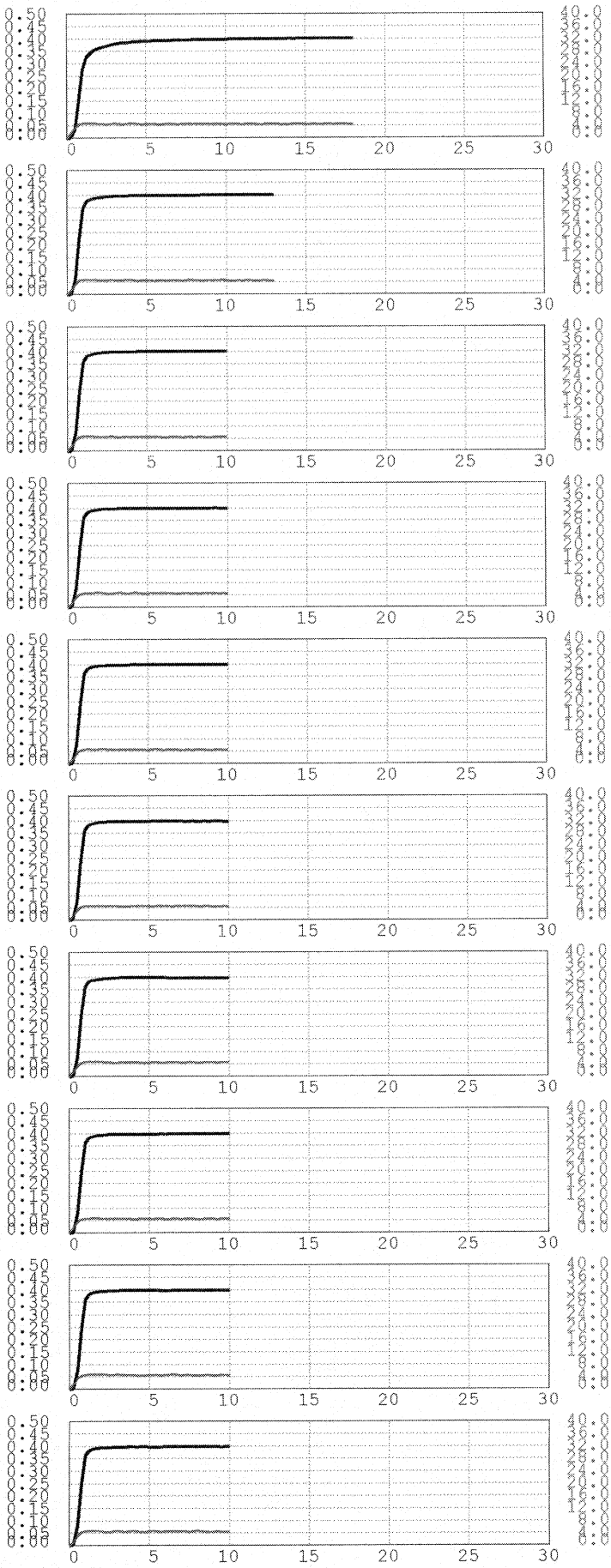
Date: 11/10/2010
Time: 15:00:28

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	15:01
CALIBRATION CHECK	PASSED	15:01
SIMULATOR VAPOR	0.399	15:01
SIMULATOR VAPOR	0.399	15:03
SIMULATOR VAPOR	0.400	15:04
SIMULATOR VAPOR	0.398	15:05
SIMULATOR VAPOR	0.398	15:06
SIMULATOR VAPOR	0.397	15:07
SIMULATOR VAPOR	0.396	15:08
SIMULATOR VAPOR	0.397	15:09
SIMULATOR VAPOR	0.397	15:10
SIMULATOR VAPOR	0.397	15:11
BLANK TEST	0.000	15:12

Average = 0.397
Std Dev = 0.0012



DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/12/2010
Time: 08:12

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.68°C
Breath Tube    = 48.01°C

SETTINGS
Lamp Voltage   = 1.72 V
Cooler Voltage = 1.71 V
Bias Voltage   = 80.6 V
Chopper Freq   = 547.9 Hz

PUMP INFO
Flow Rate = 5.877 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.0246   0.0254
MIN(V)   0.0215   0.0238

FILTER INFO
Filter 1  0.025  Zero = true
Filter 2  0.364  Zero = true
Filter 3  1.400  Zero = true

CALIBRATION CHECK
Xq = 0.0868  0.61%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

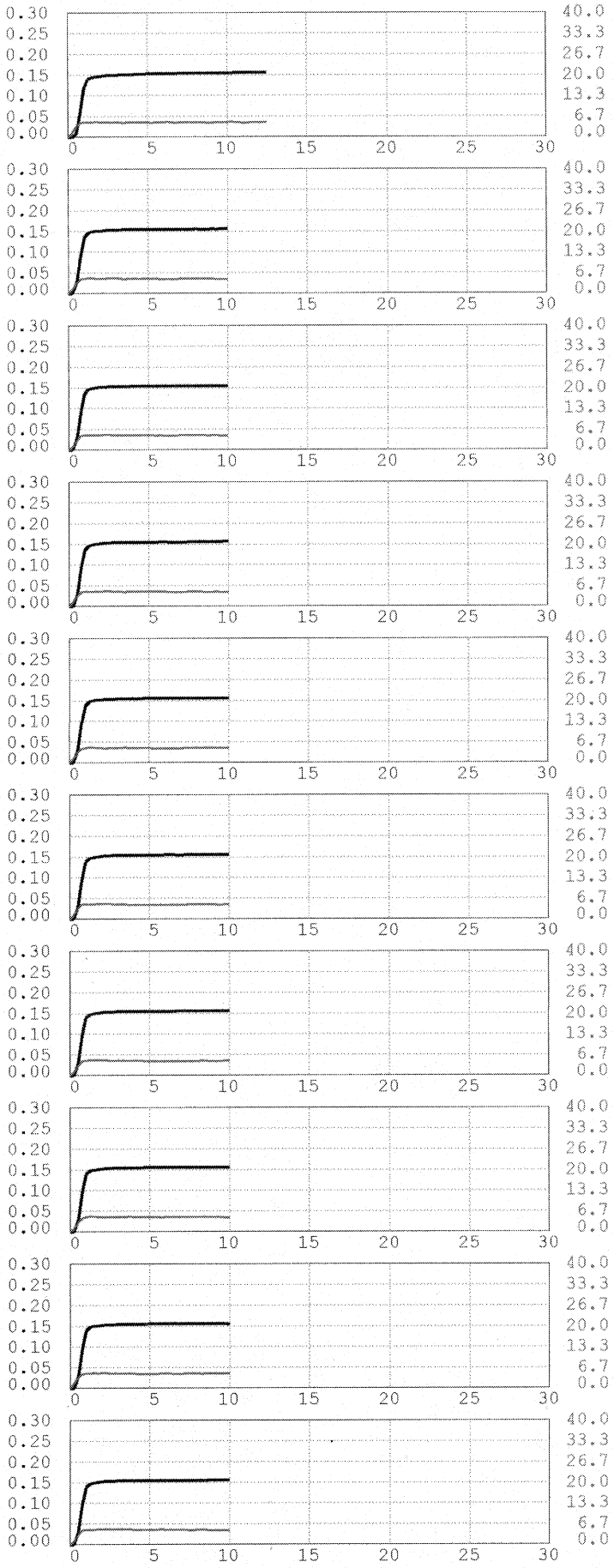
Date: 11/12/2010
Time: 08:14:52

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	08:15
CALIBRATION CHECK	PASSED	08:15
SIMULATOR VAPOR	0.156	08:16
SIMULATOR VAPOR	0.155	08:17
SIMULATOR VAPOR	0.155	08:18
SIMULATOR VAPOR	0.156	08:19
SIMULATOR VAPOR	0.156	08:20
SIMULATOR VAPOR	0.156	08:21
SIMULATOR VAPOR	0.156	08:22
SIMULATOR VAPOR	0.156	08:23
SIMULATOR VAPOR	0.156	08:24
SIMULATOR VAPOR	0.156	08:25
BLANK TEST	0.000	08:25

Average = 0.155
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

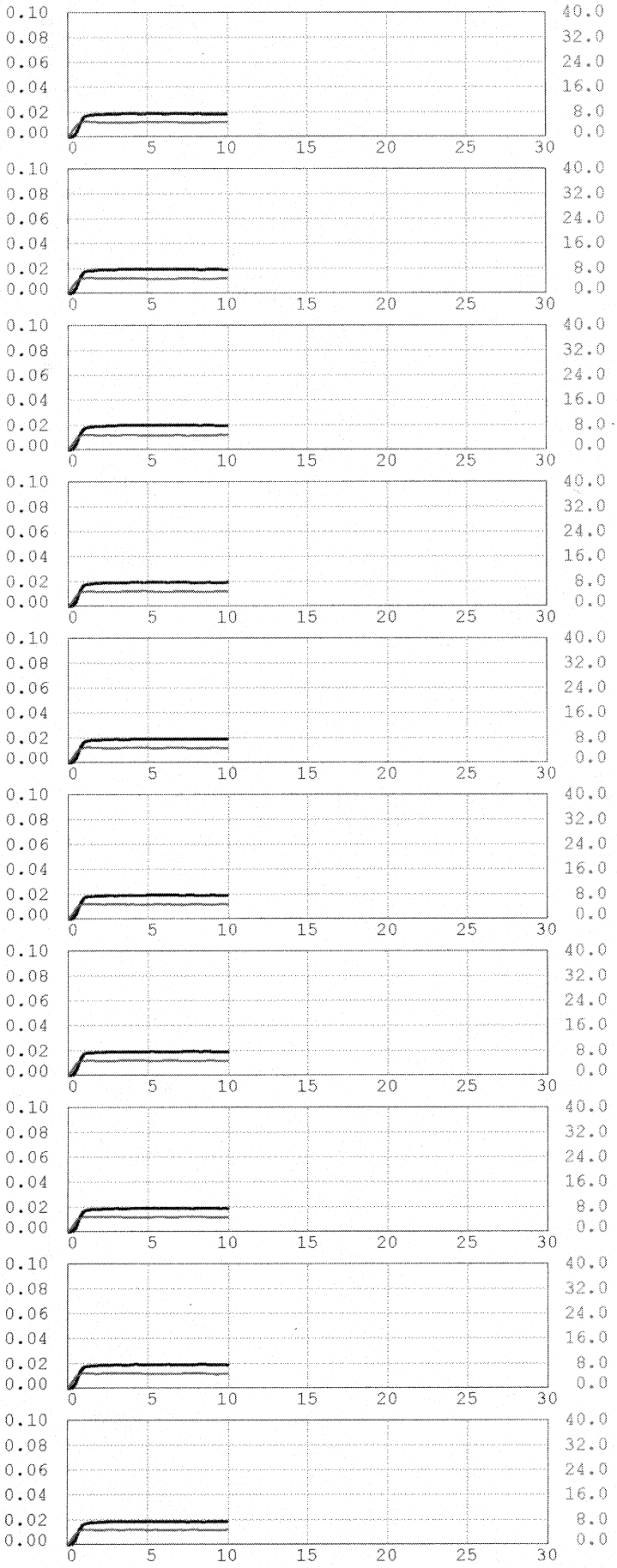
Date: 11/12/2010
Time: 08:56:34

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	08:57
CALIBRATION CHECK	PASSED	08:57
SIMULATOR VAPOR	0.019	08:57
SIMULATOR VAPOR	0.019	08:58
SIMULATOR VAPOR	0.019	08:59
SIMULATOR VAPOR	0.020	09:00
SIMULATOR VAPOR	0.019	09:01
SIMULATOR VAPOR	0.019	09:02
SIMULATOR VAPOR	0.019	09:03
SIMULATOR VAPOR	0.019	09:04
SIMULATOR VAPOR	0.019	09:05
SIMULATOR VAPOR	0.019	09:06
BLANK TEST	0.000	09:07

Average = 0.019
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

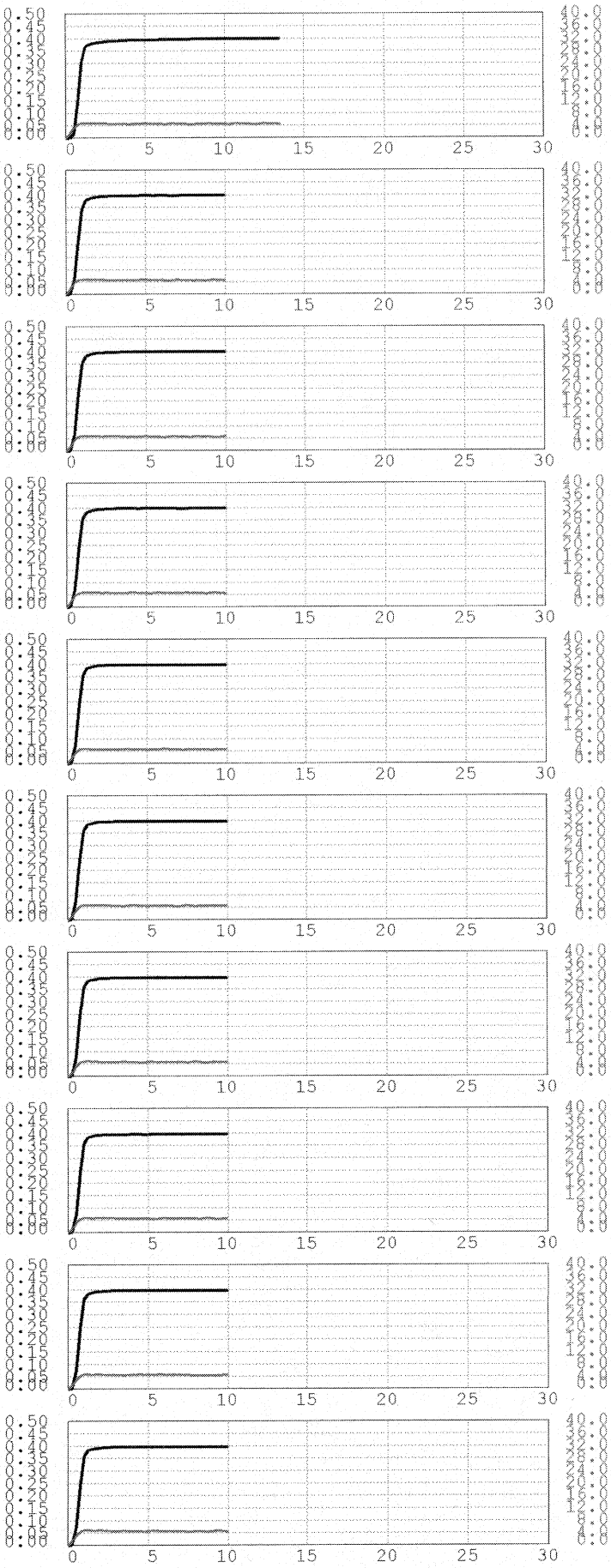
Date: 11/12/2010
Time: 09:10:05

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	09:11
CALIBRATION CHECK	PASSED	09:11
SIMULATOR VAPOR	0.398	09:11
SIMULATOR VAPOR	0.397	09:12
SIMULATOR VAPOR	0.398	09:13
SIMULATOR VAPOR	0.397	09:14
SIMULATOR VAPOR	0.397	09:15
SIMULATOR VAPOR	0.396	09:16
SIMULATOR VAPOR	0.395	09:17
SIMULATOR VAPOR	0.396	09:18
SIMULATOR VAPOR	0.396	09:19
SIMULATOR VAPOR	0.396	09:20
BLANK TEST	0.000	09:21

Average = 0.396
Std Dev = 0.0009



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

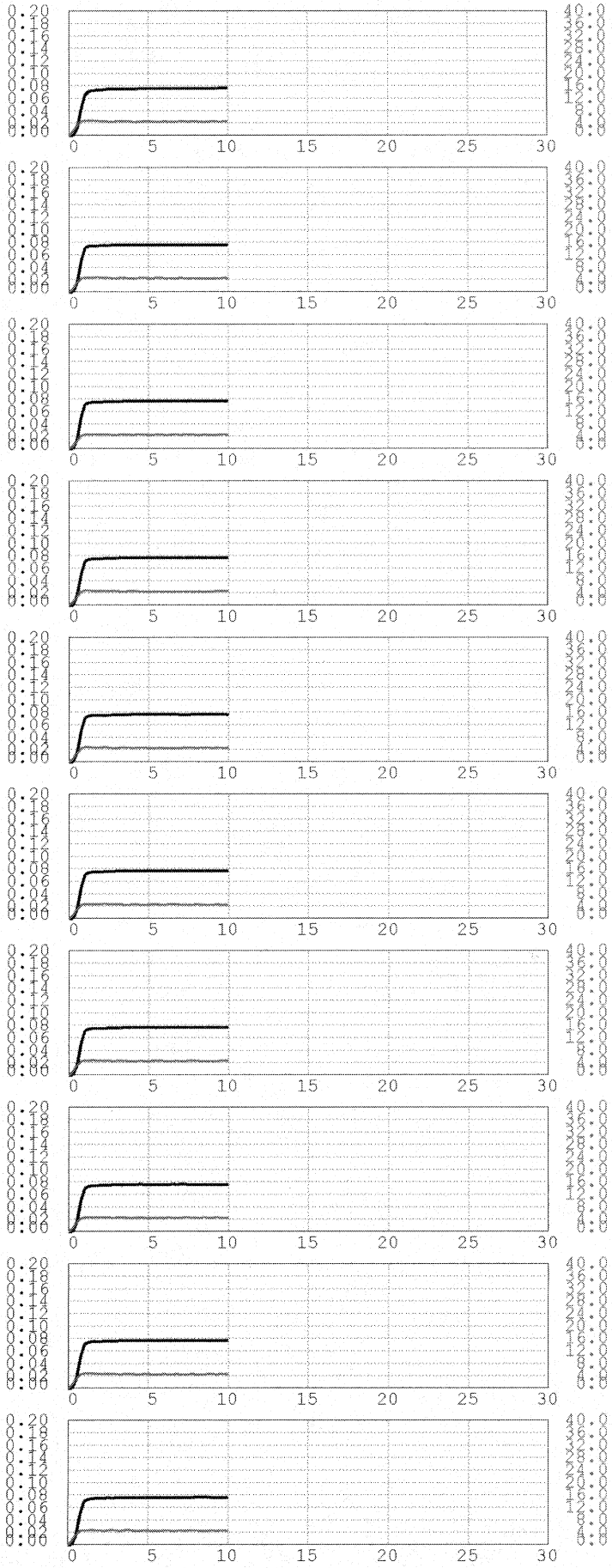
Date: 11/12/2010
Time: 09:31:56

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	09:32
CALIBRATION CHECK	PASSED	09:32
SIMULATOR VAPOR	0.077	09:33
SIMULATOR VAPOR	0.076	09:34
SIMULATOR VAPOR	0.077	09:35
SIMULATOR VAPOR	0.076	09:36
SIMULATOR VAPOR	0.076	09:37
SIMULATOR VAPOR	0.077	09:38
SIMULATOR VAPOR	0.077	09:39
SIMULATOR VAPOR	0.076	09:40
SIMULATOR VAPOR	0.077	09:41
SIMULATOR VAPOR	0.076	09:42
BLANK TEST	0.000	09:42

