SECTION 4

INTERFERENCE TESTS

DIAGNOSTIC RESULT

DataMaster DMT: 104909
Location:
Calibration Date: 12/07/2011
Certification Date:
Installation Date:
Test Date: 12/07/2011
Test Time: 11:32:57

VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 49.0°C
Breath Tube = 47.5°C
Digital Sim = 0.0°C

SETTINGS
Lamp Voltage = 1.78 V
Cooler Voltage = 1.72 V
Bias Voltage = 81 V
Chopper Freq = 534 Hz

PUMP INFO
Flow Rate = 5.877 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.0014	0.0030
MIN(V)	-0.0004	0.0014

FILTER INFO

Filter 1	0.001	Zero = true
Filter 2	0.696	Zero = true
Filter 3	0.345	Zero = true

CALIBRATION CHECK
Xq = 0.083 0.42%

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

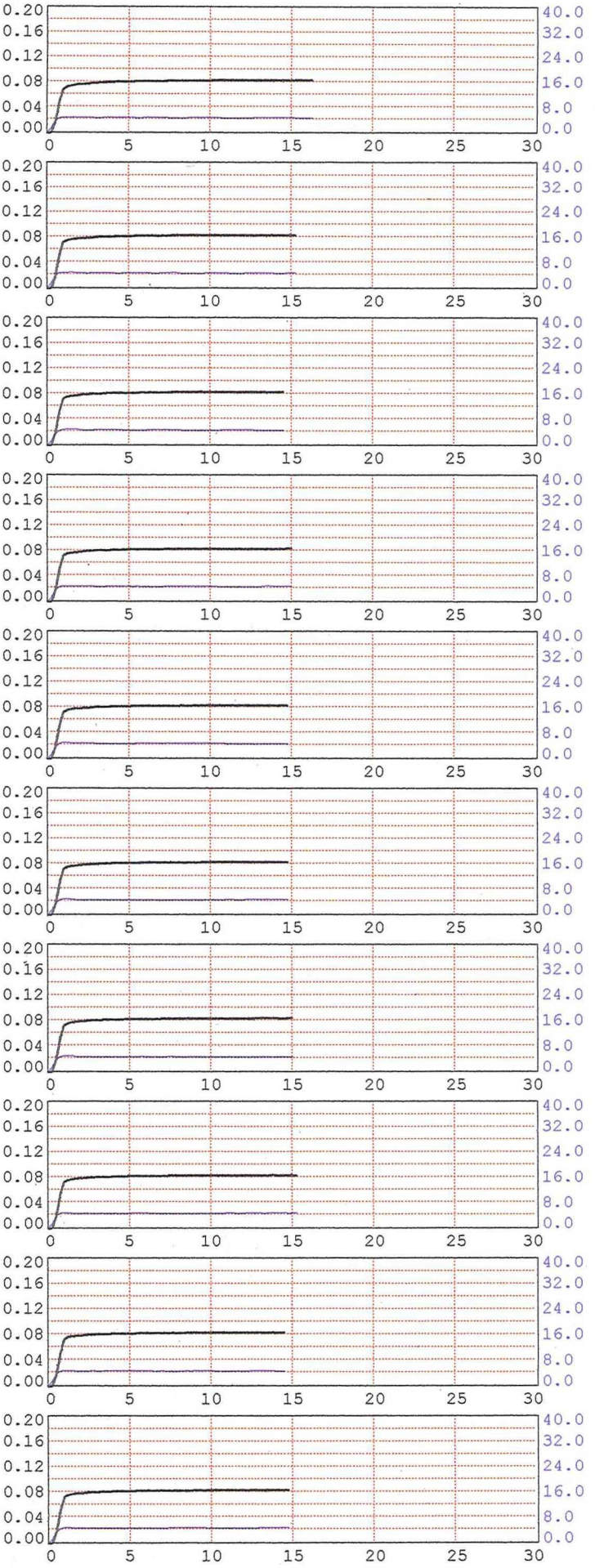
Date: 12/07/2011
Time: 13:14:36

SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 12-37-080A1
SOLUTION CONCENTRATION: 0.081

BLANK TEST	0.000	13:15
CALIBRATION CHECK	PASSED	13:15
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:15
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:17
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:18
SIMULATOR VAPOR 34.1°C	INTERFERENCE	13:19
SIMULATOR VAPOR 34.1°C	INTERFERENCE	13:20
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:21
SIMULATOR VAPOR 34.1°C	INTERFERENCE	13:22
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:23
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:24
SIMULATOR VAPOR 34.1°C	INTERFERENCE	13:25
BLANK TEST	0.000	13:26

