DATAMASTER DMT 100158

VERMONT DEPARTMENT OF HEALTH LABORATORY

PERFORMANCE TESTING RESULTS

August 2010

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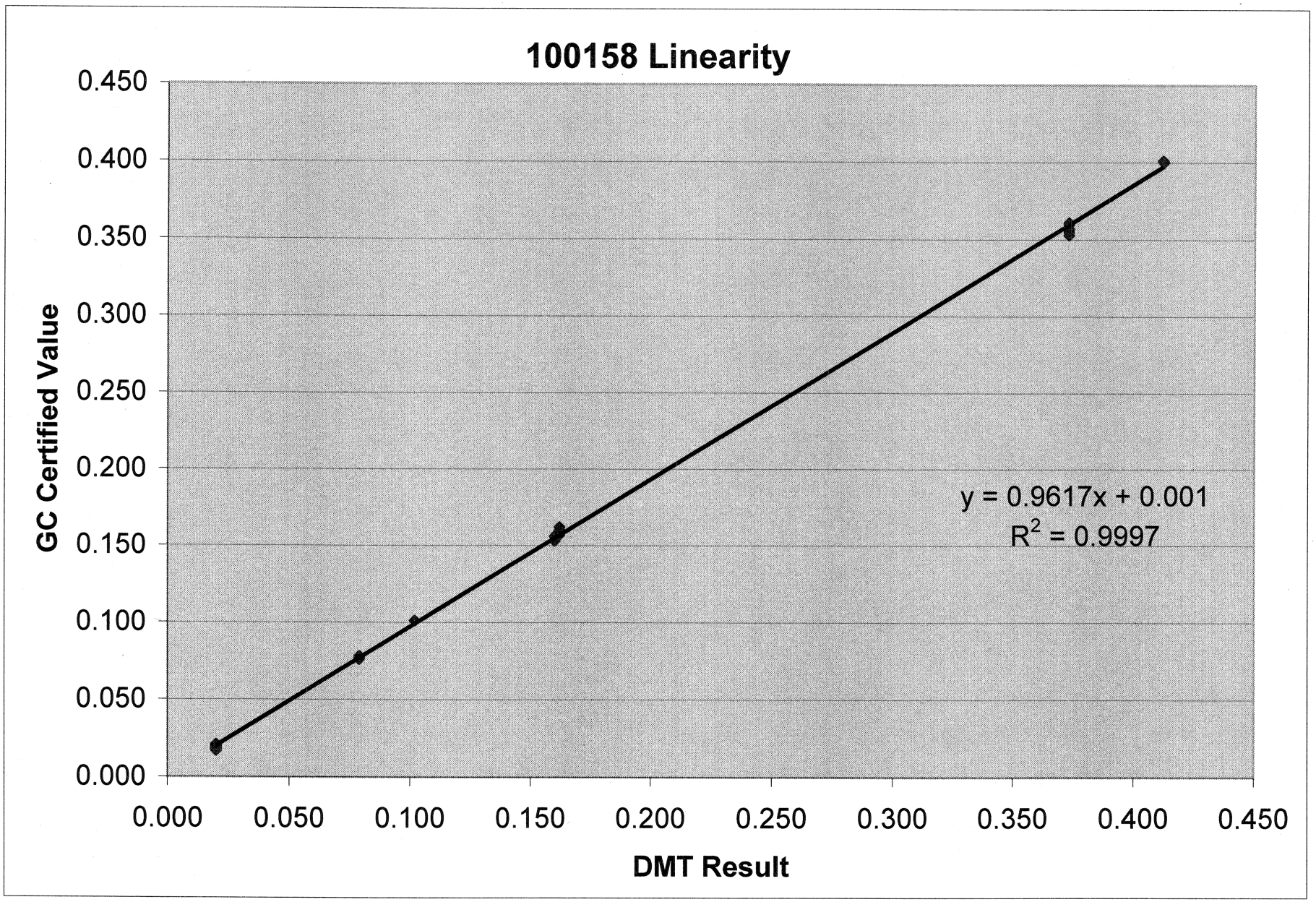
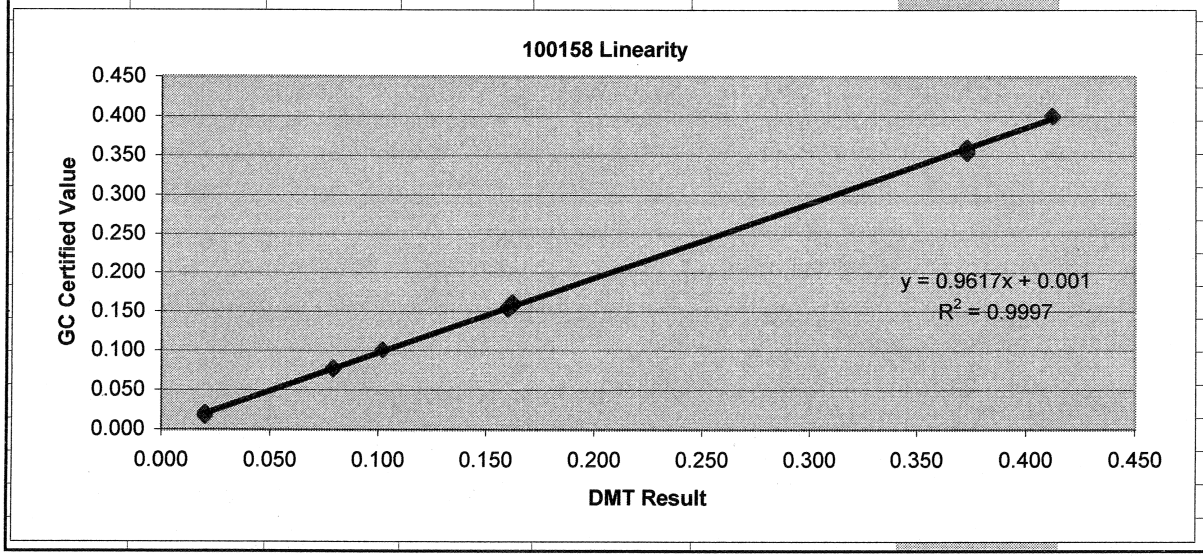
Section 1: Results


100158 Linearity
GC Certified Value
DMT Result
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
0.450
y = 0.9617x + 0.001
R2 = 0.9997

DMT Serial # 100158

Operator	Date	Lot #	GC Value	DMT Result	Std Dev	% Recovery	
SH	9/10/2010	11-05-100	0.102	0.101	0.0006	99.0	Outside 5%
SH	9/13/2010	10-32-400	0.373	0.361	0.0005	96.8	Outside 10%
		10-31-160	0.160	0.156	0.0004	97.5	
		10-37-080	0.079	0.078	0.0003	98.7	
		10-34-020	0.020	0.018	0.0003	90.0	
SH	9/13/2010	10-34-020	0.020	0.017	0.0003	85.0	DEPLETED
SH	9/15/2010	10-32-400	0.373	0.357	0.0006	95.7	
		10-37-080	0.079	0.078	0.0004	98.7	
		10-31-160	0.160	0.153	0.0007	95.6	
SH	9/17/2010	10-34-020	0.020	0.020	0.0000	100.0	
SH	9/21/2010	10-34-020	0.020	0.018	0.0004	90.0	
		10-37-080	0.079	0.076	0.0004	96.2	
		10-32-400	0.373	0.360	0.0004	96.5	
		11-06-160	0.162	0.162	0.0004	100.0	
SH	9/21/2010	11-06-160	0.162	0.160	0.0004	98.8	
		10-32-400	0.373	0.355	0.0006	95.2	
		10-37-080	0.079	0.078	0.0005	98.7	
		10-34-020	0.020	0.019	0.0004	95.0	
SH	9/22/2010	10-37-080	0.079	0.078	0.0007	98.7	
		10-34-020	0.020	0.020	0.0000	100.0	
		10-32-400	0.373	0.353	0.0006	94.6	
		11-06-160	0.162	0.159	0.0004	98.1	
SH	9/22/2010	10-34-020	0.020	0.021	0.0005	105.0	
		11-07-400	0.412	0.401	0.0006	97.3	
		11-06-160	0.162	0.158	0.0004	97.5	
		10-37-080	0.079	0.077	0.0004	97.5	
SH	9/23/10`	10-34-020	0.020	0.019	0.0004	95.0	
		10-37-080	0.079	0.076	0.0005	96.2	
		11-06-160	0.162	0.157	0.0005	96.9	
		11-07-400	0.412	0.400	0.0005	97.0	
				Average	0.0004	96.7	
				Std Dev	0.0002	3.59	
				Range	0.0000 - 0.0007	90.0 - 105.0	



Operator	Date	Concentration	Lot Number	DMT Result	Apparent EtOH	N = 10
SH	09/13/10	.01 Acetone in .08 EtOH	10-33-08A	INTERFERENCE	0.08	
SH	09/13/10	.01 Acetone in .04 EtOH	10-35-04A1	INTERFERENCE	0.04	
SH	09/13/10	.02 Acetone in .04 EtOH	10-35-04A2	INTERFERENCE	0.04	
SH	09/13/10	.04 MeOH in water	11-08-04M	INTERFERENCE	0.02	
SH	09/10/10	.04 MeOH in .08 EtOH	10-10-08M4	INTERFERENCE	0.1	
SH	09/13/10	.04 IPA in water	10-26-04I	INTERFERENCE	0.02	
SH	09/13/10	.04 IPA in .08 EtOH	09-30-08I	INTERFERENCE	0.1	

Section 2: NPAS Tests

DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location: ADDISON COUNTY SO
Calibration Date: 06/28/2010
Certification Date: 06/28/2010
Installation Date: 06/28/2010
Test Date: 06/28/2010
Time: 16:10

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.74°C
Breath Tube    = 44.08°C

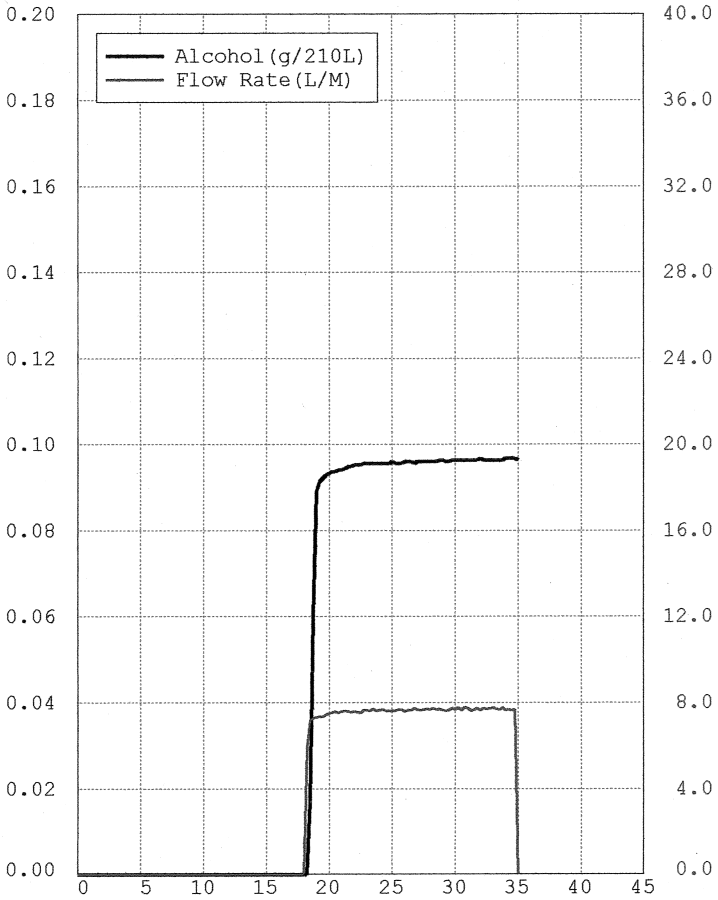
SETTINGS
Lamp Voltage   = 2.17 V
Cooler Voltage = 1.71 V
Bias Voltage   = 78.7 V
Chopper Freq   = 537.4 Hz

PUMP INFO
Flow Rate = 4.821 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.4620   0.4636
MIN(V)   0.4599   0.4616

FILTER INFO
Filter 1  0.463  Zero = true
Filter 2  0.681  Zero = true
Filter 3  1.432  Zero = true

CALIBRATION CHECK
Xq = 0.1018  0.09%
```



Check-In Confirmation Test

STATE OF VERMONT

DataMaster DMT: 100158
ADDISON COUNTY SO
Certification Date: 06/28/2010
Installation Date: 06/28/2010

Date: 06/28/2010
Time: 16:12:02

Subject Name: T T T
Date of Birth: 04/11/1975 Age: 35
Gender: M
License #:

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

BLANK TEST	0.000	16:12
CALIBRATION CHECK	PASSED	16:13
Xq = 0.1021 (0.26%)		
SIMULATOR VAPOR	0.098	16:13
X[1] = 0.0987 (0.0001) (0.0011)		
BLANK TEST	0.000	16:14
SUBJECT SAMPLE (Vol=2.1L)	0.097	16:14
X[1] = 0.0974 (-0.0007) (0.0003)		

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.098
Sim. Vapor Range 0.093 - 0.103

INSTALLATION REPORT

DataMaster DMT: 100158
Location: ADDISON COUNTY SO
Calibration Date: 06/28/2010
Certification Date: 06/28/2010
Installation Date: 06/28/2010
Installed By: T T T

VERMONT
DEPARTMENT OF HEALTH

Site meets specification in doc P-ALC-210

Diagnostic Results

VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.91°C
Breath Tube = 46.31°C

SETTINGS
Lamp Voltage = 2.17 V
Cooler Voltage = 1.71 V
Bias Voltage = 78.7 V
Chopper Freq = 537.6 Hz

PUMP INFO
Flow Rate = 4.777 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.4599	0.4628
MIN(V)	0.4581	0.4616

FILTER INFO
Filter 1 0.462 Zero = true
Filter 2 0.680 Zero = true
Filter 3 1.431 Zero = true

CALIBRATION CHECK
Xq = 0.1015 0.34%

INSTALLATION PASSED

Accuracy and Precision Check

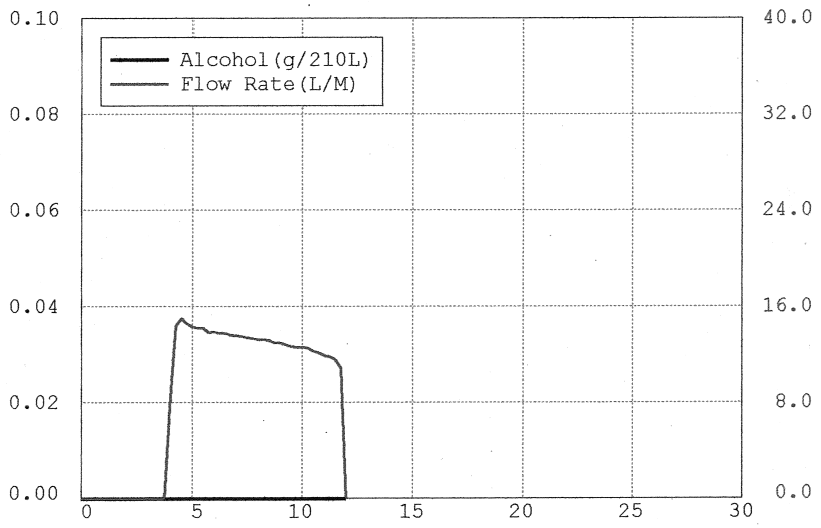
Concentration = 0.098 g/210L
Lot # = 987
Average = 0.098 g/210L
Std Dev = 0.001

RFI Interference Test

RFI detected

Sample Acceptance Test

Passed



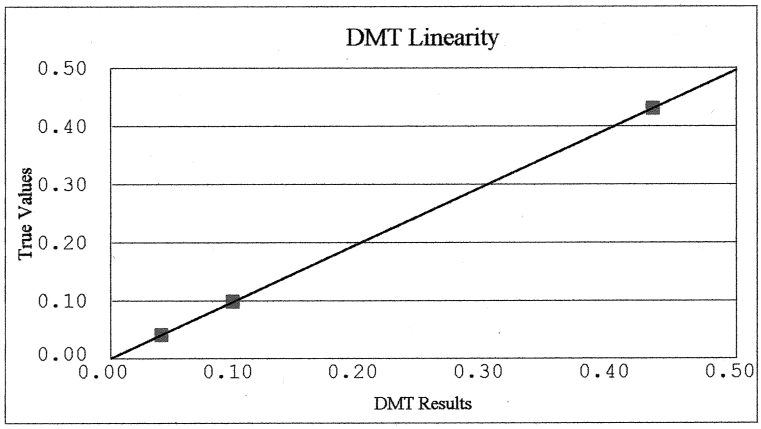
Performed by _____ **Date** 06/28/2010

Reviewed by _____ **Date** _____

Linearity Check Results

True Value	Reported Average	Std Dev
0.041 g/210L Lot # 8765	0.041 g/210L	0.000
0.098 g/210L Lot # 7654	0.098 g/210L	0.000
0.099 g/210L Lot # 6756	0.098 g/210L	0.000
0.430 g/210L Lot # 876567	0.433 g/210L	0.001

$R^2 = 1.0000$



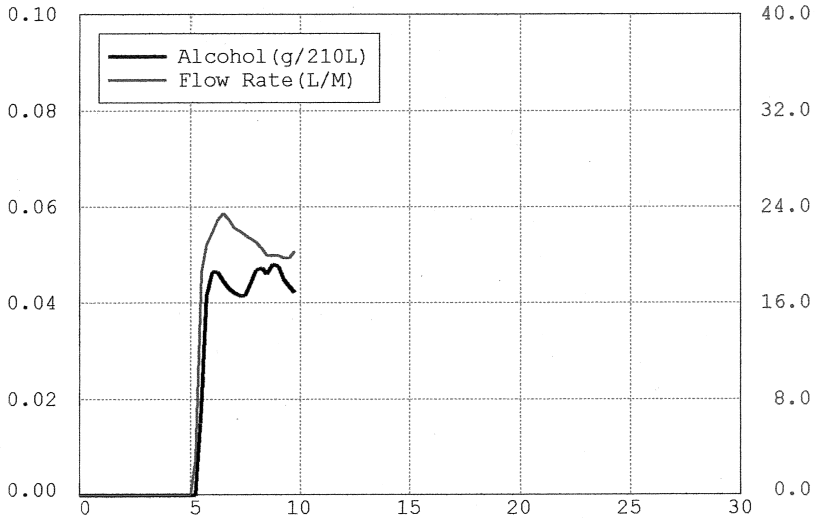
Acetone Interference Test

Lot # 876

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

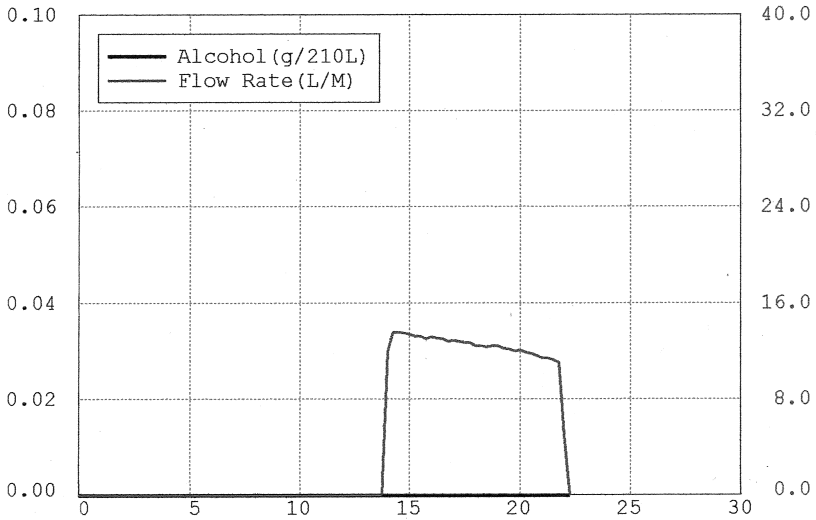


RF Interference Test

RFI detected

Sample Acceptance Test

Passed



CERTIFICATION PASSED

Performed by _____ **Date** 06/28/2010

Reviewed by _____ **Date** _____

CERTIFICATION REPORT

DataMaster DMT: 100158
Calibration Date: 06/28/2010
Certification Date: 06/28/2010
Certified by: T T T

VERMONT
DEPARTMENT OF HEALTH

Diagnostic Results

VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.74°C
Breath Tube = 47.29°C

SETTINGS
Lamp Voltage = 2.17 V
Cooler Voltage = 1.71 V
Bias Voltage = 78.7 V
Chopper Freq = 538.5 Hz

PUMP INFO
Flow Rate = 4.740 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.4604	0.4620
MIN(V)	0.4579	0.4604

FILTER INFO
Filter 1 0.460 Zero = true
Filter 2 0.680 Zero = true
Filter 3 1.426 Zero = true

CALIBRATION CHECK
Xq = 0.1021 0.26%

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: 0.097
Digital Simulator: none
Simulator Before: yes
Simulator Between: yes
Simulator After: yes
Number of Subject Tests: 2
AskQuestions: yes
Query Refusal: yes
Alcohol Display: yes
Show Two Digits: no
Volume Display: yes
Number of Calibration Tests: 2
Calibrate with Wet Bath: yes
Calibration Nominal: 0.100

CALIBRATION REPORT

DataMaster DMT: 100158
Calibration Date: 06/28/2010
Calibrated by: T T T
Lot: 98765

VERMONT
DEPARTMENT OF HEALTH