Average = 0.076
Std Dev = 0.0005



DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/12/2010
Time: 13:39

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.68°C
Breath Tube    = 46.60°C

SETTINGS
Lamp Voltage   = 1.72 V
Cooler Voltage = 1.71 V
Bias Voltage   = 80.6 V
Chopper Freq   = 545.0 Hz

PUMP INFO
Flow Rate = 5.820 L/M

DETECTOR INFO
PUMP    ON       OFF
MAX(V)  0.0167   0.0189
MIN(V)  0.0152   0.0173

FILTER INFO
Filter 1  0.018  Zero = true
Filter 2  0.356  Zero = true
Filter 3  1.386  Zero = true

CALIBRATION CHECK
Xq = 0.0865  0.20%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

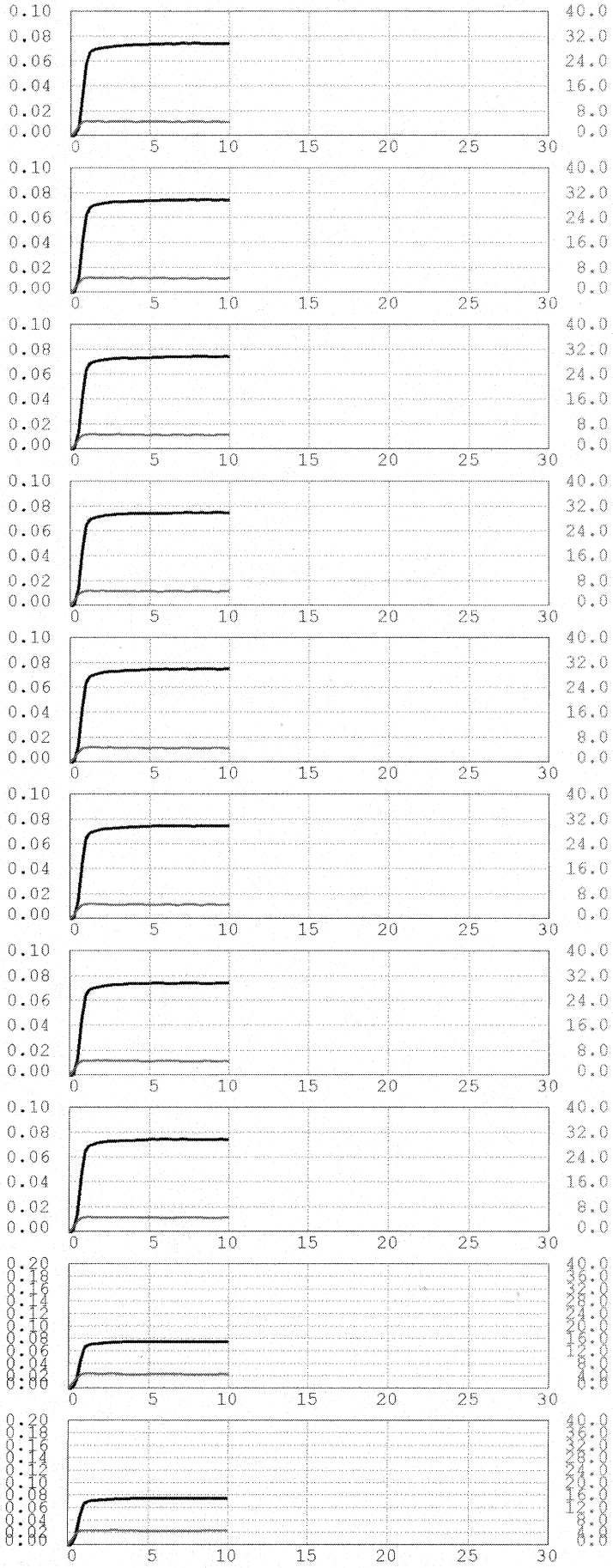
Date: 11/12/2010
Time: 13:43:29

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	13:44
CALIBRATION CHECK	PASSED	13:44
SIMULATOR VAPOR	0.075	13:44
SIMULATOR VAPOR	0.074	13:45
SIMULATOR VAPOR	0.075	13:46
SIMULATOR VAPOR	0.075	13:47
SIMULATOR VAPOR	0.075	13:48
SIMULATOR VAPOR	0.075	13:49
SIMULATOR VAPOR	0.075	13:50
SIMULATOR VAPOR	0.075	13:51
SIMULATOR VAPOR	0.076	13:52
SIMULATOR VAPOR	0.075	13:53
BLANK TEST	0.000	13:54

Average = 0.075
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

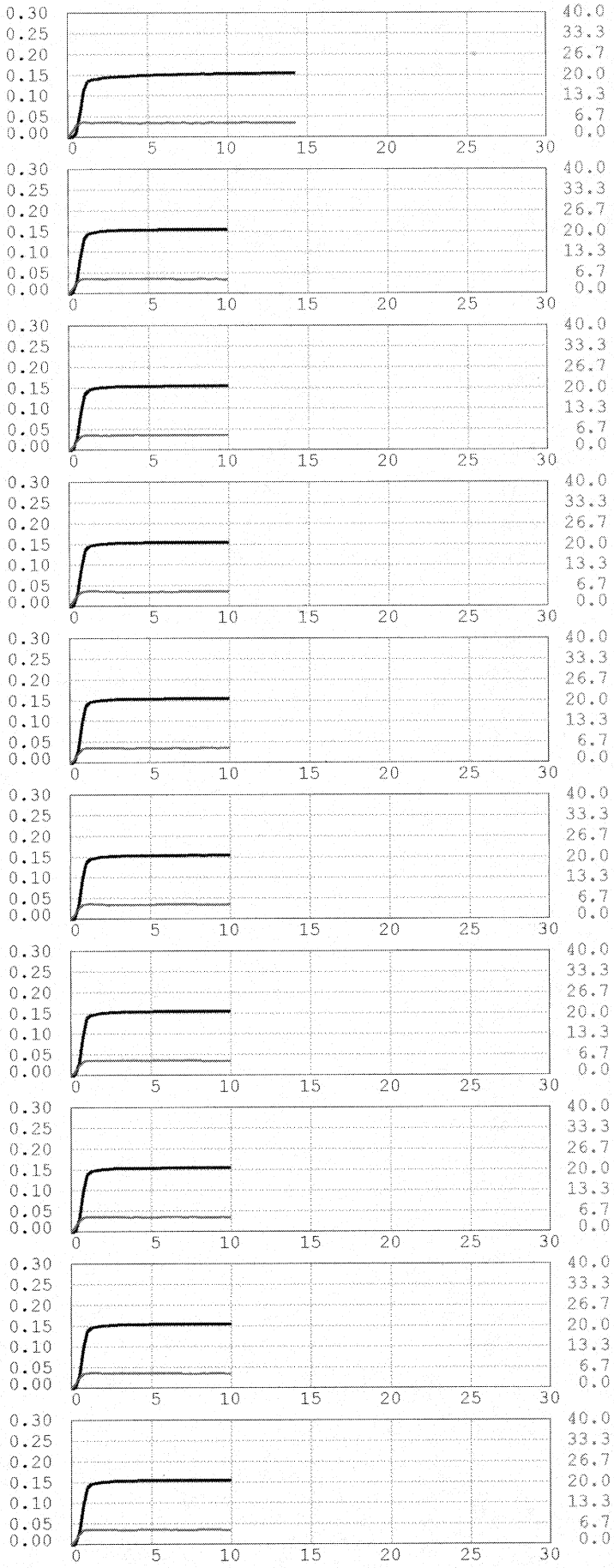
Date: 11/12/2010
Time: 13:58:44

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	13:59
CALIBRATION CHECK	PASSED	13:59
SIMULATOR VAPOR	0.155	14:00
SIMULATOR VAPOR	0.155	14:01
SIMULATOR VAPOR	0.155	14:02
SIMULATOR VAPOR	0.155	14:03
SIMULATOR VAPOR	0.155	14:04
SIMULATOR VAPOR	0.154	14:05
SIMULATOR VAPOR	0.155	14:06
SIMULATOR VAPOR	0.155	14:07
SIMULATOR VAPOR	0.155	14:08
SIMULATOR VAPOR	0.155	14:09
BLANK TEST	0.000	14:09

Average = 0.154
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

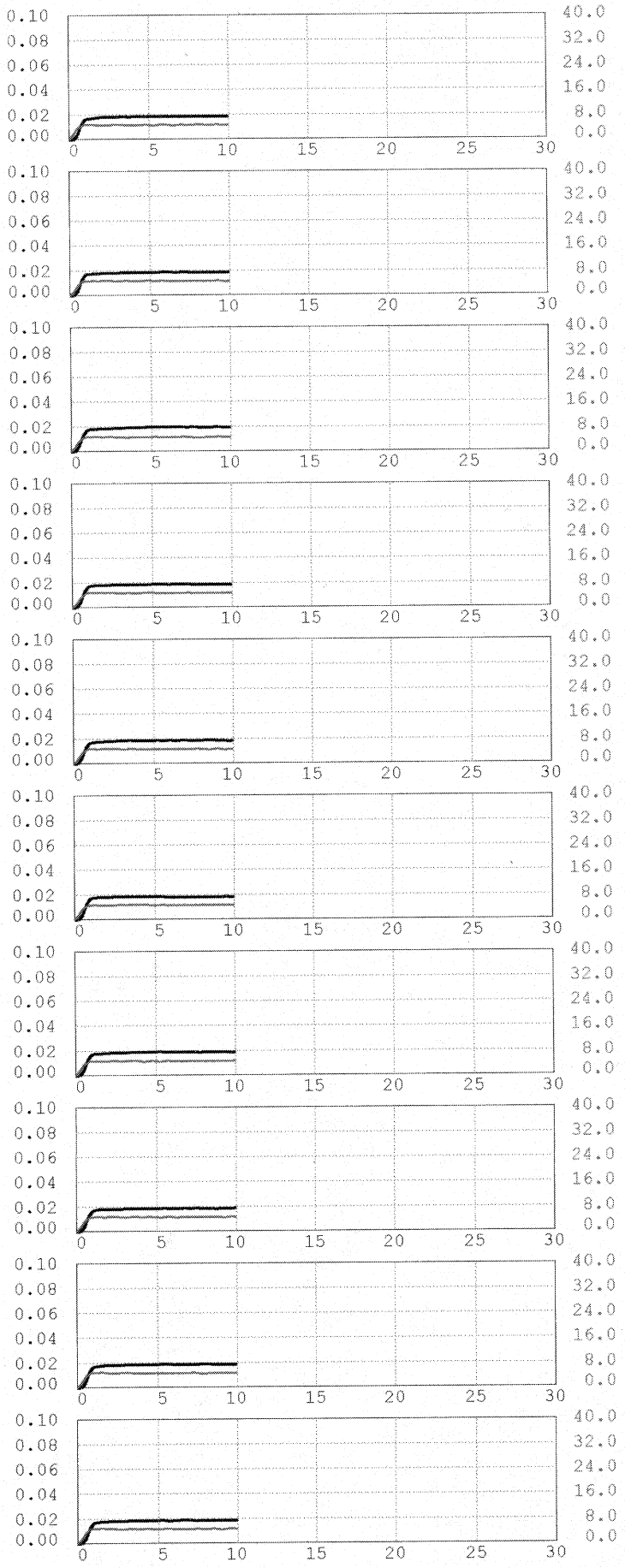
Date: 11/12/2010
Time: 14:24:59

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	14:25
CALIBRATION CHECK	PASSED	14:26
SIMULATOR VAPOR	0.019	14:26
SIMULATOR VAPOR	0.019	14:27
SIMULATOR VAPOR	0.019	14:28
SIMULATOR VAPOR	0.019	14:29
SIMULATOR VAPOR	0.019	14:30
SIMULATOR VAPOR	0.019	14:31
SIMULATOR VAPOR	0.019	14:32
SIMULATOR VAPOR	0.019	14:33
SIMULATOR VAPOR	0.019	14:34
SIMULATOR VAPOR	0.019	14:35
BLANK TEST	0.000	14:35

Average = 0.019
Std Dev = 0.0000



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

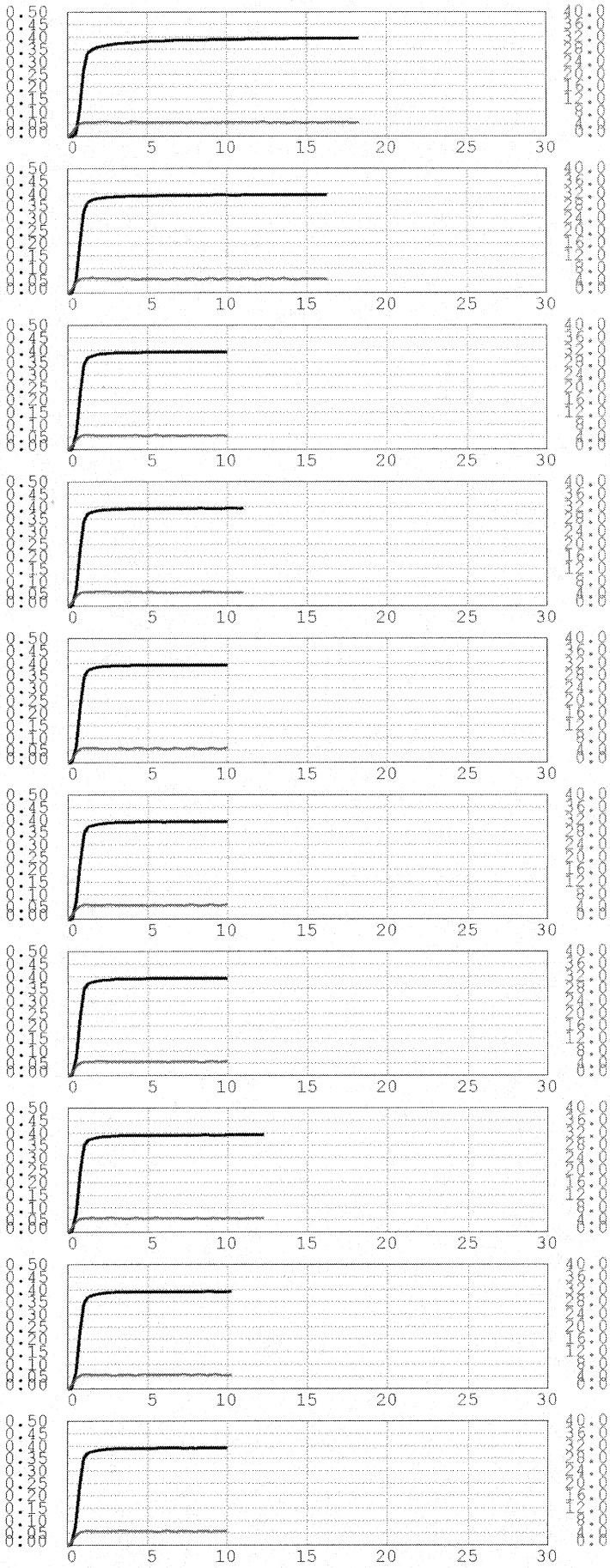
Date: 11/12/2010
Time: 14:40:00

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	14:40
CALIBRATION CHECK	PASSED	14:41
SIMULATOR VAPOR	0.392	14:41
SIMULATOR VAPOR	0.394	14:42
SIMULATOR VAPOR	0.392	14:43
SIMULATOR VAPOR	0.391	14:45
SIMULATOR VAPOR	0.391	14:46
SIMULATOR VAPOR	0.391	14:47
SIMULATOR VAPOR	0.391	14:48
SIMULATOR VAPOR	0.390	14:49
SIMULATOR VAPOR	0.390	14:50
SIMULATOR VAPOR	0.390	14:51
BLANK TEST	0.000	14:51

Average = 0.391
Std Dev = 0.0012



DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/15/2010
Time: 14:29

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.74°C
Breath Tube    = 44.22°C

SETTINGS
Lamp Voltage   = 1.72 V
Cooler Voltage = 1.71 V
Bias Voltage   = 80.6 V
Chopper Freq   = 541.6 Hz

PUMP INFO
Flow Rate = 5.689 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.2904   0.2906
MIN(V)   0.2866   0.2888

FILTER INFO
Filter 1  0.289  Zero = true
Filter 2  0.609  Zero = true
Filter 3  1.563  Zero = true

CALIBRATION CHECK
Xq = 0.0865  0.20%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

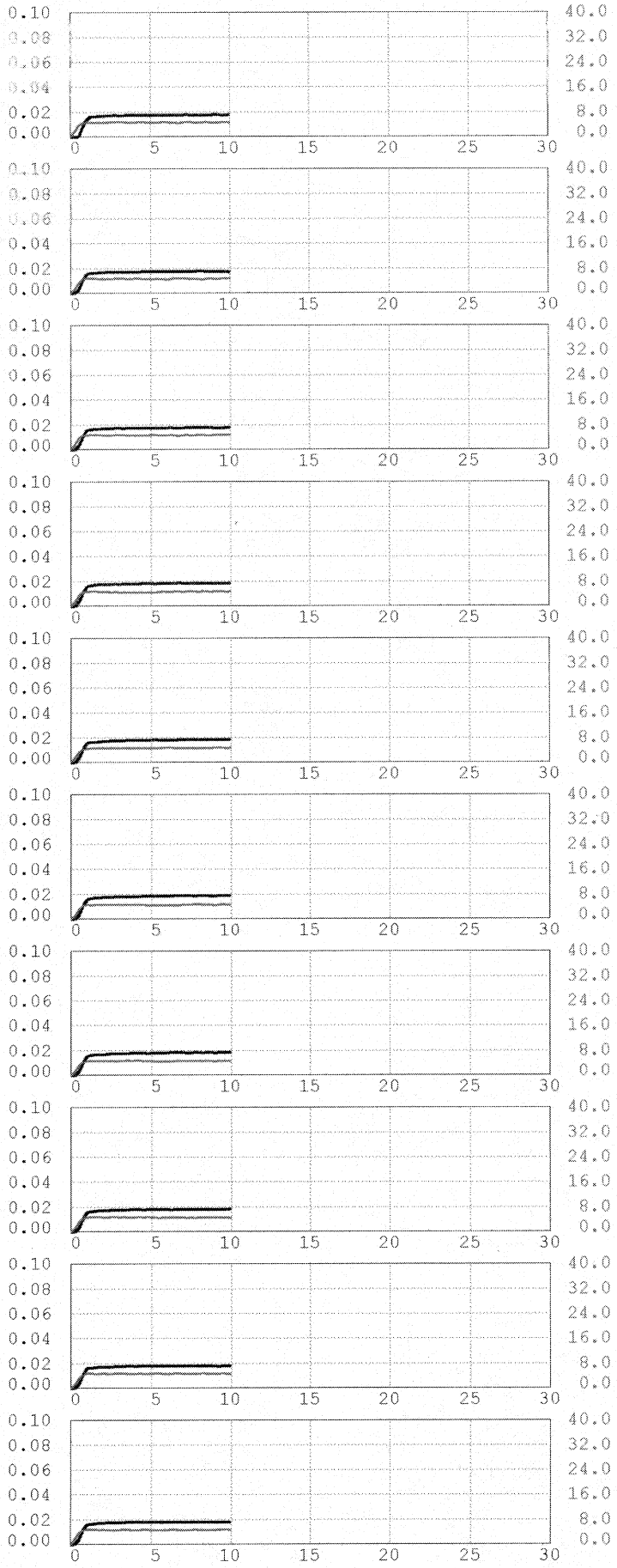
Date: 11/15/2010
Time: 14:45:59

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	14:46
CALIBRATION CHECK	PASSED	14:47
SIMULATOR VAPOR	0.019	14:47
SIMULATOR VAPOR	0.018	14:48
SIMULATOR VAPOR	0.019	14:49
SIMULATOR VAPOR	0.019	14:50
SIMULATOR VAPOR	0.019	14:51
SIMULATOR VAPOR	0.020	14:52
SIMULATOR VAPOR	0.019	14:53
SIMULATOR VAPOR	0.019	14:54
SIMULATOR VAPOR	0.019	14:55
SIMULATOR VAPOR	0.019	14:56
BLANK TEST	0.000	14:56