100%
[illegible]
0.01 Acetone
0.081 EtOH
12-7-11



DIAGNOSTIC RESULT

DataMaster DMT: 104909
Location:
Calibration Date: 12/07/2011
Certification Date: 12/08/2011
Installation Date:
Test Date: 12/09/2011
Test Time: 08:57:29

VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 48.7°C
Breath Tube = 46.3°C
Digital Sim = 0.0°C

SETTINGS
Lamp Voltage = 1.78 V
Cooler Voltage = 1.72 V
Bias Voltage = 81 V
Chopper Freq = 533 Hz

PUMP INFO
Flow Rate = 6.039 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	-0.0260	-0.0246
MIN(V)	-0.0295	-0.0260

FILTER INFO
Filter 1 -0.026 Zero = true
Filter 2 0.672 Zero = true
Filter 3 0.312 Zero = true

CALIBRATION CHECK
Xq = 0.083 0.21%

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

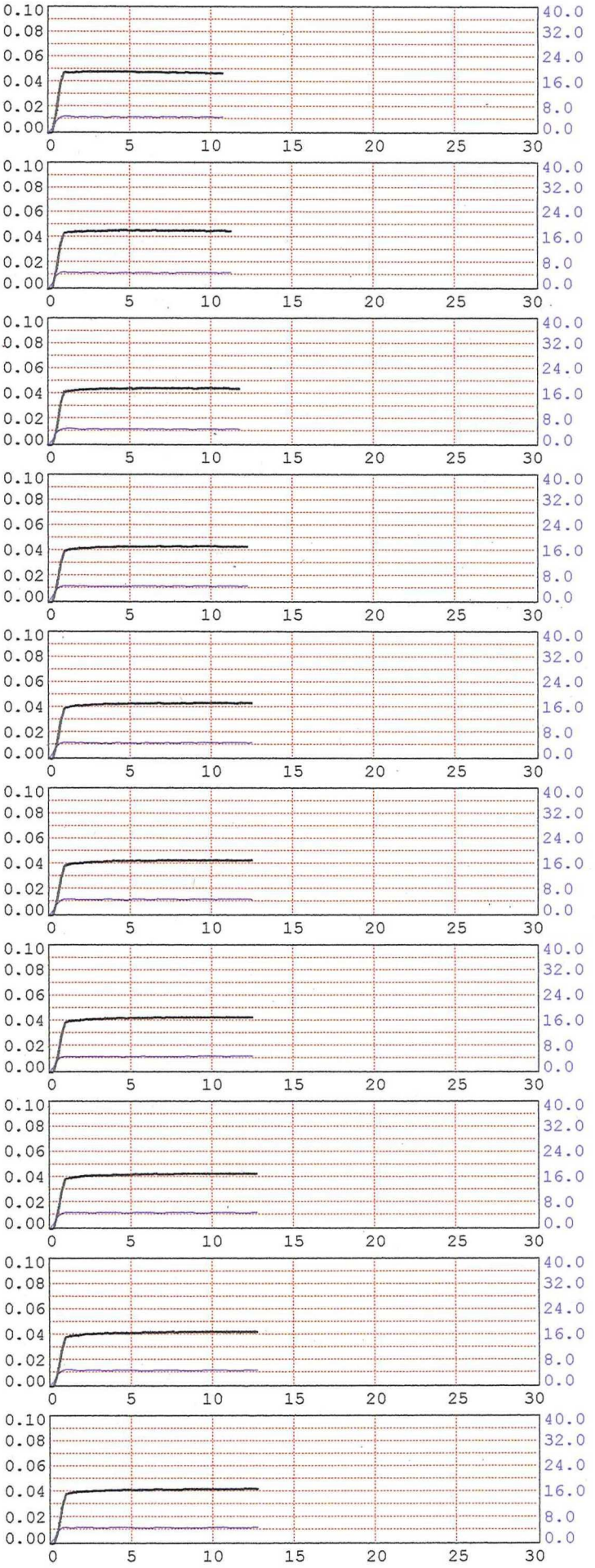
Date: 12/09/2011
Time: 11:28:53

SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 12-26-040A1
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	11:29
CALIBRATION CHECK	PASSED	11:29
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:30
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:31
SIMULATOR VAPOR 34.1°C	INTERFERENCE	11:32
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:33
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:34
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:35
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:36
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:37
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:38
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:39
BLANK TEST	0.000	11:40