```
Ca  =  0.097000
CAL =  0.973148    0.800 <= CAL < 1.200
b1  =  0.000444    0.000 <=  b1 < 0.004
b2  =  0.006165    0.001 <=  b2 < 0.012
b3  =  0.000000    0.000 <=  b3 < 0.004
Xq  =  0.101896    0.050 <=  Xq < 0.200
a21 =  1.194035    1.050 <= a21 < 1.300
a31 =  0.428292    0.300 <= a31 < 0.800
```

Performed by _____ **Date** 06/28/2010

Section 3: Power-Up Tests

CALIBRATION REPORT

DataMaster DMT: 100158
Calibration Date: 09/10/2010
Calibrated by: STEVEN E HARNOIS
Lot: 11-03-100

VERMONT
DEPARTMENT OF HEALTH

Ca =	0.102000		
CAL =	0.989328	0.800 <= CAL < 1.200	
b1 =	0.000554	0.000 <= b1 < 0.004	
b2 =	0.005060	0.001 <= b2 < 0.012	
b3 =	0.000345	0.000 <= b3 < 0.004	
Xq =	0.111931	0.050 <= Xq < 0.200	
a21 =	1.164022	1.050 <= a21 < 1.300	
a31 =	0.469447	0.300 <= a31 < 0.800	

Performed by _____ **Date** 09/10/2010

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

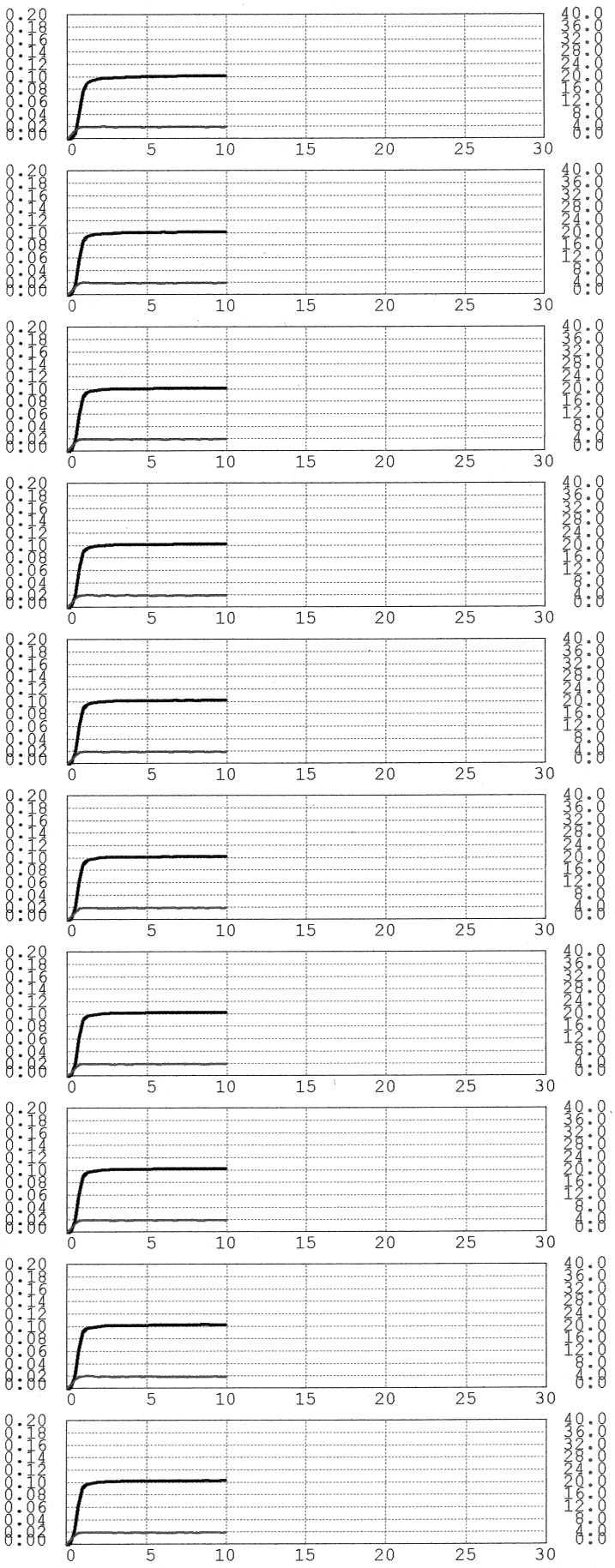
Date: 09/10/2010
Time: 08:18:44

SUPERVISOR NAME: SEH CAL CHECK

SOLUTION LOT #: 11-05-100
SOLUTION CONCENTRATION: 0.102

BLANK TEST	0.000	08:19
CALIBRATION CHECK	PASSED	08:19
SIMULATOR VAPOR	0.101	08:20
SIMULATOR VAPOR	0.101	08:21
SIMULATOR VAPOR	0.101	08:22
SIMULATOR VAPOR	0.102	08:23
SIMULATOR VAPOR	0.102	08:24
SIMULATOR VAPOR	0.102	08:25
SIMULATOR VAPOR	0.102	08:26
SIMULATOR VAPOR	0.102	08:26
SIMULATOR VAPOR	0.102	08:27
SIMULATOR VAPOR	0.103	08:28
BLANK TEST	0.000	08:29

Average = 0.101
Std Dev = 0.0006



CERTIFICATION REPORT

DataMaster DMT: 100158
Calibration Date: 09/10/2010
Certification Date: 09/10/2010
Certified by: STEVEN E HARNOIS

VERMONT
DEPARTMENT OF HEALTH

Diagnostic Results

VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

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

SETTINGS
Lamp Voltage = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage = 80.1 V
Chopper Freq = 542.1 Hz

PUMP INFO
Flow Rate = 4.703 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	-0.0494	-0.0474
MIN(V)	-0.0510	-0.0490

FILTER INFO
Filter 1 -0.049 Zero = true
Filter 2 0.212 Zero = true
Filter 3 1.303 Zero = true

CALIBRATION CHECK
Xq = 0.1113 0.55%

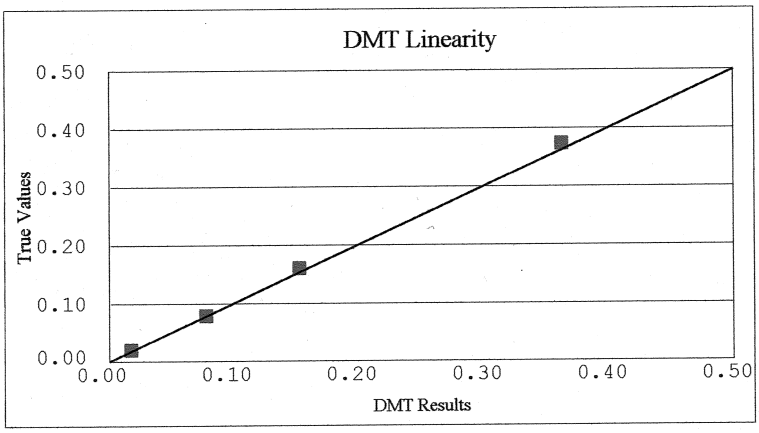
Options

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: 0.102
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
0.020 g/210L Lot # 10-34-020	0.018 g/210L	0.000
0.079 g/210L Lot # 10-37-080	0.078 g/210L	0.001
0.160 g/210L Lot # 10-31-160	0.153 g/210L	0.000
0.373 g/210L Lot # 10-32-400	0.362 g/210L	0.002

$R^2 = 0.9999$



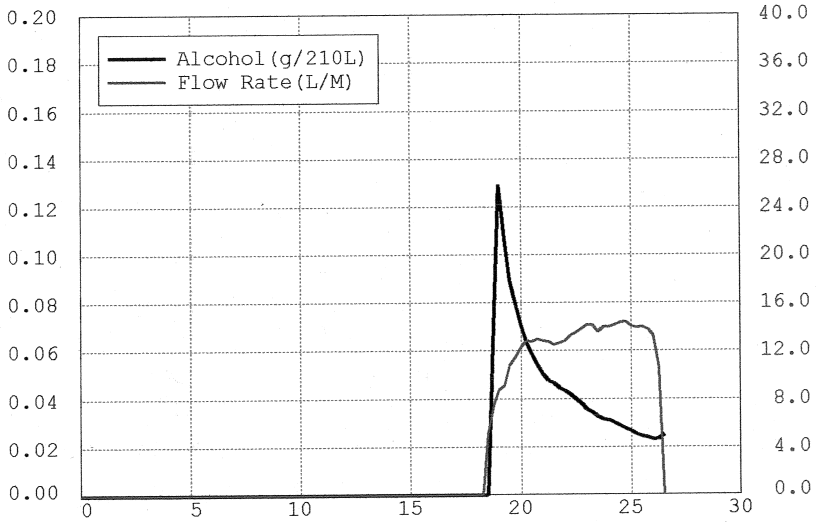
Acetone Interference Test

Lot # 10-33-08A

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

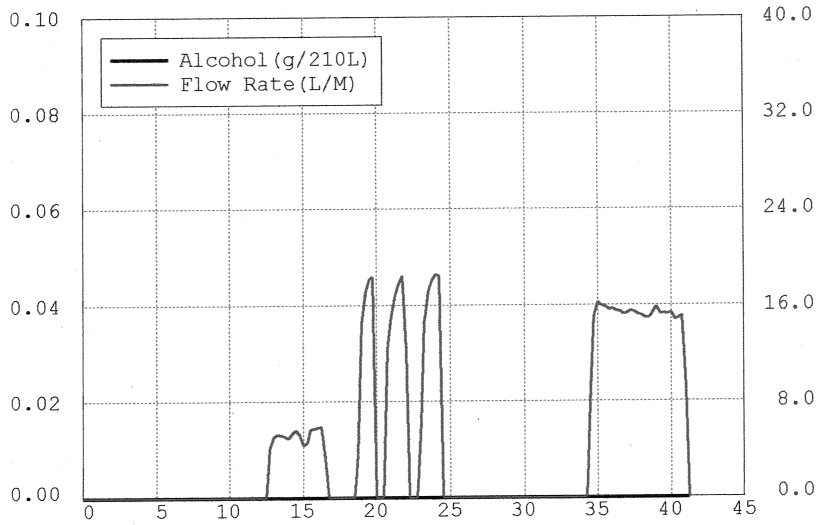


RF Interference Test

RFI detected

Sample Acceptance Test

Passed



CERTIFICATION PASSED

Performed by x _____ **Date** 09/10/2010

Reviewed by _____ **Date** _____

Section 4: Linearity

DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location:
Calibration Date: 09/10/2010
Certification Date: 09/10/2010
Installation Date: 09/10/2010
Test Date: 09/13/2010
Time: 13:56

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

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

SETTINGS
Lamp Voltage   = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage   = 80.1 V
Chopper Freq   = 541.8 Hz

PUMP INFO
Flow Rate = 4.719 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)  -0.0687   -0.0663
MIN(V)  -0.0701   -0.0681

FILTER INFO
Filter 1 -0.067  Zero = true
Filter 2  0.199  Zero = true
Filter 3  1.287  Zero = true

CALIBRATION CHECK
Xq = 0.1114  0.47%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

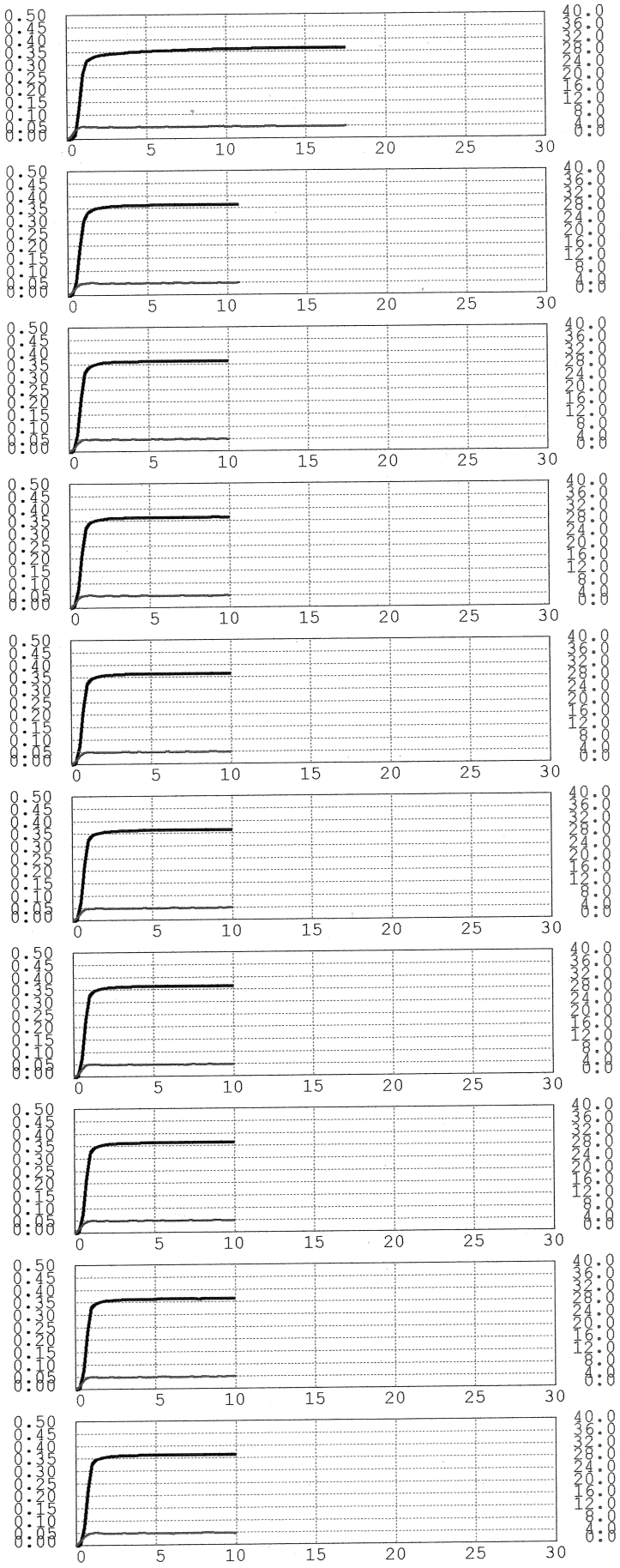
Date: 09/13/2010
Time: 11:32:57

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-32-400
SOLUTION CONCENTRATION: 0.373

BLANK TEST	0.000	11:33
CALIBRATION CHECK	PASSED	11:33
SIMULATOR VAPOR	0.362	11:34
SIMULATOR VAPOR	0.363	11:35
SIMULATOR VAPOR	0.362	11:36
SIMULATOR VAPOR	0.362	11:37
SIMULATOR VAPOR	0.362	11:38
SIMULATOR VAPOR	0.362	11:39
SIMULATOR VAPOR	0.362	11:40
SIMULATOR VAPOR	0.362	11:41
SIMULATOR VAPOR	0.361	11:42
SIMULATOR VAPOR	0.361	11:43
BLANK TEST	0.000	11:44

Average = 0.361
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

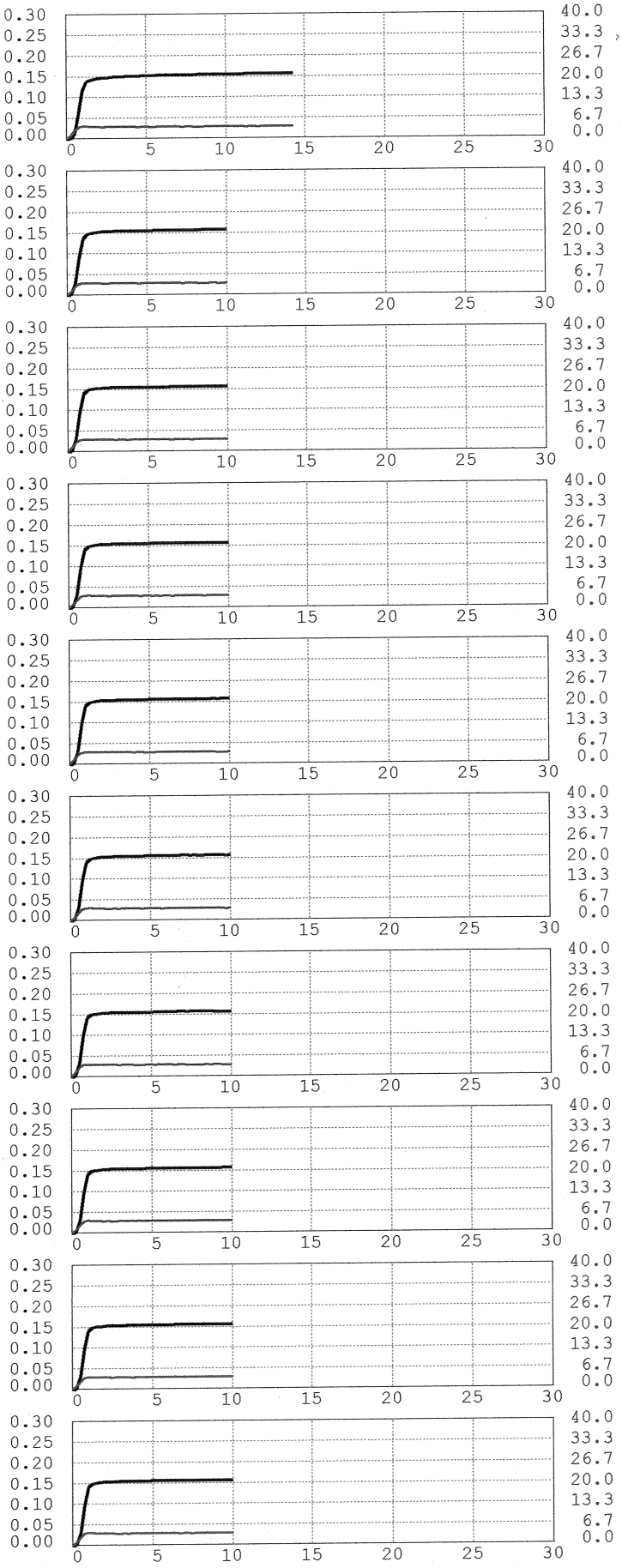
Date: 09/13/2010
Time: 11:47:48

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-31-160
SOLUTION CONCENTRATION: 0.160

BLANK TEST	0.000	11:48
CALIBRATION CHECK	PASSED	11:48
SIMULATOR VAPOR	0.156	11:49
SIMULATOR VAPOR	0.156	11:50
SIMULATOR VAPOR	0.156	11:51
SIMULATOR VAPOR	0.156	11:52
SIMULATOR VAPOR	0.156	11:53
SIMULATOR VAPOR	0.157	11:54
SIMULATOR VAPOR	0.155	11:55
SIMULATOR VAPOR	0.156	11:56
SIMULATOR VAPOR	0.156	11:57
SIMULATOR VAPOR	0.156	11:58
BLANK TEST	0.000	11:58

Average = 0.156
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

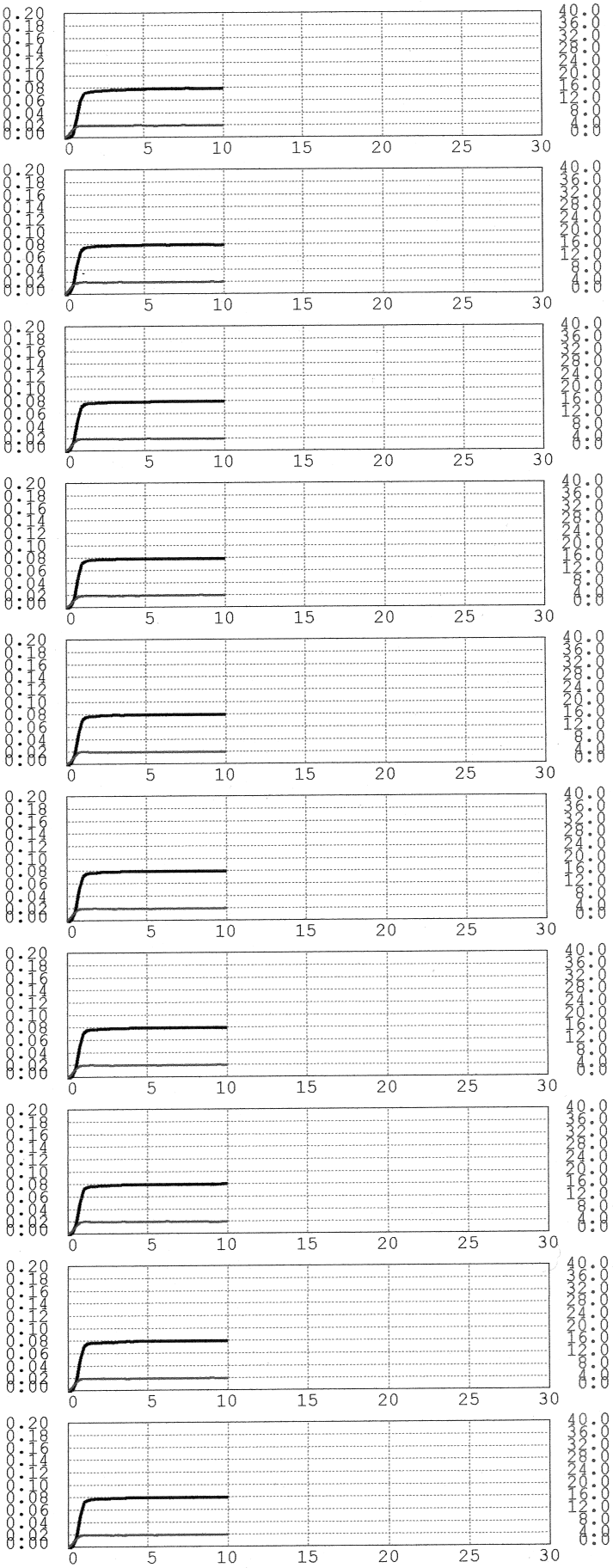
Date: 09/13/2010
Time: 12:20:17

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	12:21
CALIBRATION CHECK	PASSED	12:21
SIMULATOR VAPOR	0.078	12:21
SIMULATOR VAPOR	0.079	12:22
SIMULATOR VAPOR	0.079	12:23
SIMULATOR VAPOR	0.079	12:24
SIMULATOR VAPOR	0.079	12:25
SIMULATOR VAPOR	0.079	12:26
SIMULATOR VAPOR	0.079	12:27
SIMULATOR VAPOR	0.079	12:28
SIMULATOR VAPOR	0.079	12:29
SIMULATOR VAPOR	0.079	12:30
BLANK TEST	0.000	12:31

Average = 0.078
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

Date: 09/13/2010
Time: 12:38:58

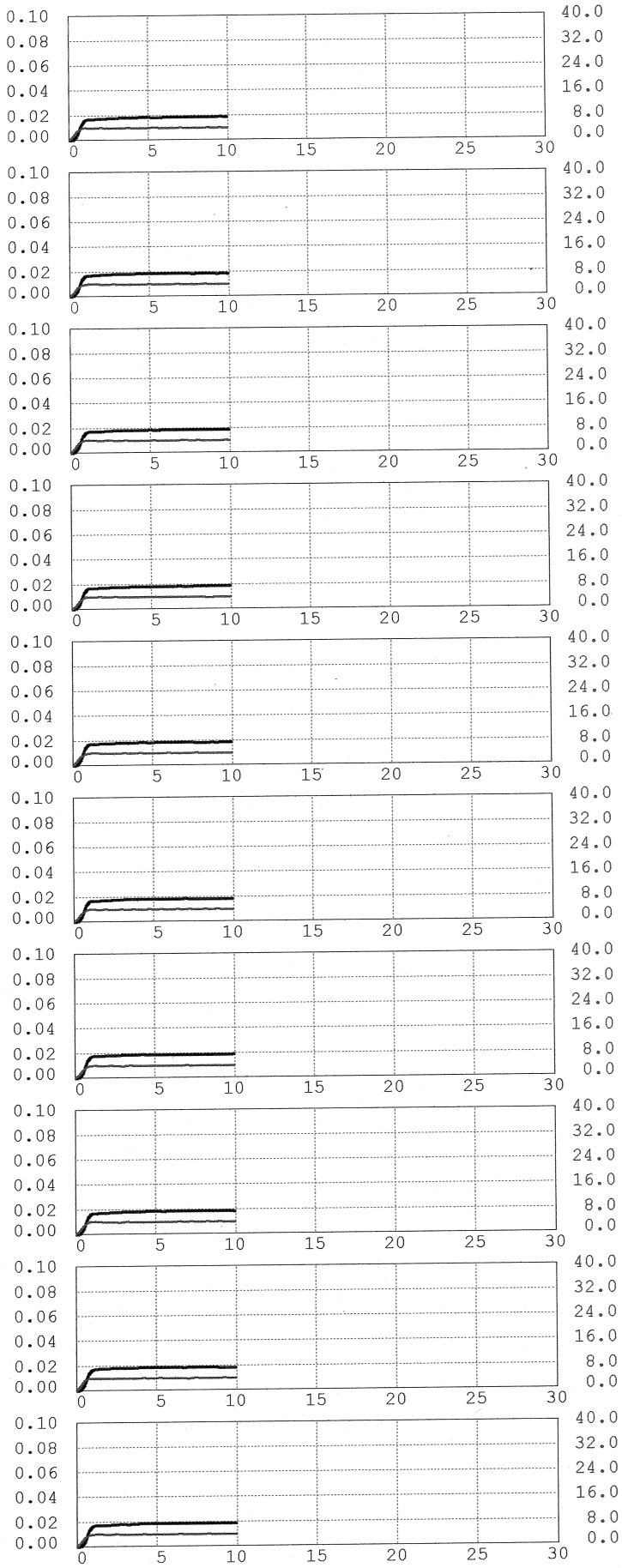
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-34-020
SOLUTION CONCENTRATION: 0.020

BLANK TEST	0.000	12:39
CALIBRATION CHECK	PASSED	12:40
SIMULATOR VAPOR	0.019	12:40
SIMULATOR VAPOR	0.018	12:41
SIMULATOR VAPOR	0.018	12:42
SIMULATOR VAPOR	0.018	12:43
SIMULATOR VAPOR	0.018	12:44
SIMULATOR VAPOR	0.018	12:45
SIMULATOR VAPOR	0.018	12:46
SIMULATOR VAPOR	0.018	12:47
SIMULATOR VAPOR	0.018	12:48
SIMULATOR VAPOR	0.018	12:49
BLANK TEST	0.000	12:49

Average out of range!

Average = 0.018
Std Dev = 0.0003



DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location:
Calibration Date: 09/10/2010
Certification Date: 09/10/2010
Installation Date: 09/10/2010
Test Date: 09/15/2010
Time: 05:52

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.09°C
Breath Tube    = 43.92°C

SETTINGS
Lamp Voltage   = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage   = 80.1 V
Chopper Freq   = 541.9 Hz

PUMP INFO
Flow Rate = 4.774 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)  -0.1114   -0.1075
MIN(V)  -0.1126   -0.1089

FILTER INFO
Filter 1 -0.108  Zero = true
Filter 2  0.157  Zero = true
Filter 3  1.230  Zero = true

CALIBRATION CHECK
Xq = 0.1109  0.87%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

Date: 09/15/2010
Time: 06:25:20

SUPERVISOR NAME: STEVEN E HARNOIS

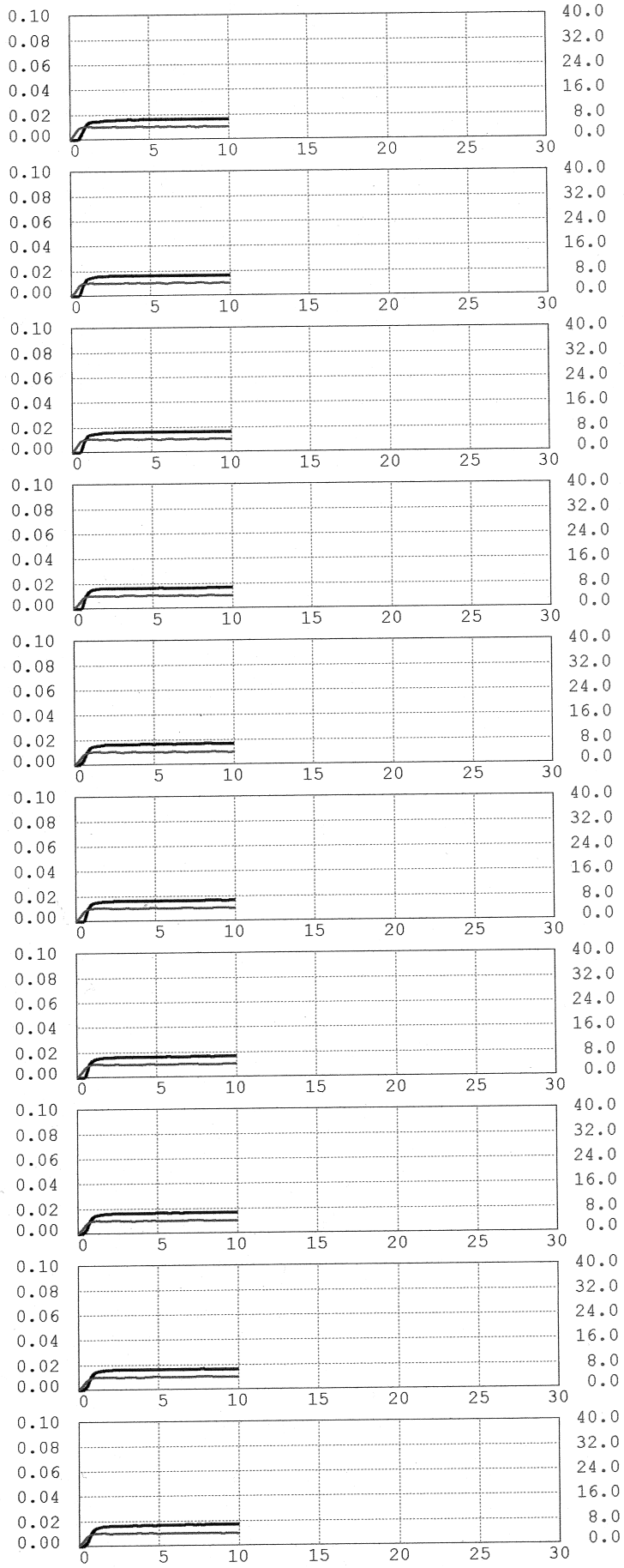
SOLUTION LOT #: 10-34-020
SOLUTION CONCENTRATION: 0.020

BLANK TEST	0.000	06:26
CALIBRATION CHECK	PASSED	06:26
SIMULATOR VAPOR	0.018	06:26
SIMULATOR VAPOR	0.017	06:27
SIMULATOR VAPOR	0.018	06:28
SIMULATOR VAPOR	0.018	06:29
SIMULATOR VAPOR	0.018	06:30