Average = 0.019
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

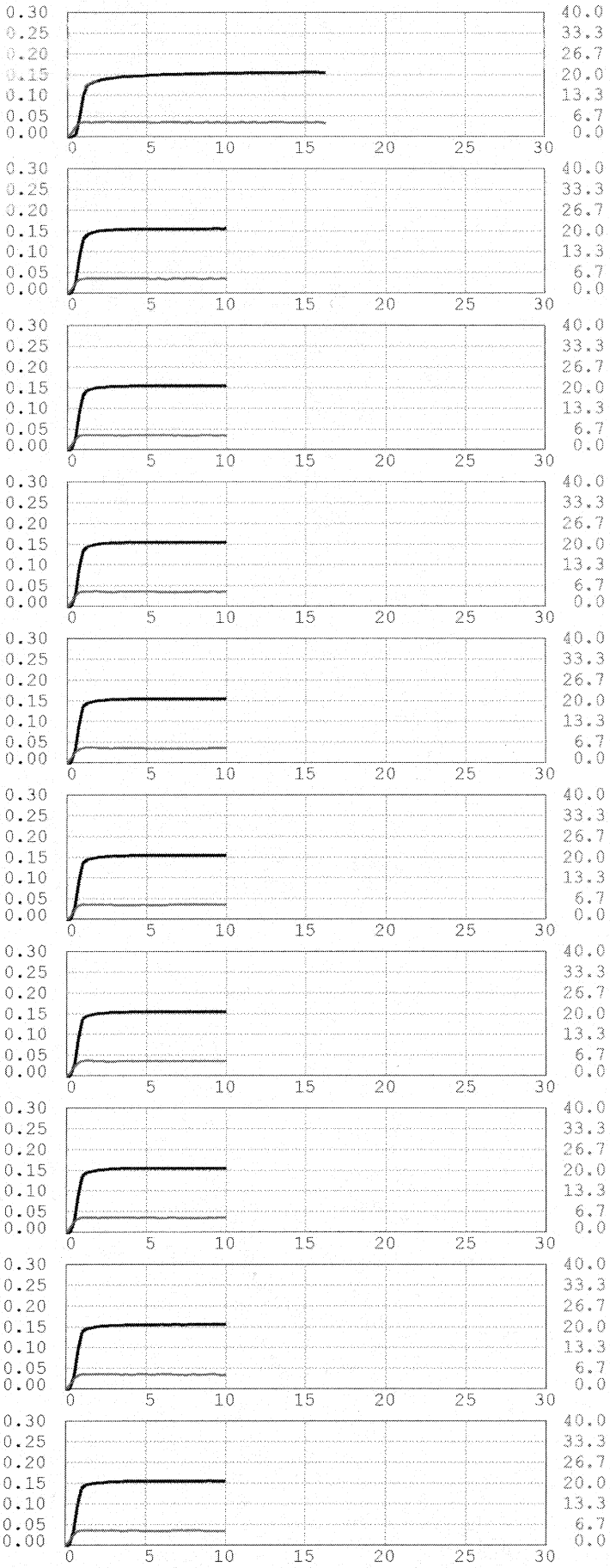
Date: 11/15/2010
Time: 15:02:39

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	15:03
CALIBRATION CHECK	PASSED	15:03
SIMULATOR VAPOR	0.156	15:04
SIMULATOR VAPOR	0.155	15:05
SIMULATOR VAPOR	0.155	15:06
SIMULATOR VAPOR	0.155	15:07
SIMULATOR VAPOR	0.155	15:08
SIMULATOR VAPOR	0.155	15:09
SIMULATOR VAPOR	0.155	15:10
SIMULATOR VAPOR	0.155	15:11
SIMULATOR VAPOR	0.156	15:12
SIMULATOR VAPOR	0.155	15:13
BLANK TEST	0.000	15:13

Average = 0.155
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

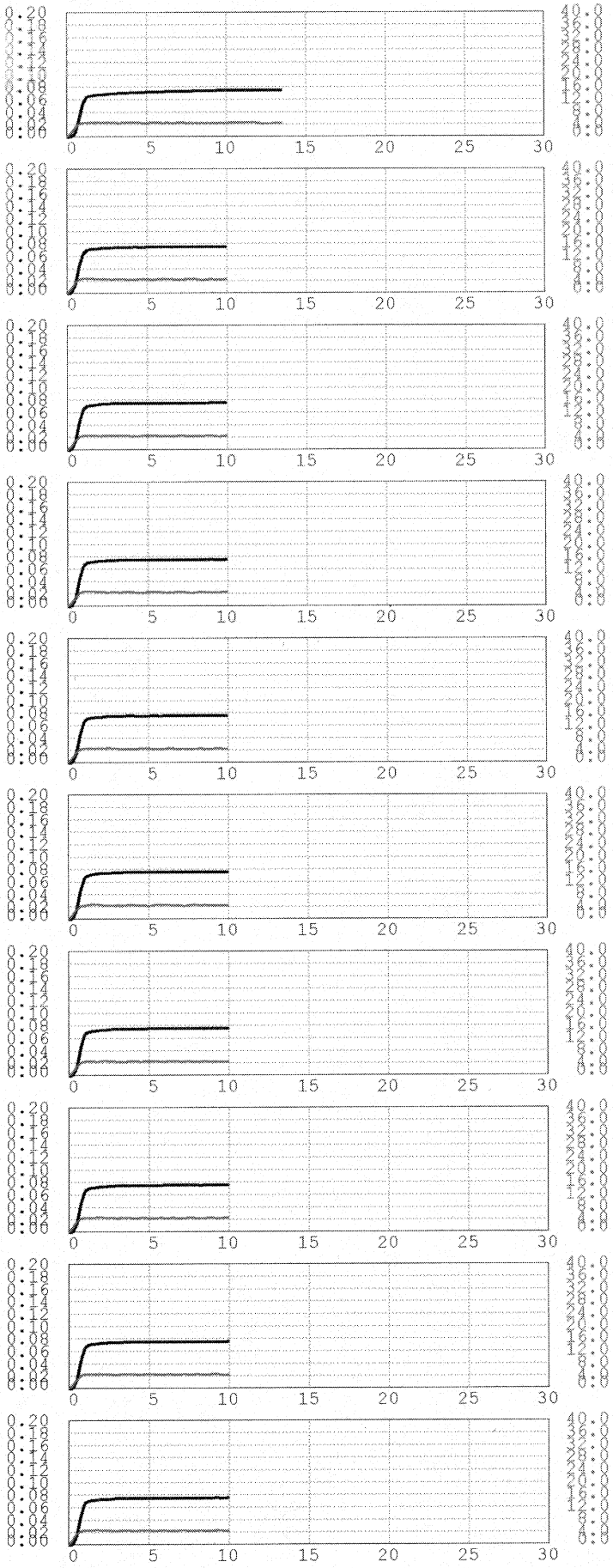
Date: 11/15/2010
Time: 15:16:32

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	15:17
CALIBRATION CHECK	PASSED	15:17
SIMULATOR VAPOR	0.075	15:17
SIMULATOR VAPOR	0.076	15:18
SIMULATOR VAPOR	0.076	15:19
SIMULATOR VAPOR	0.076	15:20
SIMULATOR VAPOR	0.076	15:21
SIMULATOR VAPOR	0.076	15:22
SIMULATOR VAPOR	0.076	15:23
SIMULATOR VAPOR	0.076	15:24
SIMULATOR VAPOR	0.076	15:25
SIMULATOR VAPOR	0.076	15:26
BLANK TEST	0.000	15:27

Average = 0.075
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

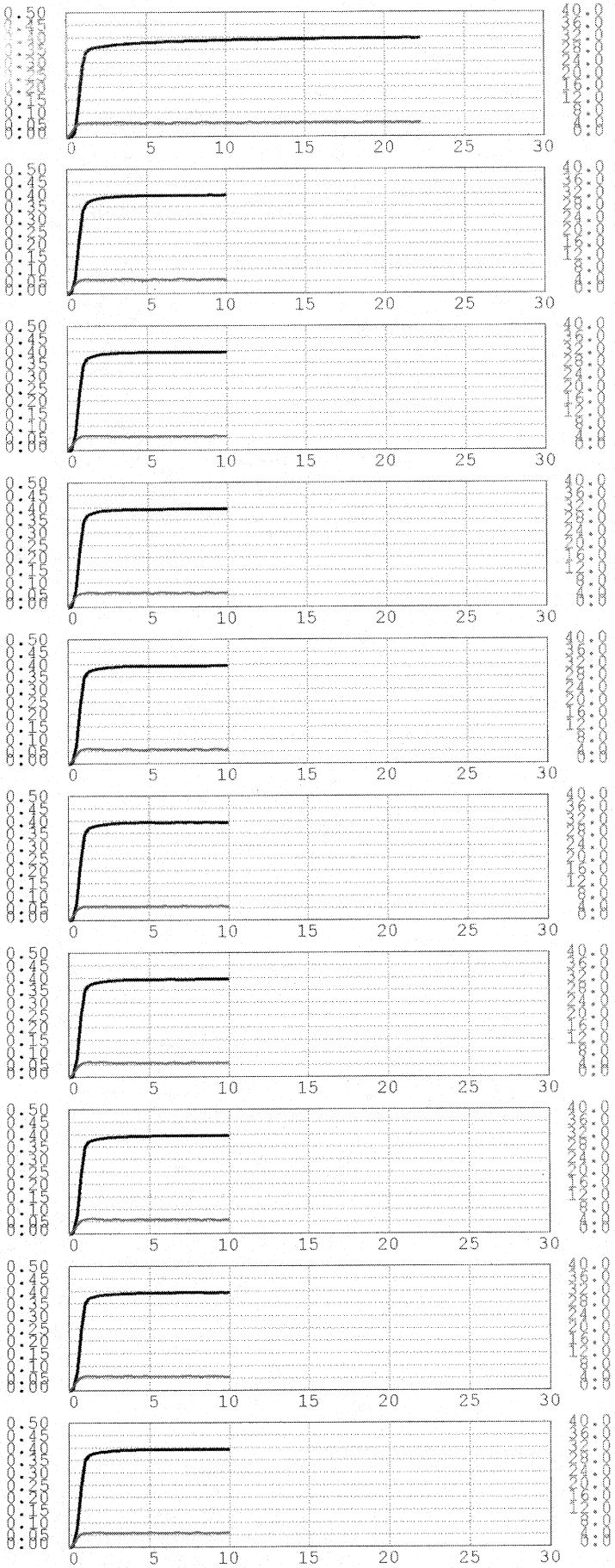
Date: 11/15/2010
Time: 15:29:25

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	15:30
CALIBRATION CHECK	PASSED	15:30
SIMULATOR VAPOR	0.394	15:30
SIMULATOR VAPOR	0.394	15:32
SIMULATOR VAPOR	0.392	15:33
SIMULATOR VAPOR	0.392	15:34
SIMULATOR VAPOR	0.391	15:35
SIMULATOR VAPOR	0.392	15:36
SIMULATOR VAPOR	0.392	15:37
SIMULATOR VAPOR	0.392	15:38
SIMULATOR VAPOR	0.391	15:39
SIMULATOR VAPOR	0.391	15:40
BLANK TEST	0.000	15:41

Average = 0.392
Std Dev = 0.0011



DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/16/2010
Time: 07:48

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.26°C
Breath Tube    = 46.65°C

SETTINGS
Lamp Voltage   = 1.72 V
Cooler Voltage = 1.71 V
Bias Voltage   = 80.6 V
Chopper Freq   = 545.6 Hz

PUMP INFO
Flow Rate = 5.842 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.0516   0.0530
MIN(V)   0.0486   0.0512

FILTER INFO
Filter 1  0.052  Zero = true
Filter 2  0.391  Zero = true
Filter 3  1.409  Zero = true

CALIBRATION CHECK
Xq = 0.0872  1.01%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

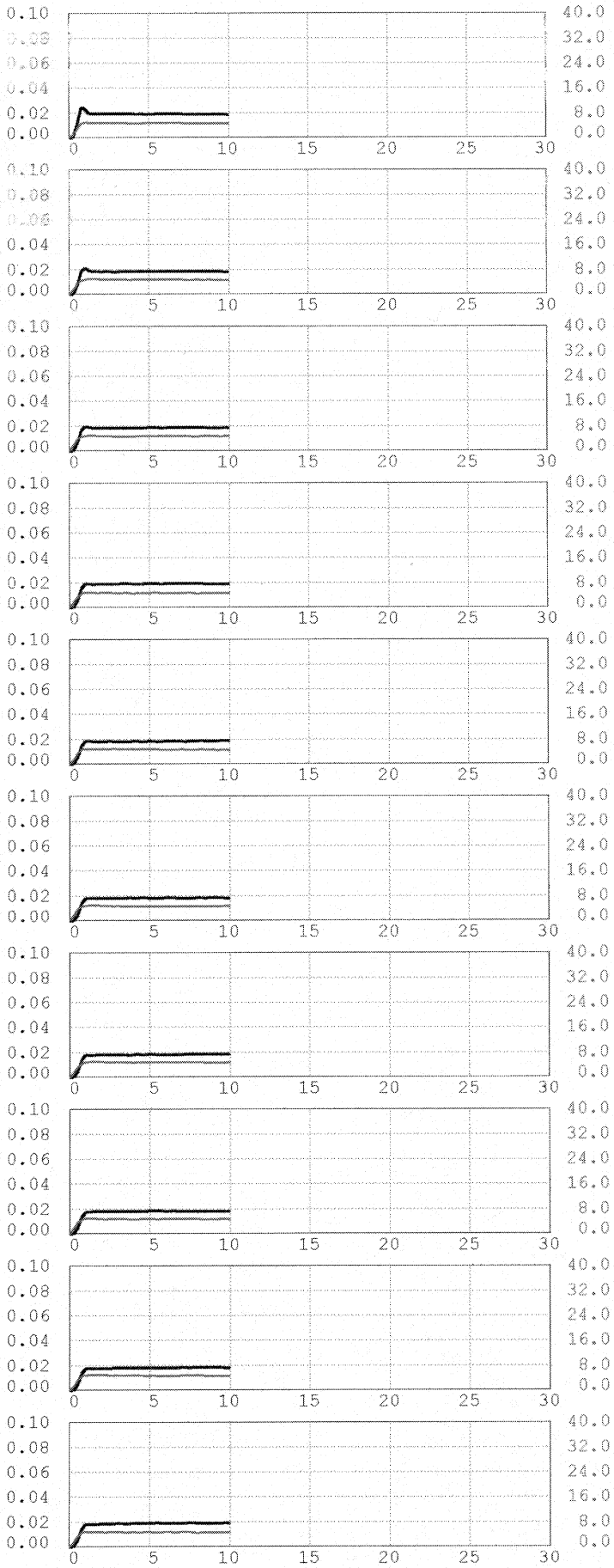
Date: 11/16/2010
Time: 09:25:29

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	09:26
CALIBRATION CHECK	PASSED	09:26
SIMULATOR VAPOR	0.019	09:26
SIMULATOR VAPOR	0.019	09:27
SIMULATOR VAPOR	0.019	09:28
SIMULATOR VAPOR	0.020	09:29
SIMULATOR VAPOR	0.020	09:30
SIMULATOR VAPOR	0.019	09:31
SIMULATOR VAPOR	0.019	09:32
SIMULATOR VAPOR	0.019	09:33
SIMULATOR VAPOR	0.019	09:34
SIMULATOR VAPOR	0.019	09:35
BLANK TEST	0.000	09:36

Average = 0.019
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

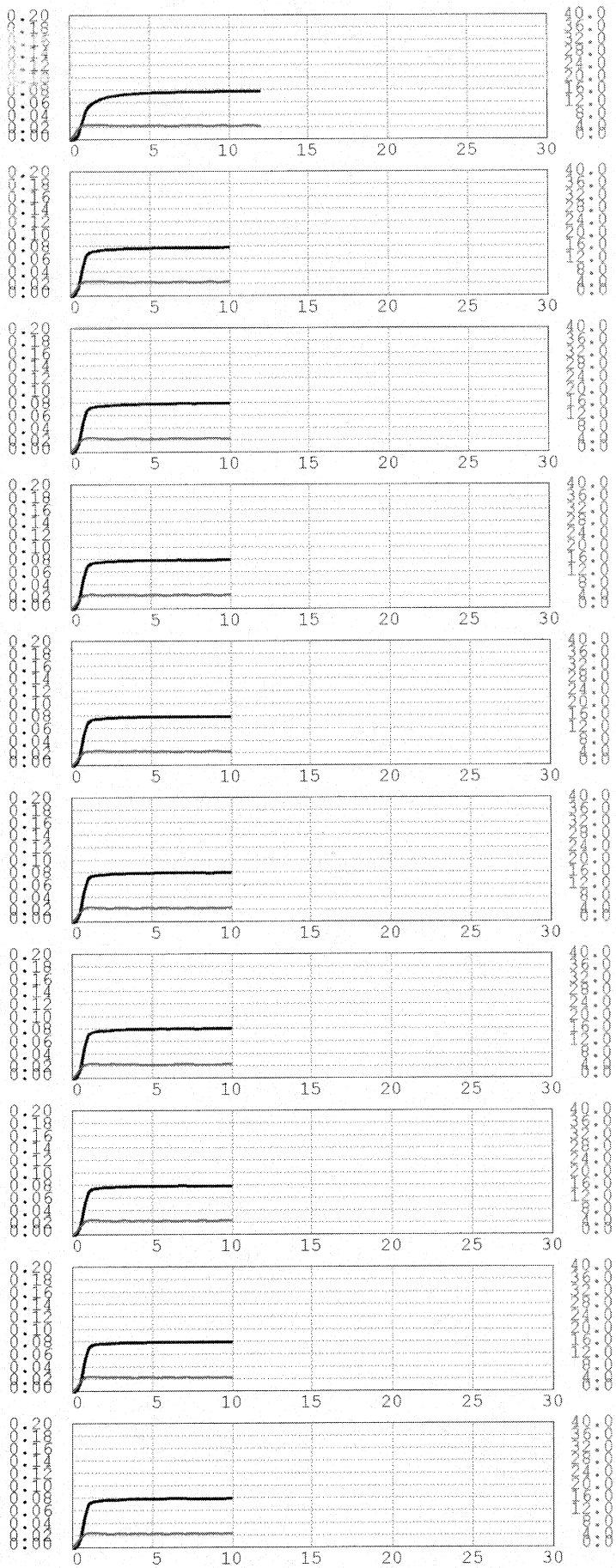
Date: 11/16/2010
Time: 09:40:32

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	09:41
CALIBRATION CHECK	PASSED	09:41
SIMULATOR VAPOR	0.078	09:41
SIMULATOR VAPOR	0.078	09:42
SIMULATOR VAPOR	0.079	09:43
SIMULATOR VAPOR	0.079	09:44
SIMULATOR VAPOR	0.079	09:45
SIMULATOR VAPOR	0.079	09:46
SIMULATOR VAPOR	0.080	09:47
SIMULATOR VAPOR	0.079	09:48
SIMULATOR VAPOR	0.080	09:49
SIMULATOR VAPOR	0.079	09:50
BLANK TEST	0.000	09:51