100%
0.01 Acetone
0.040 EtOH
KLK
12-9-11



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/09/2011
Time: 11:54:11

SUPERVISOR NAME:
KIRK L KIMBALL

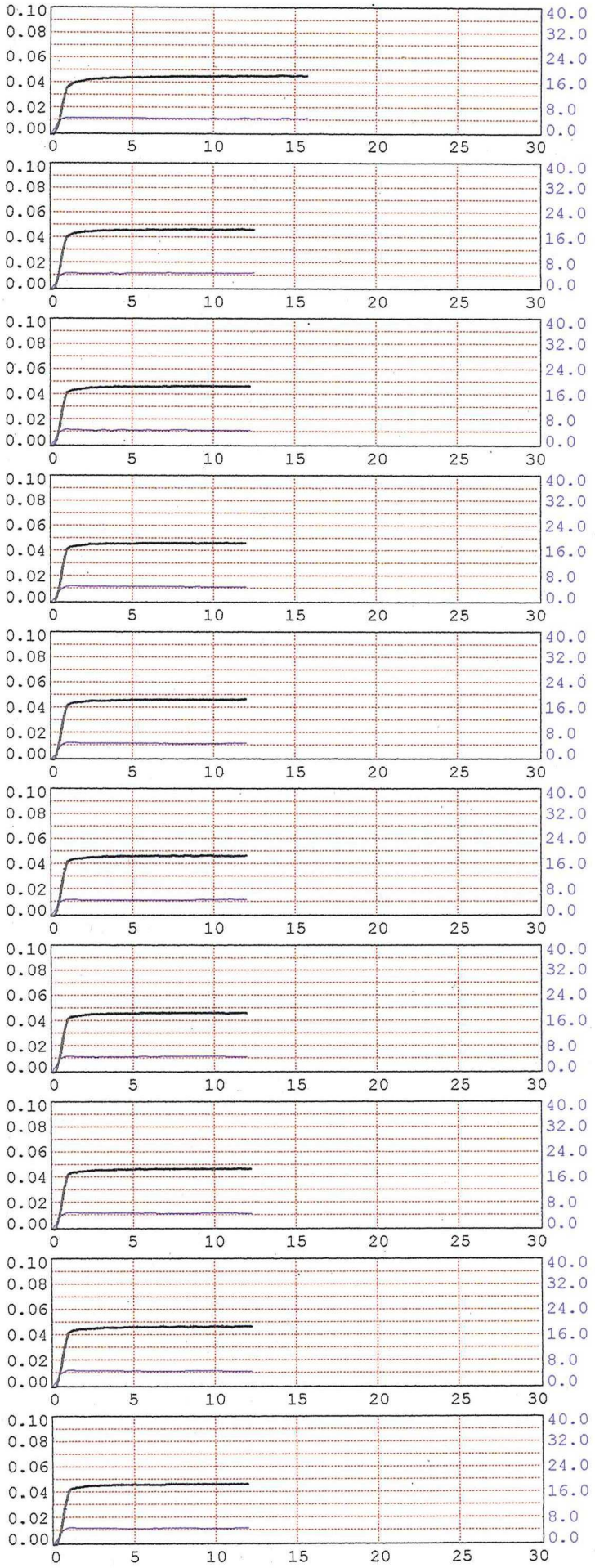
SOLUTION LOT #: 12-26-040A2
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	11:55
CALIBRATION CHECK	PASSED	11:55
SIMULATOR VAPOR 34.4°C	INTERFERENCE	11:55
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:56
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:57
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:58
SIMULATOR VAPOR 34.2°C	INTERFERENCE	11:59
SIMULATOR VAPOR 34.2°C	INTERFERENCE	12:00
SIMULATOR VAPOR 34.2°C	INTERFERENCE	12:01
SIMULATOR VAPOR 34.2°C	INTERFERENCE	12:02
SIMULATOR VAPOR 34.2°C	INTERFERENCE	12:03
SIMULATOR VAPOR 34.2°C	INTERFERENCE	12:05
BLANK TEST	0.000	12:05

100%

0.02 Acetone/0.04 EtOH 12/09/11 [illegible]

KLK



DIAGNOSTIC RESULT

DataMaster DMT: 104909
Location:
Calibration Date: 12/07/2011
Certification Date: 12/08/2011
Installation Date:
Test Date: 12/12/2011
Test Time: 11:45:01

VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 48.9°C
Breath Tube = 43.7°C
Digital Sim = 34.1°C

SETTINGS
Lamp Voltage = 1.78 V
Cooler Voltage = 1.72 V
Bias Voltage = 81 V
Chopper Freq = 533 Hz

PUMP INFO
Flow Rate = 6.140 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	-0.0417	-0.0392
MIN(V)	-0.0431	-0.0409

FILTER INFO

Filter 1	-0.041	Zero = true
Filter 2	0.657	Zero = true
Filter 3	0.300	Zero = true

CALIBRATION CHECK
Xq = 0.082 0.11%

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

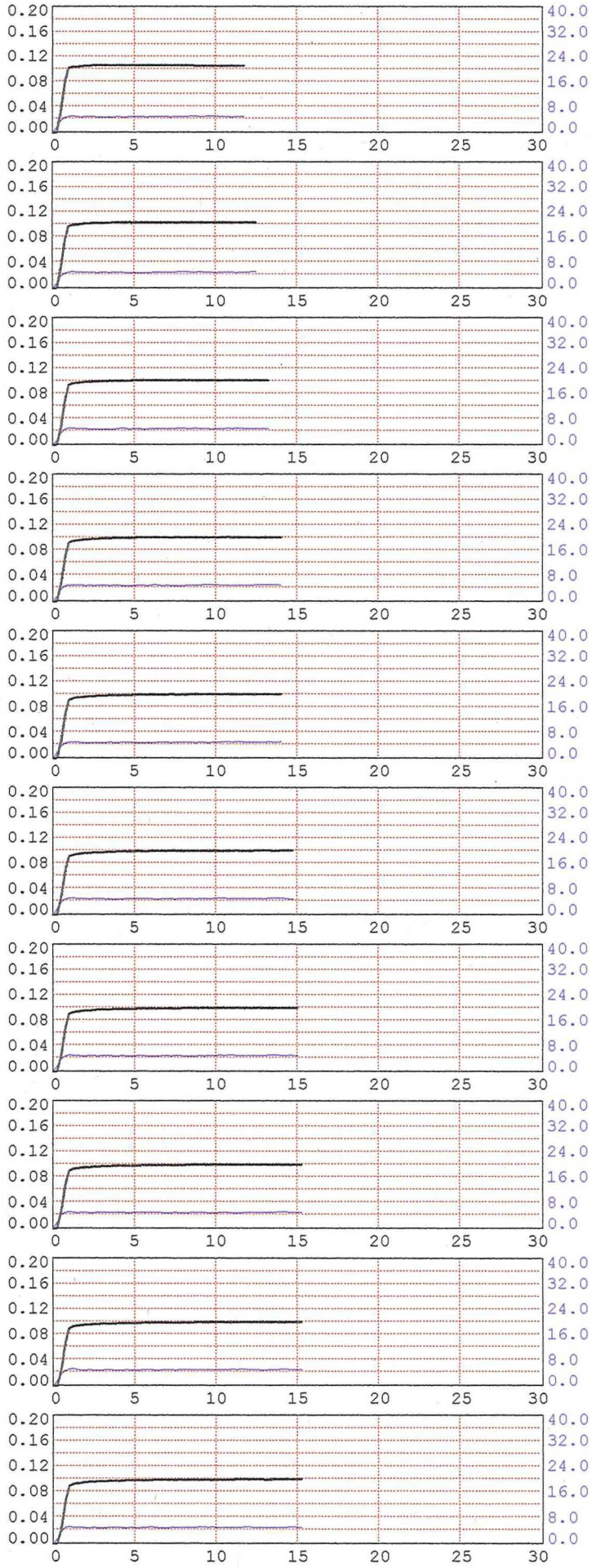
Date: 12/12/2011
Time: 11:49:33

SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 12-29-080M
SOLUTION CONCENTRATION: 0.081

BLANK TEST	0.000	11:50
CALIBRATION CHECK	PASSED	11:50
SIMULATOR VAPOR 34.1°C	INTERFERENCE	11:50
SIMULATOR VAPOR 34.0°C	INTERFERENCE	11:51
SIMULATOR VAPOR 34.0°C	INTERFERENCE	11:52
SIMULATOR VAPOR 34.0°C	INTERFERENCE	11:54
SIMULATOR VAPOR 34.0°C	INTERFERENCE	11:55
SIMULATOR VAPOR 34.0°C	INTERFERENCE	11:56
SIMULATOR VAPOR 34.0°C	INTERFERENCE	11:57
SIMULATOR VAPOR 34.0°C	INTERFERENCE	11:58
SIMULATOR VAPOR 34.0°C	INTERFERENCE	11:59
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:00
BLANK TEST	0.000	12:01