SIMULATOR VAPOR	0.018	06:31
SIMULATOR VAPOR	0.018	06:32
SIMULATOR VAPOR	0.018	06:33
SIMULATOR VAPOR	0.018	06:34
SIMULATOR VAPOR	0.018	06:35
BLANK TEST	0.000	06:36

Average out of range!

Average = 0.017
Std Dev = 0.0003

Solution Depleted Replace + Rerun SH 9/17/10



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

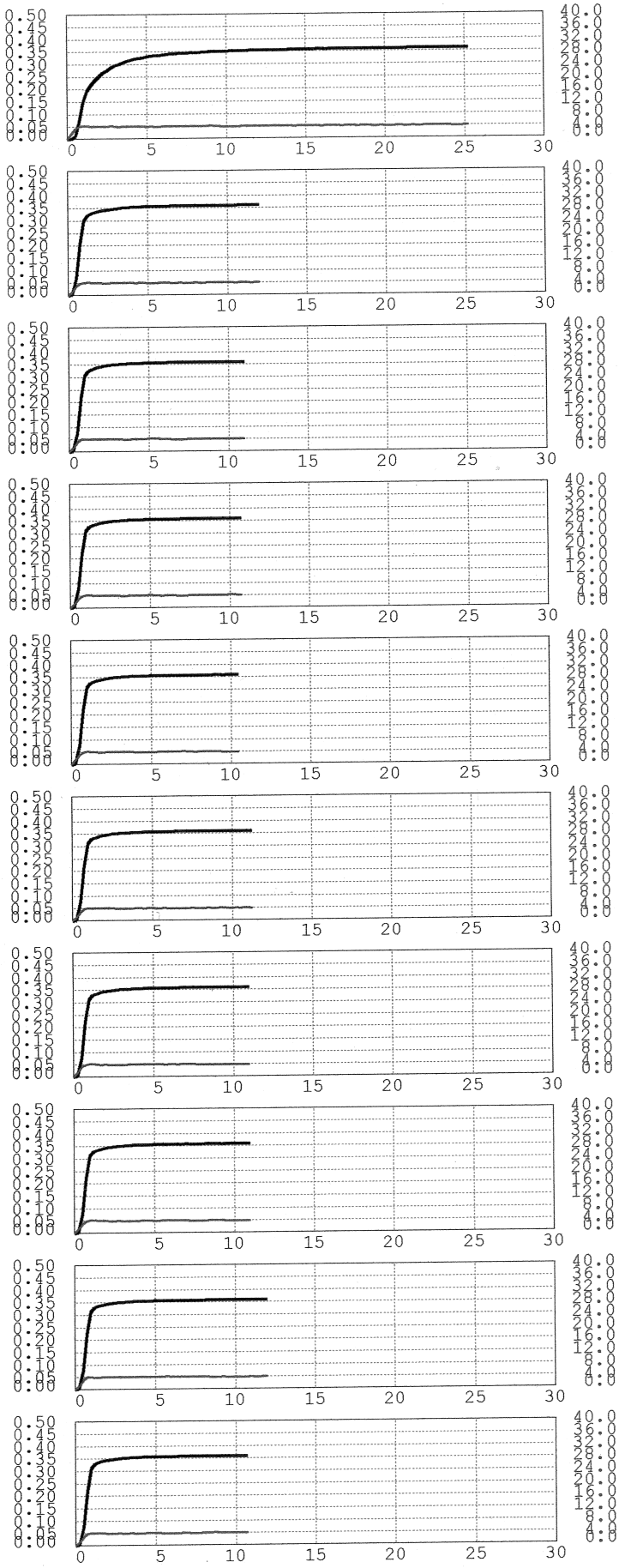
Date: 09/15/2010
Time: 06:55:55

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-32-400
SOLUTION CONCENTRATION: 0.373

BLANK TEST	0.000	06:56
CALIBRATION CHECK	PASSED	06:56
SIMULATOR VAPOR	0.359	06:57
SIMULATOR VAPOR	0.358	06:58
SIMULATOR VAPOR	0.358	06:59
SIMULATOR VAPOR	0.358	07:00
SIMULATOR VAPOR	0.357	07:01
SIMULATOR VAPOR	0.357	07:02
SIMULATOR VAPOR	0.358	07:03
SIMULATOR VAPOR	0.357	07:04
SIMULATOR VAPOR	0.358	07:05
SIMULATOR VAPOR	0.358	07:06
BLANK TEST	0.000	07:07

Average = 0.357
Std Dev = 0.0006



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

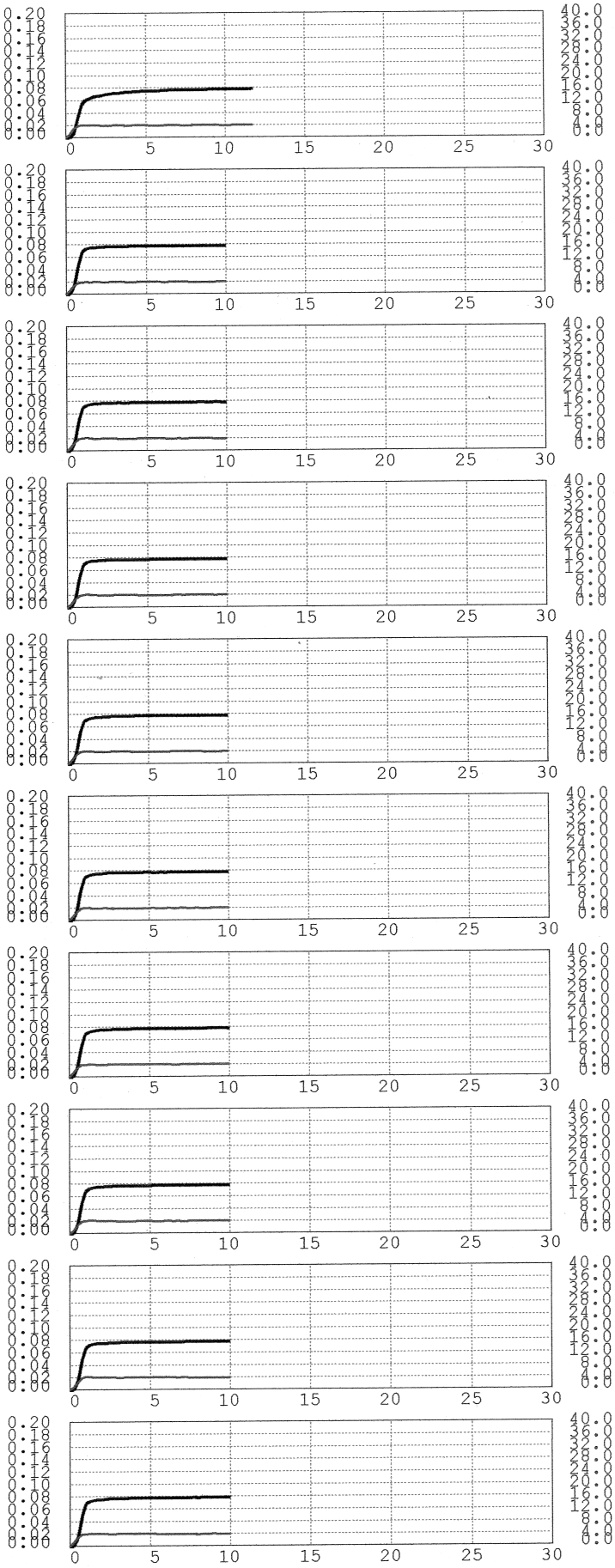
Date: 09/15/2010
Time: 13:35:48

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	13:36
CALIBRATION CHECK	PASSED	13:36
SIMULATOR VAPOR	0.079	13:37
SIMULATOR VAPOR	0.079	13:38
SIMULATOR VAPOR	0.079	13:39
SIMULATOR VAPOR	0.079	13:40
SIMULATOR VAPOR	0.079	13:41
SIMULATOR VAPOR	0.078	13:42
SIMULATOR VAPOR	0.079	13:43
SIMULATOR VAPOR	0.078	13:44
SIMULATOR VAPOR	0.078	13:45
SIMULATOR VAPOR	0.079	13:45
BLANK TEST	0.000	13:46

Average = 0.078
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

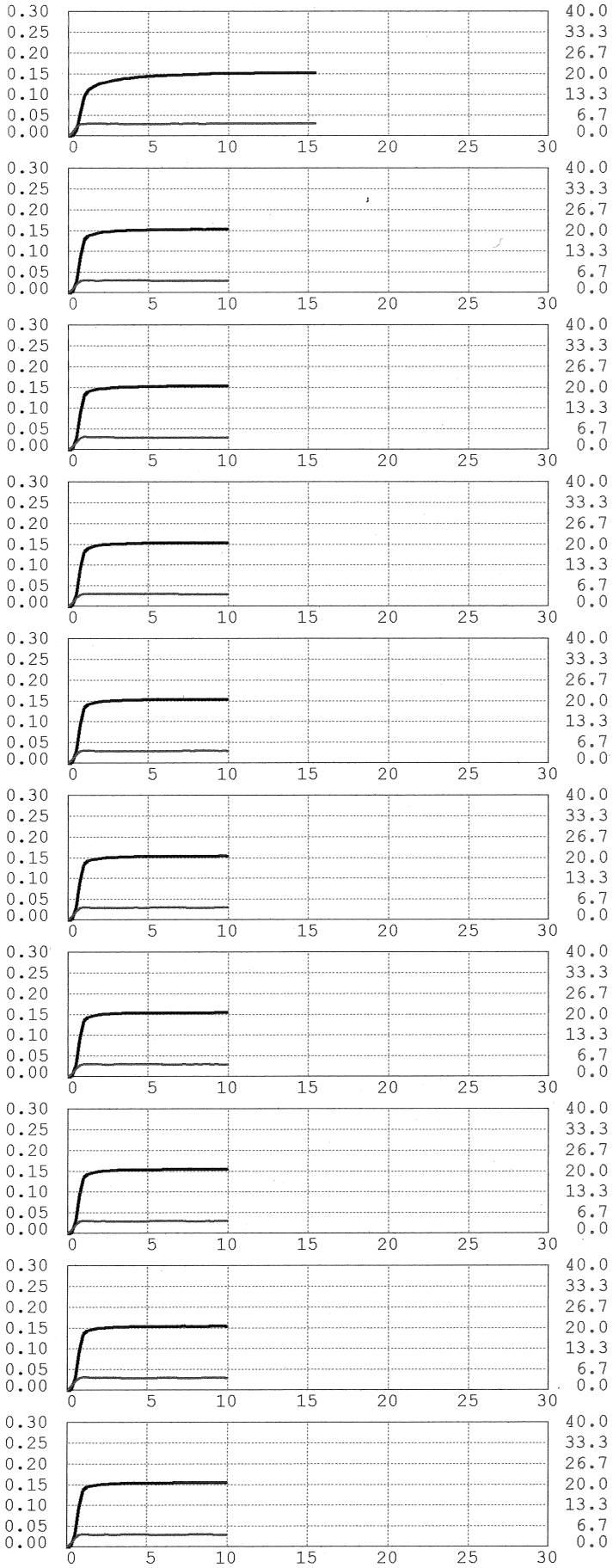
Date: 09/15/2010
Time: 14:11:05

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-31-160
SOLUTION CONCENTRATION: 0.160

BLANK TEST	0.000	14:12
CALIBRATION CHECK	PASSED	14:12
SIMULATOR VAPOR	0.153	14:12
SIMULATOR VAPOR	0.153	14:13
SIMULATOR VAPOR	0.153	14:14
SIMULATOR VAPOR	0.154	14:15
SIMULATOR VAPOR	0.154	14:16
SIMULATOR VAPOR	0.154	14:17
SIMULATOR VAPOR	0.155	14:18
SIMULATOR VAPOR	0.155	14:19
SIMULATOR VAPOR	0.154	14:20
SIMULATOR VAPOR	0.154	14:21
BLANK TEST	0.000	14:22

Average = 0.153
Std Dev = 0.0007



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

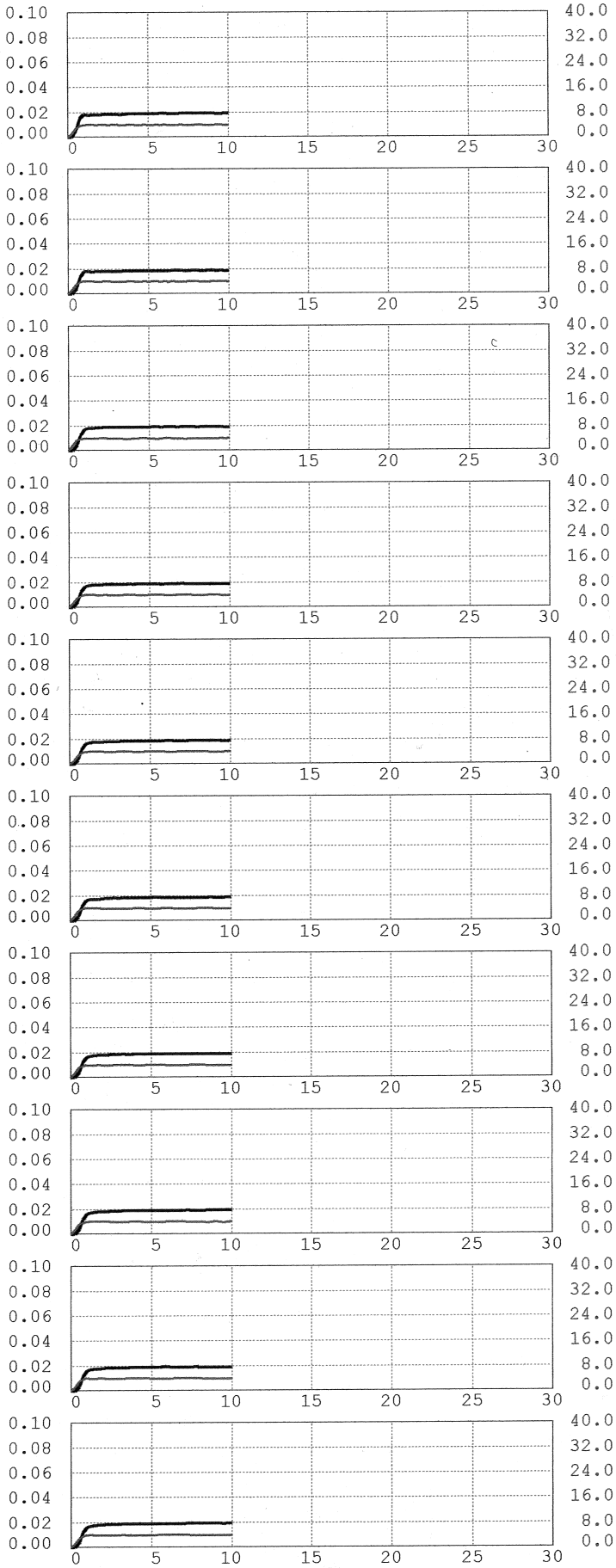
Date: 09/17/2010
Time: 07:04:18

SUPERVISOR NAME: SEH REPLACMENT

SOLUTION LOT #: 10-34-020
SOLUTION CONCENTRATION: 0.020

BLANK TEST	0.000	07:05
CALIBRATION CHECK	PASSED	07:05
SIMULATOR VAPOR	0.020	07:05
SIMULATOR VAPOR	0.020	07:06
SIMULATOR VAPOR	0.020	07:07
SIMULATOR VAPOR	0.020	07:08
SIMULATOR VAPOR	0.020	07:09
SIMULATOR VAPOR	0.020	07:10
SIMULATOR VAPOR	0.020	07:11
SIMULATOR VAPOR	0.020	07:12
SIMULATOR VAPOR	0.020	07:13
SIMULATOR VAPOR	0.020	07:14
BLANK TEST	0.000	07:15

Average = 0.020
Std Dev = 0.0000



DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location:
Calibration Date: 09/10/2010
Certification Date: 09/10/2010
Installation Date: 09/10/2010
Test Date: 09/21/2010
Time: 08:38

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.86°C
Breath Tube    = 46.81°C

SETTINGS
Lamp Voltage   = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage   = 80.1 V
Chopper Freq   = 544.5 Hz

PUMP INFO
Flow Rate = 4.791 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)  -0.0992   -0.0957
MIN(V)  -0.1004   -0.0974

FILTER INFO
Filter 1 -0.097  Zero = true
Filter 2  0.177  Zero = true
Filter 3  1.239  Zero = true

CALIBRATION CHECK
Xq = 0.1108  0.95%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

Date: 09/21/2010
Time: 08:40:54

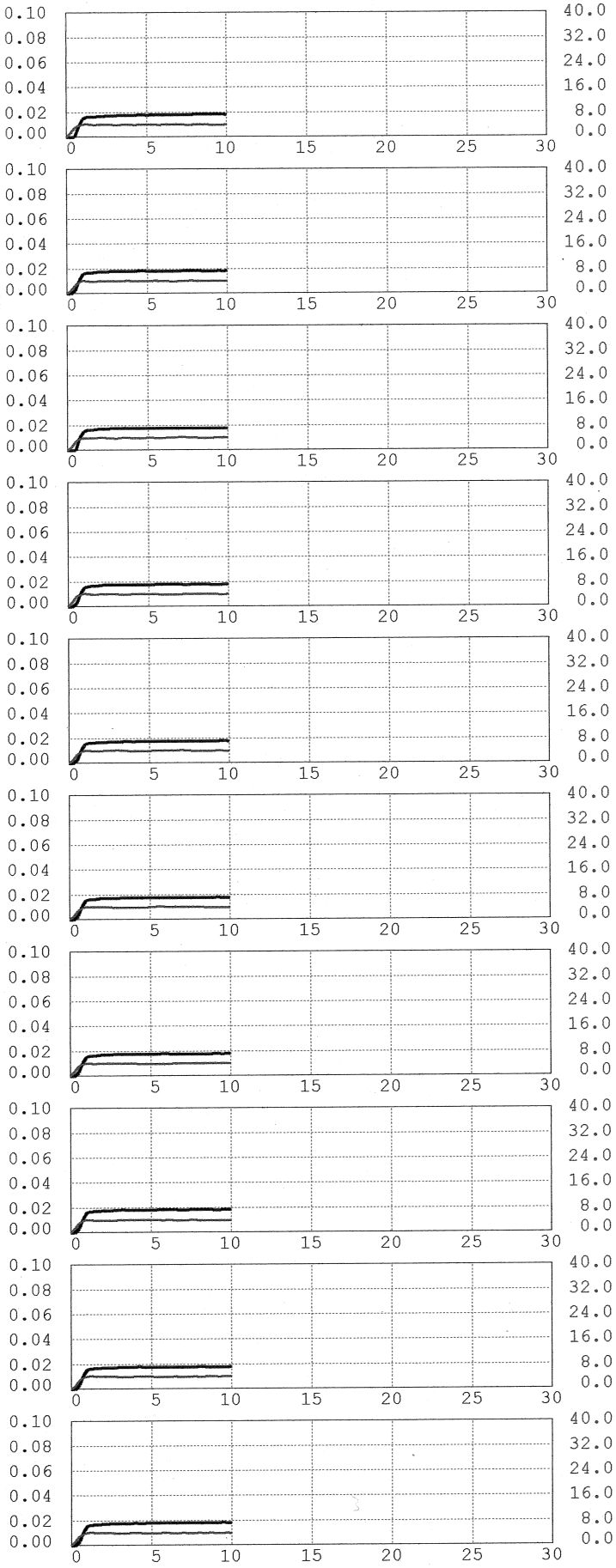
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-34-020
SOLUTION CONCENTRATION: 0.020

BLANK TEST	0.000	08:41
CALIBRATION CHECK	PASSED	08:41
SIMULATOR VAPOR	0.019	08:42
SIMULATOR VAPOR	0.019	08:43
SIMULATOR VAPOR	0.018	08:44
SIMULATOR VAPOR	0.019	08:45
SIMULATOR VAPOR	0.018	08:46
SIMULATOR VAPOR	0.019	08:47
SIMULATOR VAPOR	0.019	08:48
SIMULATOR VAPOR	0.019	08:49
SIMULATOR VAPOR	0.019	08:50
SIMULATOR VAPOR	0.019	08:51
BLANK TEST	0.000	08:51

Average out of range!

Average = 0.018
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

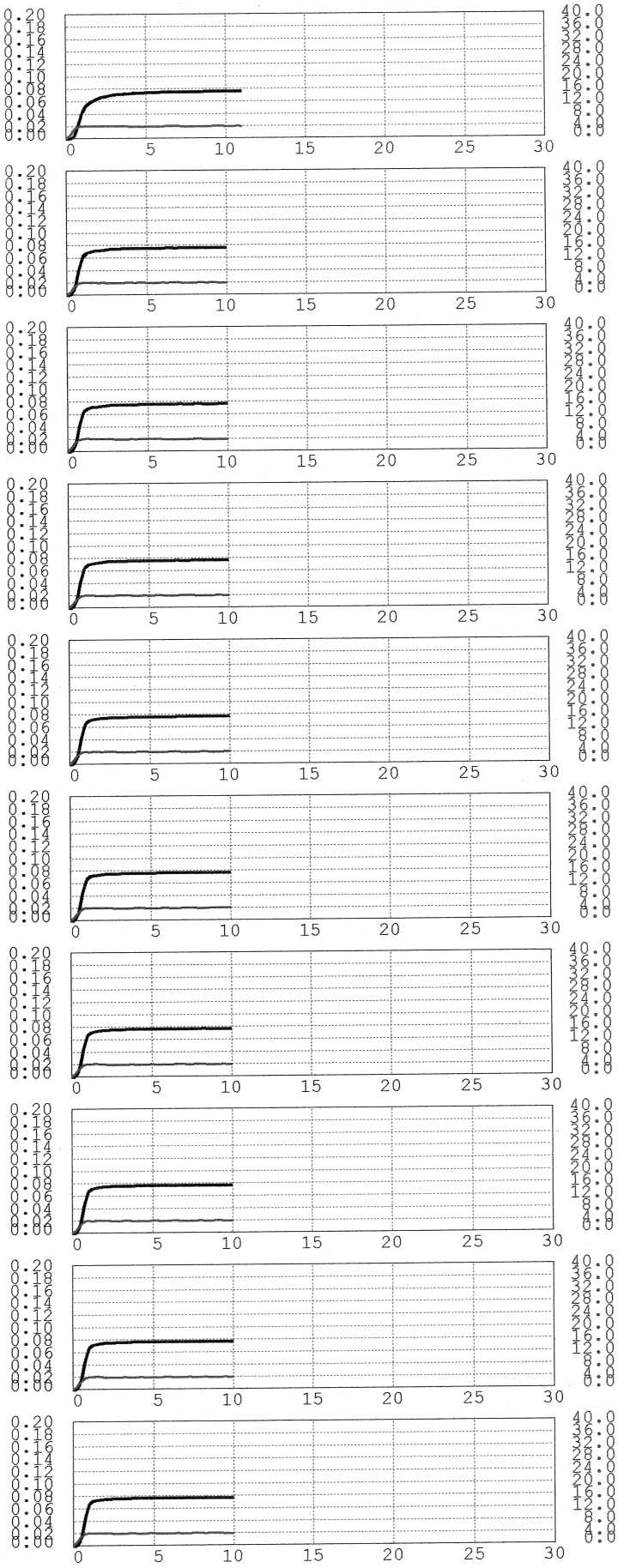
Date: 09/21/2010
Time: 08:53:35

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	08:54
CALIBRATION CHECK	PASSED	08:54
SIMULATOR VAPOR	0.076	08:54
SIMULATOR VAPOR	0.076	08:55
SIMULATOR VAPOR	0.076	08:56
SIMULATOR VAPOR	0.077	08:57
SIMULATOR VAPOR	0.077	08:58
SIMULATOR VAPOR	0.077	08:59
SIMULATOR VAPOR	0.077	09:00
SIMULATOR VAPOR	0.077	09:01
SIMULATOR VAPOR	0.077	09:02
SIMULATOR VAPOR	0.077	09:03
BLANK TEST	0.000	09:04

Average = 0.076
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

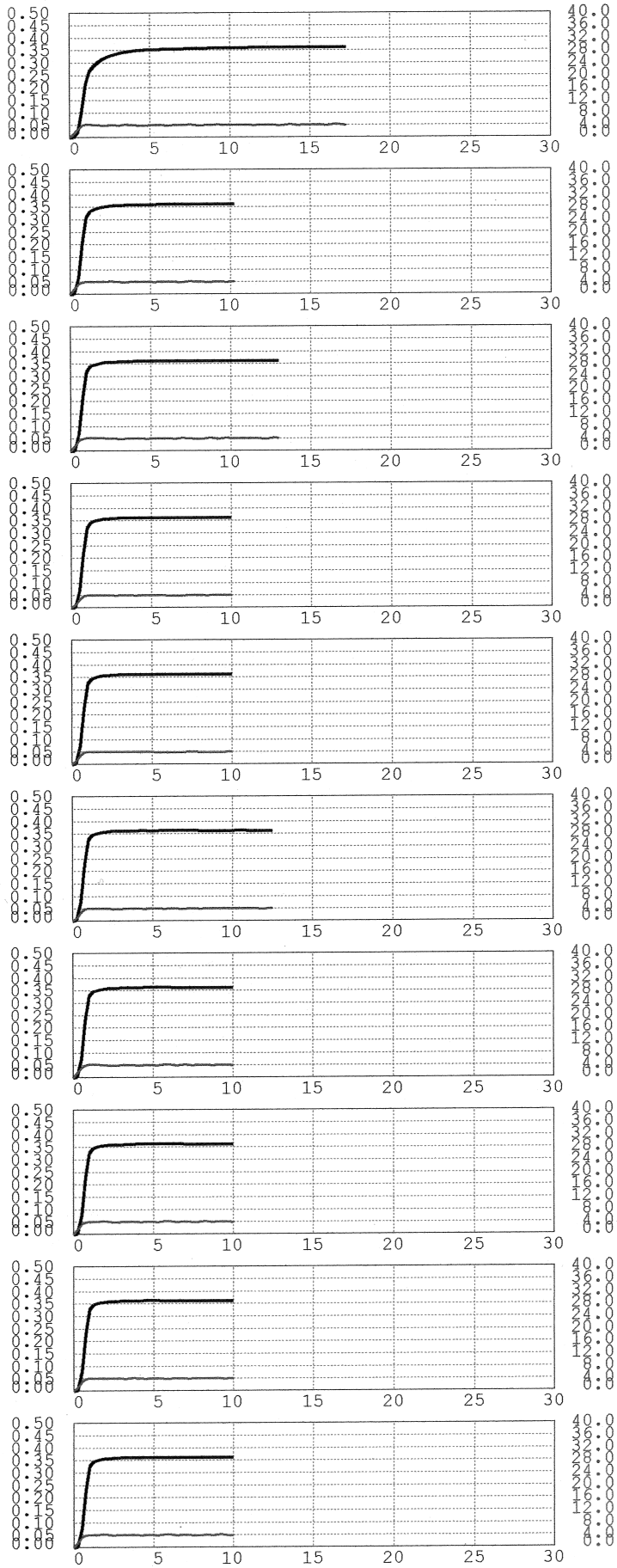
Date: 09/21/2010
Time: 09:11:25

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-32-400
SOLUTION CONCENTRATION: 0.373

BLANK TEST	0.000	09:12
CALIBRATION CHECK	PASSED	09:12
SIMULATOR VAPOR	0.361	09:12
SIMULATOR VAPOR	0.360	09:14
SIMULATOR VAPOR	0.360	09:15
SIMULATOR VAPOR	0.360	09:16
SIMULATOR VAPOR	0.360	09:17
SIMULATOR VAPOR	0.361	09:18
SIMULATOR VAPOR	0.360	09:19
SIMULATOR VAPOR	0.360	09:20
SIMULATOR VAPOR	0.360	09:21
SIMULATOR VAPOR	0.360	09:22
BLANK TEST	0.000	09:23

Average = 0.360
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

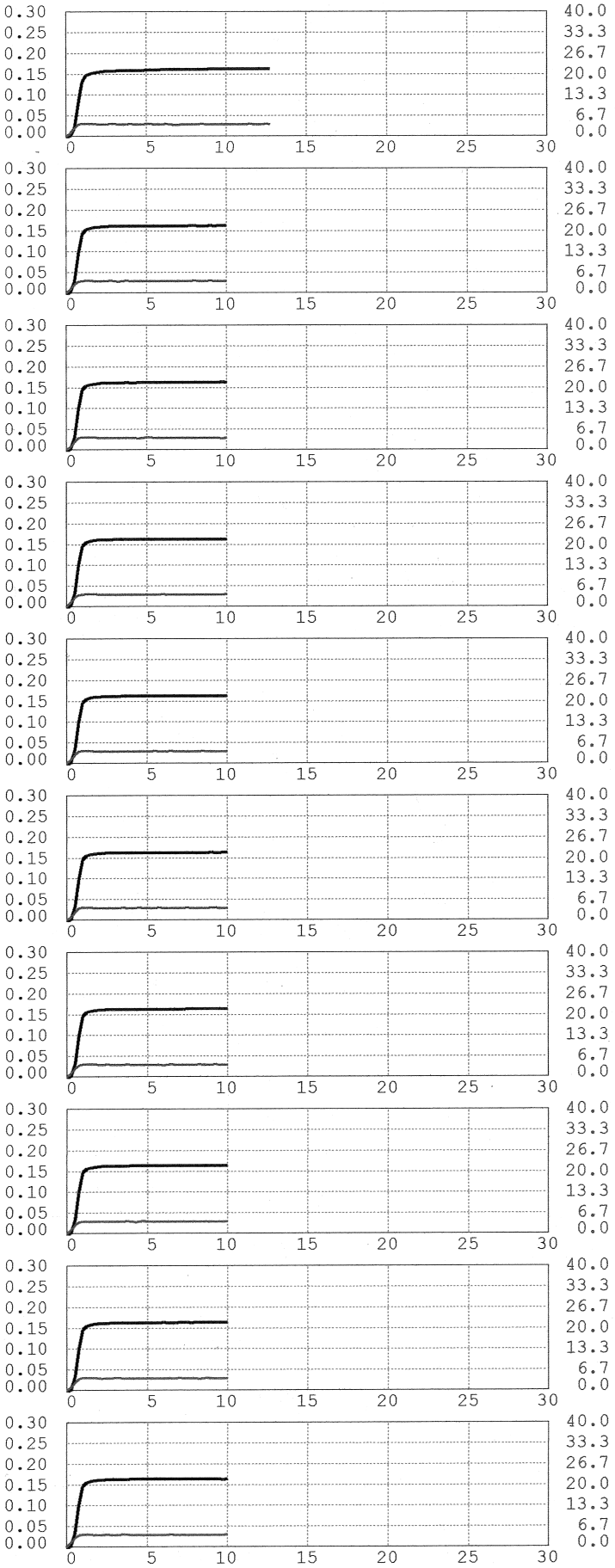
Date: 09/21/2010
Time: 09:33:35

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	09:34
CALIBRATION CHECK	PASSED	09:34
SIMULATOR VAPOR	0.163	09:34
SIMULATOR VAPOR	0.162	09:36
SIMULATOR VAPOR	0.162	09:37
SIMULATOR VAPOR	0.163	09:38
SIMULATOR VAPOR	0.163	09:39
SIMULATOR VAPOR	0.163	09:39
SIMULATOR VAPOR	0.163	09:40
SIMULATOR VAPOR	0.163	09:41
SIMULATOR VAPOR	0.163	09:42
SIMULATOR VAPOR	0.163	09:43
BLANK TEST	0.000	09:44

Average = 0.162
Std Dev = 0.0004



DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location:
Calibration Date: 09/10/2010
Certification Date: 09/10/2010
Installation Date: 09/10/2010
Test Date: 09/21/2010
Time: 13:22

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.80°C
Breath Tube    = 47.95°C

SETTINGS
Lamp Voltage   = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage   = 80.1 V
Chopper Freq   = 544.1 Hz

PUMP INFO
Flow Rate = 4.722 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)  -0.0848   -0.0831
MIN(V)  -0.0866   -0.0843

FILTER INFO
Filter 1 -0.084  Zero = true
Filter 2  0.191  Zero = true
Filter 3  1.261  Zero = true

CALIBRATION CHECK
Xq = 0.1114  0.47%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

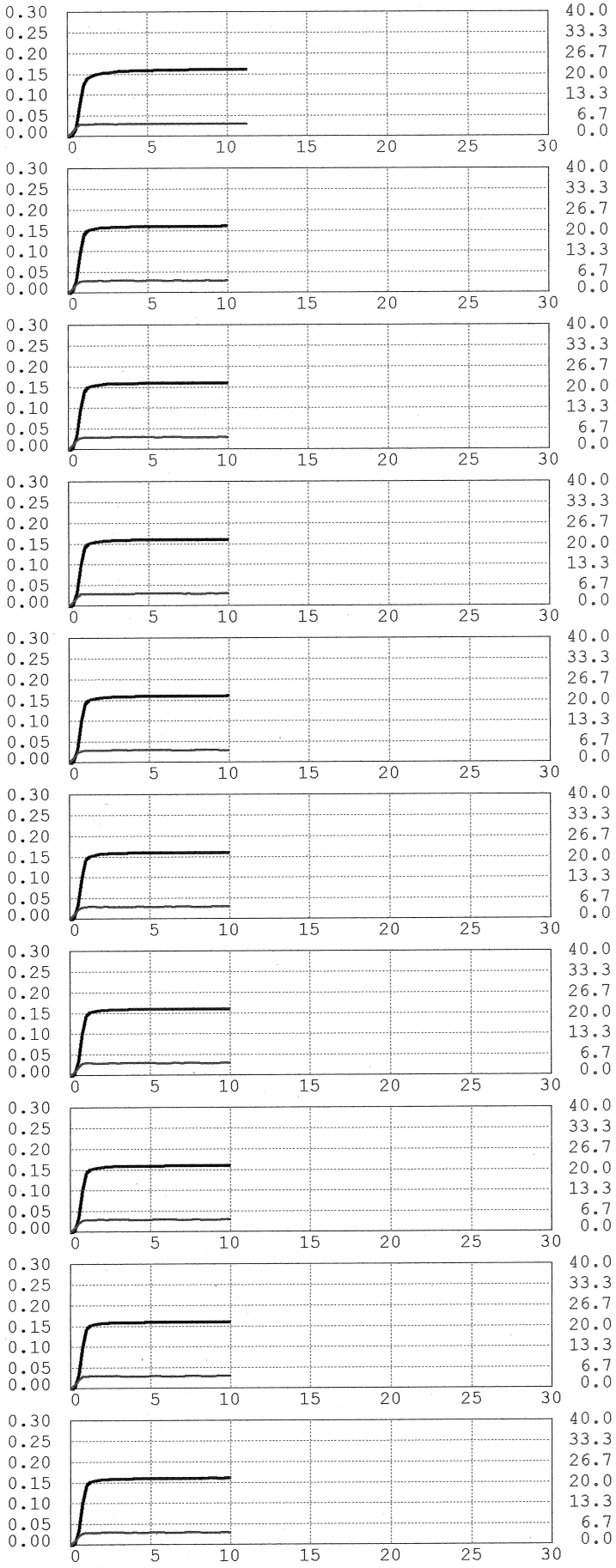
Date: 09/21/2010
Time: 13:24:33

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	13:25
CALIBRATION CHECK	PASSED	13:25
SIMULATOR VAPOR	0.161	13:25
SIMULATOR VAPOR	0.161	13:26
SIMULATOR VAPOR	0.161	13:27
SIMULATOR VAPOR	0.161	13:28
SIMULATOR VAPOR	0.160	13:29
SIMULATOR VAPOR	0.160	13:30
SIMULATOR VAPOR	0.161	13:31
SIMULATOR VAPOR	0.160	13:32
SIMULATOR VAPOR	0.161	13:33
SIMULATOR VAPOR	0.161	13:34
BLANK TEST	0.000	13:35

Average = 0.160
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

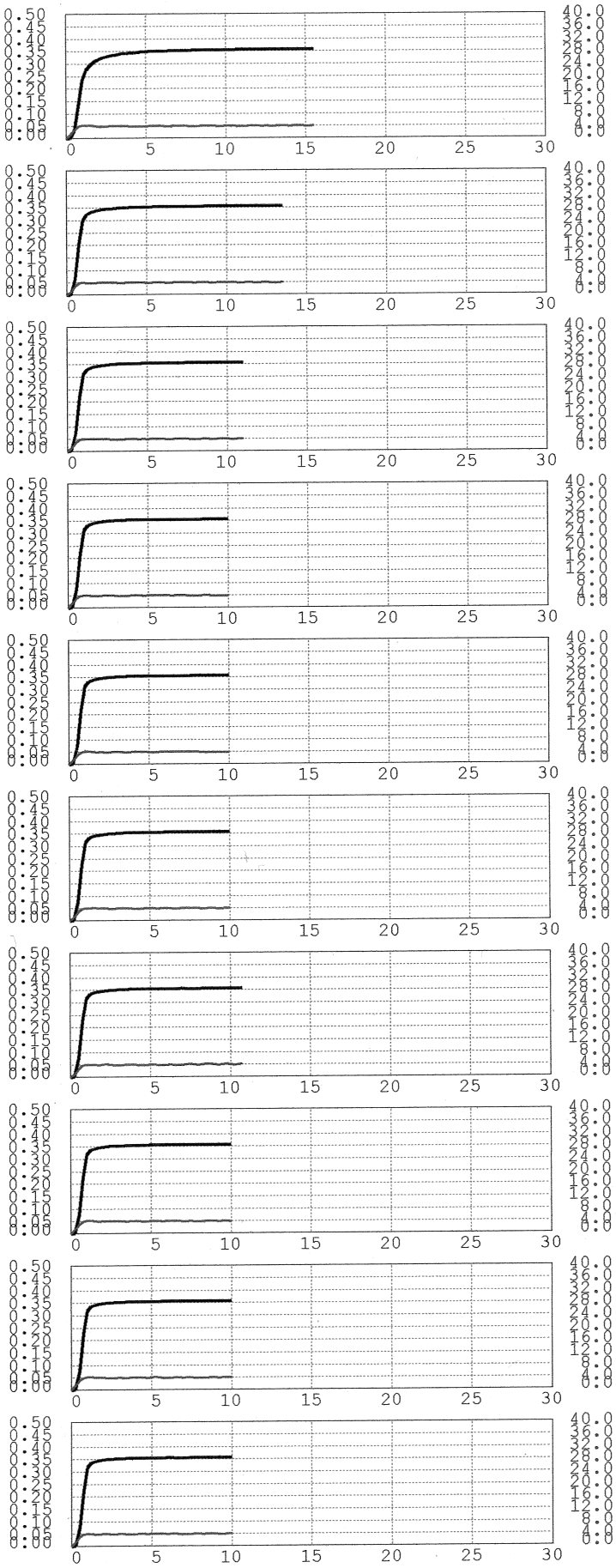
Date: 09/21/2010
Time: 13:38:23

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-32-400