Average = 0.079
Std Dev = 0.0006



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

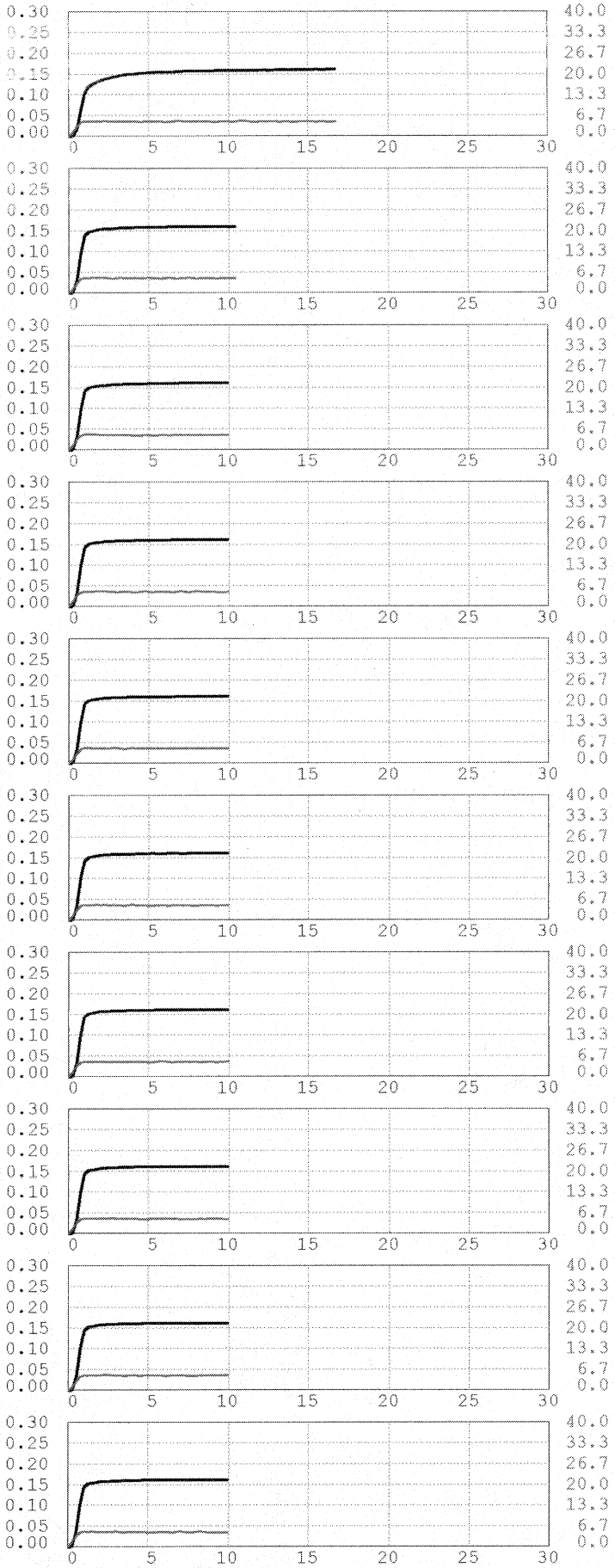
Date: 11/16/2010
Time: 09:55:11

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	09:56
CALIBRATION CHECK	PASSED	09:56
SIMULATOR VAPOR	0.161	09:56
SIMULATOR VAPOR	0.160	09:57
SIMULATOR VAPOR	0.161	09:58
SIMULATOR VAPOR	0.161	09:59
SIMULATOR VAPOR	0.161	10:00
SIMULATOR VAPOR	0.161	10:01
SIMULATOR VAPOR	0.161	10:02
SIMULATOR VAPOR	0.161	10:03
SIMULATOR VAPOR	0.162	10:04
SIMULATOR VAPOR	0.161	10:05
BLANK TEST	0.000	10:06

Average = 0.161
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

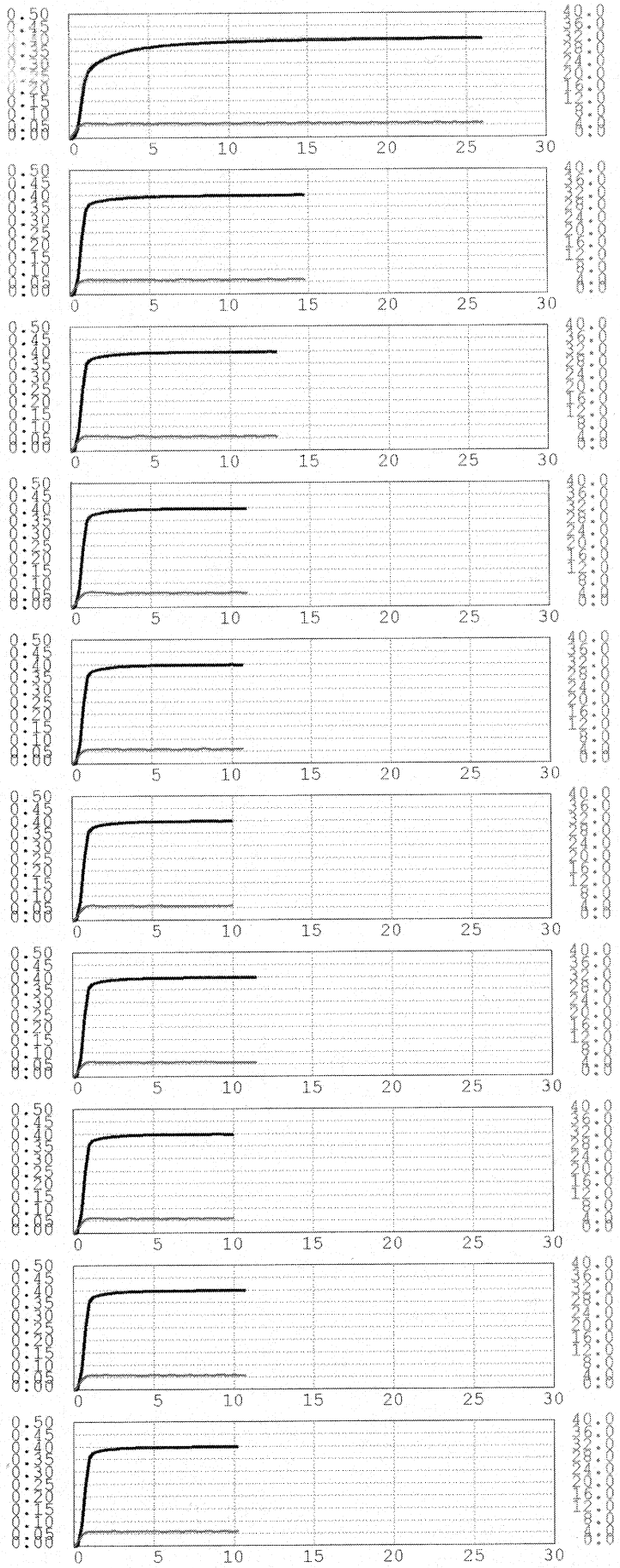
Date: 11/16/2010
Time: 10:20:28

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	10:21
CALIBRATION CHECK	PASSED	10:21
SIMULATOR VAPOR	0.396	10:22
SIMULATOR VAPOR	0.397	10:23
SIMULATOR VAPOR	0.397	10:24
SIMULATOR VAPOR	0.397	10:25
SIMULATOR VAPOR	0.396	10:26
SIMULATOR VAPOR	0.397	10:27
SIMULATOR VAPOR	0.398	10:28
SIMULATOR VAPOR	0.397	10:29
SIMULATOR VAPOR	0.397	10:30
SIMULATOR VAPOR	0.398	10:31
BLANK TEST	0.000	10:32

Average = 0.397
Std Dev = 0.0006



DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/16/2010
Time: 10:55

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.74°C
Breath Tube    = 46.41°C

SETTINGS
Lamp Voltage   = 1.72 V
Cooler Voltage = 1.71 V
Bias Voltage   = 80.7 V
Chopper Freq   = 547.4 Hz

PUMP INFO
Flow Rate = 5.769 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.0486   0.0512
MIN(V)   0.0470   0.0498

FILTER INFO
Filter 1  0.051  Zero = true
Filter 2  0.390  Zero = true
Filter 3  1.418  Zero = true

CALIBRATION CHECK
Xq = 0.0868  0.61%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 11/16/2010
Time: 11:01:14

SUPERVISOR NAME: STEVEN E HARNOIS

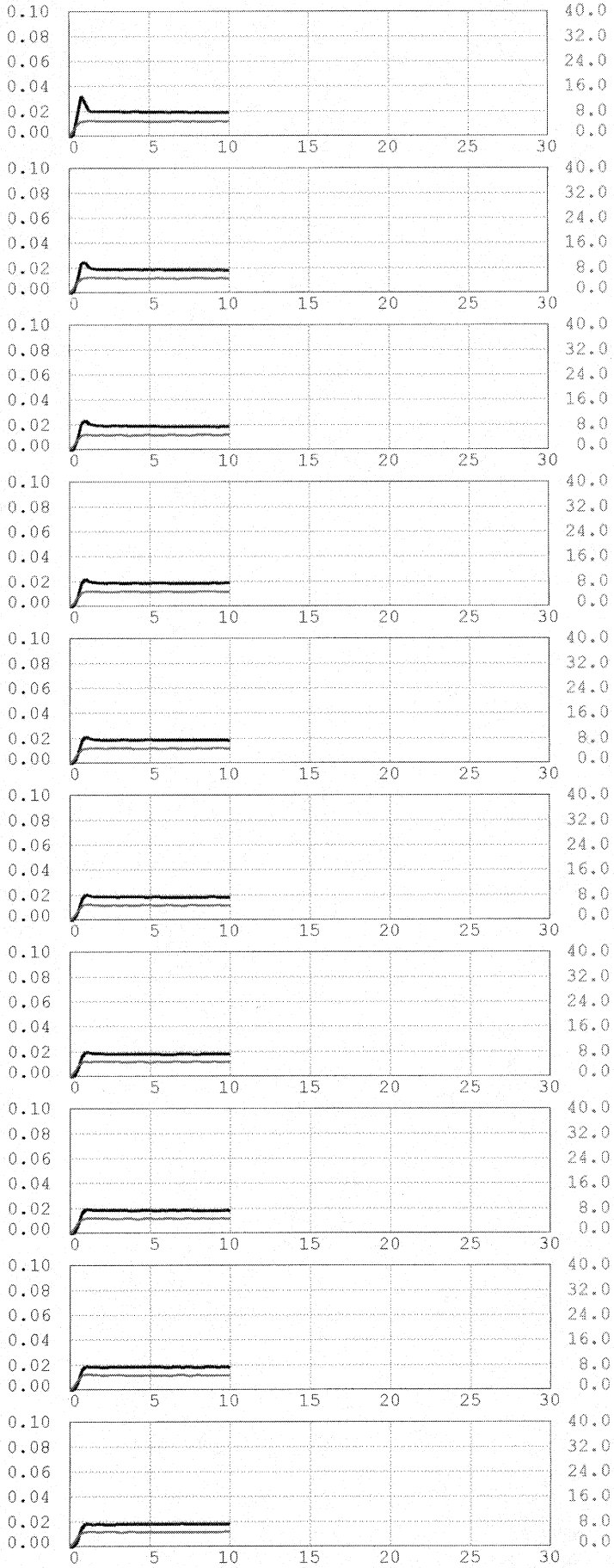
SOLUTION LOT #: 11-13-020
SOLUTION CONCENTRATION: 0.021

BLANK TEST	0.000	11:02
CALIBRATION CHECK	PASSED	11:02
Xq = 0.0873 (1.21%)		
SIMULATOR VAPOR	0.019	11:02
X[1] = 0.0199 (0.0001) (0.0015)		
SIMULATOR VAPOR	0.019	11:03
X[1] = 0.0193 (-0.0001) (0.0007)		
SIMULATOR VAPOR	0.019	11:04
X[1] = 0.0195 (0.0000) (0.0003)		
SIMULATOR VAPOR	0.019	11:05
X[1] = 0.0197 (0.0000) (0.0008)		
SIMULATOR VAPOR	0.019	11:06
X[1] = 0.0193 (0.0000) (0.0007)		
SIMULATOR VAPOR	0.019	11:07
X[1] = 0.0191 (-0.0002) (0.0007)		
SIMULATOR VAPOR	0.018	11:08
X[1] = 0.0188 (-0.0007) (-0.0001)		
SIMULATOR VAPOR	0.019	11:09
X[1] = 0.0190 (-0.0004) (-0.0001)		
SIMULATOR VAPOR	0.019	11:10
X[1] = 0.0190 (-0.0006) (0.0009)		
SIMULATOR VAPOR	0.019	11:11
X[1] = 0.0190 (-0.0005) (0.0005)		
BLANK TEST	0.000	11:12

Average out of range!

Average = 0.018
Std Dev = 0.0003

Avg of X1 is .01926
.021 - 10% = .01890
Avg is greater then
Minimum Passed
11/16/10



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

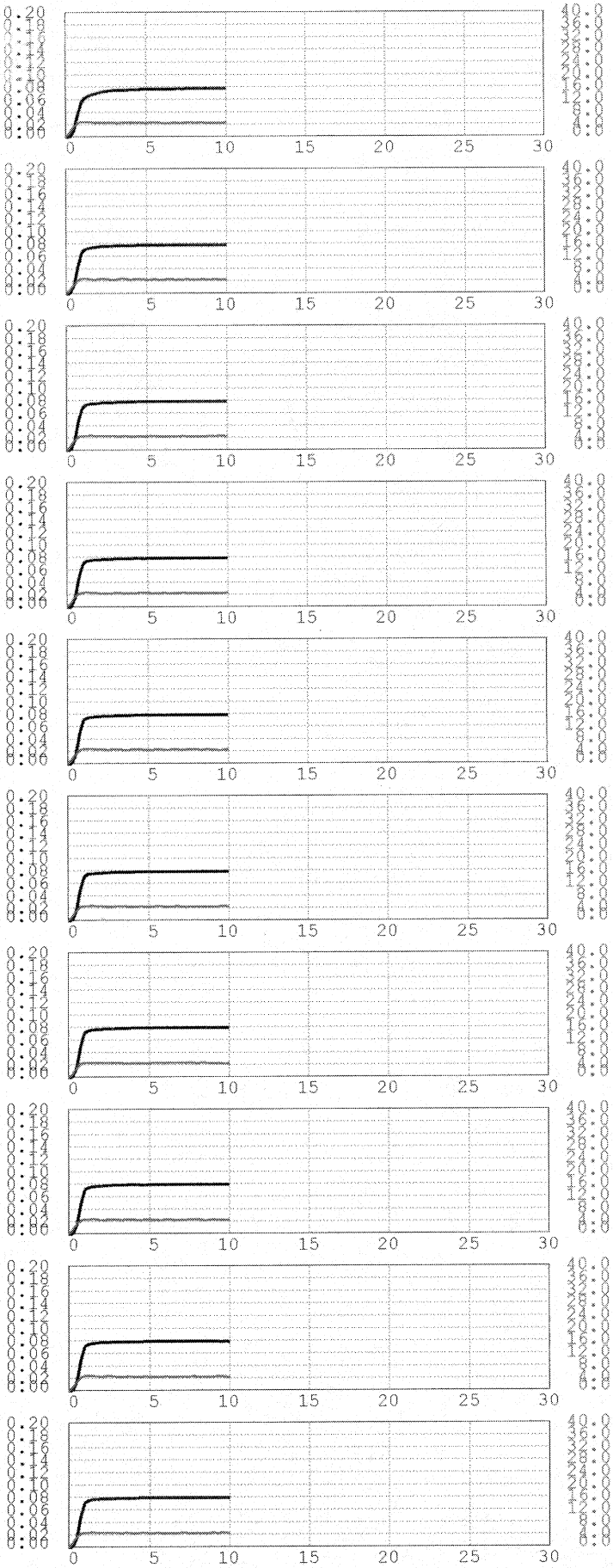
Date: 11/16/2010
Time: 11:17:53

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	11:18
CALIBRATION CHECK	PASSED	11:18
SIMULATOR VAPOR	0.078	11:19
SIMULATOR VAPOR	0.078	11:20
SIMULATOR VAPOR	0.079	11:21
SIMULATOR VAPOR	0.079	11:22
SIMULATOR VAPOR	0.079	11:23
SIMULATOR VAPOR	0.079	11:24
SIMULATOR VAPOR	0.079	11:25
SIMULATOR VAPOR	0.079	11:26
SIMULATOR VAPOR	0.079	11:27
SIMULATOR VAPOR	0.079	11:28
BLANK TEST	0.000	11:28