100%
0.04 MeOH
0.081 EtOH
12-12-11



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

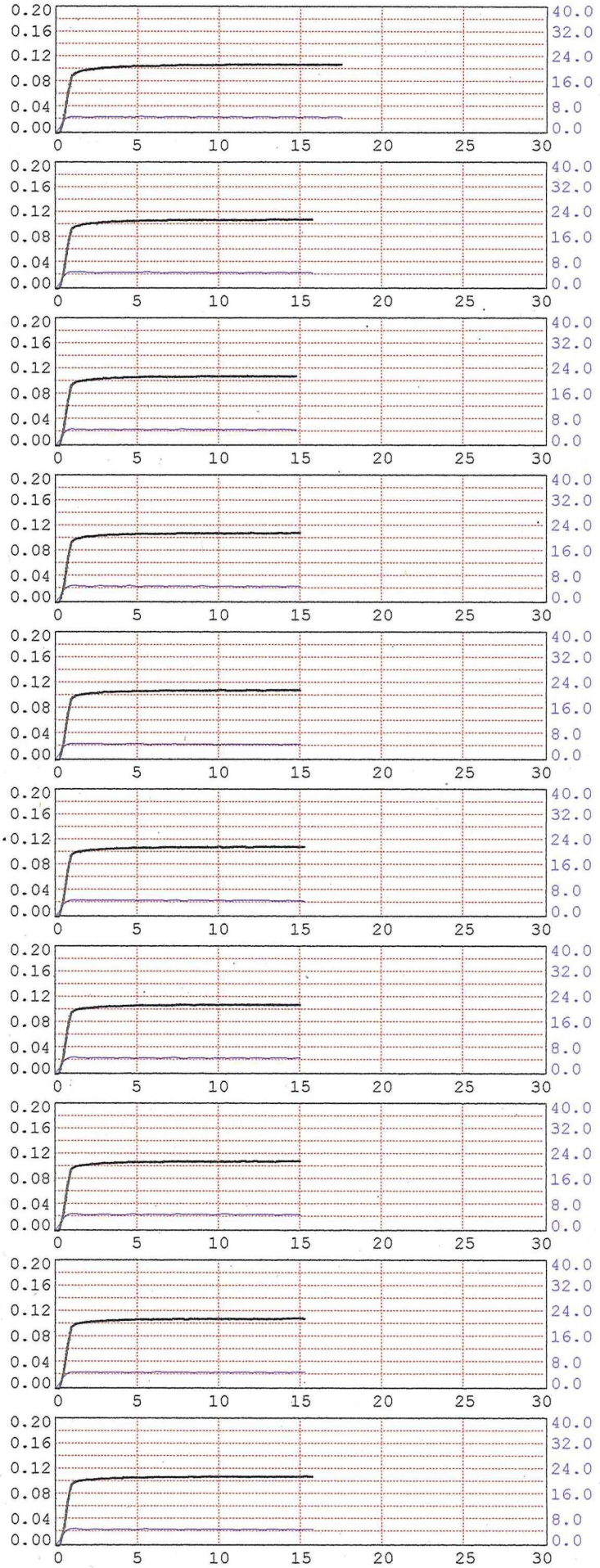
Date: 12/12/2011
Time: 12:07:35

SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 12-29-080I
SOLUTION CONCENTRATION: 0.081

BLANK TEST	0.000	12:08
CALIBRATION CHECK	PASSED	12:08
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:08
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:10
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:11
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:12
SIMULATOR VAPOR 34.1°C	INTERFERENCE	12:13
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:14
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:15
SIMULATOR VAPOR 34.1°C	INTERFERENCE	12:16
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:17
SIMULATOR VAPOR 34.1°C	INTERFERENCE	12:18
BLANK TEST	0.000	12:19