SOLUTION CONCENTRATION: 0.373

BLANK TEST	0.000	13:39
CALIBRATION CHECK	PASSED	13:39
SIMULATOR VAPOR	0.356	13:39
SIMULATOR VAPOR	0.356	13:41
SIMULATOR VAPOR	0.355	13:42
SIMULATOR VAPOR	0.354	13:43
SIMULATOR VAPOR	0.355	13:44
SIMULATOR VAPOR	0.356	13:45
SIMULATOR VAPOR	0.355	13:46
SIMULATOR VAPOR	0.356	13:47
SIMULATOR VAPOR	0.355	13:48
SIMULATOR VAPOR	0.355	13:49
BLANK TEST	0.000	13:49

Average = 0.355
Std Dev = 0.0006



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

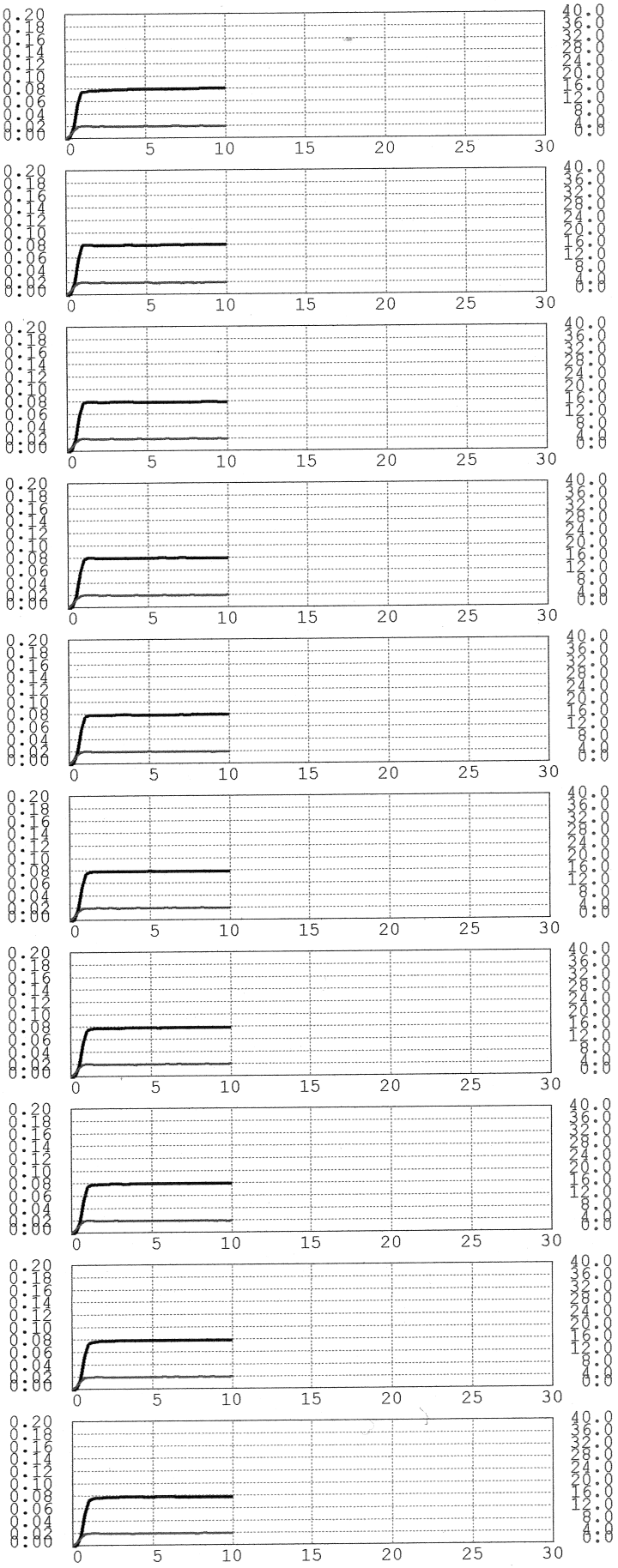
Date: 09/21/2010
Time: 13:53:55

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	13:54
CALIBRATION CHECK	PASSED	13:54
SIMULATOR VAPOR	0.080	13:55
SIMULATOR VAPOR	0.079	13:56
SIMULATOR VAPOR	0.079	13:57
SIMULATOR VAPOR	0.079	13:58
SIMULATOR VAPOR	0.079	13:59
SIMULATOR VAPOR	0.079	14:00
SIMULATOR VAPOR	0.078	14:01
SIMULATOR VAPOR	0.079	14:02
SIMULATOR VAPOR	0.079	14:03
SIMULATOR VAPOR	0.078	14:04
BLANK TEST	0.000	14:04

Average = 0.078
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

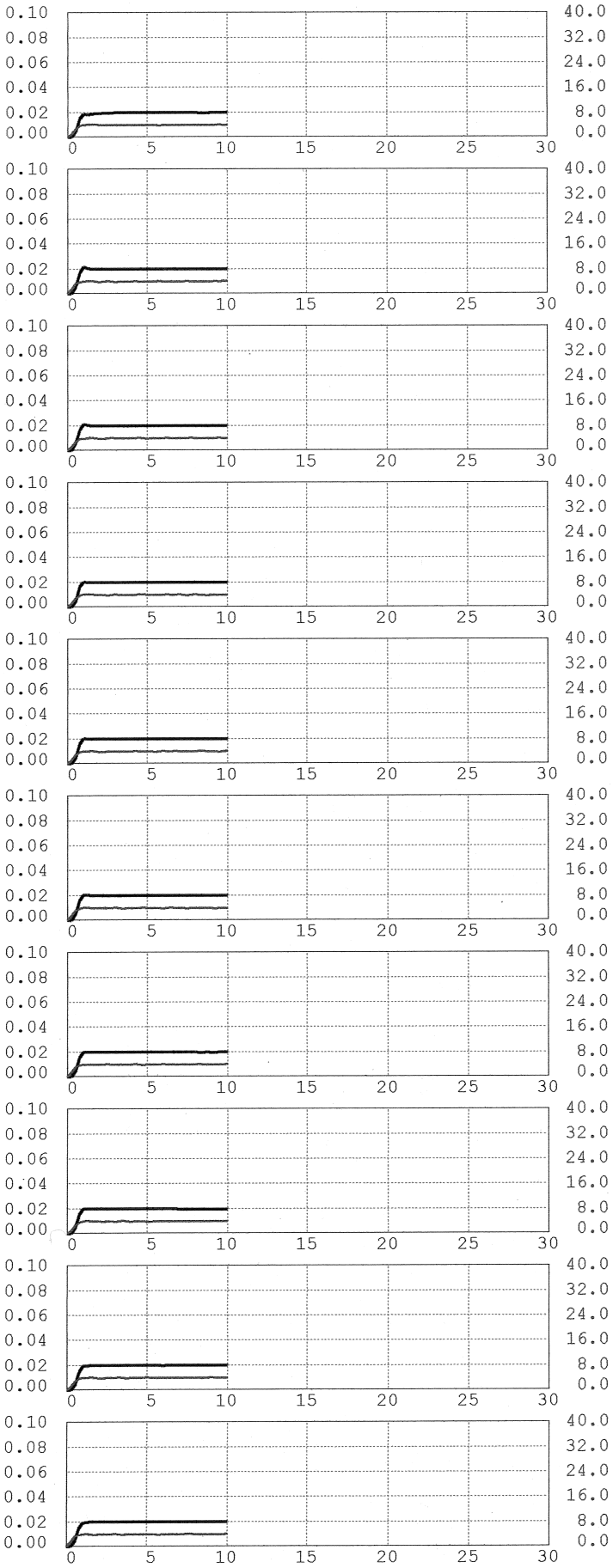
Date: 09/21/2010
Time: 14:09:26

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-34-020
SOLUTION CONCENTRATION: 0.020

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

Average = 0.019
Std Dev = 0.0004



DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location:
Calibration Date: 09/10/2010
Certification Date: 09/10/2010
Installation Date: 09/10/2010
Test Date: 09/22/2010
Time: 05:53

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.97°C
Breath Tube    = 47.19°C

SETTINGS
Lamp Voltage   = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage   = 80.1 V
Chopper Freq   = 543.9 Hz

PUMP INFO
Flow Rate = 4.793 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)  -0.0917   -0.0888
MIN(V)  -0.0935   -0.0900

FILTER INFO
Filter 1 -0.089  Zero = true
Filter 2  0.185  Zero = true
Filter 3  1.251  Zero = true

CALIBRATION CHECK
Xq = 0.1110  0.79%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

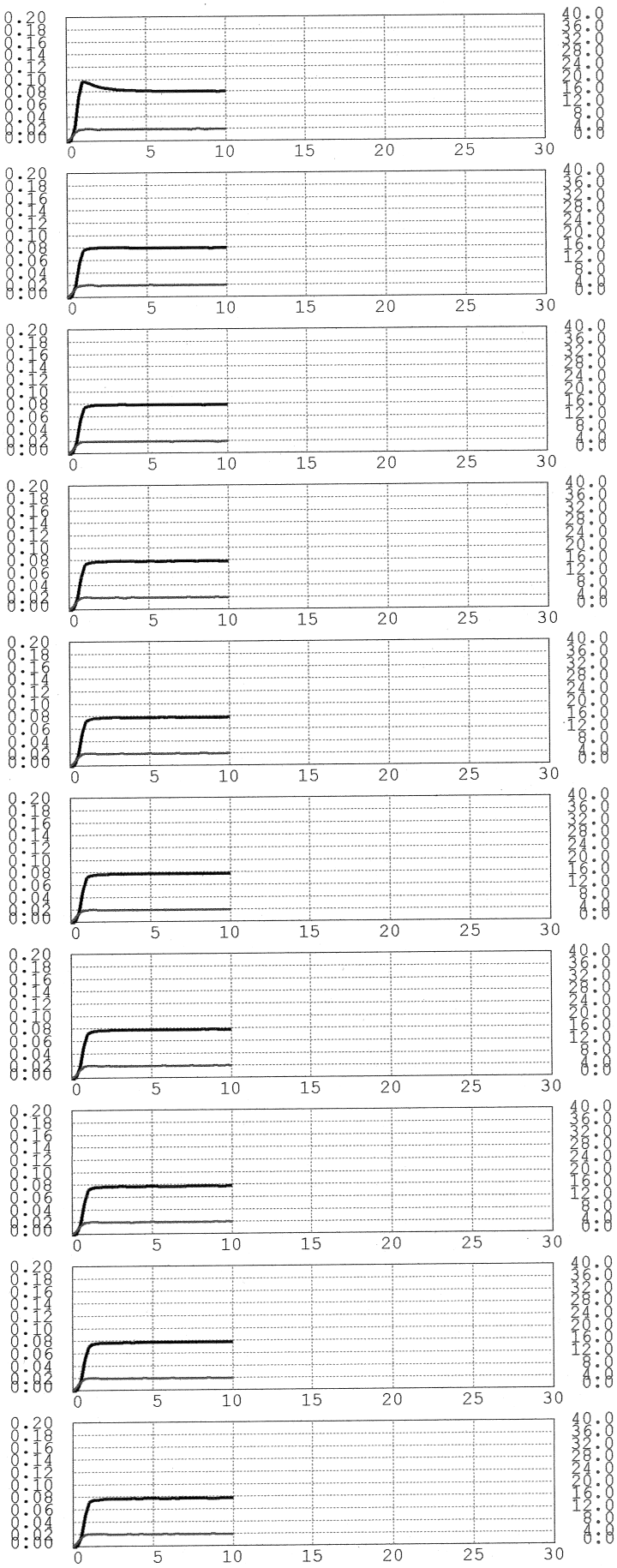
Date: 09/22/2010
Time: 07:11:06

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	07:12
CALIBRATION CHECK	PASSED	07:12
SIMULATOR VAPOR	0.080	07:12
SIMULATOR VAPOR	0.079	07:13
SIMULATOR VAPOR	0.078	07:14
SIMULATOR VAPOR	0.078	07:15
SIMULATOR VAPOR	0.078	07:16
SIMULATOR VAPOR	0.078	07:17
SIMULATOR VAPOR	0.078	07:18
SIMULATOR VAPOR	0.077	07:19
SIMULATOR VAPOR	0.078	07:20
SIMULATOR VAPOR	0.078	07:21
BLANK TEST	0.000	07:22

Average = 0.078
Std Dev = 0.0007



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

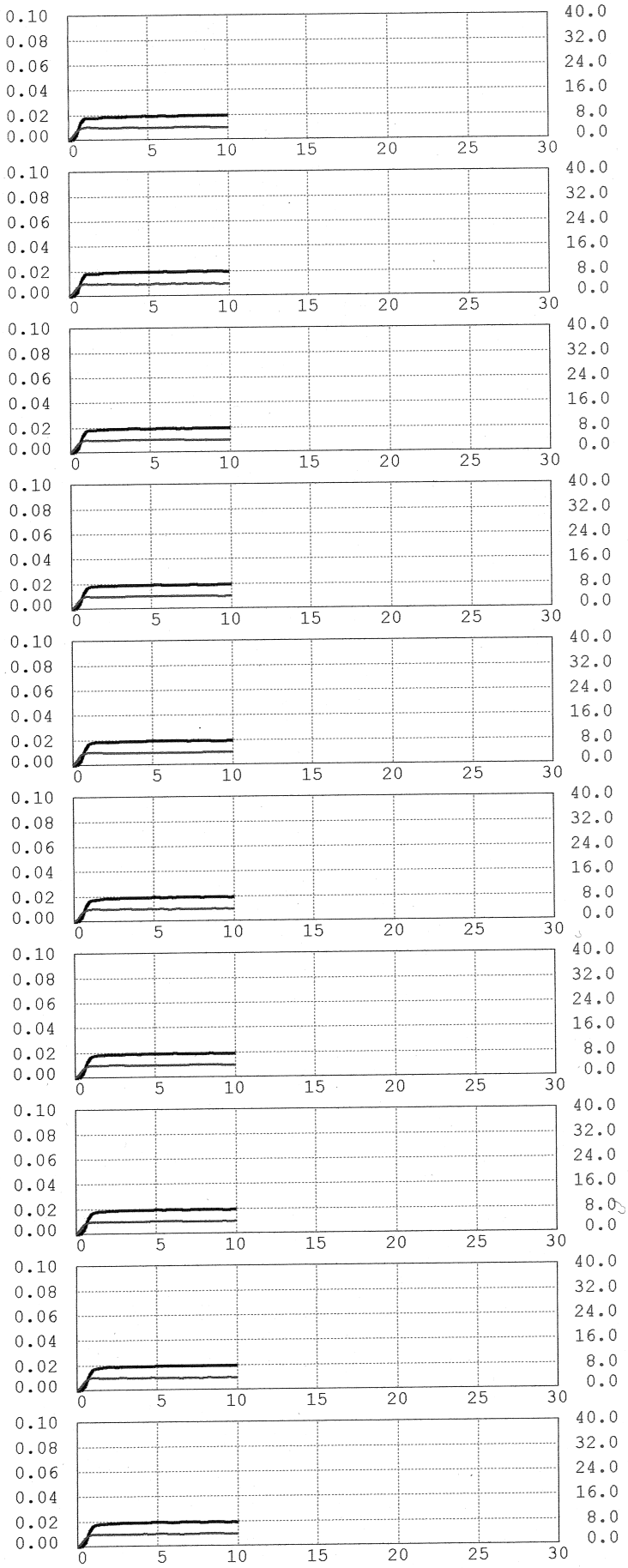
Date: 09/22/2010
Time: 05:57:53

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-34-020
SOLUTION CONCENTRATION: 0.020

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

Average = 0.020
Std Dev = 0.0000



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

Date: 09/22/2010
Time: 06:25:57

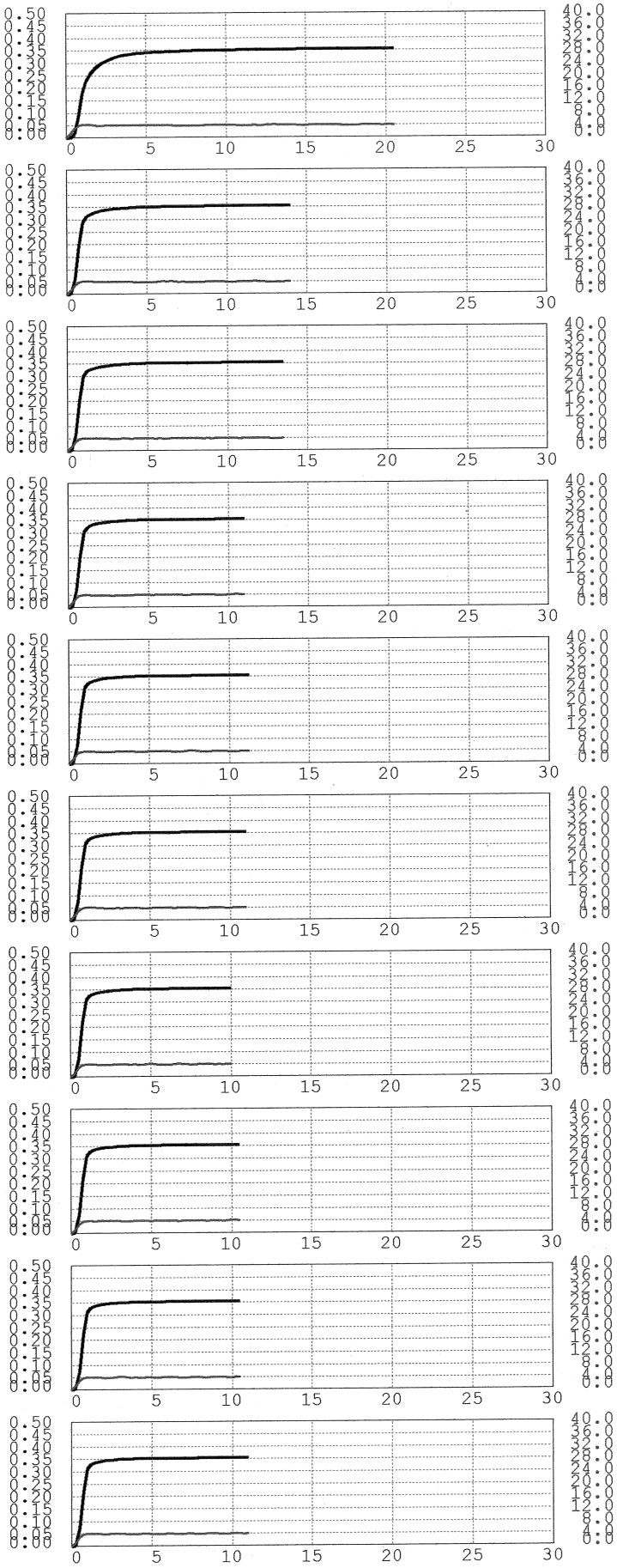
SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-32-400
SOLUTION CONCENTRATION: 0.373

BLANK TEST	0.000	06:26
CALIBRATION CHECK	PASSED	06:26
SIMULATOR VAPOR	0.354	06:27
SIMULATOR VAPOR	0.354	06:28
SIMULATOR VAPOR	0.353	06:29
SIMULATOR VAPOR	0.352	06:30
SIMULATOR VAPOR	0.353	06:31
SIMULATOR VAPOR	0.353	06:32
SIMULATOR VAPOR	0.353	06:33
SIMULATOR VAPOR	0.354	06:34
SIMULATOR VAPOR	0.354	06:35
SIMULATOR VAPOR	0.353	06:36
BLANK TEST	0.000	06:37

Average out of range!

Average = 0.353
Std Dev = 0.0006



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

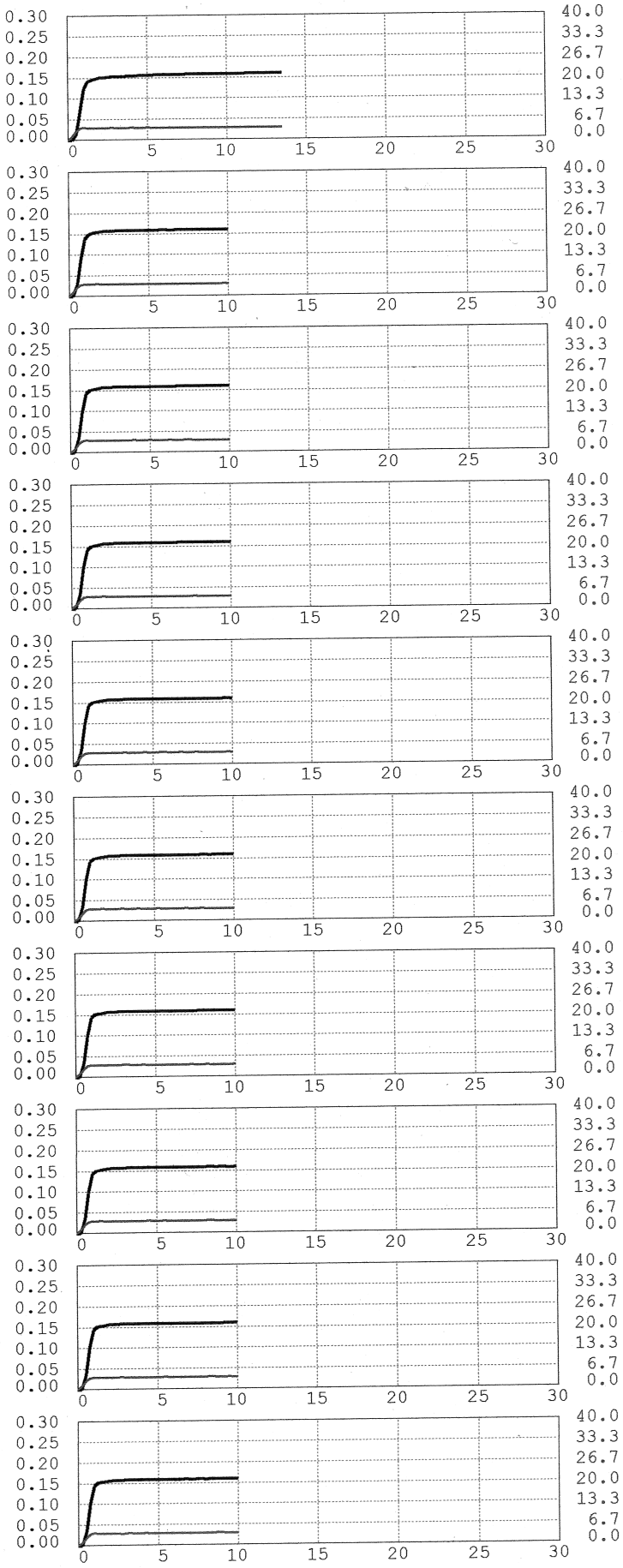
Date: 09/22/2010
Time: 06:53:03

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	06:53
CALIBRATION CHECK	PASSED	06:54
SIMULATOR VAPOR	0.160	06:54
SIMULATOR VAPOR	0.159	06:55
SIMULATOR VAPOR	0.160	06:56
SIMULATOR VAPOR	0.160	06:57
SIMULATOR VAPOR	0.159	06:58
SIMULATOR VAPOR	0.160	06:59
SIMULATOR VAPOR	0.160	07:00
SIMULATOR VAPOR	0.159	07:01
SIMULATOR VAPOR	0.160	07:02
SIMULATOR VAPOR	0.160	07:03
BLANK TEST	0.000	07:04

Average = 0.159
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

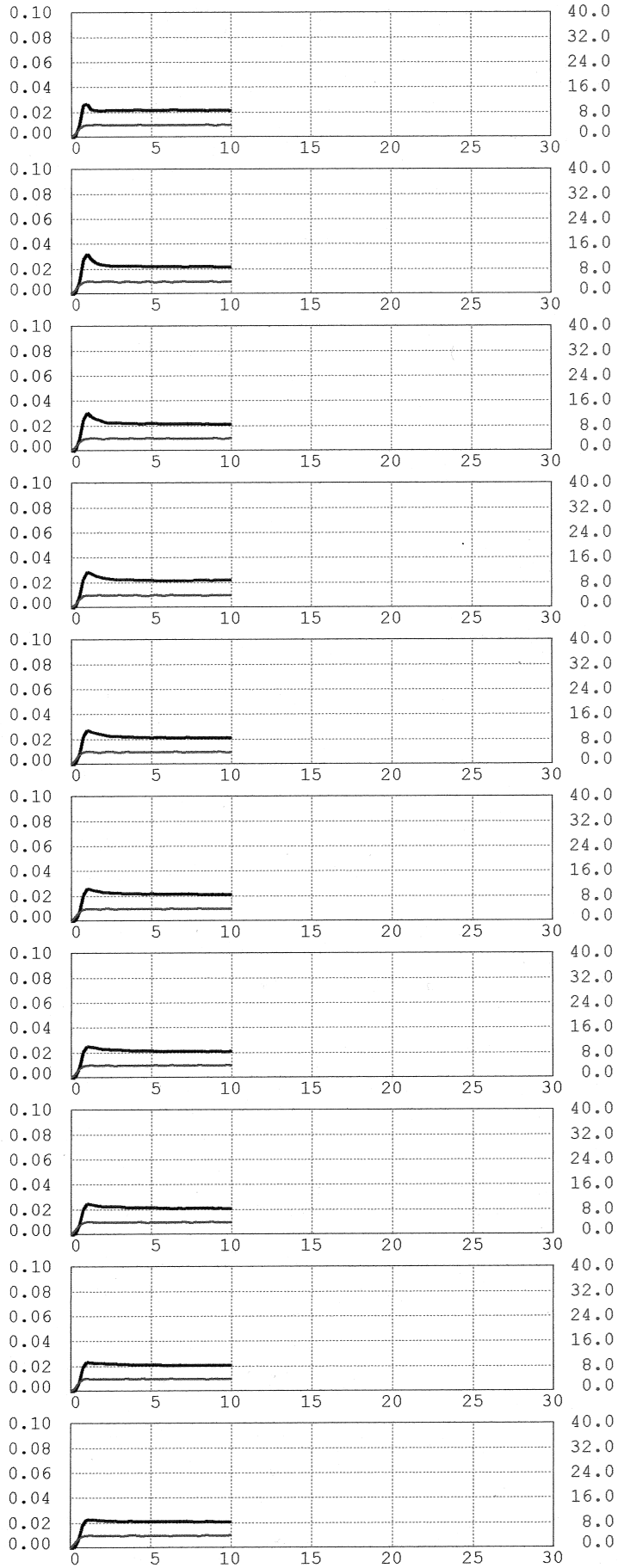
Date: 09/22/2010
Time: 09:41:20

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-34-020
SOLUTION CONCENTRATION: 0.020

BLANK TEST	0.000	09:42
CALIBRATION CHECK	PASSED	09:42
SIMULATOR VAPOR	0.022	09:42
SIMULATOR VAPOR	0.022	09:43
SIMULATOR VAPOR	0.022	09:44
SIMULATOR VAPOR	0.022	09:45
SIMULATOR VAPOR	0.021	09:46
SIMULATOR VAPOR	0.022	09:47
SIMULATOR VAPOR	0.021	09:48
SIMULATOR VAPOR	0.021	09:49
SIMULATOR VAPOR	0.021	09:50
SIMULATOR VAPOR	0.021	09:51
BLANK TEST	0.000	09:52

Average = 0.021
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

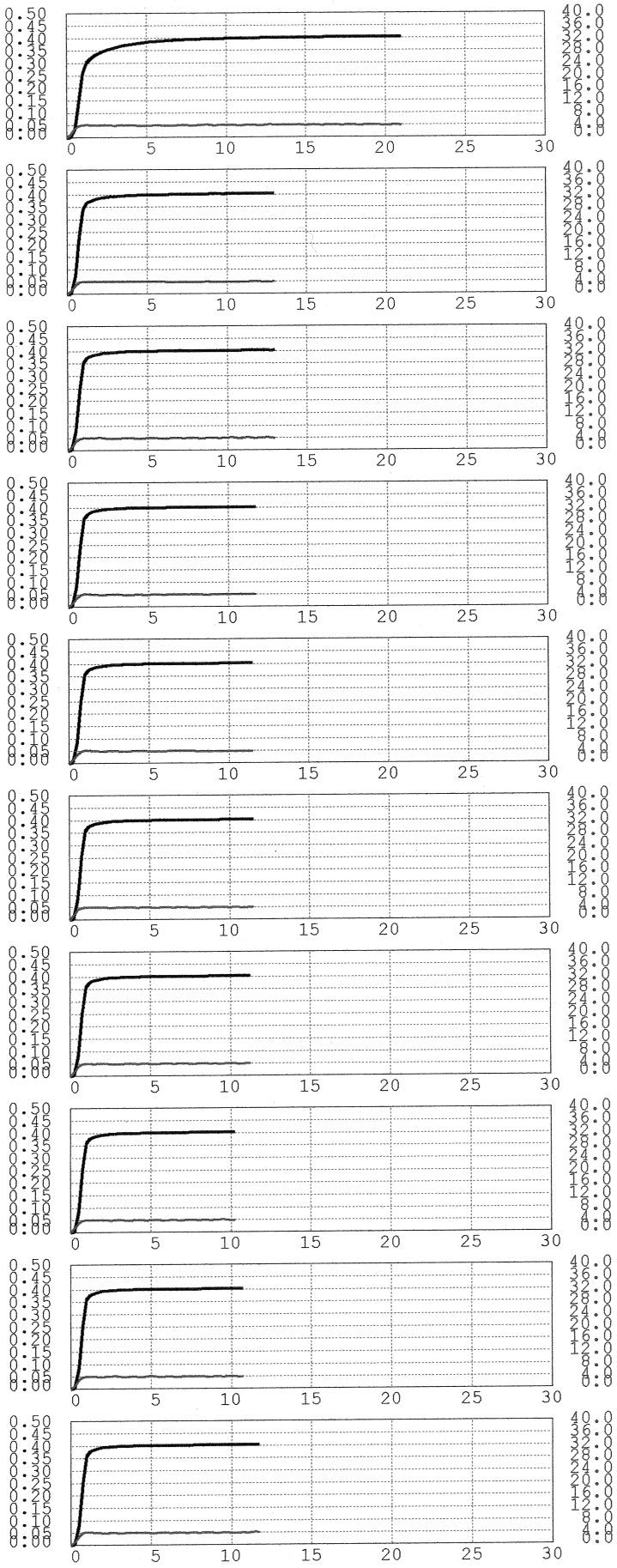
Date: 09/22/2010
Time: 09:14:14

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-07-400
SOLUTION CONCENTRATION: 0.412

BLANK TEST	0.000	09:15
CALIBRATION CHECK	PASSED	09:15
SIMULATOR VAPOR	0.402	09:15
SIMULATOR VAPOR	0.401	09:16
SIMULATOR VAPOR	0.401	09:18
SIMULATOR VAPOR	0.400	09:19
SIMULATOR VAPOR	0.401	09:20
SIMULATOR VAPOR	0.401	09:21
SIMULATOR VAPOR	0.401	09:22
SIMULATOR VAPOR	0.401	09:23
SIMULATOR VAPOR	0.402	09:24
SIMULATOR VAPOR	0.402	09:25
BLANK TEST	0.000	09:25

Average = 0.401
Std Dev = 0.0006



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

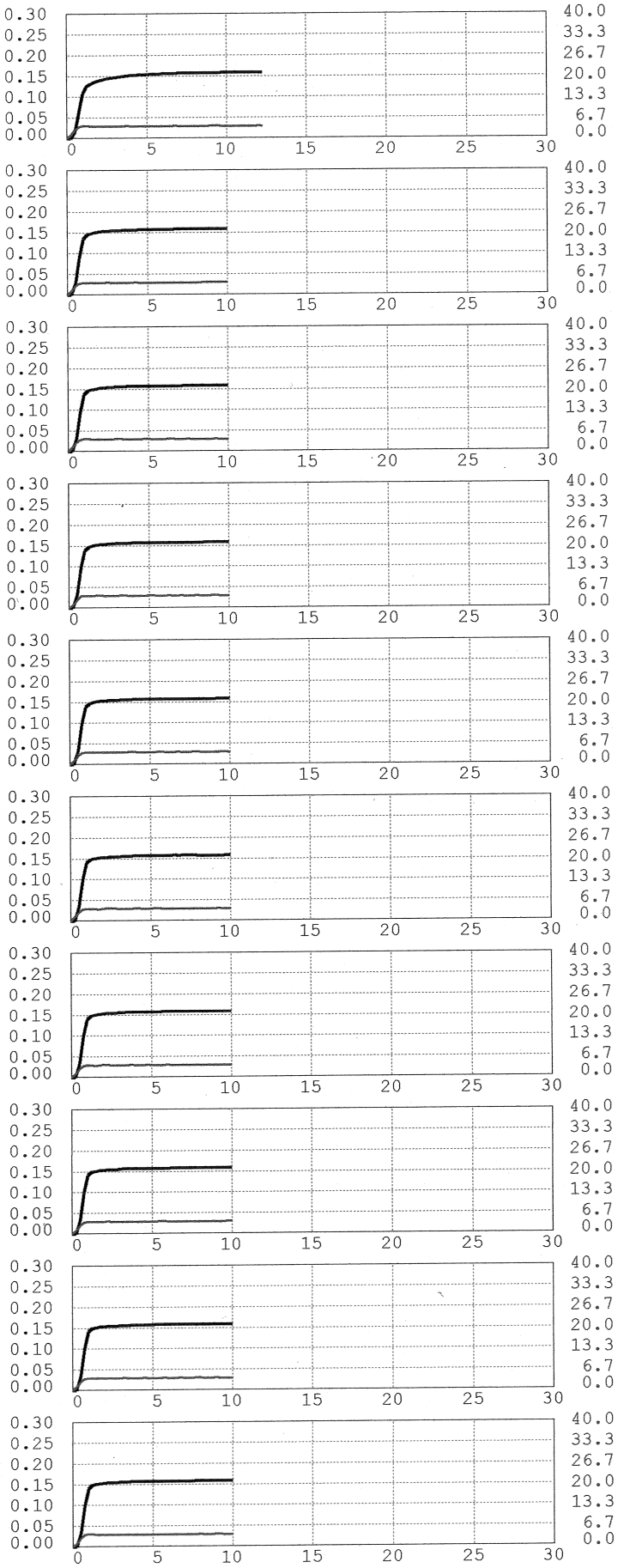
Date: 09/22/2010
Time: 08:48:07

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	08:49
CALIBRATION CHECK	PASSED	08:49
SIMULATOR VAPOR	0.158	08:49
SIMULATOR VAPOR	0.158	08:50
SIMULATOR VAPOR	0.159	08:51
SIMULATOR VAPOR	0.158	08:52
SIMULATOR VAPOR	0.158	08:53
SIMULATOR VAPOR	0.158	08:54
SIMULATOR VAPOR	0.159	08:55
SIMULATOR VAPOR	0.158	08:56
SIMULATOR VAPOR	0.158	08:57
SIMULATOR VAPOR	0.158	08:58
BLANK TEST	0.000	08:59

Average = 0.158
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

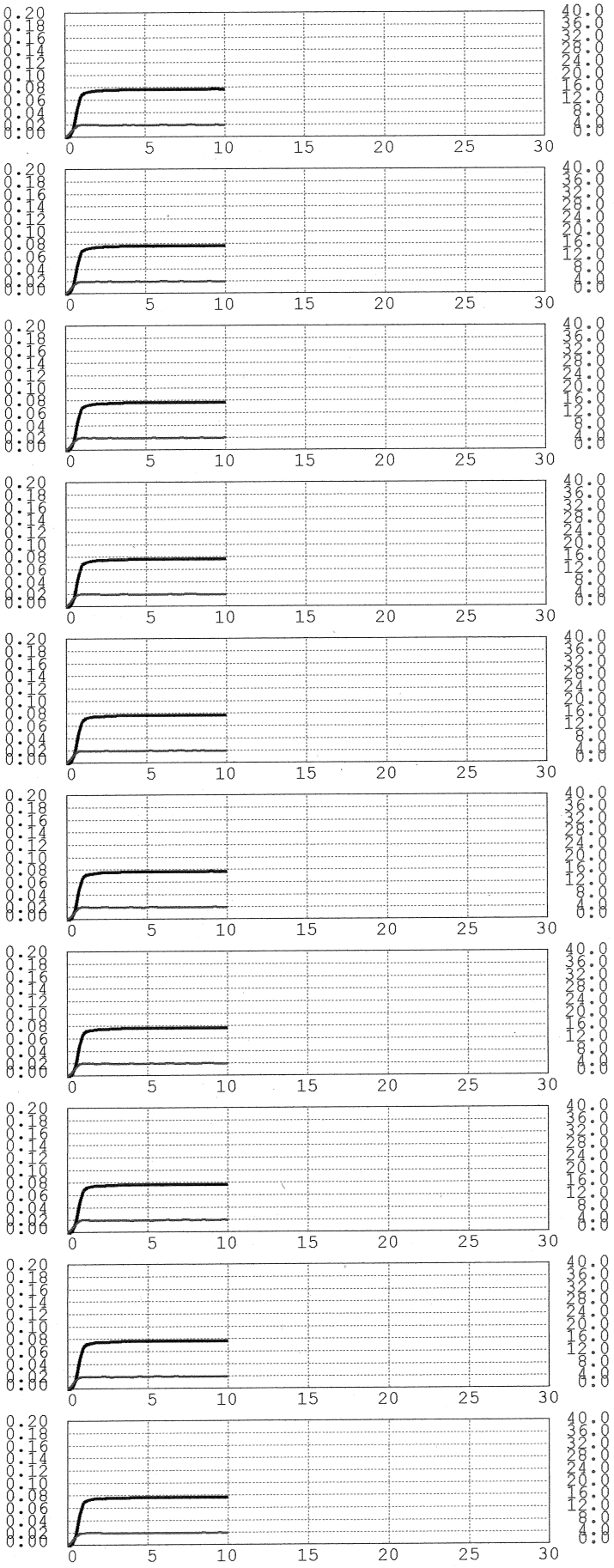
Date: 09/22/2010
Time: 08:17:48

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	08:18
CALIBRATION CHECK	PASSED	08:18
SIMULATOR VAPOR	0.078	08:19
SIMULATOR VAPOR	0.077	08:20
SIMULATOR VAPOR	0.077	08:21
SIMULATOR VAPOR	0.077	08:22
SIMULATOR VAPOR	0.077	08:23
SIMULATOR VAPOR	0.078	08:24
SIMULATOR VAPOR	0.077	08:25
SIMULATOR VAPOR	0.077	08:26
SIMULATOR VAPOR	0.077	08:27
SIMULATOR VAPOR	0.077	08:27
BLANK TEST	0.000	08:28

Average = 0.077
Std Dev = 0.0004



DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location:
Calibration Date: 09/10/2010
Certification Date: 09/10/2010
Installation Date: 09/10/2010
Test Date: 09/22/2010
Time: 08:15

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.68°C
Breath Tube    = 48.04°C

SETTINGS
Lamp Voltage   = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage   = 80.1 V
Chopper Freq   = 544.8 Hz

PUMP INFO
Flow Rate = 4.787 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)  -0.0734   -0.0717
MIN(V)  -0.0758   -0.0732

FILTER INFO
Filter 1 -0.072  Zero = true
Filter 2  0.204  Zero = true
Filter 3  1.275  Zero = true

CALIBRATION CHECK
Xq = 0.1116  0.24%
```

DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location:
Calibration Date: 09/10/2010
Certification Date: 09/10/2010
Installation Date: 09/10/2010
Test Date: 09/23/2010
Time: 07:05

VERMONT
DEPARTMENT OF HEALTH

```
VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 49.15°C
Breath Tube    = 46.32°C

SETTINGS
Lamp Voltage   = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage   = 80.1 V
Chopper Freq   = 543.6 Hz

PUMP INFO
Flow Rate = 4.858 L/M

DETECTOR INFO
PUMP     ON        OFF
MAX(V)  -0.0951   -0.0917
MIN(V)  -0.0963   -0.0929

FILTER INFO
Filter 1 -0.092  Zero = true
Filter 2  0.184  Zero = true
Filter 3  1.246  Zero = true

CALIBRATION CHECK
Xq = 0.1114  0.47%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

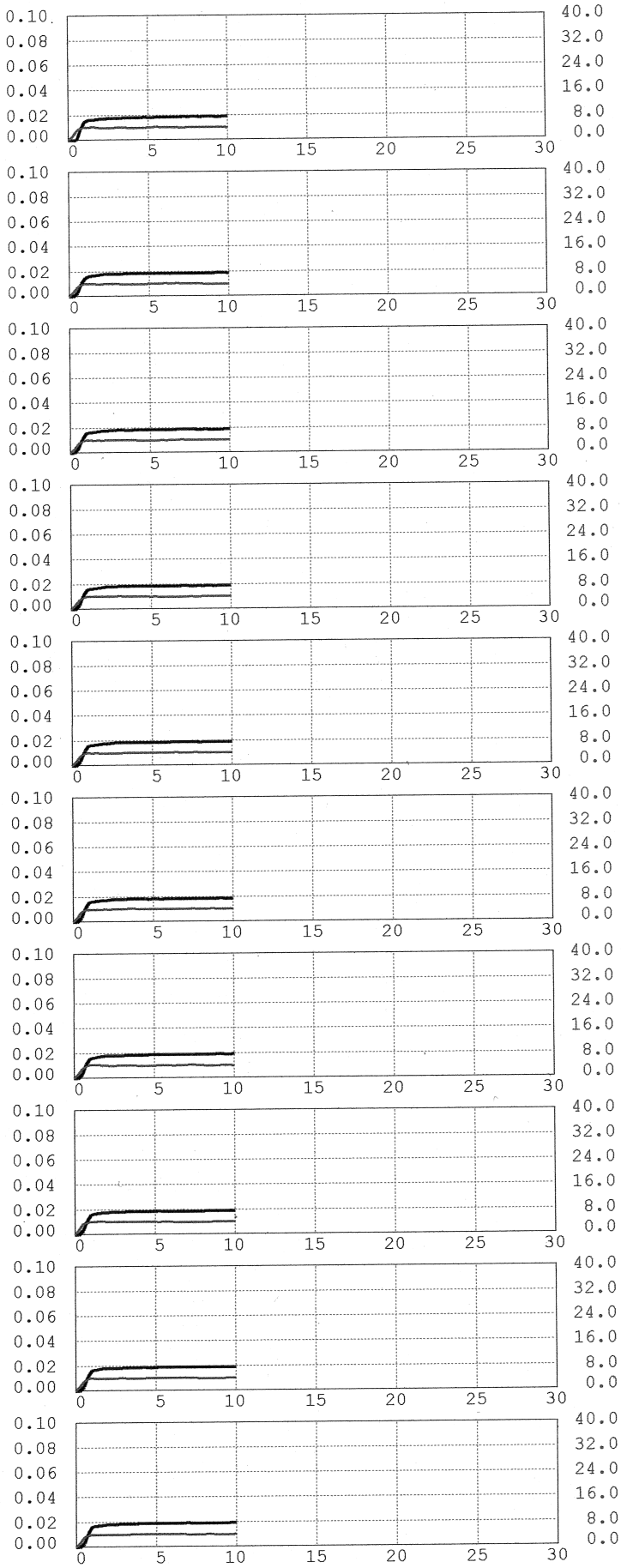
Date: 09/23/2010
Time: 07:07:51

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 10-34-020
SOLUTION CONCENTRATION: 0.020

BLANK TEST	0.000	07:08
CALIBRATION CHECK	PASSED	07:08
SIMULATOR VAPOR	0.020	07:09
SIMULATOR VAPOR	0.020	07:10
SIMULATOR VAPOR	0.020	07:11
SIMULATOR VAPOR	0.020	07:12
SIMULATOR VAPOR	0.020	07:13
SIMULATOR VAPOR	0.019	07:14
SIMULATOR VAPOR	0.020	07:15
SIMULATOR VAPOR	0.019	07:16
SIMULATOR VAPOR	0.020	07:16
SIMULATOR VAPOR	0.020	07:17
BLANK TEST	0.000	07:18

Average = 0.019
Std Dev = 0.0004



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

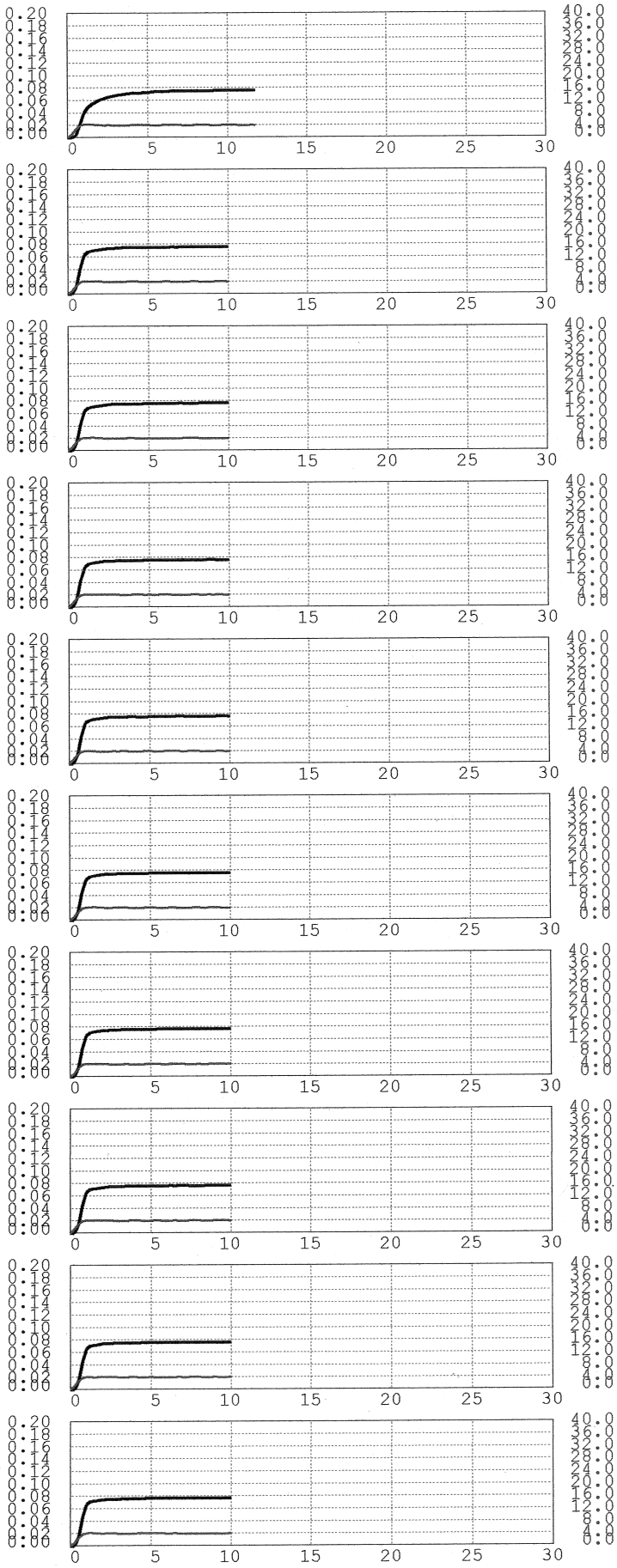
Date: 09/23/2010
Time: 07:20:27

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	07:21
CALIBRATION CHECK	PASSED	07:21
SIMULATOR VAPOR	0.076	07:21
SIMULATOR VAPOR	0.076	07:22
SIMULATOR VAPOR	0.077	07:23
SIMULATOR VAPOR	0.076	07:24
SIMULATOR VAPOR	0.077	07:25
SIMULATOR VAPOR	0.076	07:26
SIMULATOR VAPOR	0.077	07:27
SIMULATOR VAPOR	0.077	07:28
SIMULATOR VAPOR	0.076	07:29
SIMULATOR VAPOR	0.077	07:30
BLANK TEST	0.000	07:31

Average = 0.076
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

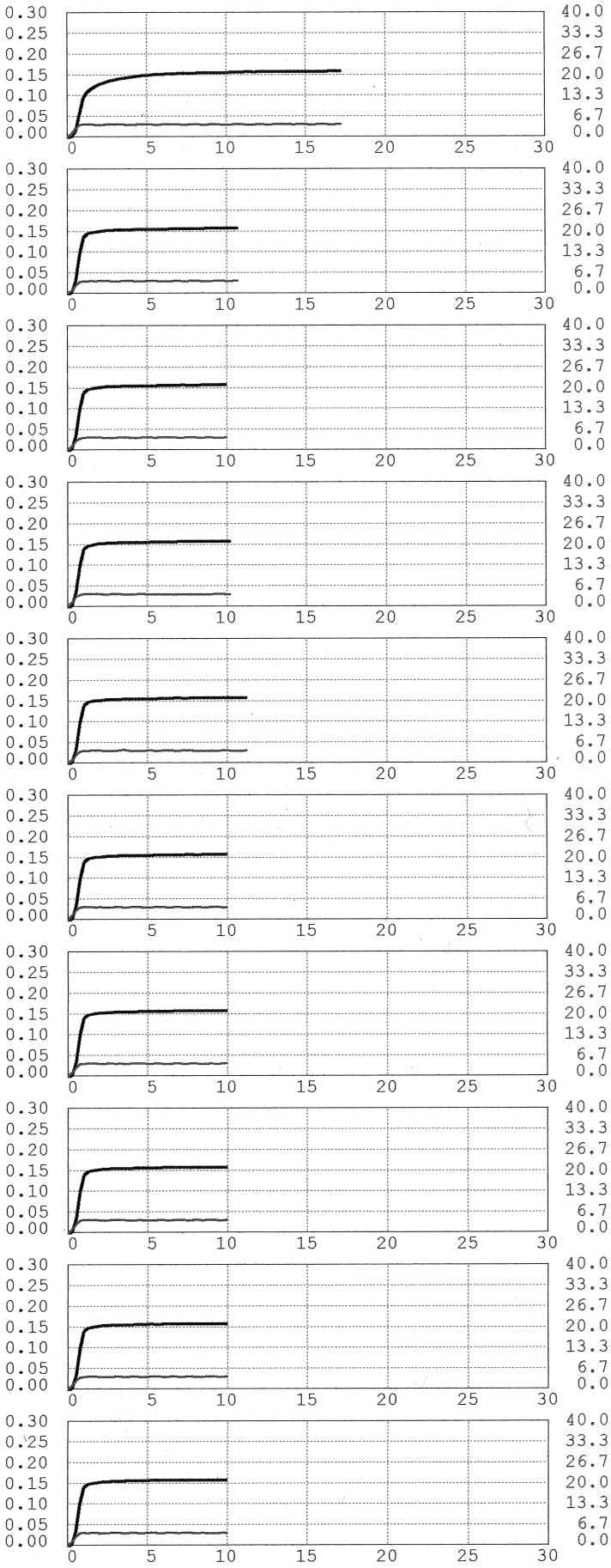
Date: 09/23/2010
Time: 07:35:56

SUPERVISOR NAME: STEVEN E HARNOIS

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

BLANK TEST	0.000	07:36
CALIBRATION CHECK	PASSED	07:36
SIMULATOR VAPOR	0.158	07:37
SIMULATOR VAPOR	0.157	07:38
SIMULATOR VAPOR	0.157	07:39
SIMULATOR VAPOR	0.157	07:40
SIMULATOR VAPOR	0.157	07:41
SIMULATOR VAPOR	0.157	07:42
SIMULATOR VAPOR	0.157	07:43
SIMULATOR VAPOR	0.158	07:44
SIMULATOR VAPOR	0.158	07:45
SIMULATOR VAPOR	0.158	07:46
BLANK TEST	0.000	07:47

Average = 0.157
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

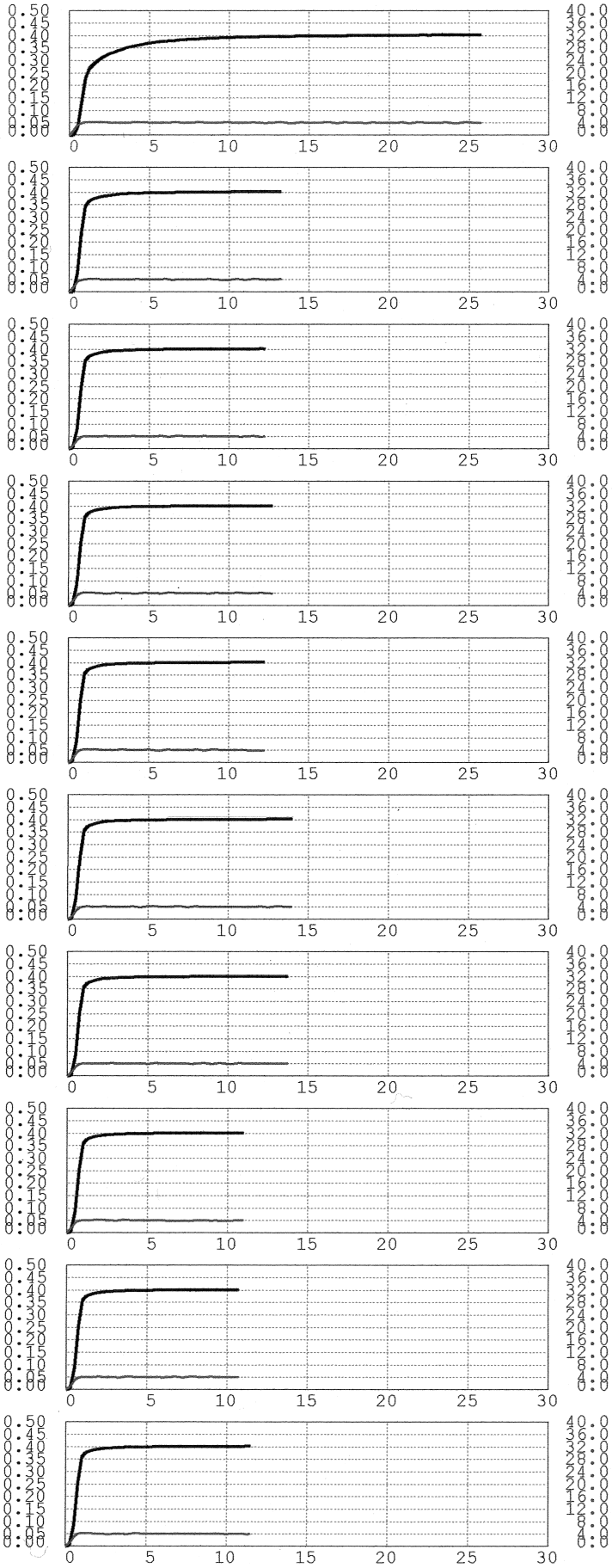
Date: 09/23/2010
Time: 08:03:03

SUPERVISOR NAME: STEVEN E HARNOIS

SOLUTION LOT #: 11-07-400
SOLUTION CONCENTRATION: 0.412

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

Average = 0.400
Std Dev = 0.0005



Section 5: Interference

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

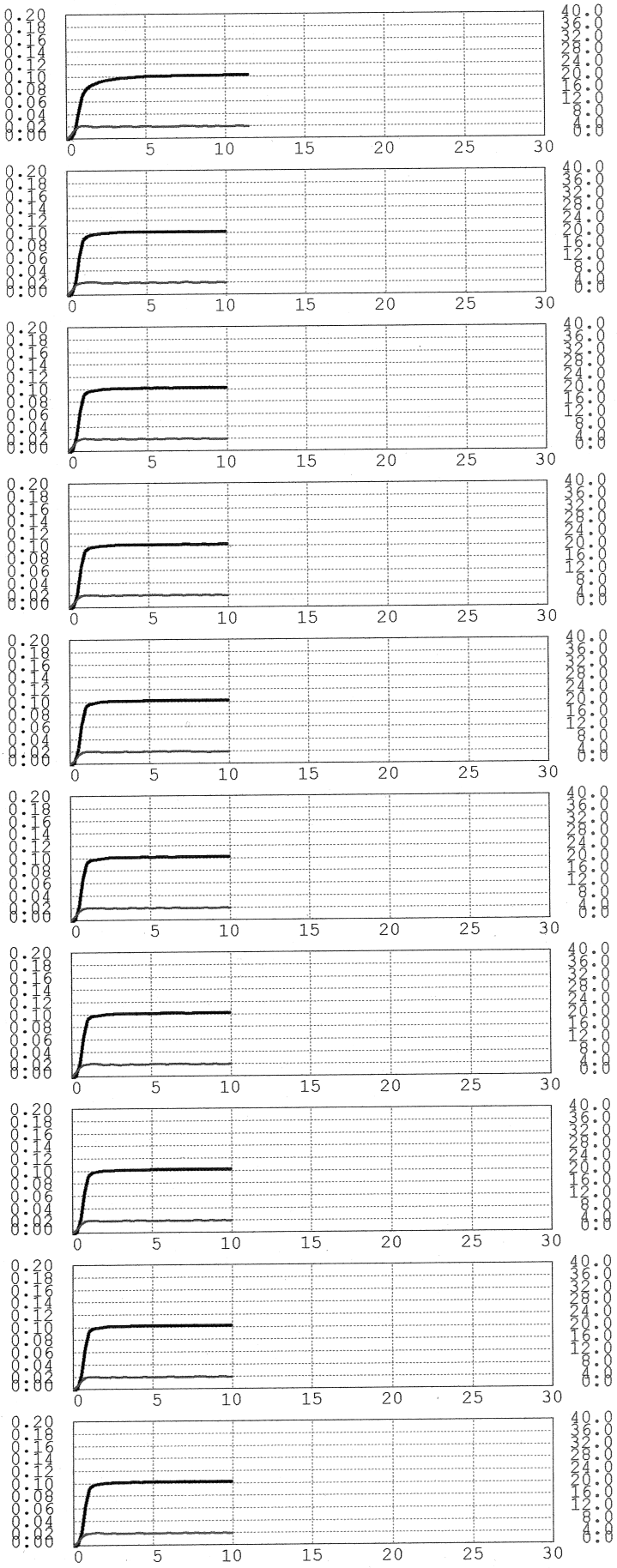
Date: 09/10/2010
Time: 08:51:57

SUPERVISOR NAME: SEH 0.04MEOH0.08ETOHINH20

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

BLANK TEST	0.000	08:52
CALIBRATION CHECK	PASSED	08:52
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	09:02

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

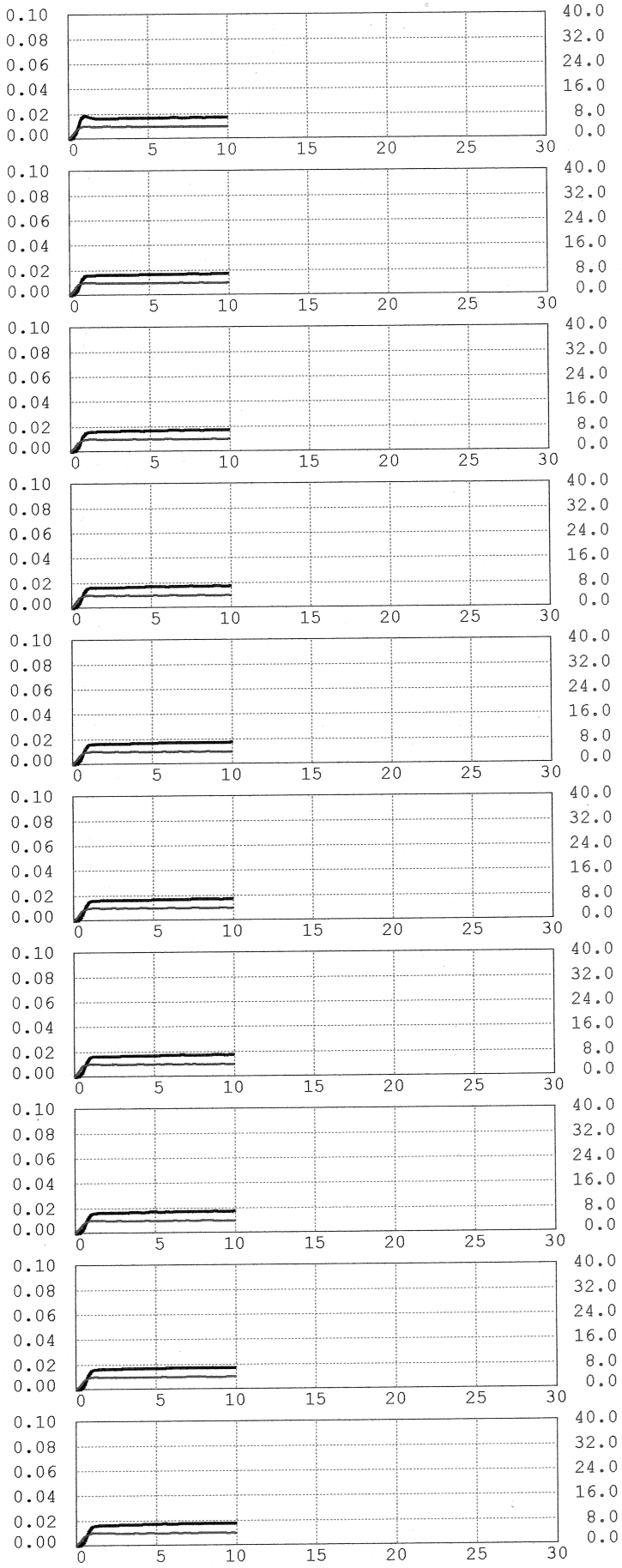
Date: 09/13/2010
Time: 08:25:06

SUPERVISOR NAME: SEH 04MEOHINH2O

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

BLANK TEST	0.000	08:26
CALIBRATION CHECK	PASSED	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
SIMULATOR VAPOR	INTERFERENCE	08:34
SIMULATOR VAPOR	INTERFERENCE	08:35
BLANK TEST	0.000	08:35

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

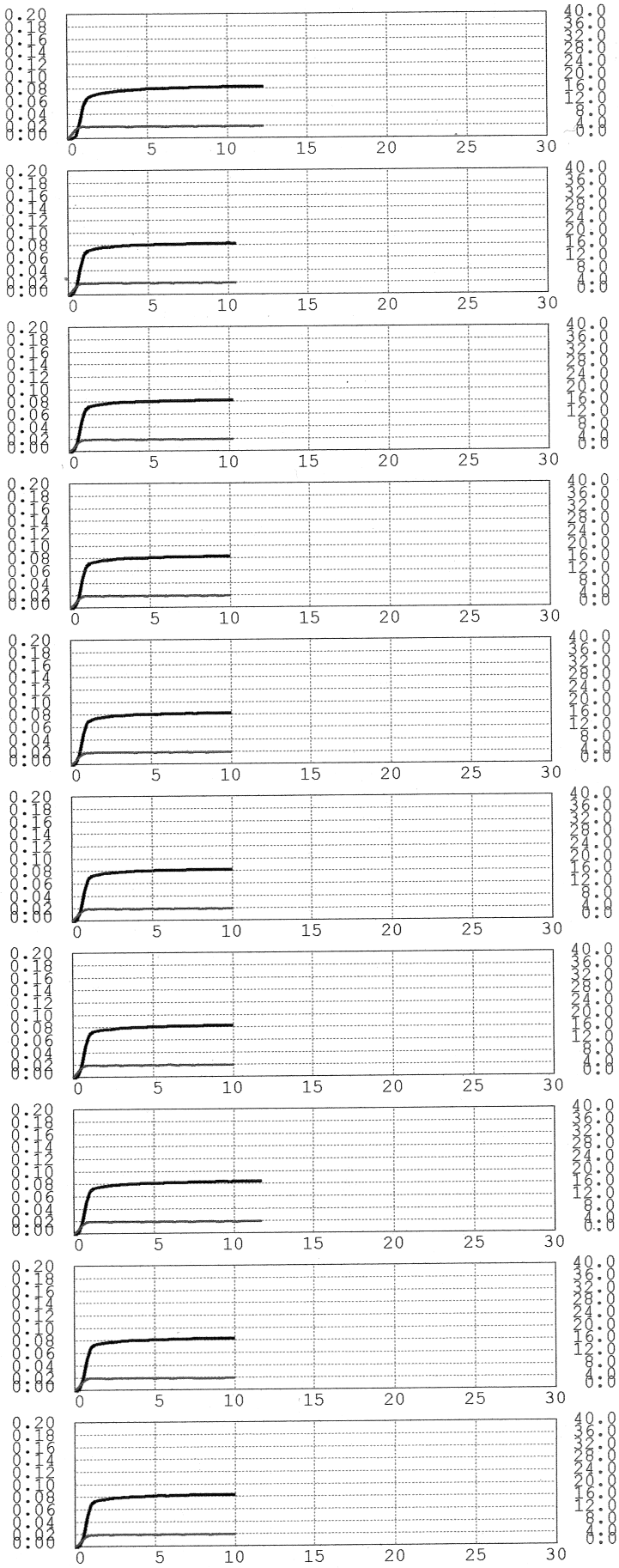
DataMaster DMT: 100158

Date: 09/13/2010
Time: 07:58:47

SUPERVISOR NAME: SEH 08ETOH 01 ACE IN H2O

SOLUTION LOT #: 10-33-08A
SOLUTION CONCENTRATION: 0.080

BLANK TEST	0.000	07:59
CALIBRATION CHECK	PASSED	07:59
SIMULATOR VAPOR	INTERFERENCE	08:00
SIMULATOR VAPOR	INTERFERENCE	08:01
SIMULATOR VAPOR	INTERFERENCE	08:02
SIMULATOR VAPOR	INTERFERENCE	08:03
SIMULATOR VAPOR	INTERFERENCE	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
BLANK TEST	0.000	08:09



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

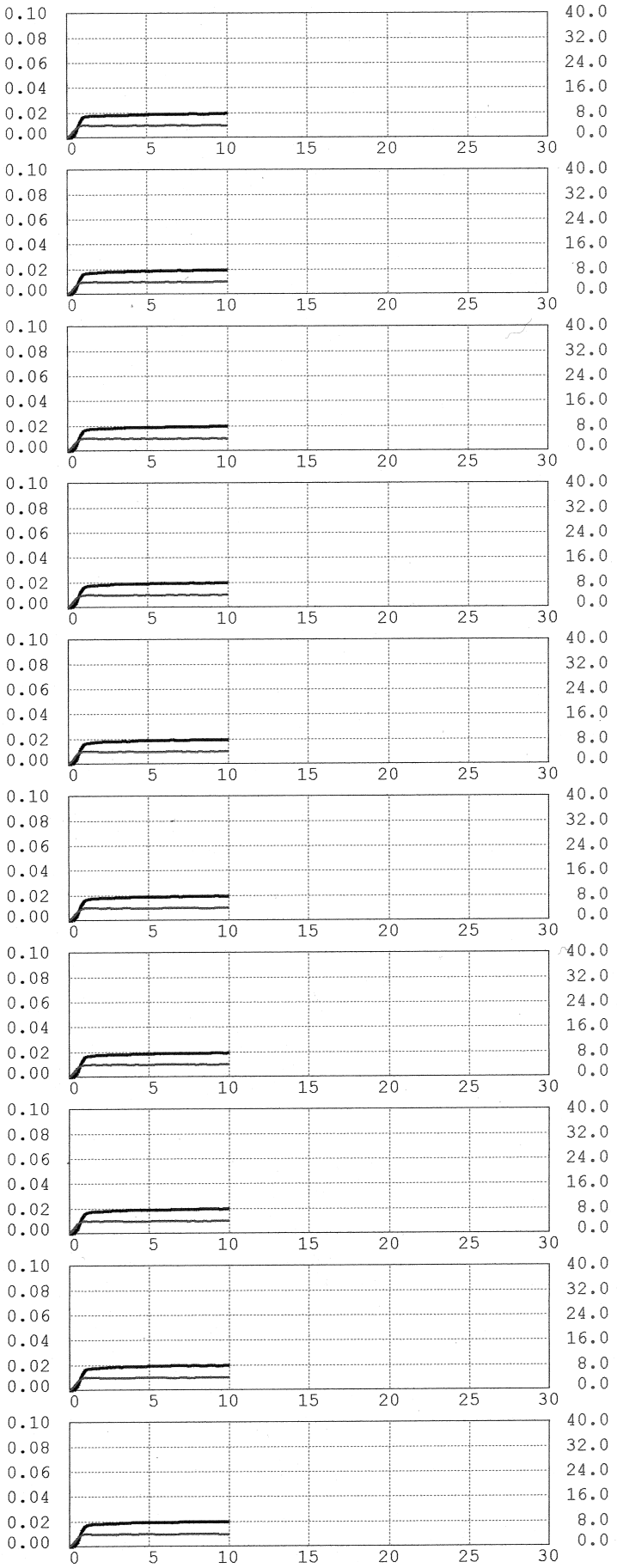
Date: 09/13/2010
Time: 08:39:21

SUPERVISOR NAME: SEH 04IPAINH20

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

BLANK TEST	0.000	08:40
CALIBRATION CHECK	PASSED	08:40
SIMULATOR VAPOR	INTERFERENCE	08:40
SIMULATOR VAPOR	INTERFERENCE	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	08:46
SIMULATOR VAPOR	INTERFERENCE	08:47
SIMULATOR VAPOR	INTERFERENCE	08:48
SIMULATOR VAPOR	INTERFERENCE	08:49
BLANK TEST	0.000	08:50

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

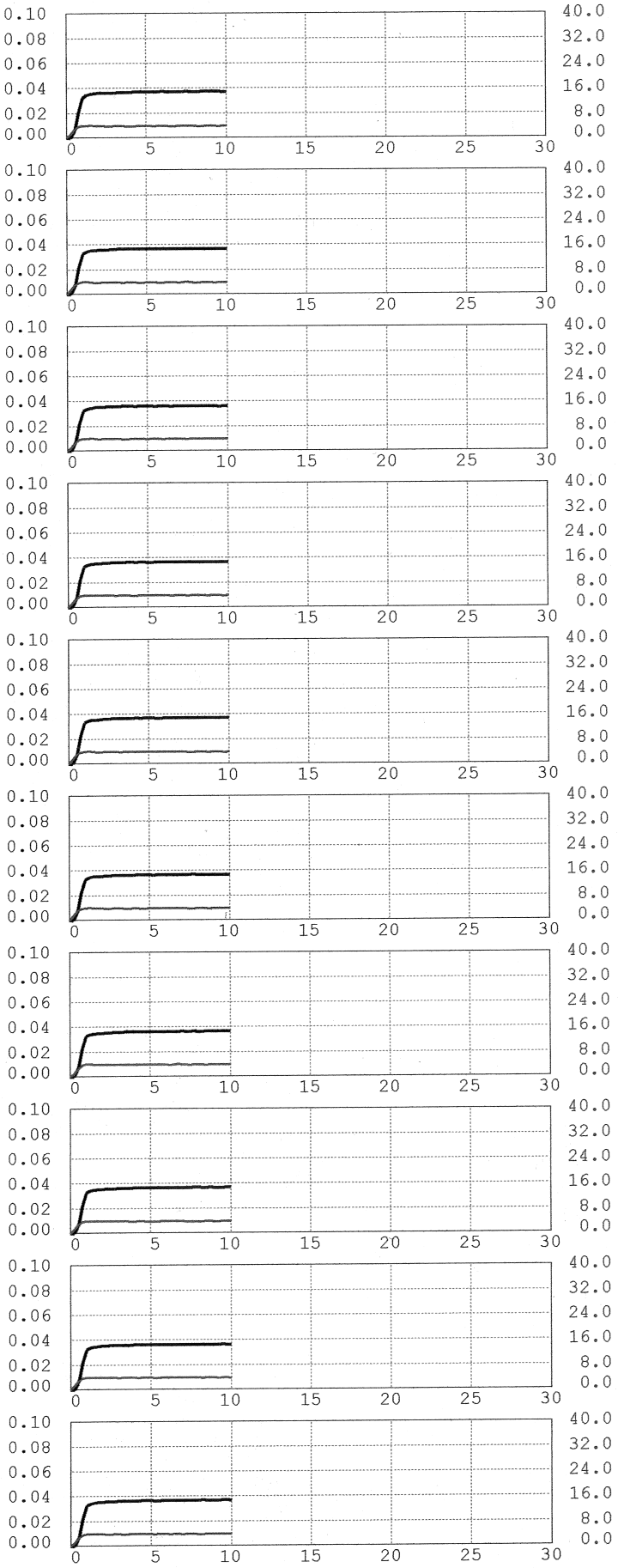
Date: 09/13/2010
Time: 10:37:17

SUPERVISOR NAME: SEH 04ETOH02ACEINH20

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

BLANK TEST	0.000	10:38
CALIBRATION CHECK	PASSED	10:38
SIMULATOR VAPOR	INTERFERENCE	10:38
SIMULATOR VAPOR	INTERFERENCE	10:39
SIMULATOR VAPOR	INTERFERENCE	10:40
SIMULATOR VAPOR	INTERFERENCE	10:41
SIMULATOR VAPOR	INTERFERENCE	10:42
SIMULATOR VAPOR	INTERFERENCE	10:43