Average = 0.078
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

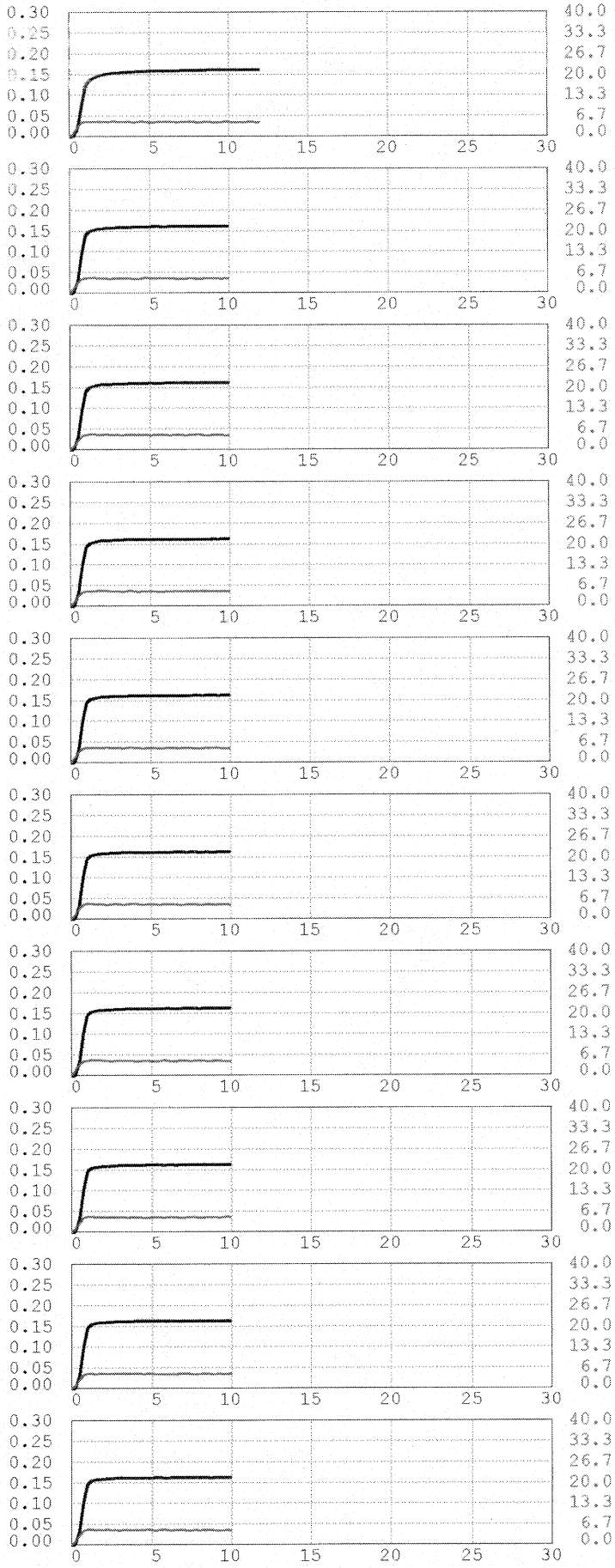
Date: 11/16/2010
Time: 11:44:16

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	11:45
CALIBRATION CHECK	PASSED	11:45
SIMULATOR VAPOR	0.161	11:45
SIMULATOR VAPOR	0.161	11:46
SIMULATOR VAPOR	0.161	11:47
SIMULATOR VAPOR	0.162	11:48
SIMULATOR VAPOR	0.162	11:49
SIMULATOR VAPOR	0.162	11:50
SIMULATOR VAPOR	0.162	11:51
SIMULATOR VAPOR	0.162	11:52
SIMULATOR VAPOR	0.162	11:53
SIMULATOR VAPOR	0.162	11:54
BLANK TEST	0.000	11:55

Average = 0.161
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

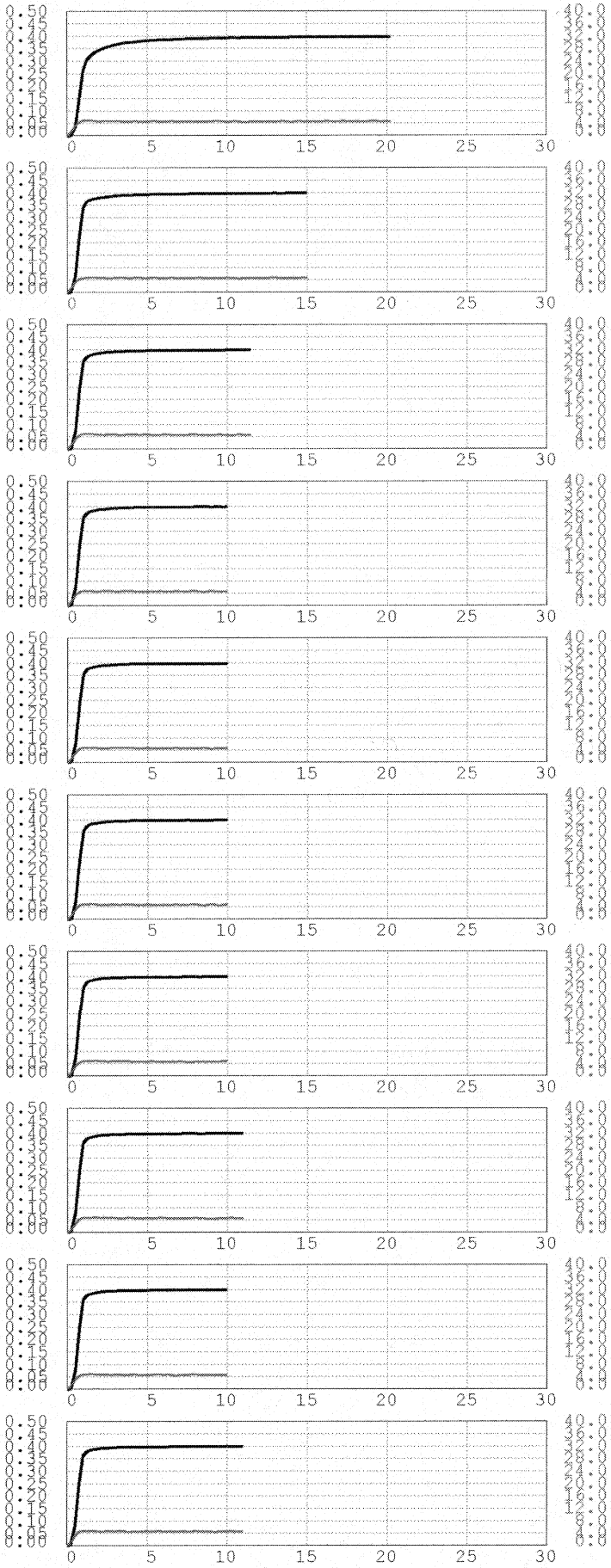
Date: 11/16/2010
Time: 11:58:04

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	11:58
CALIBRATION CHECK	PASSED	11:59
SIMULATOR VAPOR	0.397	11:59
SIMULATOR VAPOR	0.397	12:00
SIMULATOR VAPOR	0.397	12:01
SIMULATOR VAPOR	0.397	12:02
SIMULATOR VAPOR	0.395	12:03
SIMULATOR VAPOR	0.396	12:04
SIMULATOR VAPOR	0.397	12:05
SIMULATOR VAPOR	0.396	12:07
SIMULATOR VAPOR	0.398	12:08
SIMULATOR VAPOR	0.397	12:09
BLANK TEST	0.000	12:09

Average = 0.396
Std Dev = 0.0008



Section 5: Interference

DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location:
Calibration Date: 11/09/2010
Certification Date: 11/09/2010
Installation Date: 11/09/2010
Test Date: 11/10/2010
Time: 07:26

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.91°C
Breath Tube    = 47.95°C

SETTINGS
Lamp Voltage   = 1.72 V
Cooler Voltage = 1.71 V
Bias Voltage   = 80.7 V
Chopper Freq   = 547.4 Hz

PUMP INFO
Flow Rate = 5.790 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.0215   0.0209
MIN(V)   0.0165   0.0187

FILTER INFO
Filter 1  0.020  Zero = true
Filter 2  0.357  Zero = true
Filter 3  1.394  Zero = true

CALIBRATION CHECK
Xq = 0.0865  0.20%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 11/10/2010
Time: 08:03:53

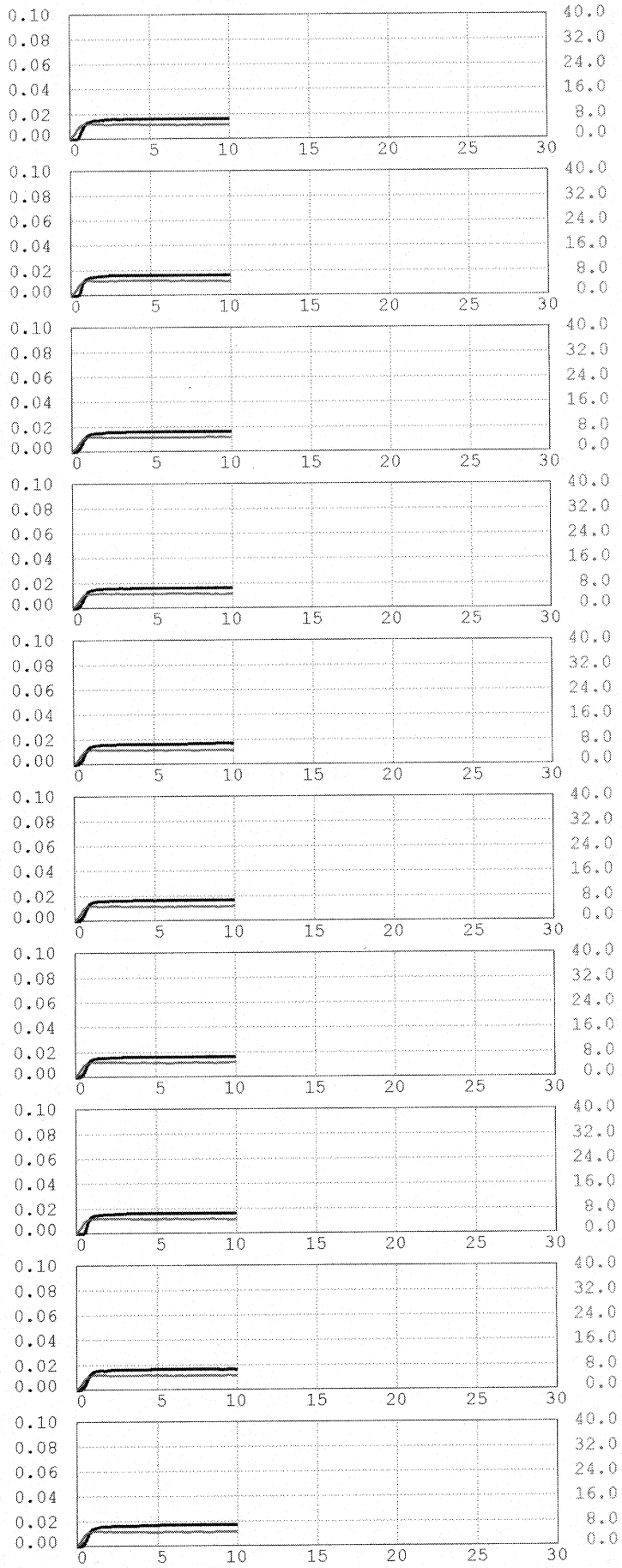
SUPERVISOR NAME: STEVEN E HARNOIS

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

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

Average out of range!

.04 MeOH in H_2O 4/6/11 [illegible]



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 11/10/2010
Time: 08:16:28

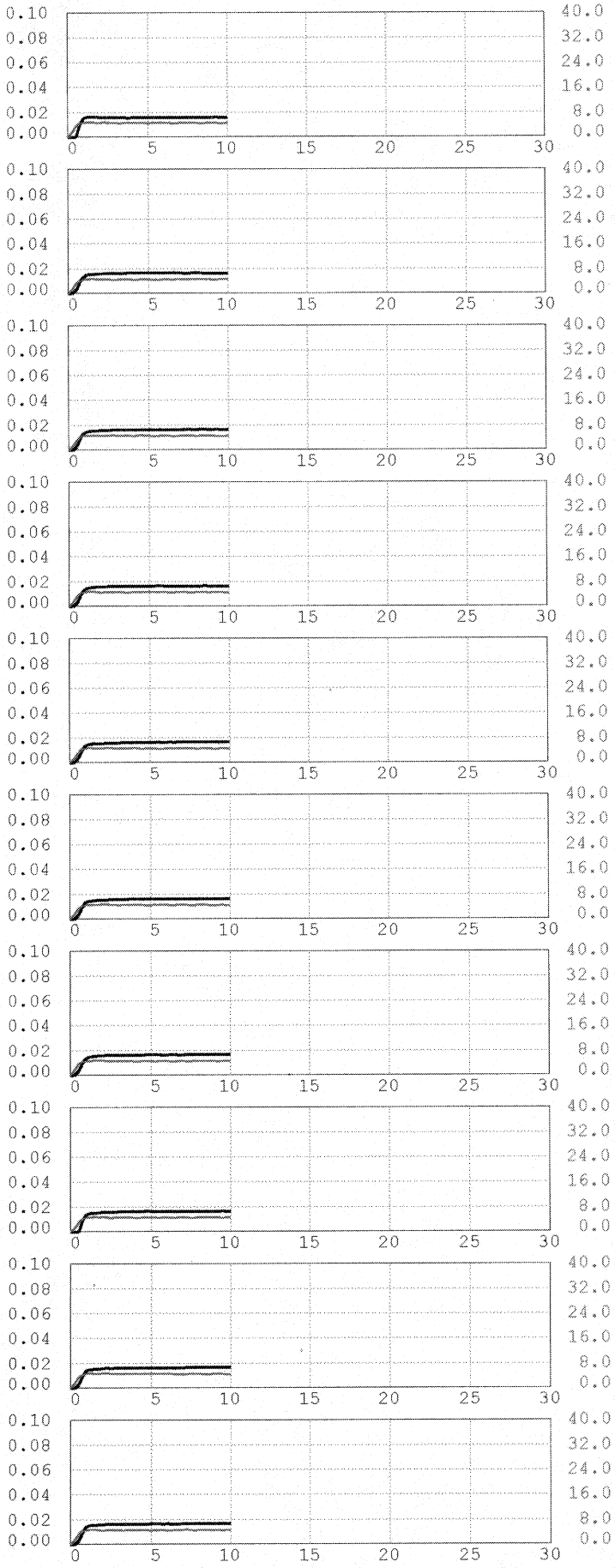
SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	08:17
CALIBRATION CHECK	PASSED	08:17
SIMULATOR VAPOR	INTERFERENCE	08:17
SIMULATOR VAPOR	INTERFERENCE	08:18
SIMULATOR VAPOR	INTERFERENCE	08:19
SIMULATOR VAPOR	INTERFERENCE	08:20
SIMULATOR VAPOR	INTERFERENCE	08:21
SIMULATOR VAPOR	INTERFERENCE	08:22
SIMULATOR VAPOR	INTERFERENCE	08:23
SIMULATOR VAPOR	INTERFERENCE	08:24
SIMULATOR VAPOR	INTERFERENCE	08:25
SIMULATOR VAPOR	INTERFERENCE	08:26
BLANK TEST	0.000	08:27

Average out of range!

04 IPA
in H_2O
4/6/11



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

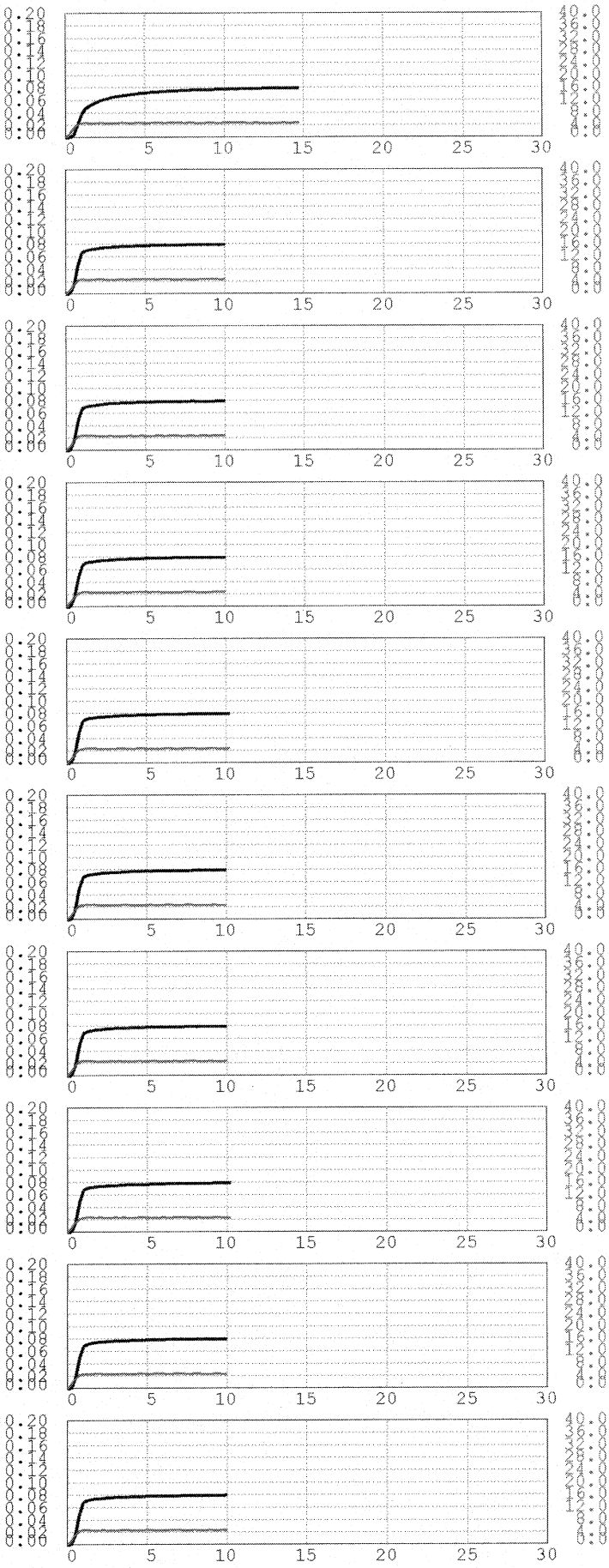
Date: 11/10/2010
Time: 08:33:41

SUPERVISOR NAME: STEVEN E HARNOIS

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

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

01 Acetone
in .08 EtOH
4/6/11



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 11/10/2010
Time: 08:52:32

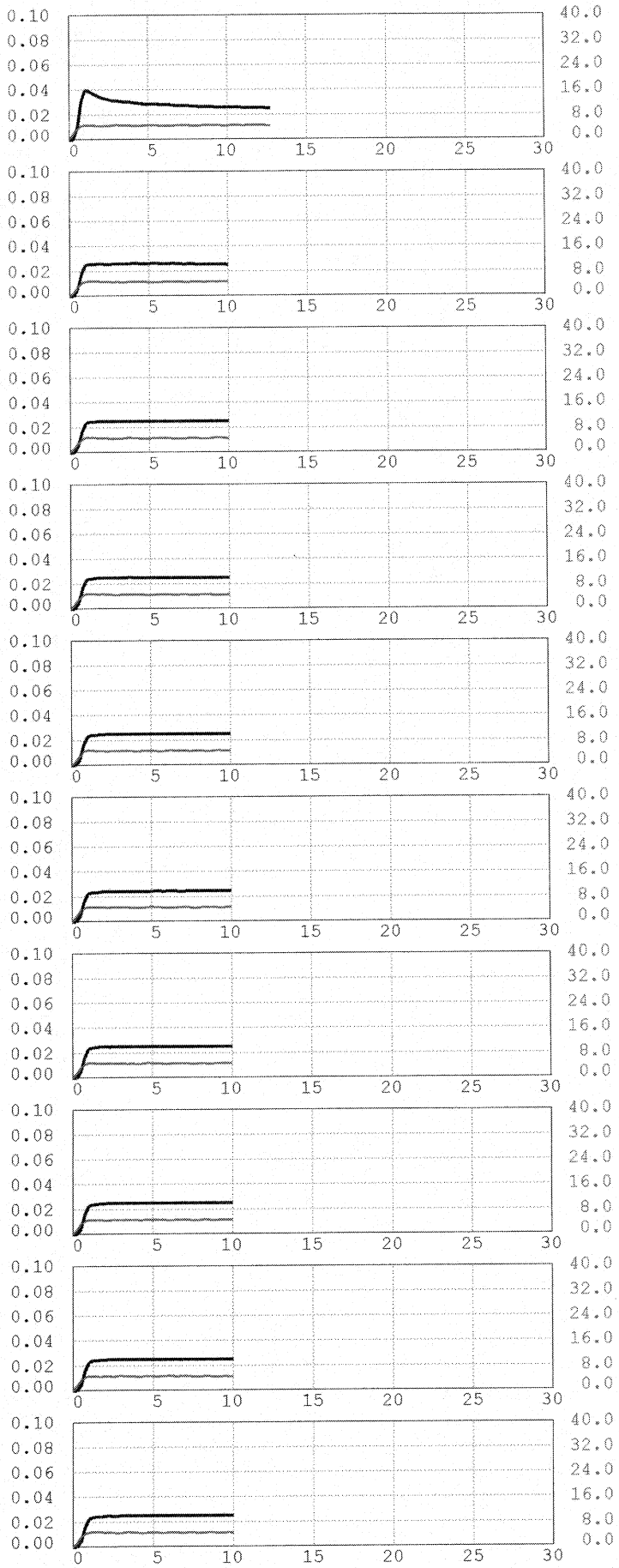
SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	08:53
CALIBRATION CHECK	PASSED	08:53
SIMULATOR VAPOR	INTERFERENCE	08:53
SIMULATOR VAPOR	INTERFERENCE	08:54
SIMULATOR VAPOR	INTERFERENCE	08:55
SIMULATOR VAPOR	INTERFERENCE	08:56
SIMULATOR VAPOR	INTERFERENCE	08:57
SIMULATOR VAPOR	INTERFERENCE	08:58
SIMULATOR VAPOR	INTERFERENCE	08:59
SIMULATOR VAPOR	INTERFERENCE	09:00
SIMULATOR VAPOR	INTERFERENCE	09:01
SIMULATOR VAPOR	INTERFERENCE	09:02
BLANK TEST	0.000	09:03

Average out of range!