100%
acc
0.04 IPA
0.081 EtOH
12-12-11



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/13/2011
Time: 12:02:54

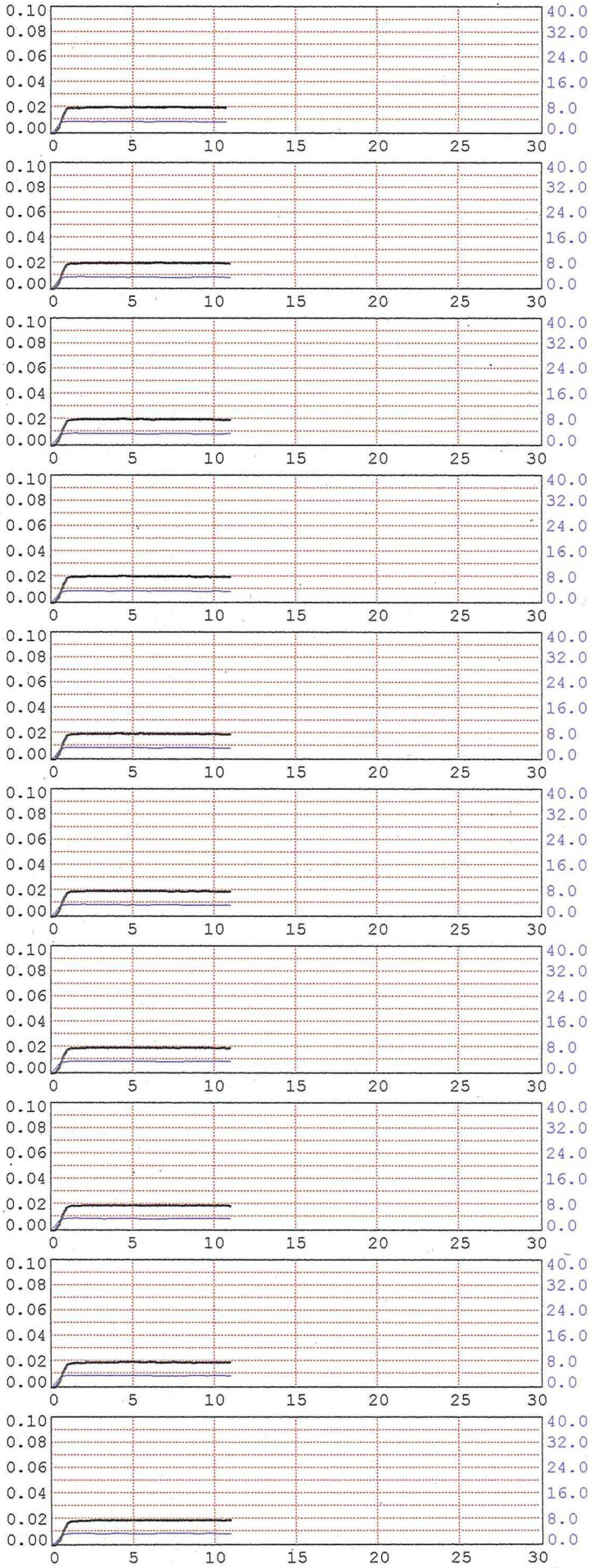
SUPERVISOR NAME:
STEVEN R MERRILL

SOLUTION LOT #: 12-43-040M
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	12:03
CALIBRATION CHECK	PASSED	12:03
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:04
SIMULATOR VAPOR 34.1°C	INTERFERENCE	12:05
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:06
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:07
SIMULATOR VAPOR 34.1°C	INTERFERENCE	12:08
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:09
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:10
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:11
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:12
SIMULATOR VAPOR 34.0°C	INTERFERENCE	12:13
BLANK TEST	0.000	12:14

100% 12/13/11 SR

0.04 MeOH / H_2O



DIAGNOSTIC RESULT

DataMaster DMT: 104909
Location:
Calibration Date: 12/07/2011
Certification Date: 12/08/2011
Installation Date:
Test Date: 12/13/2011
Test Time: 11:47:06

VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 48.7°C
Breath Tube = 45.6°C
Digital Sim = 34.1°C

SETTINGS
Lamp Voltage = 1.78 V
Cooler Voltage = 1.72 V
Bias Voltage = 81 V
Chopper Freq = 533 Hz

PUMP INFO
Flow Rate = 5.950 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	-0.0358	-0.0346
MIN(V)	-0.0392	-0.0358

FILTER INFO

Filter 1	-0.036	Zero = true
Filter 2	0.664	Zero = true
Filter 3	0.304	Zero = true