SIMULATOR VAPOR	INTERFERENCE	10:44
SIMULATOR VAPOR	INTERFERENCE	10:45
SIMULATOR VAPOR	INTERFERENCE	10:46
SIMULATOR VAPOR	INTERFERENCE	10:47
BLANK TEST	0.000	10:48

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

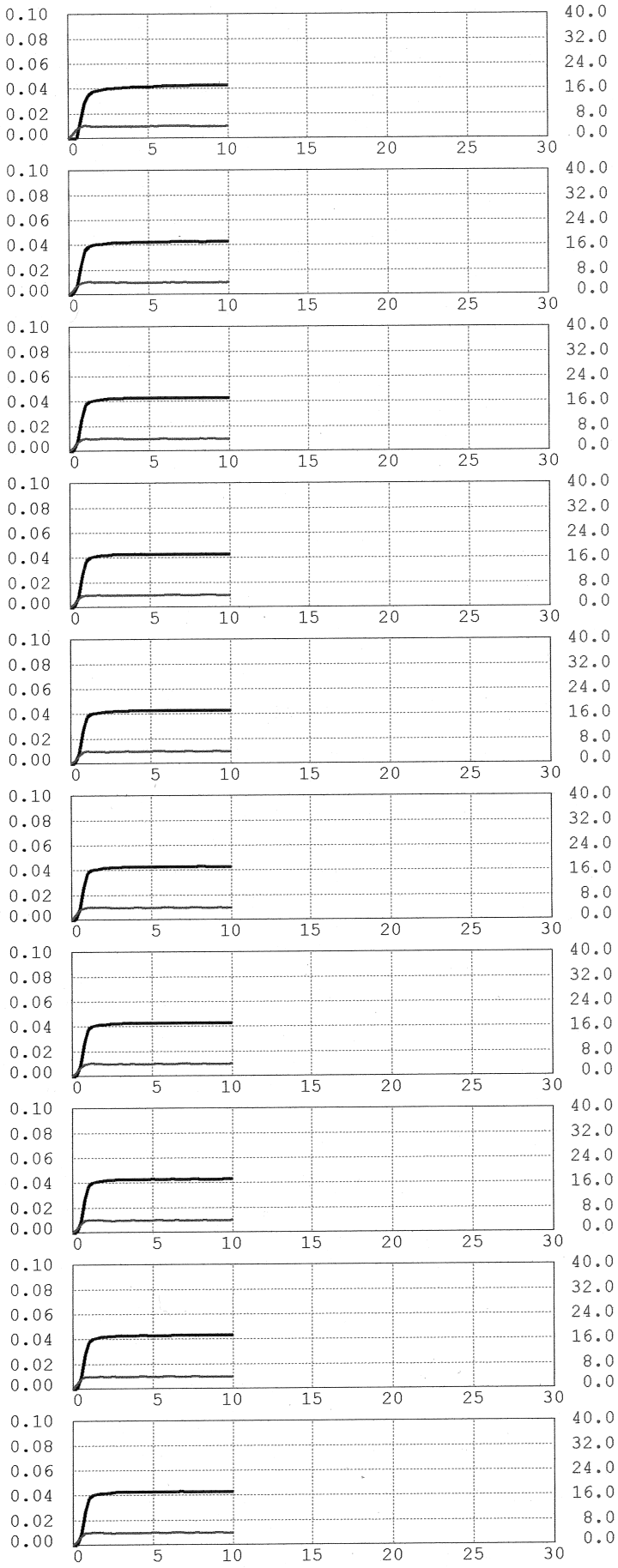
Date: 09/13/2010
Time: 10:20:16

SUPERVISOR NAME: SEH 04ETOH01ACETONE

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

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

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

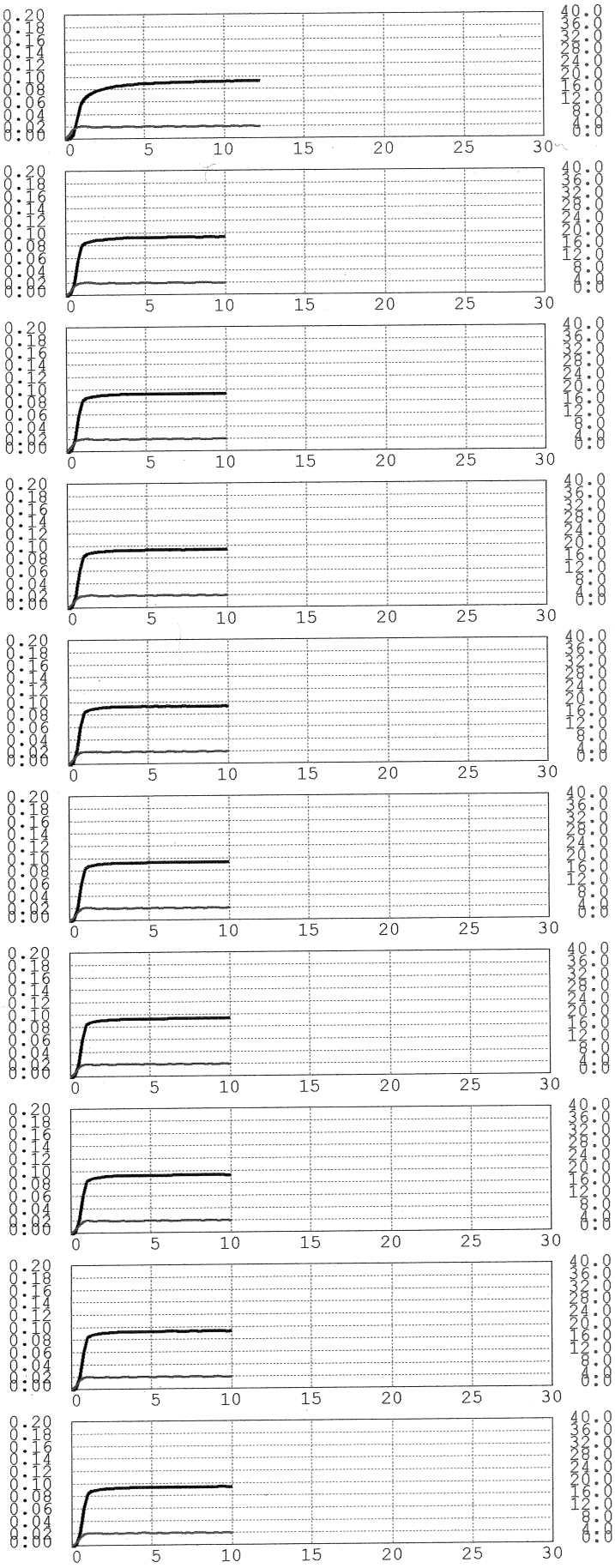
Date: 09/13/2010
Time: 10:51:03

SUPERVISOR NAME: SEH 08ETOH 04IPA

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

BLANK TEST	0.000	10:51
CALIBRATION CHECK	PASSED	10:52
SIMULATOR VAPOR	INTERFERENCE	10:52
SIMULATOR VAPOR	INTERFERENCE	10:53
SIMULATOR VAPOR	INTERFERENCE	10:54
SIMULATOR VAPOR	INTERFERENCE	10:55
SIMULATOR VAPOR	INTERFERENCE	10:56
SIMULATOR VAPOR	INTERFERENCE	10:57
SIMULATOR VAPOR	INTERFERENCE	10:58
SIMULATOR VAPOR	INTERFERENCE	10:59
SIMULATOR VAPOR	INTERFERENCE	11:00
SIMULATOR VAPOR	INTERFERENCE	11:01
BLANK TEST	0.000	11:02

Average out of range!



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

Vermont Department of Health Laboratory
195 Colchester Avenue, P.O. Box 1125, Burlington VT 05402-1125
DataMaster Technical Services (ph) 802-863-7641; (fax) 802-863-7632

DATAMASTER TECHNICAL SUPPORT INQUIRY

Agency/Site: VDHL **DataMaster Serial #:** 100158

Date: 8 /27 /2010 Requestor: Amanda Bolduc

Instrument Supervisor: Phone #:

Taken By: Harnois

Problem: Will no call MEOH Interference

Laboratory Response: Talked to NPAS advised to replace filter wheel.

Work Performed:

9/7/2010 Replaced Filter Wheel SH

☐ On Site ☒ In-house

Performed By: Steven Harnois Date: 9/7 /2010

ALC 626 Rev 1 06/07

March/April 2010 100158

~~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

100158

8/26

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.

8/26 0.01% Acetone in 0.08% EtOH
~~8/26~~ 0.04% MeOH in Water – Solution depleted on 1st attempt Retested 8/26
8/26 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.

Unit failed to adequately recognize MeOH in AZ

DRAFT

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. 1) 8/26 (1)

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 8/26 (1)
0.02% Acetone in 0.04% EtOH 8/26 (2)
0.04% MeOH in 0.08% EtOH 8/26 (1)
0.04% Isopropanol in 0.08% EtOH 8/26 (1)

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 +/- _____

RH

CALIBRATION REPORT

DataMaster DMT: 100158
Calibration Date: 08/23/2010
Calibrated by: AMANDA BOLDUC
Lot: 11-03-100

VERMONT
DEPARTMENT OF HEALTH

Ca	=	0.102000	
CAL	=	0.987738	0.800 <= CAL < 1.200
b1	=	0.000366	0.000 <= b1 < 0.004
b2	=	0.005720	0.001 <= b2 < 0.012
b3	=	0.000000	0.000 <= b3 < 0.004
Xq	=	0.102338	0.050 <= Xq < 0.200
a21	=	1.198258	1.050 <= a21 < 1.300
a31	=	0.422491	0.300 <= a31 < 0.800

Performed by _____ **Date** 08/23/2010

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

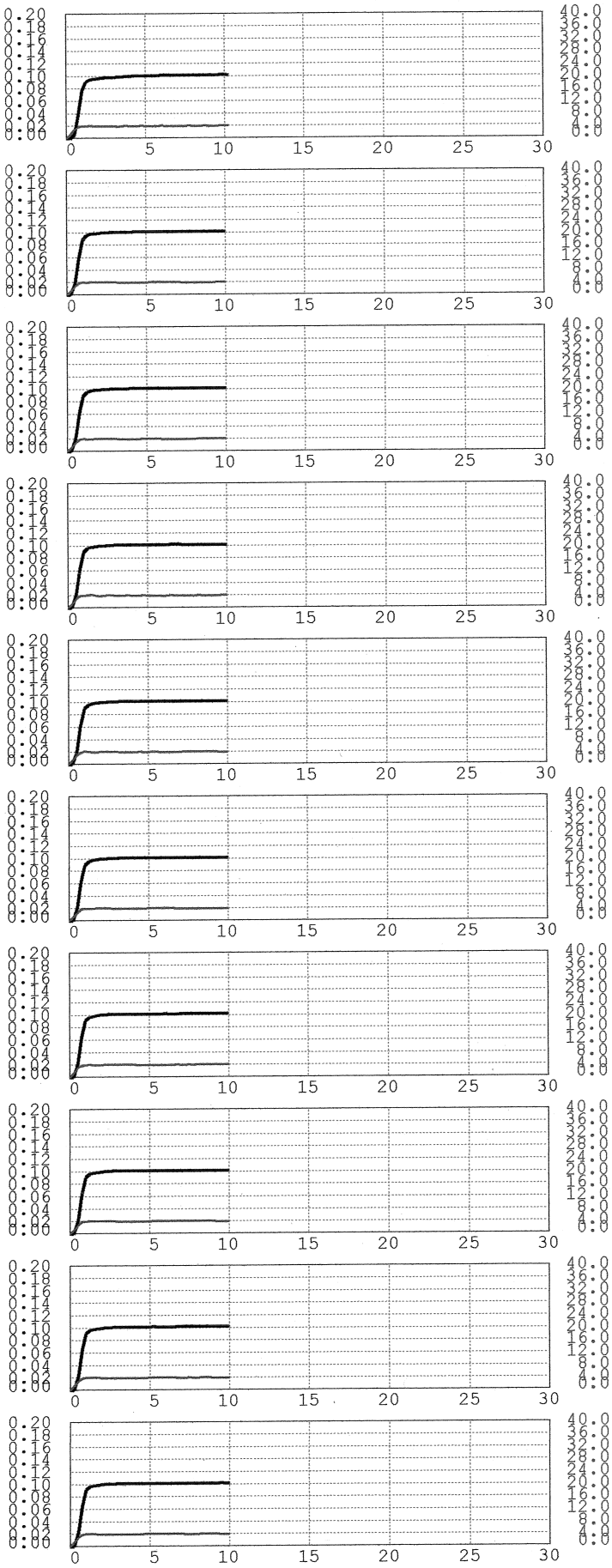
Date: 08/23/2010
Time: 14:46:09

SUPERVISOR NAME: ALB CAL CHECK

SOLUTION LOT #: 11-02-100
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	14:47
CALIBRATION CHECK	PASSED	14:47
SIMULATOR VAPOR	0.102	14:47
SIMULATOR VAPOR	0.102	14:48
SIMULATOR VAPOR	0.102	14:49
SIMULATOR VAPOR	0.102	14:50
SIMULATOR VAPOR	0.102	14:51
SIMULATOR VAPOR	0.102	14:52
SIMULATOR VAPOR	0.102	14:53
SIMULATOR VAPOR	0.102	14:54
SIMULATOR VAPOR	0.102	14:55
SIMULATOR VAPOR	0.102	14:56
BLANK TEST	0.000	14:57

Average = 0.102
Std Dev = 0.0000



CERTIFICATION REPORT

DataMaster DMT: 100158
Calibration Date: 08/23/2010
Certification Date: 08/24/2010
Certified by: AMANDA BOLDUC

VERMONT
DEPARTMENT OF HEALTH

Diagnostic Results

VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.74°C
Breath Tube = 46.42°C

SETTINGS
Lamp Voltage = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage = 80.1 V
Chopper Freq = 539.4 Hz

PUMP INFO
Flow Rate = 4.685 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.0193	0.0226
MIN(V)	0.0177	0.0211

FILTER INFO
Filter 1 0.022 Zero = true
Filter 2 0.264 Zero = true
Filter 3 1.091 Zero = true

CALIBRATION CHECK
Xq = 0.1024 0.08%

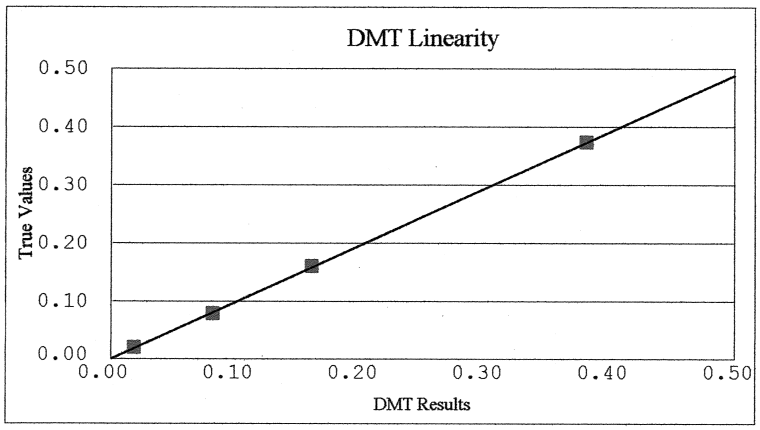
Options

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: 0.102
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
0.020 g/210L Lot # 10-34-020	0.019 g/210L	0.000
0.079 g/210L Lot # 10-37-080	0.082 g/210L	0.000
0.160 g/210L Lot # 10-31-160	0.161 g/210L	0.001
0.373 g/210L Lot # 10-32-400	0.381 g/210L	0.001

$R^2 = 0.9999$



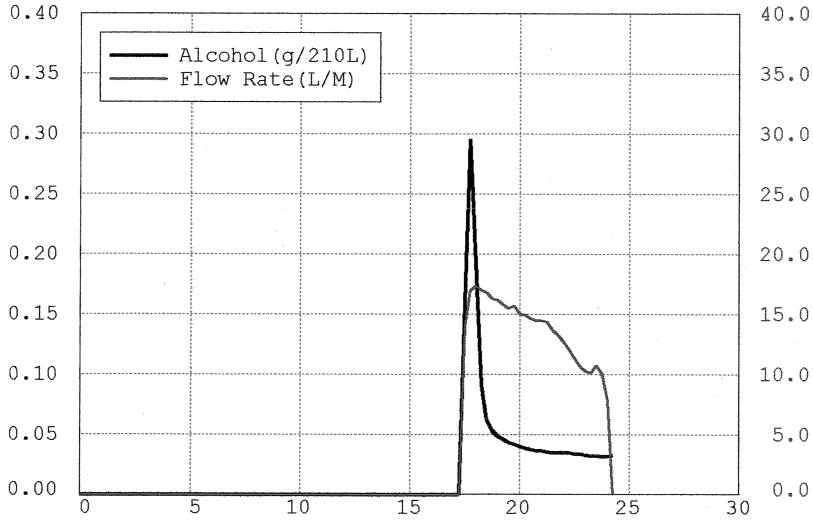
Acetone Interference Test

Lot # 10-33-08A

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

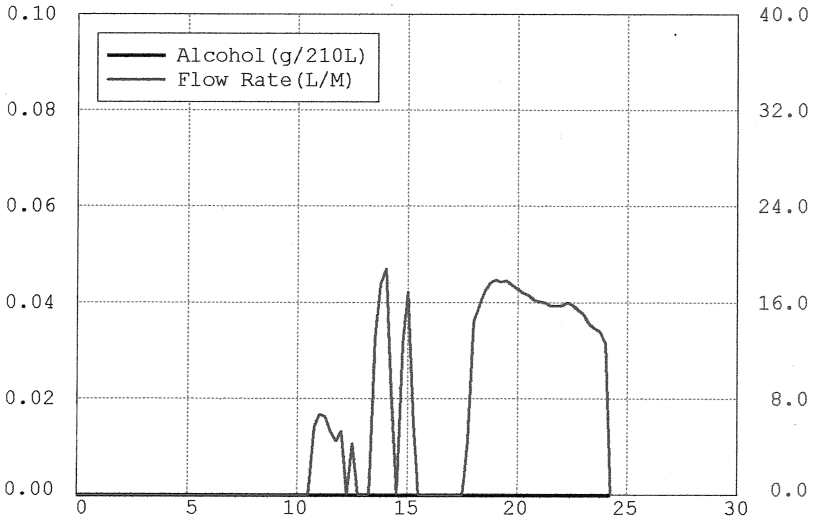


RF Interference Test

RFI detected

Sample Acceptance Test

Passed



CERTIFICATION PASSED

Performed by _____ **Date** 08/25/2010

Reviewed by _____ **Date** _____

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

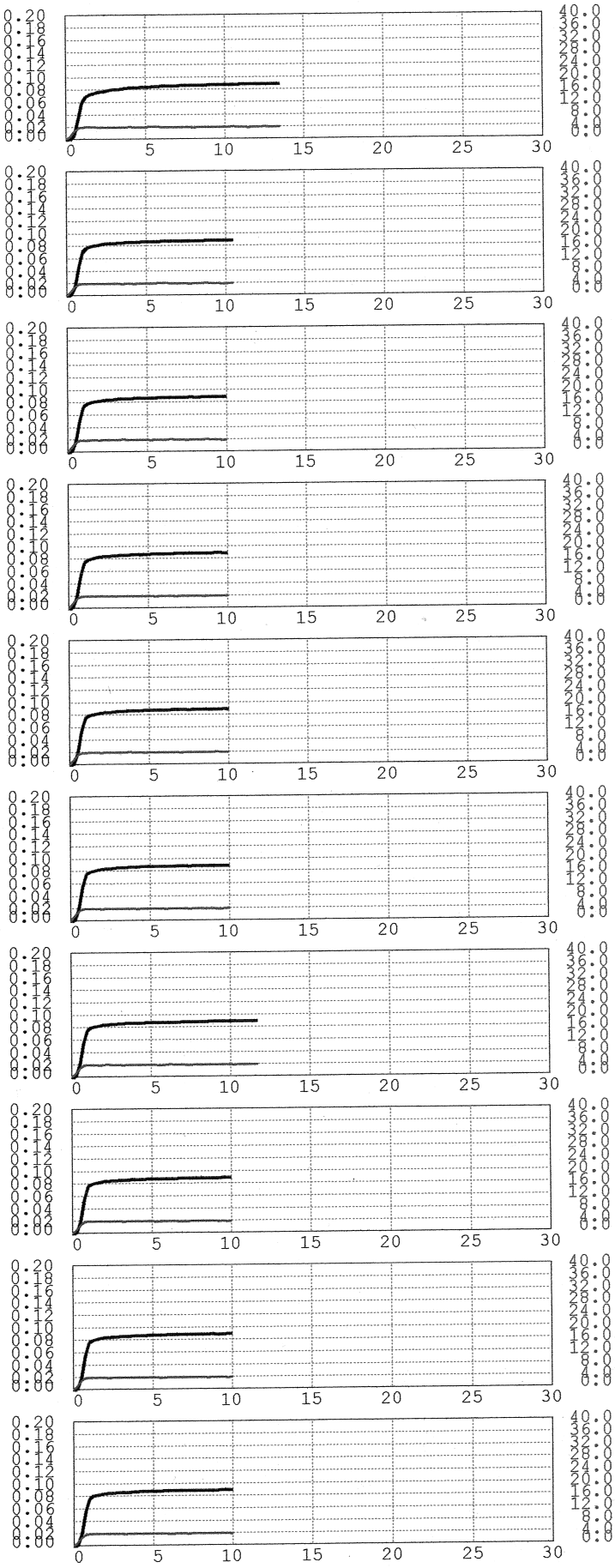
Date: 08/26/2010
Time: 08:24:21

SUPERVISOR NAME: ALB .01ACETONE IN .08ETOH

SOLUTION LOT #: 10-33-08A
SOLUTION CONCENTRATION: 0.080