.02 Acetone
04 EtOH
4/6/11



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 11/10/2010
Time: 09:07:22

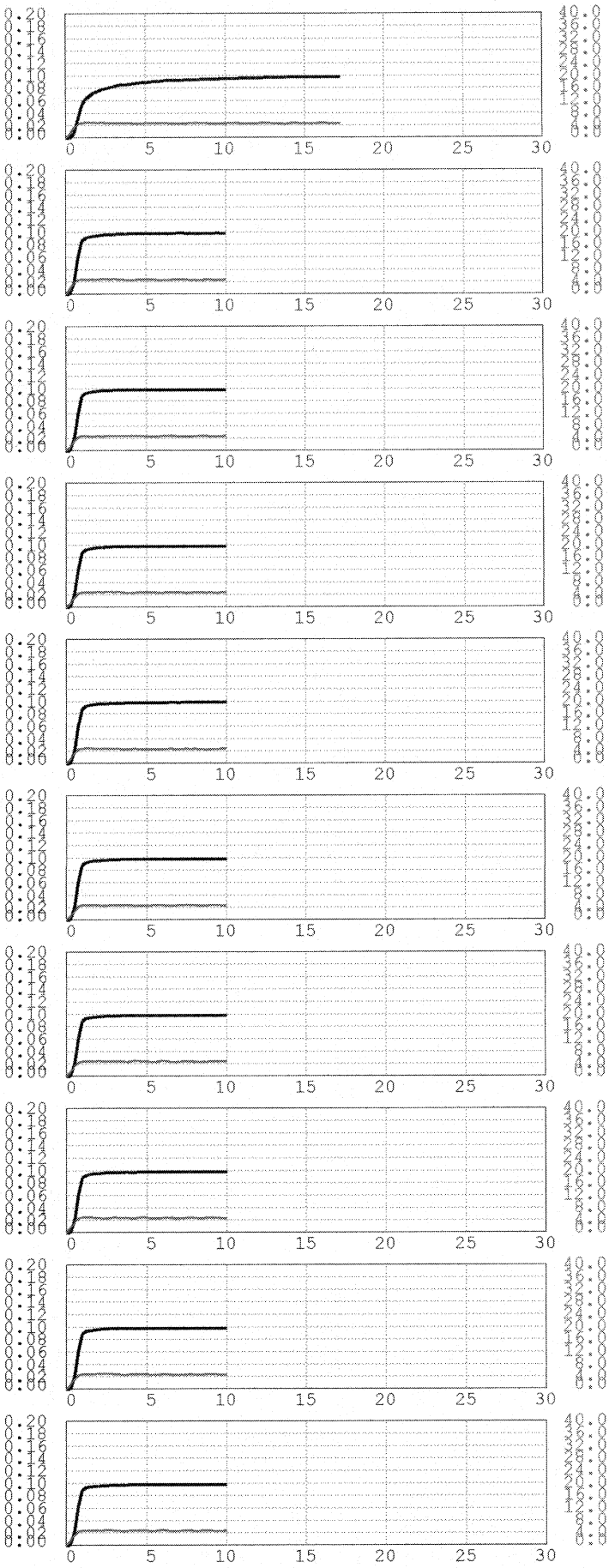
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-10-08M4
SOLUTION CONCENTRATION: 0.040

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

Average out of range!

0.04MeOH
in 0.08EtOH
4/7/11



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 11/10/2010
Time: 09:29:39

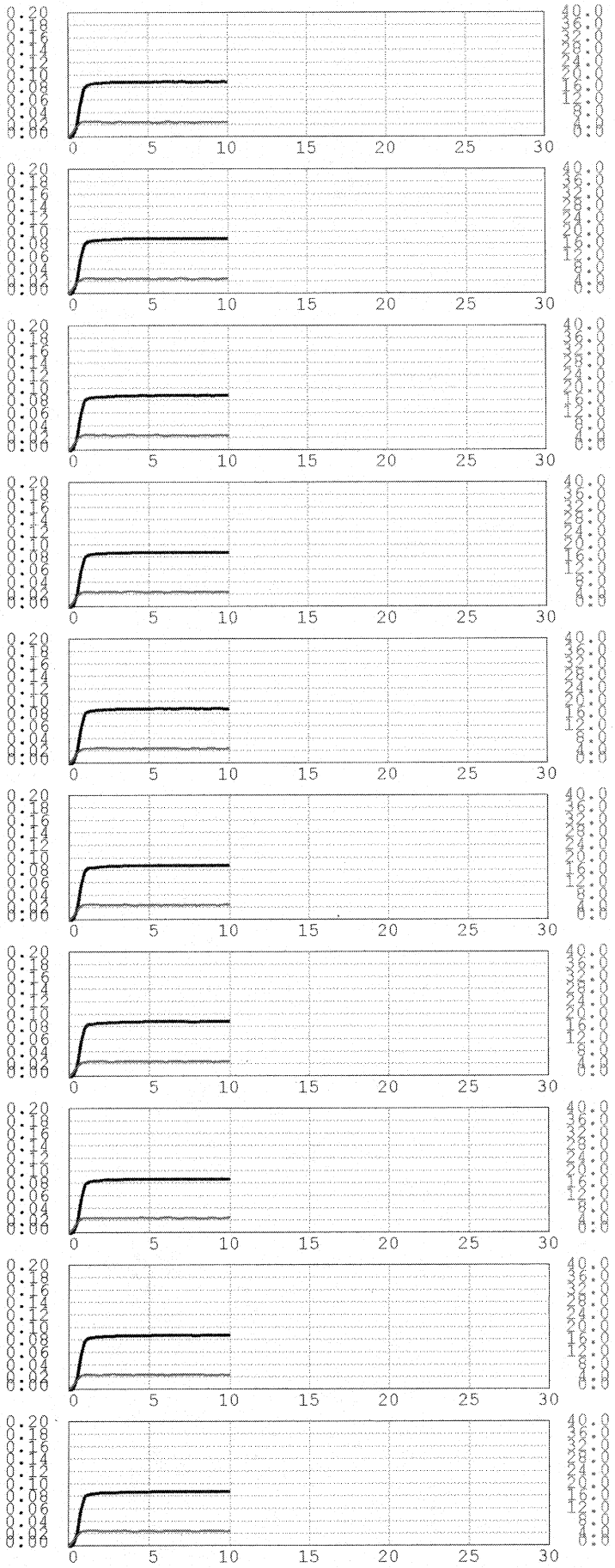
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 09-30-08I
SOLUTION CONCENTRATION: 0.080

BLANK TEST	0.000	09:30
CALIBRATION CHECK	PASSED	09:30
SIMULATOR VAPOR	INTERFERENCE	09:30
SIMULATOR VAPOR	INTERFERENCE	09:31
SIMULATOR VAPOR	INTERFERENCE	09:32
SIMULATOR VAPOR	INTERFERENCE	09:33
SIMULATOR VAPOR	INTERFERENCE	09:34
SIMULATOR VAPOR	INTERFERENCE	09:35
SIMULATOR VAPOR	INTERFERENCE	09:36
SIMULATOR VAPOR	INTERFERENCE	09:38
SIMULATOR VAPOR	INTERFERENCE	09:38
SIMULATOR VAPOR	INTERFERENCE	09:39
BLANK TEST	0.000	09:40

Average out of range!

.04 IPA
in .08 EtOH
4/7/11



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

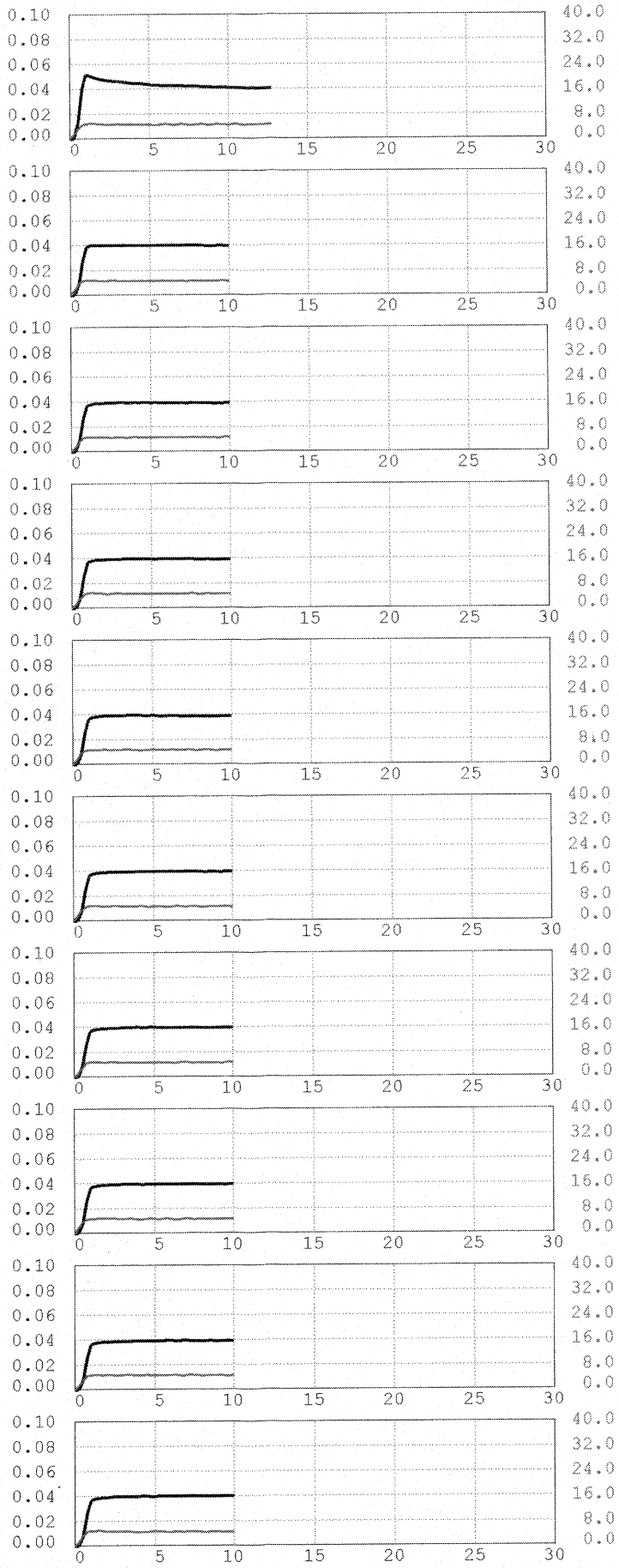
Date: 11/10/2010
Time: 09:42:55

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	09:43
CALIBRATION CHECK	PASSED	09:43
SIMULATOR VAPOR	INTERFERENCE	09:44
SIMULATOR VAPOR	INTERFERENCE	09:45
SIMULATOR VAPOR	INTERFERENCE	09:46
SIMULATOR VAPOR	INTERFERENCE	09:47
SIMULATOR VAPOR	INTERFERENCE	09:48
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
BLANK TEST	0.000	09:53

.01 Acetone
in .04 ETOH
4/7/11



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

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

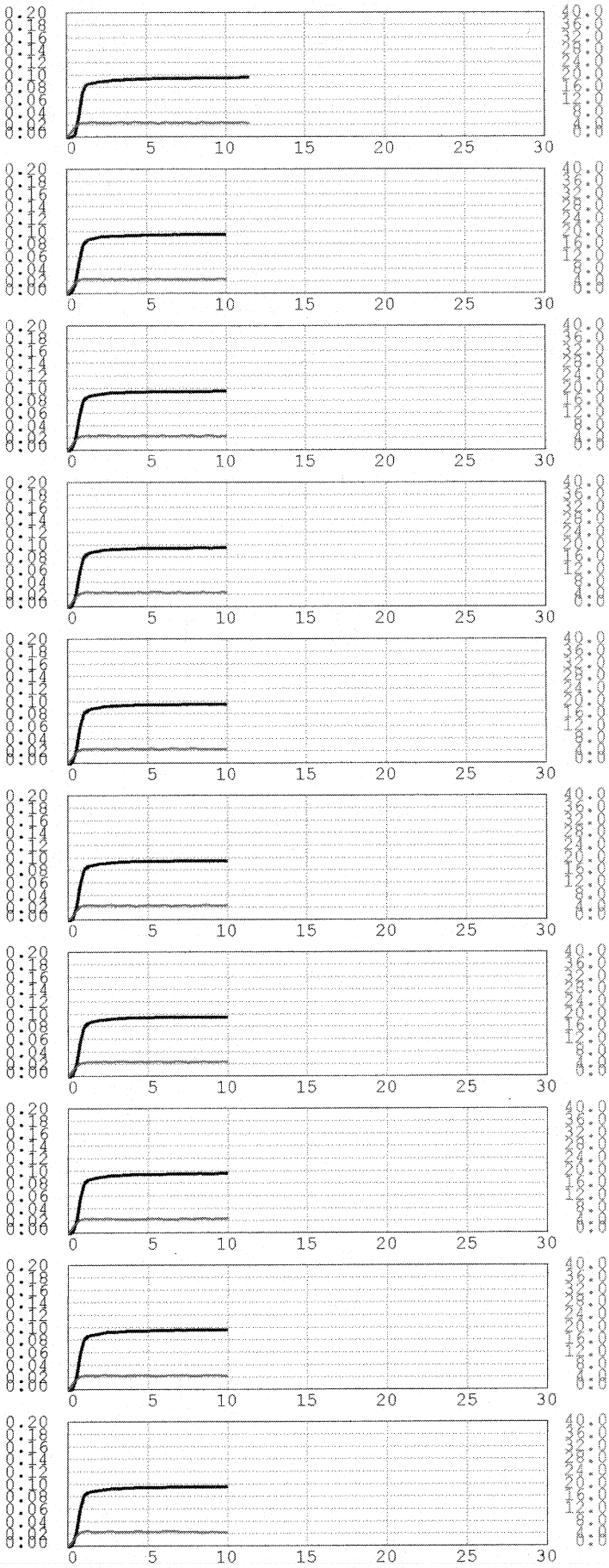
Date: 07/12/2010
Time: 09:51:15

SUPERVISOR NAME: SEH TEST CAL CHECK

SOLUTION LOT #: 10-28-100
SOLUTION CONCENTRATION: 0.100

BLANK TEST		0.000	09:52
CALIBRATION CHECK		PASSED	09:52
Xq = 0.0913 (1.06%)			
SIMULATOR VAPOR		0.096	09:52
X[1] = 0.0969	(-0.0004)	(0.0003)	
SIMULATOR VAPOR		0.096	09:53
X[1] = 0.0964	(-0.0012)	(0.0002)	
SIMULATOR VAPOR		0.096	09:54
X[1] = 0.0960	(-0.0013)	(0.0001)	
SIMULATOR VAPOR		0.096	09:55
X[1] = 0.0962	(-0.0011)	(0.0000)	
SIMULATOR VAPOR		0.096	09:56
X[1] = 0.0964	(-0.0012)	(-0.0006)	
SIMULATOR VAPOR		0.096	09:57
X[1] = 0.0966	(-0.0011)	(-0.0006)	
SIMULATOR VAPOR		0.096	09:58
X[1] = 0.0963	(-0.0014)	(-0.0004)	
SIMULATOR VAPOR		0.096	09:59
X[1] = 0.0966	(-0.0015)	(-0.0004)	
SIMULATOR VAPOR		0.097	10:00
X[1] = 0.0973	(-0.0006)	(-0.0003)	
SIMULATOR VAPOR		0.096	10:01
X[1] = 0.0966	(-0.0019)	(-0.0001)	
BLANK TEST		0.000	10:02