CALIBRATION CHECK
Xq = 0.083 0.63%

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/13/2011
Time: 13:33:33

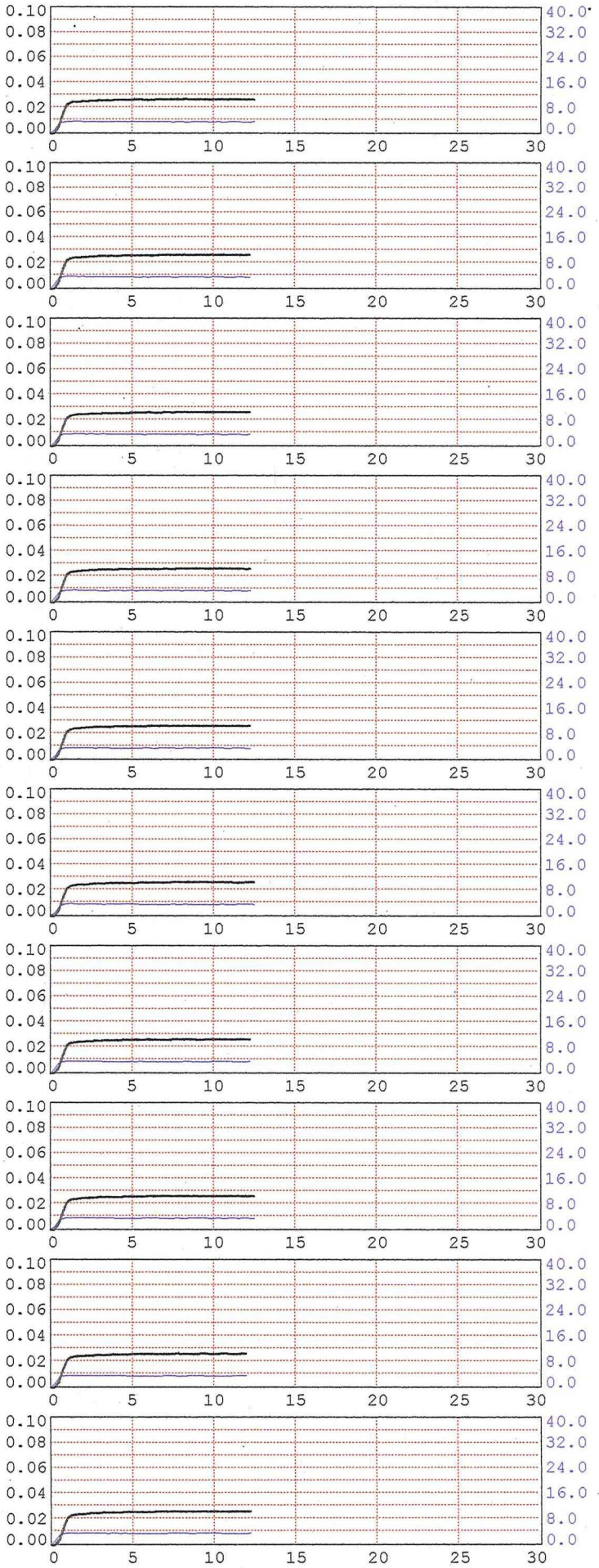
SUPERVISOR NAME:
STEVEN R MERRILL

SOLUTION LOT #: 12-44-040I
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	13:34
CALIBRATION CHECK	PASSED	13:34
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:34
SIMULATOR VAPOR 34.1°C	INTERFERENCE	13:35
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:36
SIMULATOR VAPOR 34.1°C	INTERFERENCE	13:38
SIMULATOR VAPOR 34.1°C	INTERFERENCE	13:39
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:40
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:41
SIMULATOR VAPOR 34.1°C	INTERFERENCE	13:42
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:43
SIMULATOR VAPOR 34.0°C	INTERFERENCE	13:44
BLANK TEST	0.000	13:45

100% 12/13/11 SR

0.04 IPA/H2O



SECTION 5

FINAL CALIBRATION CHECK TESTS

DIAGNOSTIC RESULT

DataMaster DMT: 104909
Location:
Calibration Date: 12/07/2011
Certification Date: 12/08/2011
Installation Date:
Test Date: 12/13/2011
Test Time: 13:52:20

VERSIONS
DMT: 1.00
PIC: 2.05
Modem: 2.1
Questions: 2.0

TEMPERATURES

Sample Chamber = 48.9°C
Breath Tube = 46.4°C
Digital Sim = 34.0°C

SETTINGS
Lamp Voltage = 1.78 V
Cooler Voltage = 1.72 V
Bias Voltage = 81 V
Chopper Freq = 534 Hz

PUMP INFO
Flow Rate = 6.143 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	0.0014	-0.0256
MIN(V)	-0.0307	-0.0272