BLANK TEST	0.000	08:25
CALIBRATION CHECK	PASSED	08:25
Xq = 0.1022 (0.09%)		
SIMULATOR VAPOR	0.089	08:25
X[1] = 0.0895 (-0.0045) (0.0001)		
SIMULATOR VAPOR	0.089	08:26
X[1] = 0.0892 (-0.0045) (0.0005)		
SIMULATOR VAPOR	0.089	08:27
X[1] = 0.0891 (-0.0048) (0.0000)		
SIMULATOR VAPOR	INTERFERENCE	08:28
X[1] = 0.0899 (-0.0051) (0.0002)		
SIMULATOR VAPOR	INTERFERENCE	08:29
X[1] = 0.0893 (-0.0054) (0.0001)		
SIMULATOR VAPOR	INTERFERENCE	08:30
X[1] = 0.0895 (-0.0052) (0.0000)		
SIMULATOR VAPOR	INTERFERENCE	08:31
X[1] = 0.0897 (-0.0051) (-0.0006)		
SIMULATOR VAPOR	0.089	08:32
X[1] = 0.0899 (-0.0050) (0.0000)		
SIMULATOR VAPOR	INTERFERENCE	08:33
X[1] = 0.0900 (-0.0051) (-0.0002)		
SIMULATOR VAPOR	INTERFERENCE	08:34
X[1] = 0.0899 (-0.0051) (-0.0002)		
BLANK TEST	0.000	08:35

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

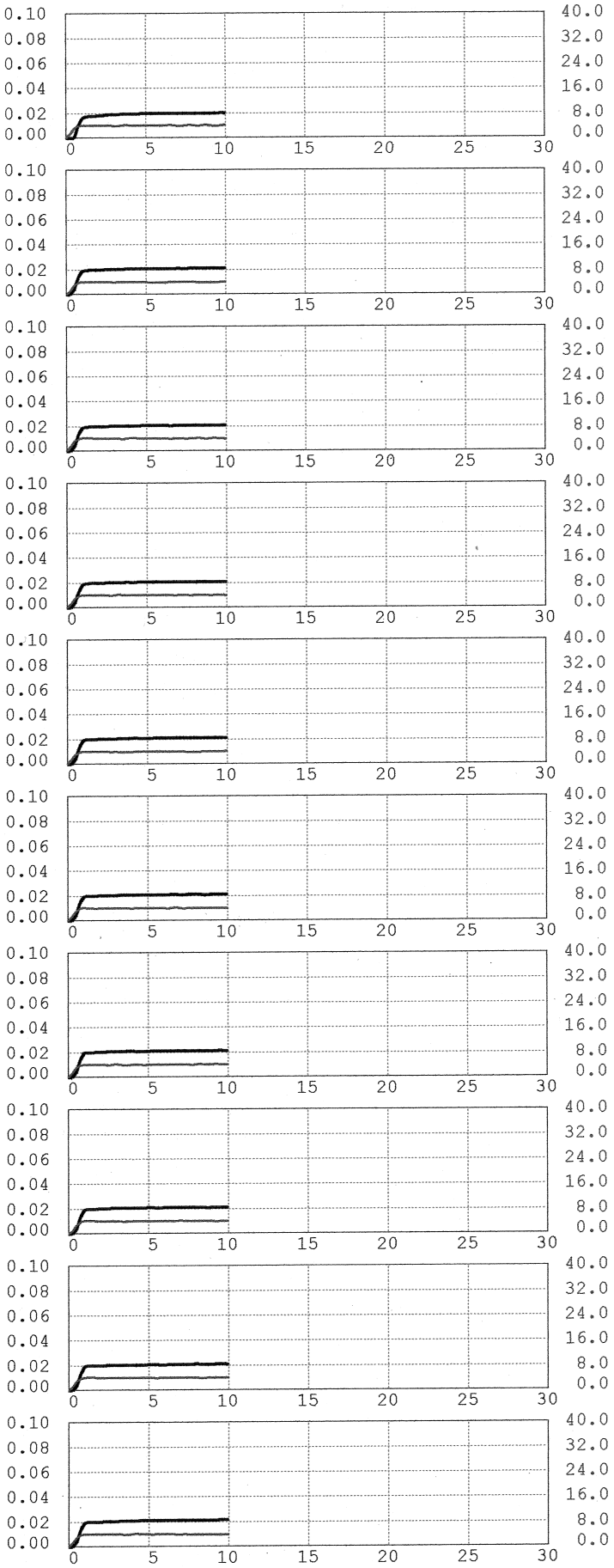
Date: 08/26/2010
Time: 08:51:17

SUPERVISOR NAME: ALB .04MEOH IN H2O

SOLUTION LOT #: 10-25-04M
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	08:52
CALIBRATION CHECK	PASSED	08:52
SIMULATOR VAPOR	0.021	08:52
SIMULATOR VAPOR	0.022	08:53
SIMULATOR VAPOR	0.022	08:54
SIMULATOR VAPOR	0.022	08:55
SIMULATOR VAPOR	0.022	08:56
SIMULATOR VAPOR	0.022	08:57
SIMULATOR VAPOR	INTERFERENCE	08:58
SIMULATOR VAPOR	0.022	08:59
SIMULATOR VAPOR	INTERFERENCE	09:00
SIMULATOR VAPOR	INTERFERENCE	09:01
BLANK TEST	0.000	09:02

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

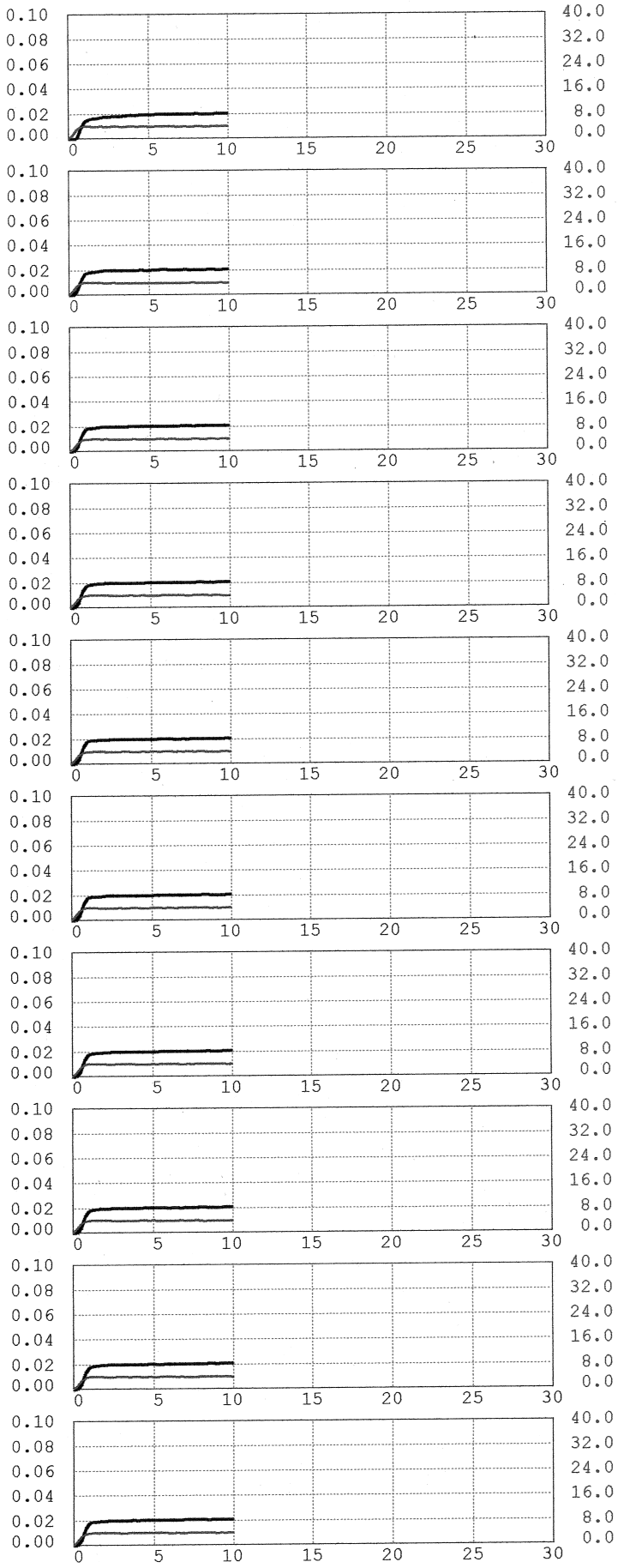
Date: 08/26/2010
Time: 09:06:37

SUPERVISOR NAME: ALB .04IPA IN H2O

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

BLANK TEST	0.000	09:07
CALIBRATION CHECK	PASSED	09:07
SIMULATOR VAPOR	INTERFERENCE	09:07
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
BLANK TEST	0.000	09:17

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

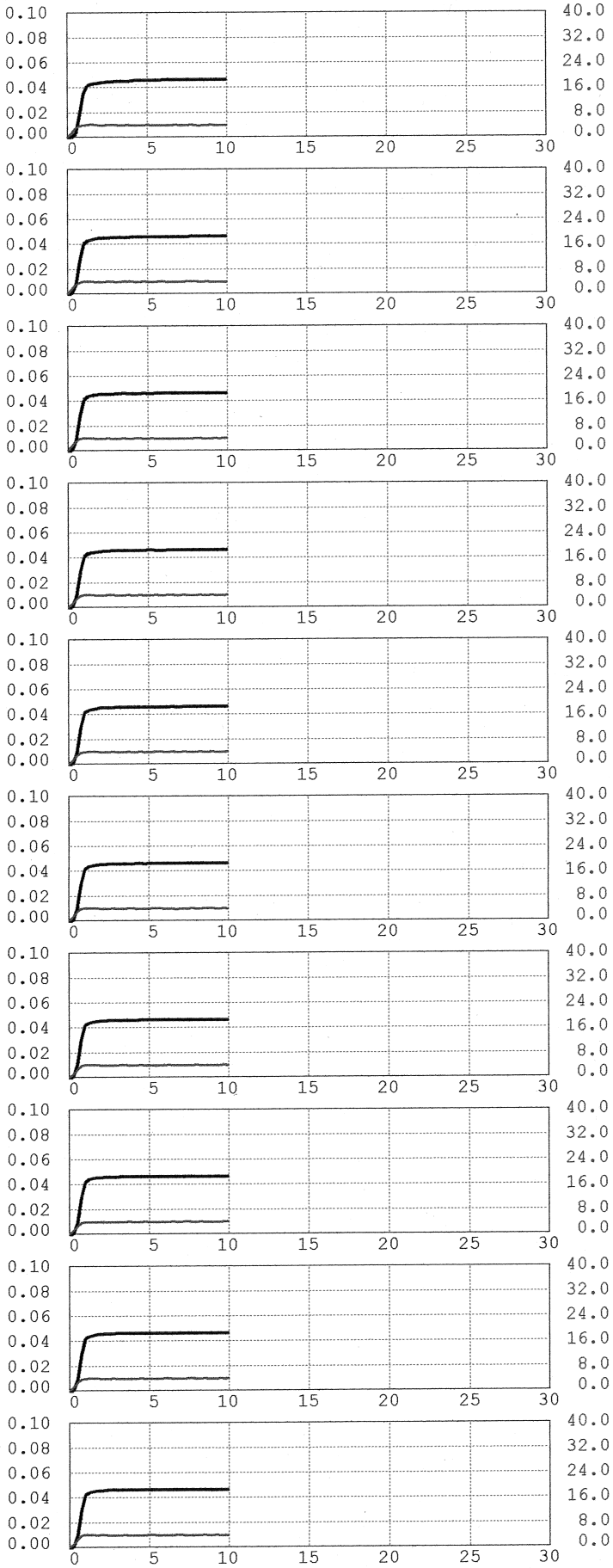
Date: 08/26/2010
Time: 09:23:30

SUPERVISOR NAME: ALB .01 AETONE IN .04 ETOH

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

BLANK TEST	0.000	09:24
CALIBRATION CHECK	PASSED	09:24
SIMULATOR VAPOR	INTERFERENCE	09:24
SIMULATOR VAPOR	INTERFERENCE	09:25
SIMULATOR VAPOR	INTERFERENCE	09:26
SIMULATOR VAPOR	INTERFERENCE	09:27
SIMULATOR VAPOR	INTERFERENCE	09:28
SIMULATOR VAPOR	INTERFERENCE	09:29
SIMULATOR VAPOR	INTERFERENCE	09:30
SIMULATOR VAPOR	INTERFERENCE	09:31
SIMULATOR VAPOR	INTERFERENCE	09:32
SIMULATOR VAPOR	INTERFERENCE	09:33
BLANK TEST	0.000	09:34

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

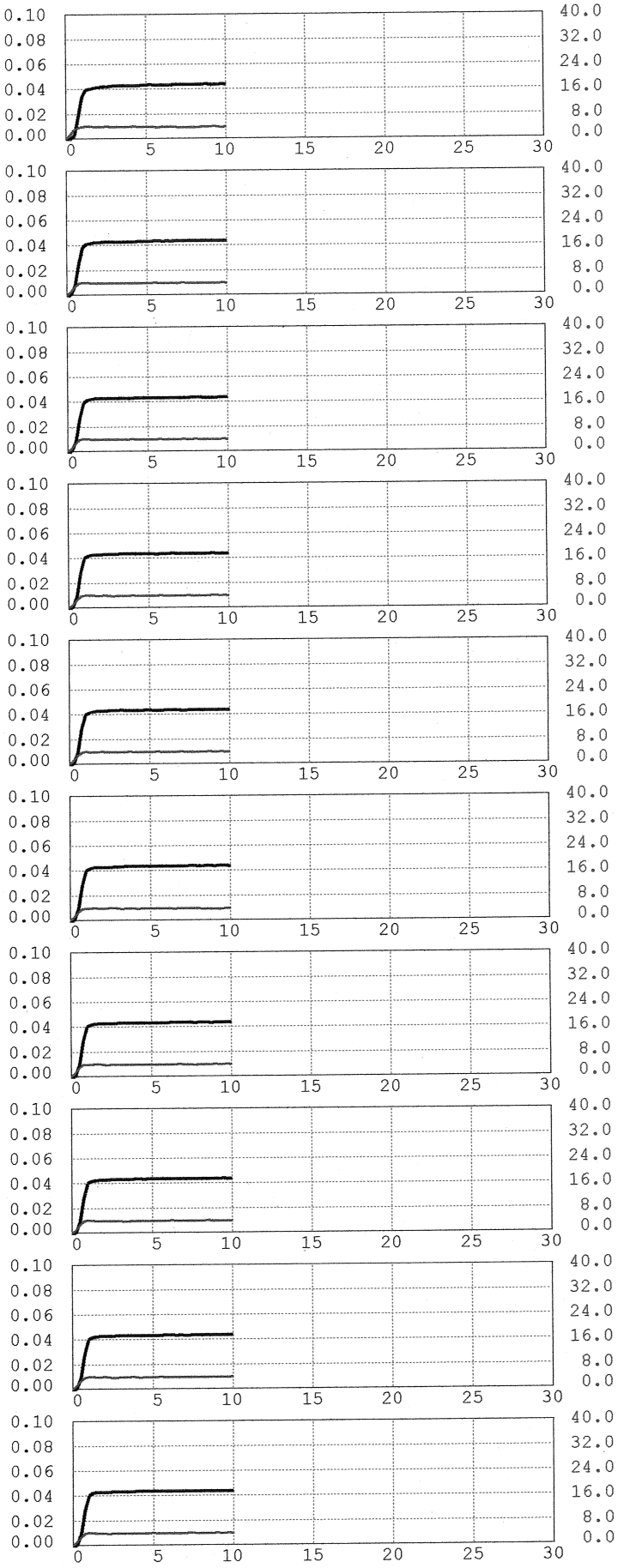
Date: 08/26/2010
Time: 09:43:11

SUPERVISOR NAME: ALB .02ACETONE IN .04ETOH

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

BLANK TEST	0.000	09:44
CALIBRATION CHECK	PASSED	09:44
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	09:54

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

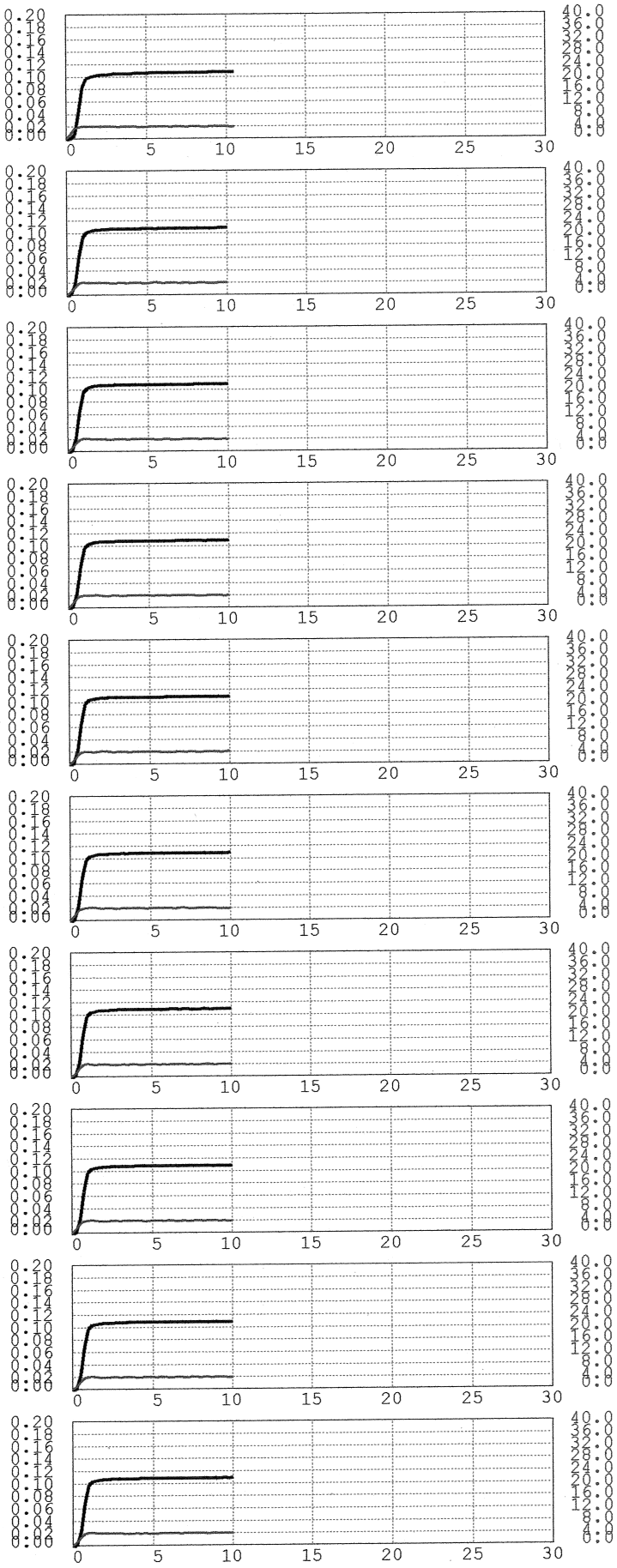
Date: 08/26/2010
Time: 10:06:58

SUPERVISOR NAME: ALB .04MEOH BIN .08ETOH

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

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

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

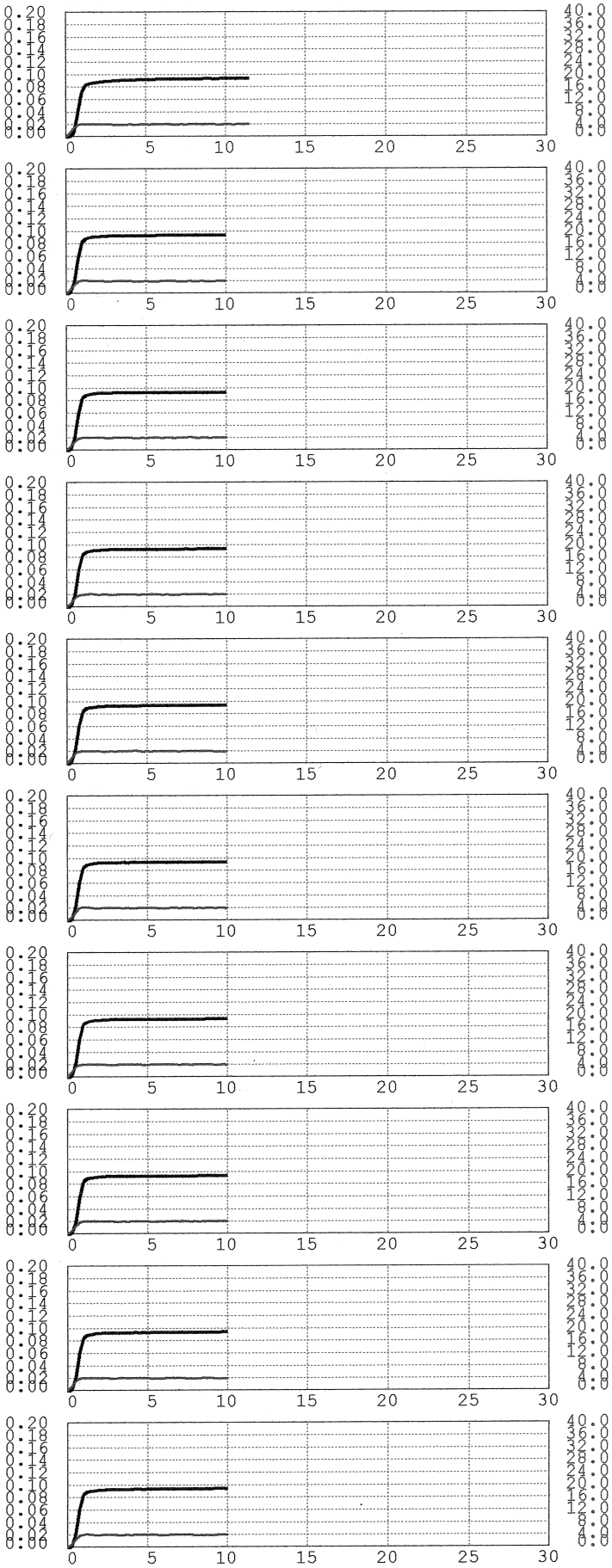
Date: 08/26/2010
Time: 10:22:49

SUPERVISOR NAME: ALB .04IPA IN .08ETOH

SOLUTION LOT #: 09-30-08I
SOLUTION CONCENTRATION: 0.079

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

Average out of range!



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

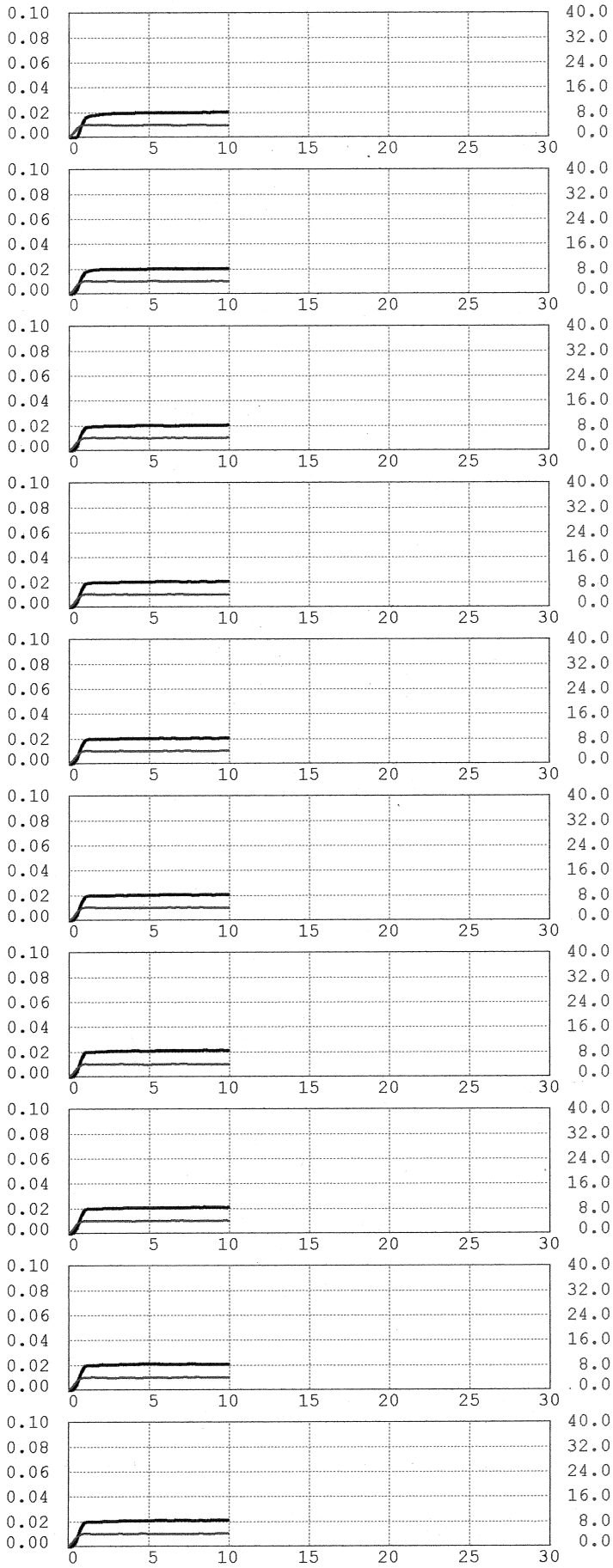
Date: 08/26/2010
Time: 11:13:04

SUPERVISOR NAME: ALB .04MEOH IN H2O

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

BLANK TEST		0.000	11:14
CALIBRATION CHECK		PASSED	11:14
Xq = 0.1024 (0.08%)			
SIMULATOR VAPOR		0.021	11:14
X[1] = 0.0214	(-0.0007)	(-0.0047)	
SIMULATOR VAPOR		0.021	11:15
X[1] = 0.0218	(-0.0006)	(-0.0046)	
SIMULATOR VAPOR		0.021	11:16
X[1] = 0.0217	(-0.0012)	(-0.0048)	
SIMULATOR VAPOR		0.021	11:17
X[1] = 0.0218	(-0.0013)	(-0.0049)	
SIMULATOR VAPOR		0.021	11:18
X[1] = 0.0218	(-0.0011)	(-0.0050)	
SIMULATOR VAPOR		0.021	11:19
X[1] = 0.0219	(-0.0010)	(-0.0048)	
SIMULATOR VAPOR		INTERFERENCE	11:20
X[1] = 0.0221	(-0.0011)	(-0.0051)	
SIMULATOR VAPOR		0.022	11:21
X[1] = 0.0221	(-0.0012)	(-0.0050)	
SIMULATOR VAPOR		INTERFERENCE	11:22
X[1] = 0.0220	(-0.0014)	(-0.0051)	
SIMULATOR VAPOR		0.022	11:23
X[1] = 0.0220	(-0.0016)	(-0.0047)	
BLANK TEST		0.000	11:23

Average out of range!



DIAGNOSTIC RESULT

DataMaster DMT: 100158
Location:
Calibration Date: 08/23/2010
Certification Date: 08/24/2010
Installation Date: 08/24/2010
Test Date: 08/26/2010
Time: 14:28

VERMONT
DEPARTMENT OF HEALTH

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VERSIONS
DMT 1.05
PIC 2.06
Modem 1.06
Questions 1.00
Reports 1.02

TEMPERATURES
Sample Chamber = 48.74°C
Breath Tube    = 45.91°C

SETTINGS
Lamp Voltage   = 2.22 V
Cooler Voltage = 1.76 V
Bias Voltage   = 80.1 V
Chopper Freq   = 542.0 Hz

PUMP INFO
Flow Rate = 4.872 L/M

DETECTOR INFO
PUMP     ON       OFF
MAX(V)   0.0175   0.0201
MIN(V)   0.0161   0.0187

FILTER INFO
Filter 1  0.020  Zero = true
Filter 2  0.269  Zero = true
Filter 3  1.104  Zero = true

CALIBRATION CHECK
Xq = 0.1027  0.43%
```

ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

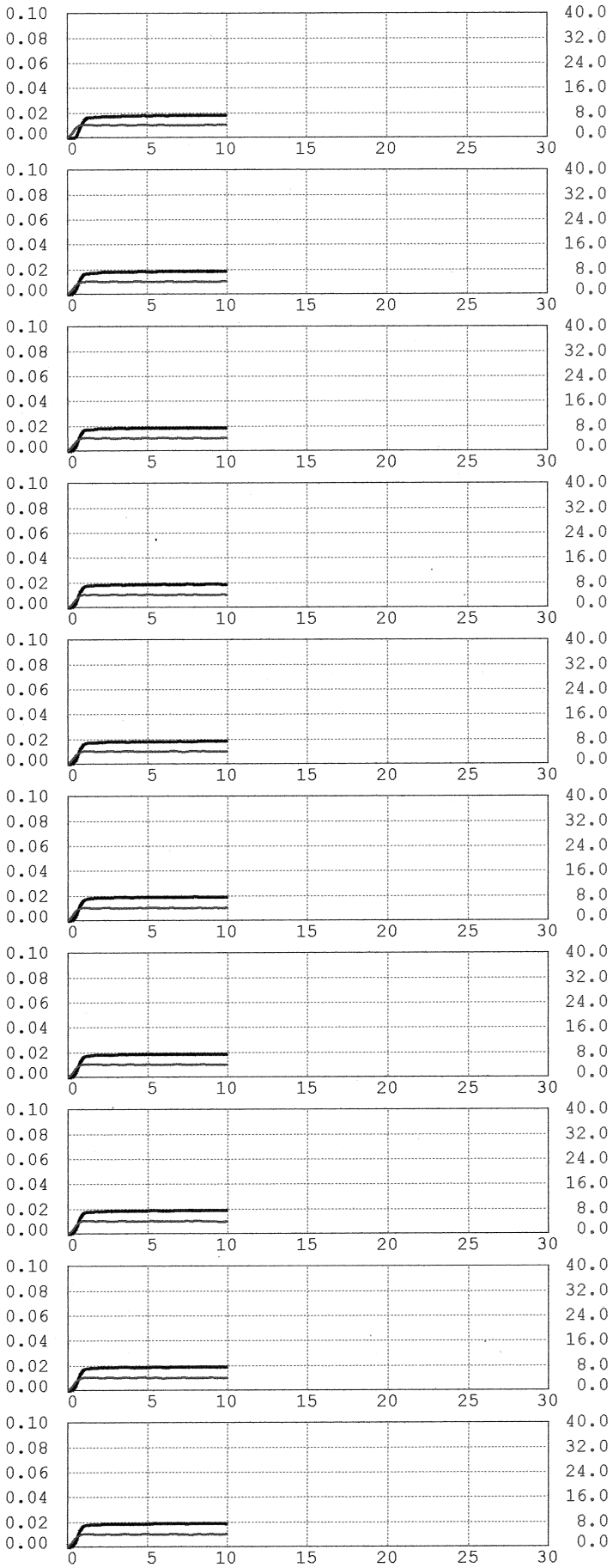
Date: 08/26/2010
Time: 11:44:41

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 10-34--020
SOLUTION CONCENTRATION: 0.020

BLANK TEST	0.000	11:45
CALIBRATION CHECK	PASSED	11:45
SIMULATOR VAPOR	0.019	11:46
SIMULATOR VAPOR	0.019	11:46
SIMULATOR VAPOR	0.019	11:47
SIMULATOR VAPOR	0.019	11:48
SIMULATOR VAPOR	0.019	11:49
SIMULATOR VAPOR	0.019	11:50
SIMULATOR VAPOR	0.019	11:51
SIMULATOR VAPOR	0.020	11:52
SIMULATOR VAPOR	0.019	11:53
SIMULATOR VAPOR	0.019	11:54
BLANK TEST	0.000	11:55

Average = 0.019
Std Dev = 0.0003



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

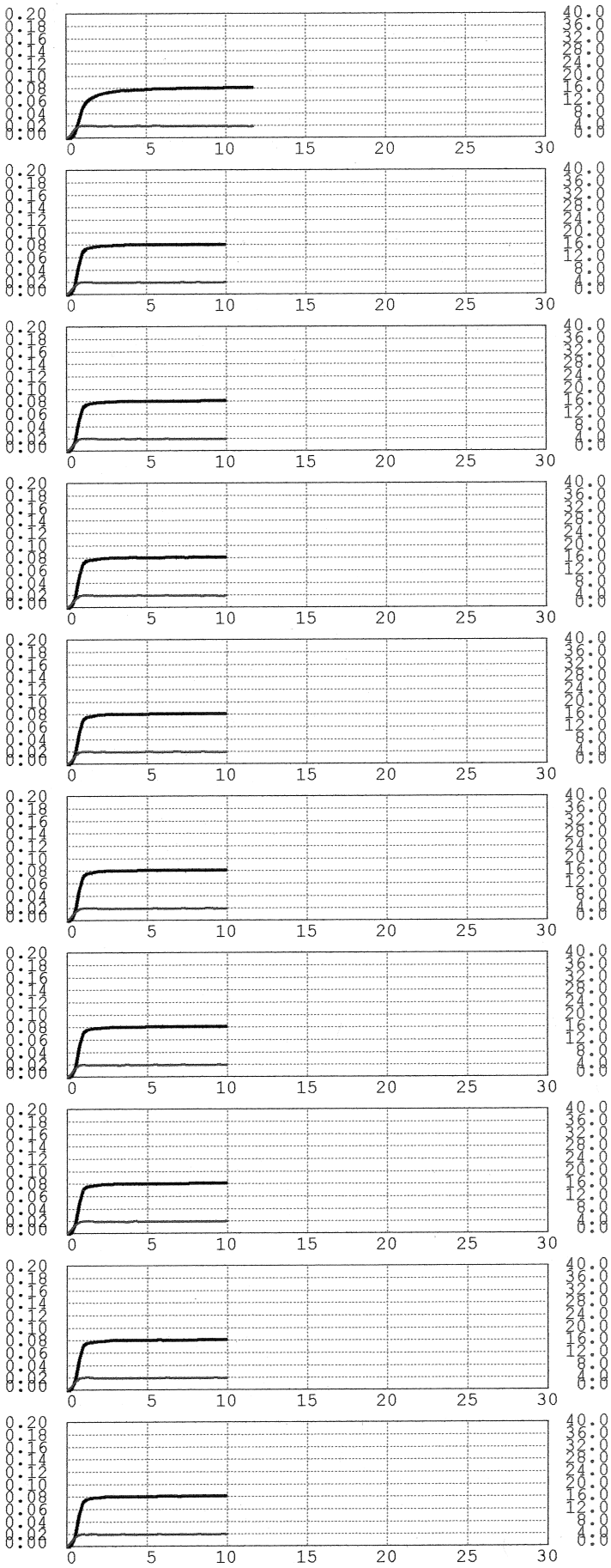
Date: 08/26/2010
Time: 12:15:36

SUPERVISOR NAME: ALB LINEARITY

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

BLANK TEST	0.000	12:16
CALIBRATION CHECK	PASSED	12:16
SIMULATOR VAPOR	0.081	12:16
SIMULATOR VAPOR	0.081	12:17
SIMULATOR VAPOR	0.081	12:18
SIMULATOR VAPOR	0.081	12:19
SIMULATOR VAPOR	0.081	12:20
SIMULATOR VAPOR	0.081	12:21
SIMULATOR VAPOR	0.081	12:22
SIMULATOR VAPOR	0.081	12:23
SIMULATOR VAPOR	0.081	12:24
SIMULATOR VAPOR	0.081	12:25
BLANK TEST	0.000	12:26

Average = 0.081
Std Dev = 0.0000



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

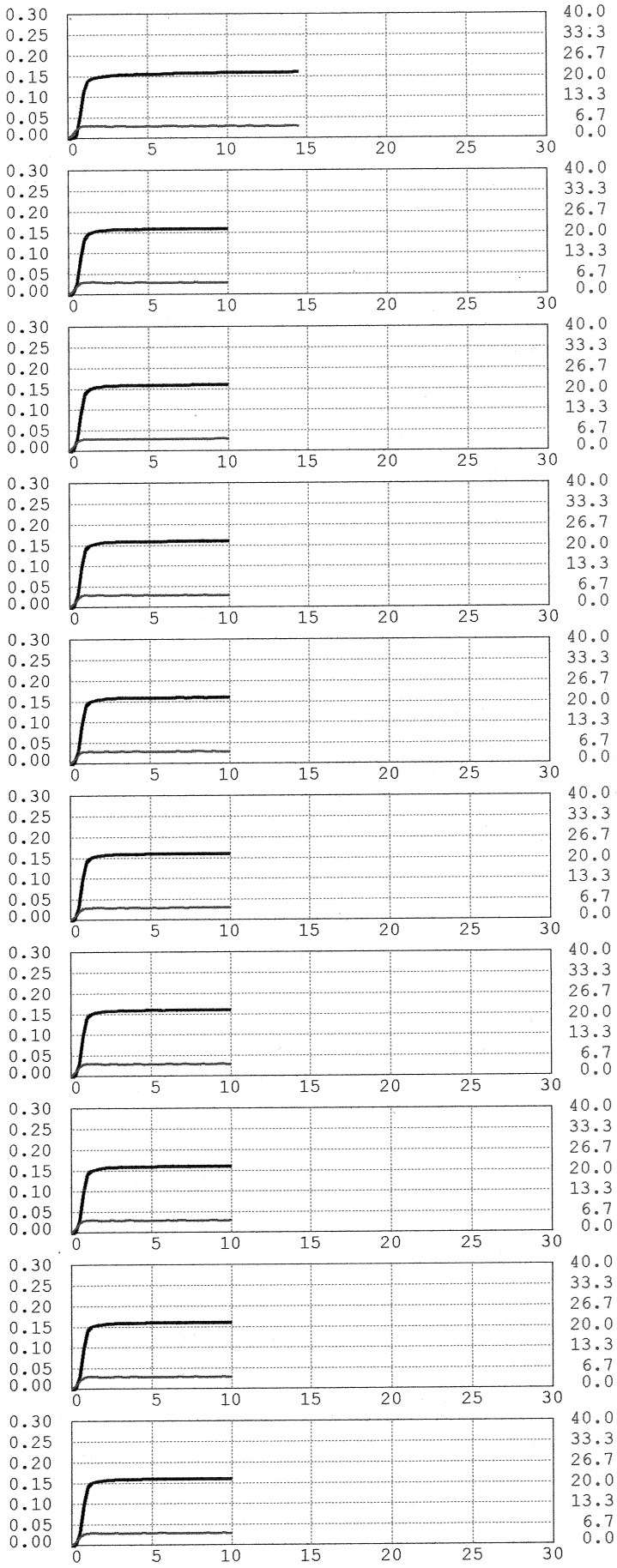
Date: 08/26/2010
Time: 13:50:39

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 10-31-160
SOLUTION CONCENTRATION: 0.160

BLANK TEST	0.000	13:51
CALIBRATION CHECK	PASSED	13:51
SIMULATOR VAPOR	0.159	13:52
SIMULATOR VAPOR	0.159	13:53
SIMULATOR VAPOR	0.160	13:54
SIMULATOR VAPOR	0.160	13:55
SIMULATOR VAPOR	0.160	13:56
SIMULATOR VAPOR	0.160	13:57
SIMULATOR VAPOR	0.160	13:58
SIMULATOR VAPOR	0.160	13:59
SIMULATOR VAPOR	0.160	14:00
SIMULATOR VAPOR	0.161	14:01
BLANK TEST	0.000	14:01

Average = 0.159
Std Dev = 0.0005



ACCURACY AND PRECISION TEST

STATE OF VERMONT

DataMaster DMT: 100158

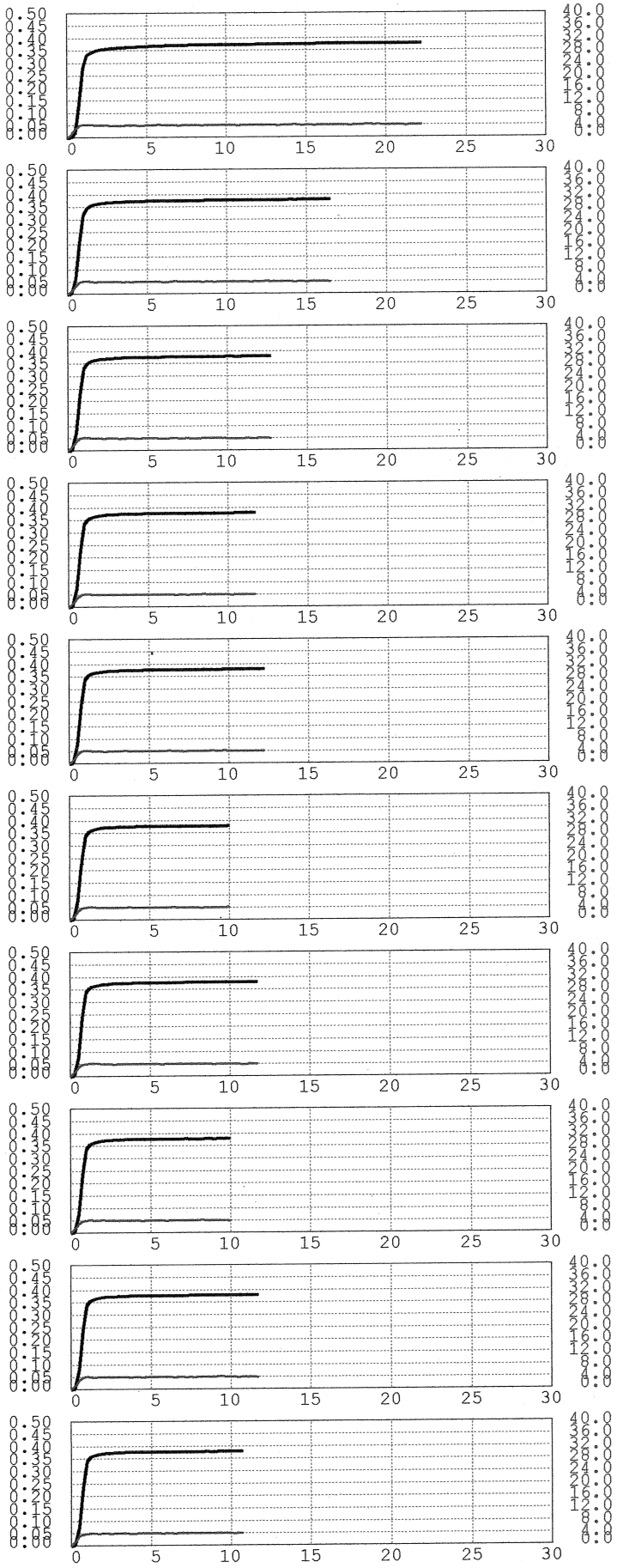
Date: 08/26/2010
Time: 14:13:51

SUPERVISOR NAME: ALB LINEARITY

SOLUTION LOT #: 10-32-400
SOLUTION CONCENTRATION: 0.373

BLANK TEST	0.000	14:14
CALIBRATION CHECK	PASSED	14:14
SIMULATOR VAPOR	0.376	14:15
SIMULATOR VAPOR	0.377	14:16
SIMULATOR VAPOR	0.376	14:17
SIMULATOR VAPOR	0.377	14:18
SIMULATOR VAPOR	0.377	14:19
SIMULATOR VAPOR	0.376	14:20
SIMULATOR VAPOR	0.378	14:21
SIMULATOR VAPOR	0.377	14:22
SIMULATOR VAPOR	0.378	14:23
SIMULATOR VAPOR	0.377	14:24
BLANK TEST	0.000	14:25

Average = 0.376
Std Dev = 0.0007



National Patent
Analytical Systems, Inc.

Certificate of Calibration

100158
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.

6-28-10
Date

Technician

Section 10: Live Subject Tests

This Instrument not tested for this specification

Section 11: Communication Notes

March/April 2010

~~October 2009~~

100159

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

Power Up Procedure:

ALB

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.

8/23/10

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.

SH 9/10/10

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.

SH 9/10/10

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

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SH 9/10/10

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.

SH 9/13/10

0.01% Acetone in 0.08% EtOH ✓ SH 9/13/10
0.04% MeOH in Water ✓ SH 9/13/10
0.04% Isopropanol in Water ✓ SH 9/13/10

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.

SH 9/13/10

0.01% Acetone in 0.04% EtOH ✓ SH 9/13/10
0.02% Acetone in 0.04% EtOH ✓ SH 9/13/10
0.04% MeOH in 0.08% EtOH ✓ SH 9/10/10
0.04% Isopropanol in 0.08% EtOH ✓ SH 9/13/10

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