Average = 0.096
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

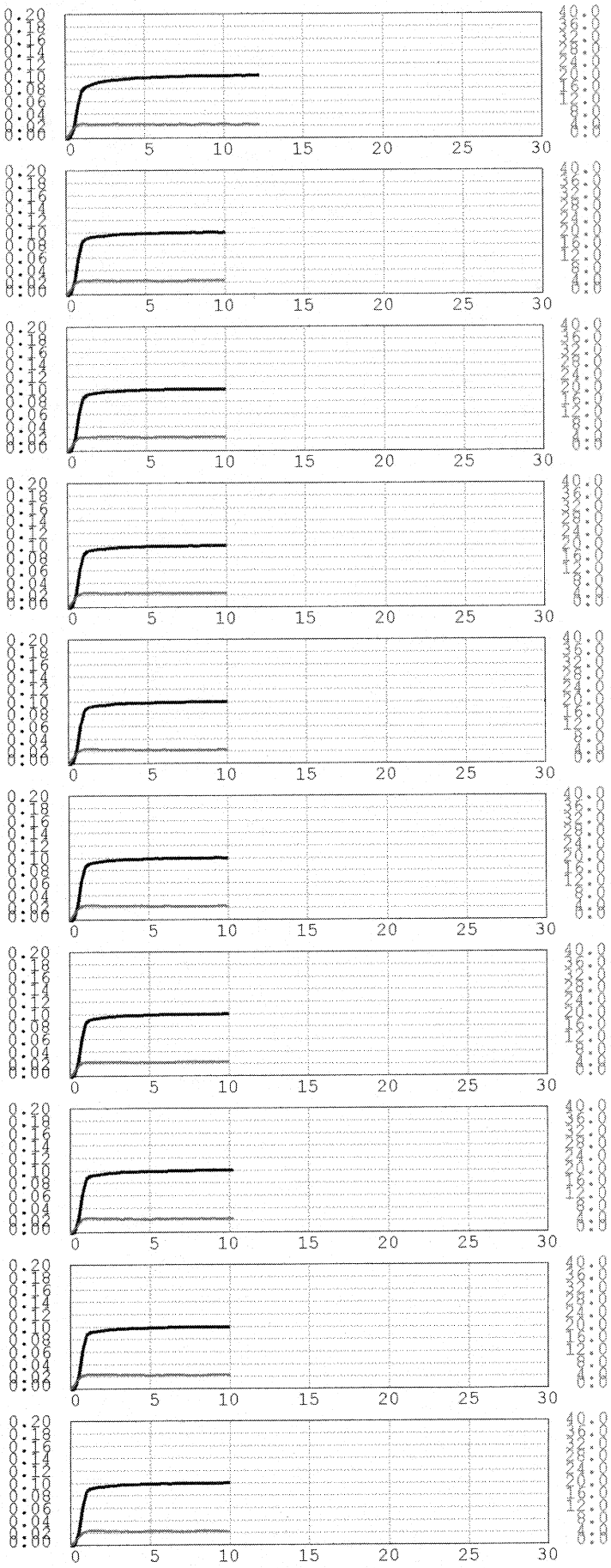
Date: 07/12/2010
Time: 10:04:48

SUPERVISOR NAME: SEH TEST CAL SOLUTION

SOLUTION LOT #: 10-36-100
SOLUTION CONCENTRATION: 0.099

BLANK TEST		0.000	10:05
CALIBRATION CHECK		PASSED	10:05
Xq = 0.0914 (1.16%)			
SIMULATOR VAPOR		0.101	10:06
X[1] = 0.1018	(-0.0005)	(0.0004)	
SIMULATOR VAPOR		0.100	10:07
X[1] = 0.1009	(-0.0013)	(-0.0003)	
SIMULATOR VAPOR		0.100	10:08
X[1] = 0.1000	(-0.0022)	(0.0003)	
SIMULATOR VAPOR		0.100	10:09
X[1] = 0.1003	(-0.0010)	(0.0007)	
SIMULATOR VAPOR		0.100	10:10
X[1] = 0.1003	(-0.0013)	(0.0005)	
SIMULATOR VAPOR		0.100	10:11
X[1] = 0.1004	(-0.0014)	(0.0000)	
SIMULATOR VAPOR		0.100	10:12
X[1] = 0.1004	(-0.0015)	(-0.0004)	
SIMULATOR VAPOR		0.101	10:13
X[1] = 0.1011	(-0.0012)	(0.0003)	
SIMULATOR VAPOR		0.100	10:14
X[1] = 0.1005	(-0.0013)	(0.0002)	
SIMULATOR VAPOR		0.100	10:15
X[1] = 0.1008	(-0.0009)	(0.0004)	
BLANK TEST		0.000	10:15

Average = 0.100
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

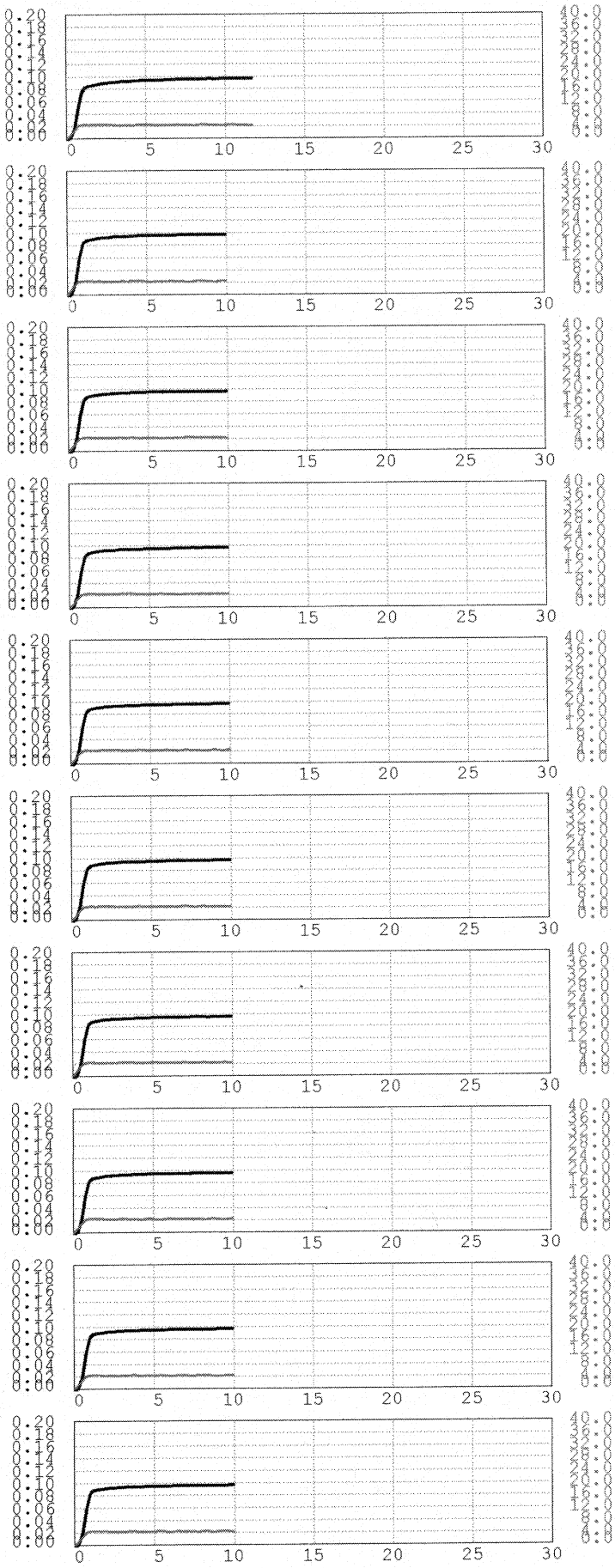
Date: 07/12/2010
Time: 10:21:17

SUPERVISOR NAME: SEH TEST FIELD

SOLUTION LOT #: 10-27-100
SOLUTION CONCENTRATION: 0.102

BLANK TEST	0.000	10:22
CALIBRATION CHECK	PASSED	10:22
Xq = 0.0913 (1.06%)		
SIMULATOR VAPOR	0.097	10:22
X[1] = 0.0976 (-0.0018) (0.0008)		
SIMULATOR VAPOR	0.097	10:23
X[1] = 0.0976 (-0.0009) (0.0007)		
SIMULATOR VAPOR	0.097	10:24
X[1] = 0.0977 (-0.0013) (0.0002)		
SIMULATOR VAPOR	0.097	10:25
X[1] = 0.0979 (-0.0010) (0.0004)		
SIMULATOR VAPOR	0.097	10:26
X[1] = 0.0975 (-0.0020) (0.0001)		
SIMULATOR VAPOR	0.097	10:27
X[1] = 0.0975 (-0.0009) (0.0006)		
SIMULATOR VAPOR	0.097	10:28
X[1] = 0.0970 (-0.0014) (0.0005)		
SIMULATOR VAPOR	0.096	10:29
X[1] = 0.0969 (-0.0011) (0.0004)		
SIMULATOR VAPOR	0.097	10:30
X[1] = 0.0972 (-0.0013) (0.0003)		
SIMULATOR VAPOR	0.097	10:31
X[1] = 0.0978 (-0.0011) (0.0003)		
BLANK TEST	0.000	10:32

Average = 0.096
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 07/12/2010
Time: 10:56:29

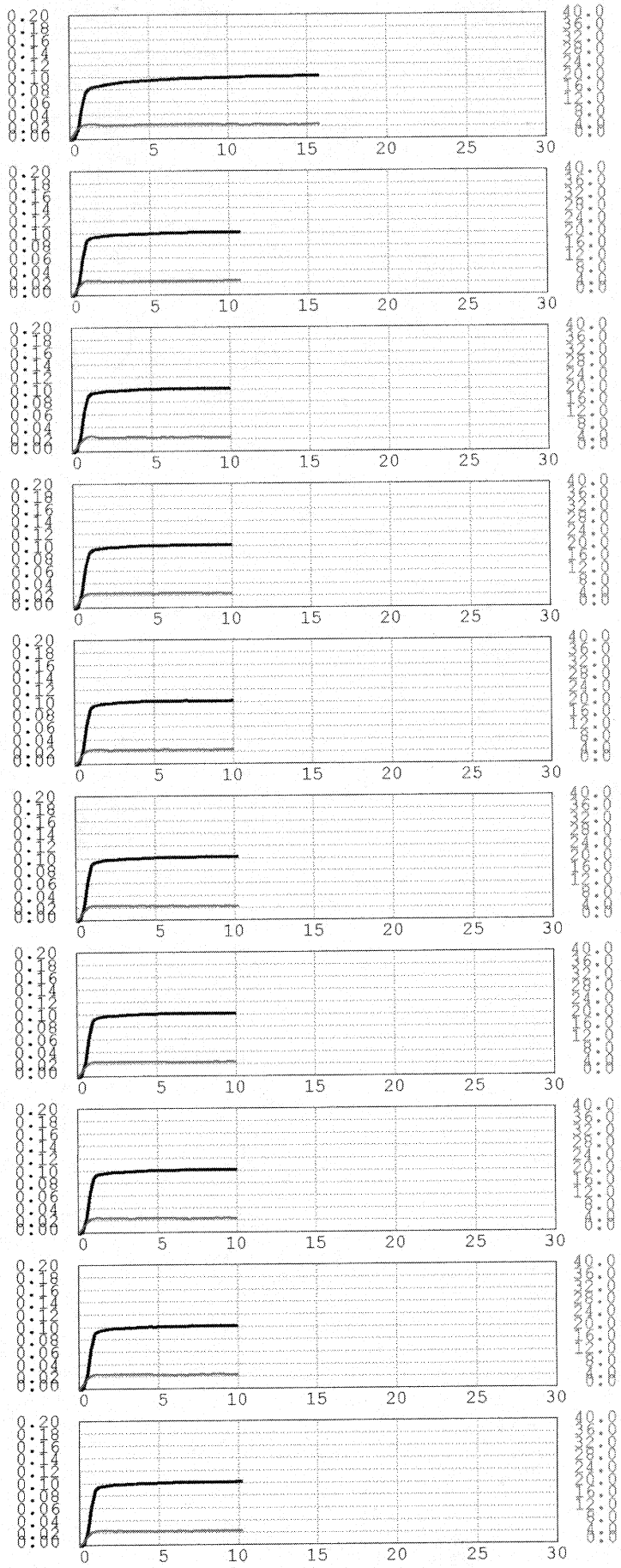
SUPERVISOR NAME: SEH TEST

SOLUTION LOT #: 10-39-100
SOLUTION CONCENTRATION: 0.097

BLANK TEST	0.000	10:57
CALIBRATION CHECK	PASSED	10:57
Xq = 0.0913 (1.06%)		
SIMULATOR VAPOR	0.101	10:57
X[1] = 0.1018 (-0.0010) (0.0016)		
SIMULATOR VAPOR	0.102	10:58
X[1] = 0.1022 (-0.0008) (0.0012)		
SIMULATOR VAPOR	0.102	10:59
X[1] = 0.1025 (-0.0002) (0.0010)		
SIMULATOR VAPOR	0.102	11:00
X[1] = 0.1023 (-0.0010) (0.0004)		
SIMULATOR VAPOR	0.103	11:01
X[1] = 0.1030 (-0.0003) (0.0015)		
SIMULATOR VAPOR	0.102	11:02
X[1] = 0.1024 (-0.0012) (0.0003)		
SIMULATOR VAPOR	0.102	11:03
X[1] = 0.1029 (-0.0010) (0.0008)		
SIMULATOR VAPOR	0.102	11:04
X[1] = 0.1023 (-0.0011) (0.0012)		
SIMULATOR VAPOR	0.102	11:05
X[1] = 0.1020 (-0.0008) (0.0008)		
SIMULATOR VAPOR	0.102	11:06
X[1] = 0.1020 (-0.0016) (0.0003)		
BLANK TEST	0.000	11:07

Average out of range!

Average = 0.102
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 07/12/2010
Time: 10:56:29

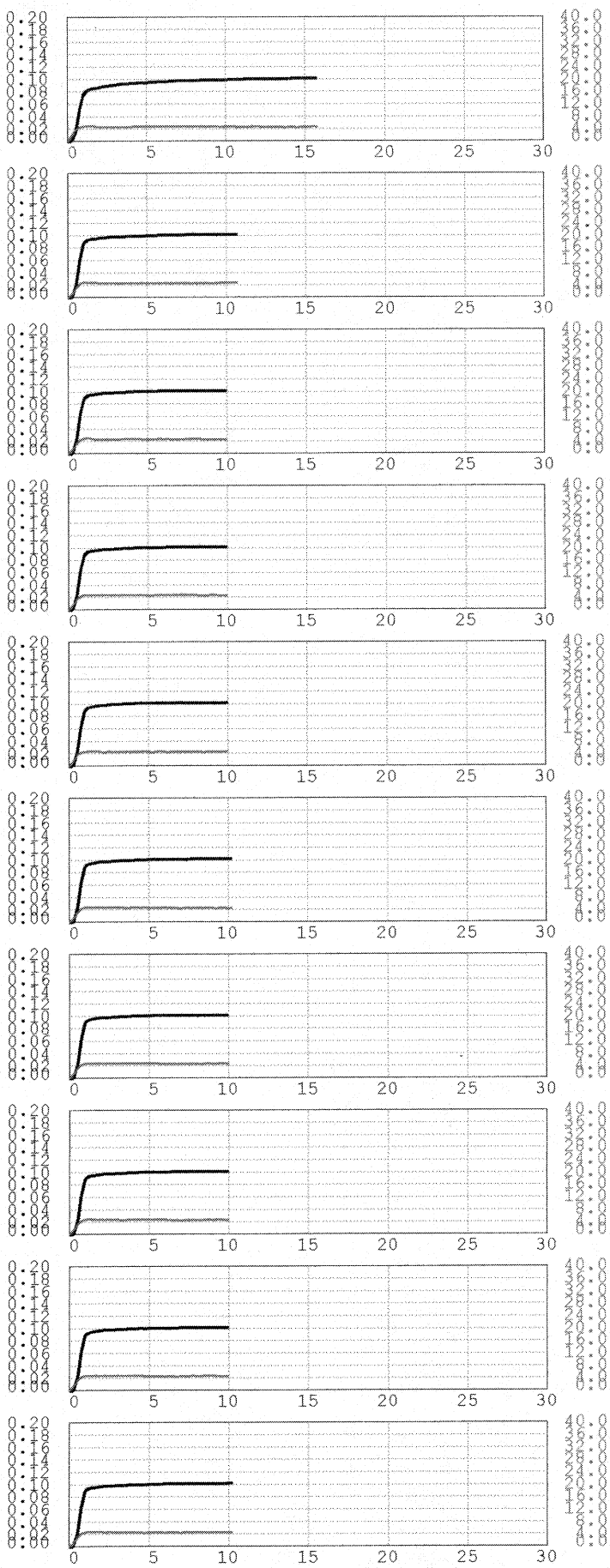
SUPERVISOR NAME: SEH TEST

SOLUTION LOT #: 10-39-100
SOLUTION CONCENTRATION: 0.097

BLANK TEST	0.000	10:57
CALIBRATION CHECK	PASSED	10:57
Xq = 0.0913 (1.06%)		
SIMULATOR VAPOR	0.101	10:57
X[1] = 0.1018 (-0.0010) (0.0016)		
SIMULATOR VAPOR	0.102	10:58
X[1] = 0.1022 (-0.0008) (0.0012)		
SIMULATOR VAPOR	0.102	10:59
X[1] = 0.1025 (-0.0002) (0.0010)		
SIMULATOR VAPOR	0.102	11:00
X[1] = 0.1023 (-0.0010) (0.0004)		
SIMULATOR VAPOR	0.103	11:01
X[1] = 0.1030 (-0.0003) (0.0015)		
SIMULATOR VAPOR	0.102	11:02
X[1] = 0.1024 (-0.0012) (0.0003)		
SIMULATOR VAPOR	0.102	11:03
X[1] = 0.1029 (-0.0010) (0.0008)		
SIMULATOR VAPOR	0.102	11:04
X[1] = 0.1023 (-0.0011) (0.0012)		
SIMULATOR VAPOR	0.102	11:05
X[1] = 0.1020 (-0.0008) (0.0008)		
SIMULATOR VAPOR	0.102	11:06
X[1] = 0.1020 (-0.0016) (0.0003)		
BLANK TEST	0.000	11:07

Average out of range!

Average = 0.102
Std Dev = 0.0004



CALIBRATION REPORT

DataMaster DMT: 100154
Calibration Date: 07/12/2010
Calibrated by: SEH TEST
Lot: 10-36-100

11:14

VERMONT
DEPARTMENT OF HEALTH

Ca	=	0.099000	
CAL	=	0.962546	0.800 <= CAL < 1.200
b1	=	0.000000	0.000 <= b1 < 0.004
b2	=	0.004202	0.001 <= b2 < 0.012
b3	=	0.000000	0.000 <= b3 < 0.004
Xq	=	0.091651	0.050 <= Xq < 0.200
a21	=	1.180462	1.050 <= a21 < 1.300
a31	=	0.464471	0.300 <= a31 < 0.800

Performed by _____ Date 07/12/2010

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 07/12/2010
Time: 11:19:52

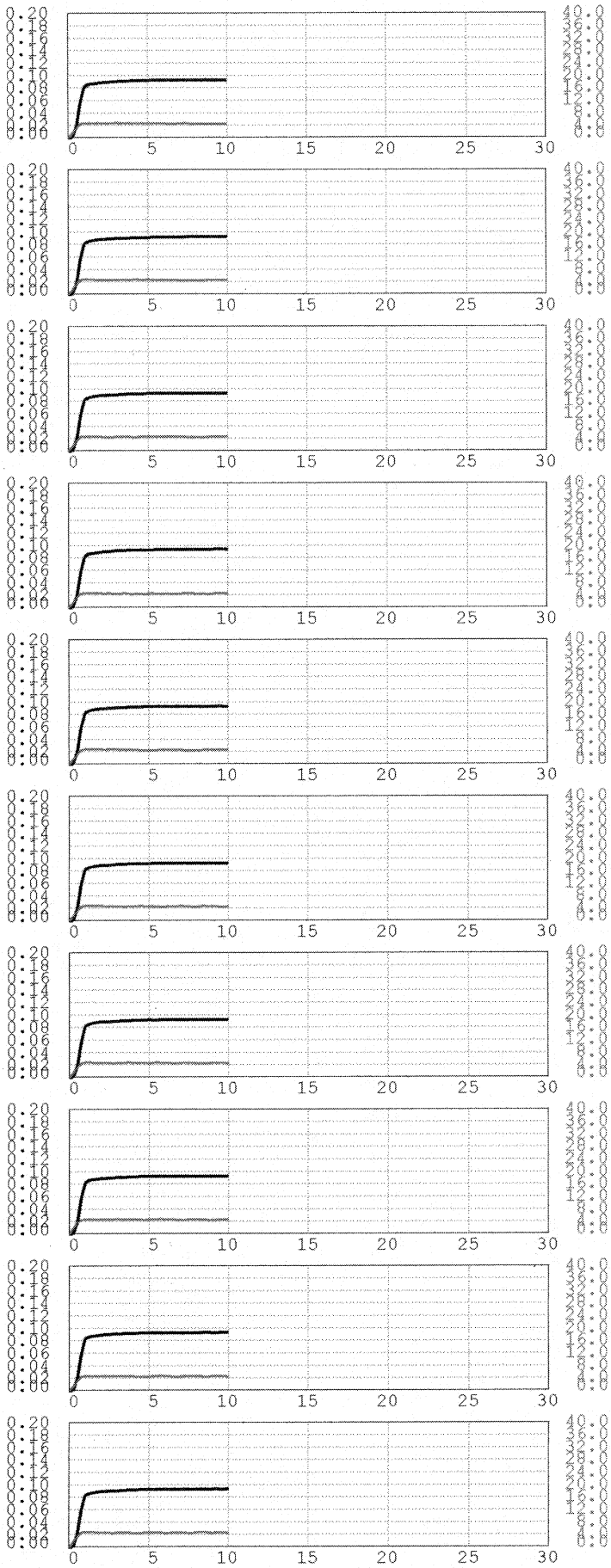
SUPERVISOR NAME: SEH TEST CAL CHECK

SOLUTION LOT #: 10-28-100
SOLUTION CONCENTRATION: 0.100

BLANK TEST		0.000	11:20
CALIBRATION CHECK		PASSED	11:20
Xq = 0.0917 (0.10%)			
SIMULATOR VAPOR		0.093	11:21
X[1] = 0.0937	(0.0001)	(0.0003)	
SIMULATOR VAPOR		0.093	11:22
X[1] = 0.0931	(-0.0013)	(0.0004)	
SIMULATOR VAPOR		0.093	11:23
X[1] = 0.0935	(-0.0003)	(-0.0003)	
SIMULATOR VAPOR		0.094	11:24
X[1] = 0.0944	(0.0001)	(-0.0002)	
SIMULATOR VAPOR		0.093	11:25
X[1] = 0.0937	(-0.0012)	(-0.0005)	
SIMULATOR VAPOR		0.093	11:26
X[1] = 0.0936	(-0.0010)	(0.0001)	
SIMULATOR VAPOR		0.093	11:27
X[1] = 0.0933	(-0.0010)	(-0.0002)	
SIMULATOR VAPOR		0.093	11:28
X[1] = 0.0935	(-0.0005)	(0.0000)	
SIMULATOR VAPOR		0.093	11:29
X[1] = 0.0939	(0.0000)	(-0.0003)	
SIMULATOR VAPOR		0.093	11:30
X[1] = 0.0937	(-0.0006)	(-0.0003)	
BLANK TEST		0.000	11:30

Average out of range!

Average = 0.093
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

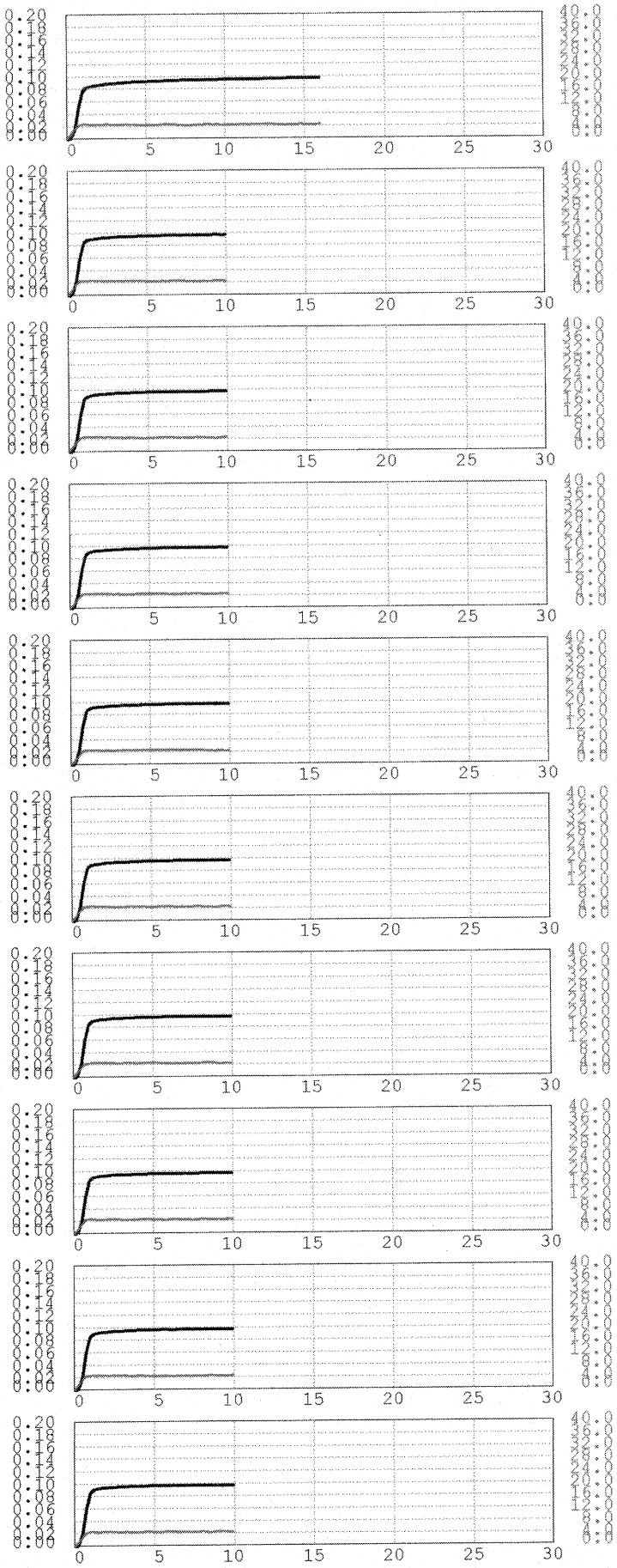
Date: 07/12/2010
Time: 11:35:42

SUPERVISOR NAME: SEH TEST CAL

SOLUTION LOT #: 10-36-100
SOLUTION CONCENTRATION: 0.099

BLANK TEST	0.000	11:36
CALIBRATION CHECK	PASSED	11:36
Xq = 0.0919 (0.29%)		
SIMULATOR VAPOR	0.097	11:37
X[1] = 0.0970 (-0.0002) (0.0006)		
SIMULATOR VAPOR	0.097	11:38
X[1] = 0.0970 (-0.0008) (-0.0001)		
SIMULATOR VAPOR	0.097	11:39
X[1] = 0.0972 (-0.0006) (0.0011)		
SIMULATOR VAPOR	0.097	11:40
X[1] = 0.0975 (0.0001) (0.0000)		
SIMULATOR VAPOR	0.097	11:41
X[1] = 0.0978 (-0.0005) (0.0002)		
SIMULATOR VAPOR	0.097	11:42
X[1] = 0.0975 (-0.0005) (-0.0002)		
SIMULATOR VAPOR	0.097	11:43
X[1] = 0.0977 (-0.0006) (0.0004)		
SIMULATOR VAPOR	0.097	11:44
X[1] = 0.0974 (-0.0011) (-0.0002)		
SIMULATOR VAPOR	0.097	11:45
X[1] = 0.0977 (-0.0006) (0.0005)		
SIMULATOR VAPOR	0.098	11:46
X[1] = 0.0980 (-0.0001) (0.0003)		
BLANK TEST	0.000	11:46

Average = 0.097
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

Date: 07/12/2010
Time: 11:55:18

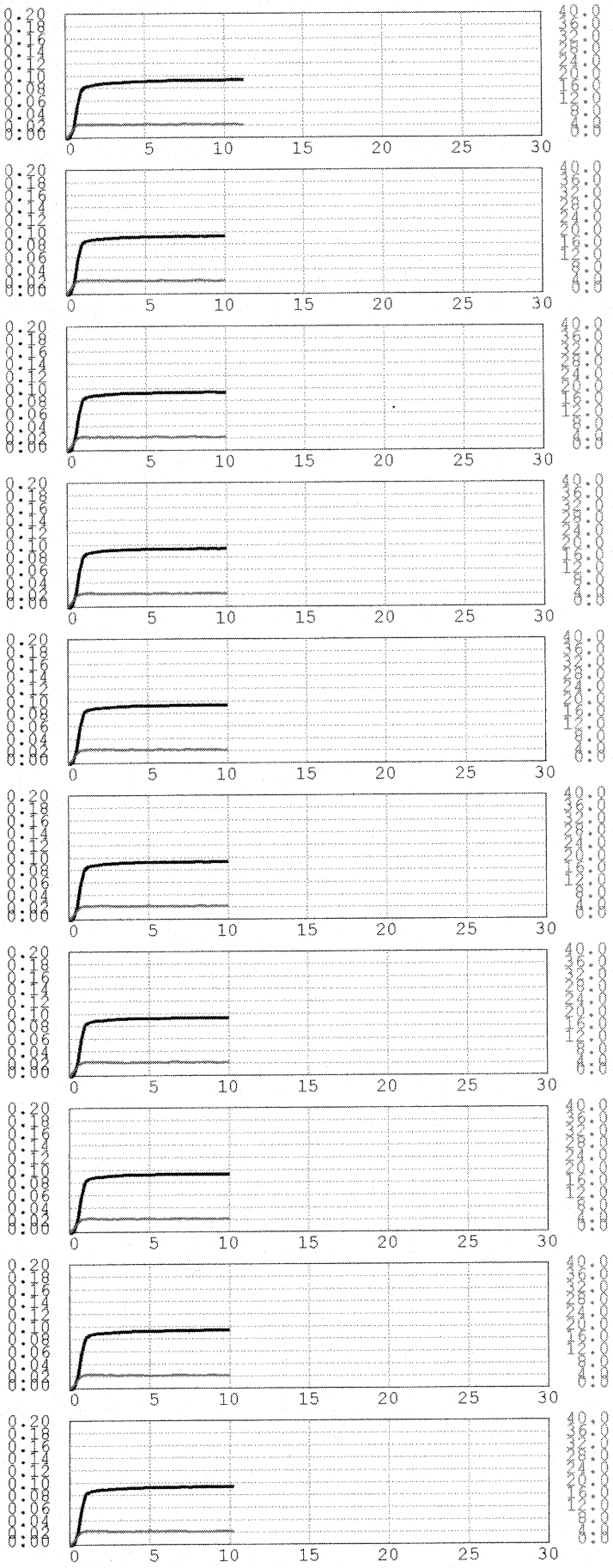
SUPERVISOR NAME: SEH TEST FIELD

SOLUTION LOT #: 10-27-100
SOLUTION CONCENTRATION: 0.102

BLANK TEST	0.000	11:56
CALIBRATION CHECK	PASSED	11:56
Xq = 0.0918 (0.198)		
SIMULATOR VAPOR	0.094	11:56
X[1] = 0.0942 (-0.0005) (0.0006)		
SIMULATOR VAPOR	0.094	11:57
X[1] = 0.0941 (-0.0003) (0.0008)		
SIMULATOR VAPOR	0.094	11:58
X[1] = 0.0946 (0.0000) (0.0004)		
SIMULATOR VAPOR	0.094	11:59
X[1] = 0.0947 (-0.0003) (0.0001)		
SIMULATOR VAPOR	0.094	12:00
X[1] = 0.0941 (-0.0009) (-0.0004)		
SIMULATOR VAPOR	0.094	12:01
X[1] = 0.0940 (-0.0008) (0.0005)		
SIMULATOR VAPOR	0.094	12:02
X[1] = 0.0944 (0.0004) (0.0001)		
SIMULATOR VAPOR	0.094	12:03
X[1] = 0.0944 (-0.0006) (0.0000)		
SIMULATOR VAPOR	0.094	12:04
X[1] = 0.0942 (-0.0005) (0.0001)		
SIMULATOR VAPOR	0.094	12:05
X[1] = 0.0940 (-0.0009) (0.0004)		
BLANK TEST	0.000	12:06

Average out of range!

Average = 0.093
Std Dev = 0.0000



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100154

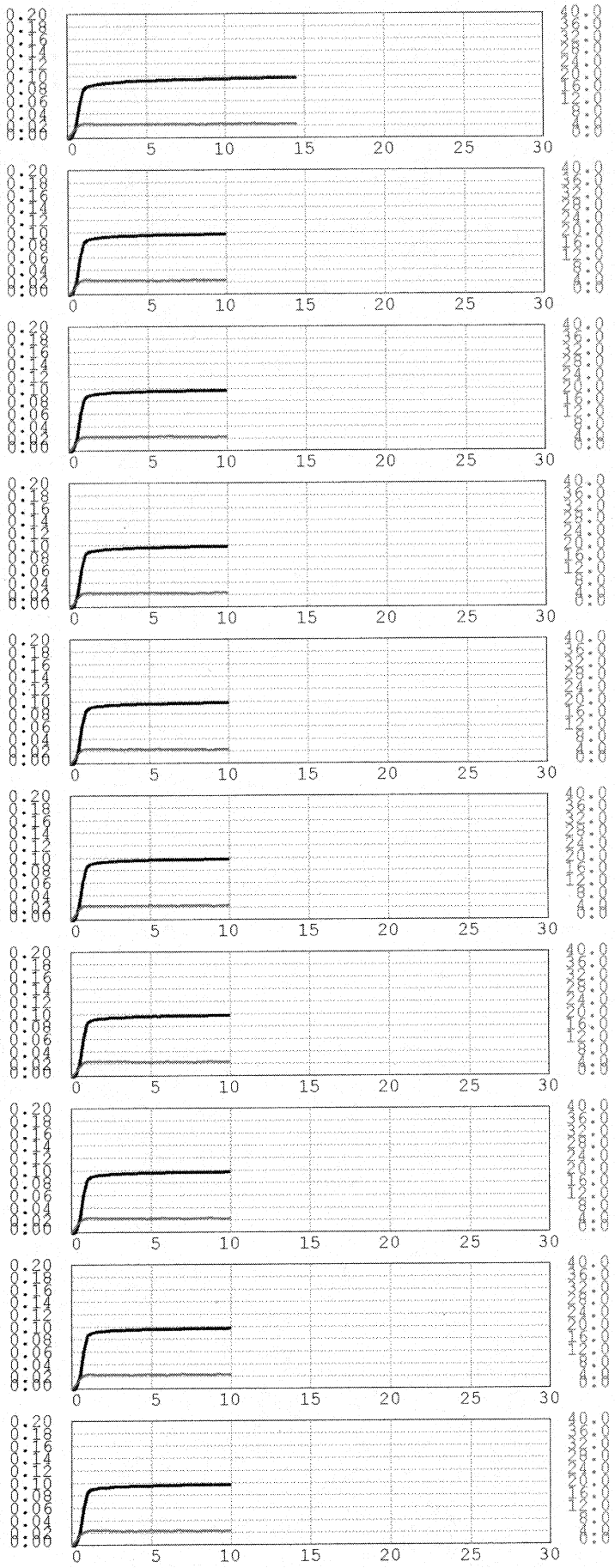
Date: 07/12/2010
Time: 12:11:30

SUPERVISOR NAME: SEH TEST

SOLUTION LOT #: 10-39-100
SOLUTION CONCENTRATION: 0.097

BLANK TEST	0.000	12:12
CALIBRATION CHECK	PASSED	12:12
Xq = 0.0923 (0.76%)		
SIMULATOR VAPOR	0.097	12:12
X[1] = 0.0976 (0.0000) (0.0010)		
SIMULATOR VAPOR	0.097	12:13
X[1] = 0.0974 (-0.0005) (0.0008)		
SIMULATOR VAPOR	0.097	12:14
X[1] = 0.0974 (-0.0010) (0.0007)		
SIMULATOR VAPOR	0.098	12:15
X[1] = 0.0980 (0.0000) (0.0003)		
SIMULATOR VAPOR	0.098	12:16
X[1] = 0.0983 (-0.0002) (0.0002)		
SIMULATOR VAPOR	0.098	12:17
X[1] = 0.0980 (-0.0008) (0.0000)		
SIMULATOR VAPOR	0.098	12:18
X[1] = 0.0980 (-0.0005) (0.0005)		
SIMULATOR VAPOR	0.097	12:19
X[1] = 0.0979 (-0.0009) (0.0007)		
SIMULATOR VAPOR	0.097	12:20
X[1] = 0.0978 (-0.0005) (0.0007)		
SIMULATOR VAPOR	0.097	12:21
X[1] = 0.0974 (-0.0011) (0.0001)		
BLANK TEST	0.000	12:22

Average = 0.097
Std Dev = 0.0005



DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location:
Calibration Date: 07/12/2010
Certification Date:
Installation Date:
Test Date: 07/12/2010
Time: 14:05

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.20°C
Breath Tube    = 43.11°C

SETTINGS
Lamp Voltage   = 1.78 V
Cooler Voltage = 1.66 V
Bias Voltage   = 80.7 V
Chopper Freq   = 527.1 Hz

PUMP INFO
Flow Rate = 5.702 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)   0.2573    0.2575
MIN(V)   0.2534    0.2565

FILTER INFO
Filter 1  0.257  Zero = true
Filter 2  0.548  Zero = true
Filter 3  1.547  Zero = true

CALIBRATION CHECK
Xq = 0.0914  0.19%
```

CALIBRATION REPORT

DataMaster DMT: 100154
Calibration Date: 08/09/2010
Calibrated by: SEH TEST
Lot: 098

VERMONT
DEPARTMENT OF HEALTH

```
Ca  =  0.098000
CAL =  0.964349    0.800 <= CAL < 1.200
b1  =  0.000000    0.000 <=  b1 < 0.004
b2  =  0.003846    0.001 <=  b2 < 0.012
b3  =  0.000000    0.000 <=  b3 < 0.004
Xq  =  0.092438    0.050 <=  Xq < 0.200
a21 =  1.188958    1.050 <= a21 < 1.300
a31 =  0.456001    0.300 <= a31 < 0.800
```

Performed by _____ Date 08/09/2010

OPTIONS PRINT OUT

DataMaster DMT: 100154
Location:
Calibration Date: 08/09/2010
Certification Date:
Installation Date:

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: 0.098
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
```

DIAGNOSTIC RESULT

DataMaster DMT: 100154
Location:
Calibration Date: 08/09/2010
Certification Date:
Installation Date:
Test Date: 11/09/2010
Time: 07:59

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.05
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.86°C
Breath Tube    = 47.98°C

SETTINGS
Lamp Voltage   = 1.72 V
Cooler Voltage = 1.71 V
Bias Voltage   = 80.6 V
Chopper Freq   = 546.2 Hz

PUMP INFO
Flow Rate = 5.638 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.0360   0.0392
MIN(V)   0.0341   0.0376

FILTER INFO
Filter 1  0.038  Zero = true
Filter 2  0.376  Zero = true
Filter 3  1.394  Zero = true

CALIBRATION CHECK
Xq = 0.0860  6.89%
```

Section 10: Live Subject Tests

This Instrument not tested for this specification

Section 11: Communication Notes

March/April 2010

100154
11/9/10

~~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.

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

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.

11/10/10

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.

DRAFT

11/10 SH
11/12 AG
11/12 SH 11/16/10

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.

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 +/- _____

DRAFT