FILTER INFO
Filter 1 -0.026 Zero = true
Filter 2 0.672 Zero = true
Filter 3 0.307 Zero = true

CALIBRATION CHECK
Xq = 0.083 1.06%

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/13/2011
Time: 14:08:31

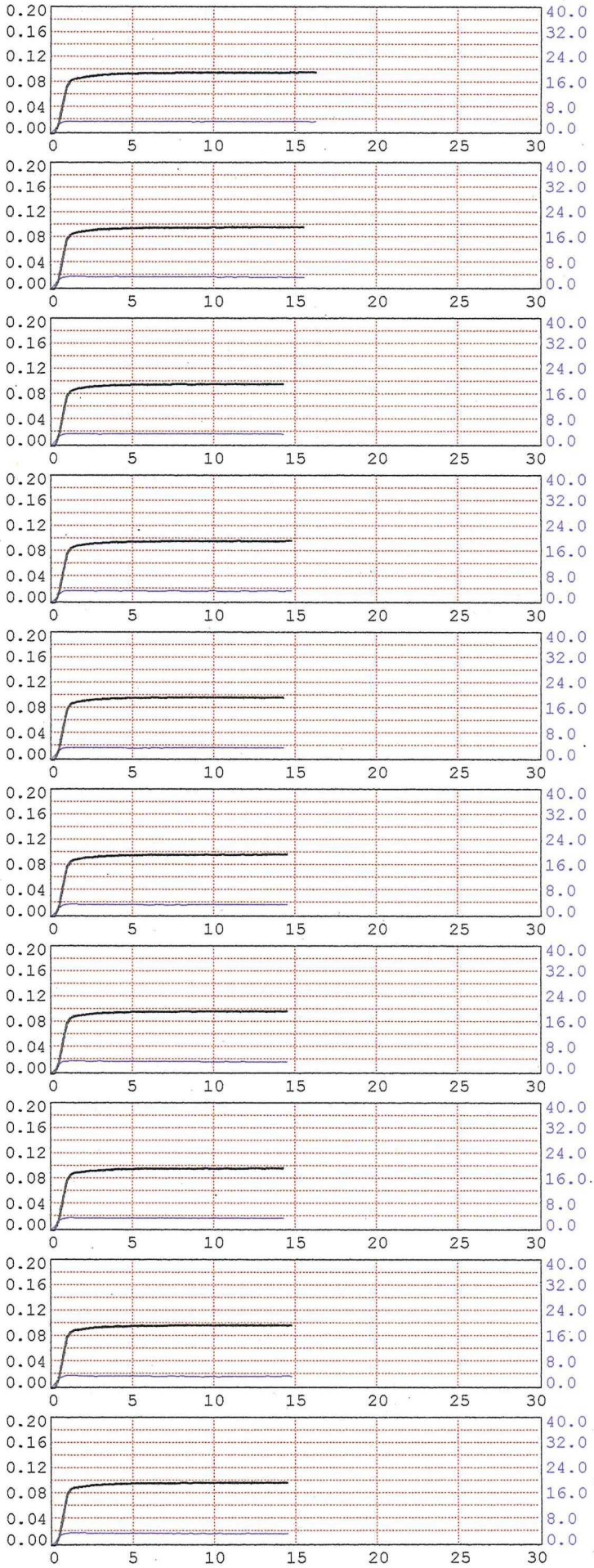
SUPERVISOR NAME:
STEVEN R MERRILL

SOLUTION LOT #: 12-39-100
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	14:09
CALIBRATION CHECK	PASSED	14:09
SIMULATOR VAPOR 34.1°C	0.097	14:09
SIMULATOR VAPOR 34.0°C	0.097	14:11
SIMULATOR VAPOR 34.0°C	0.097	14:12
SIMULATOR VAPOR 34.1°C	0.097	14:13
SIMULATOR VAPOR 34.0°C	0.098	14:14
SIMULATOR VAPOR 34.1°C	0.097	14:15
SIMULATOR VAPOR 34.0°C	0.098	14:16
SIMULATOR VAPOR 34.0°C	0.097	14:17
SIMULATOR VAPOR 34.0°C	0.098	14:18
SIMULATOR VAPOR 34.0°C	0.098	14:19
BLANK TEST	0.000	14:20

Average = 0.097
Std Dev = 0.000

In-House Cal Check 12/13/11 SRM



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/13/2011
Time: 14:23:57

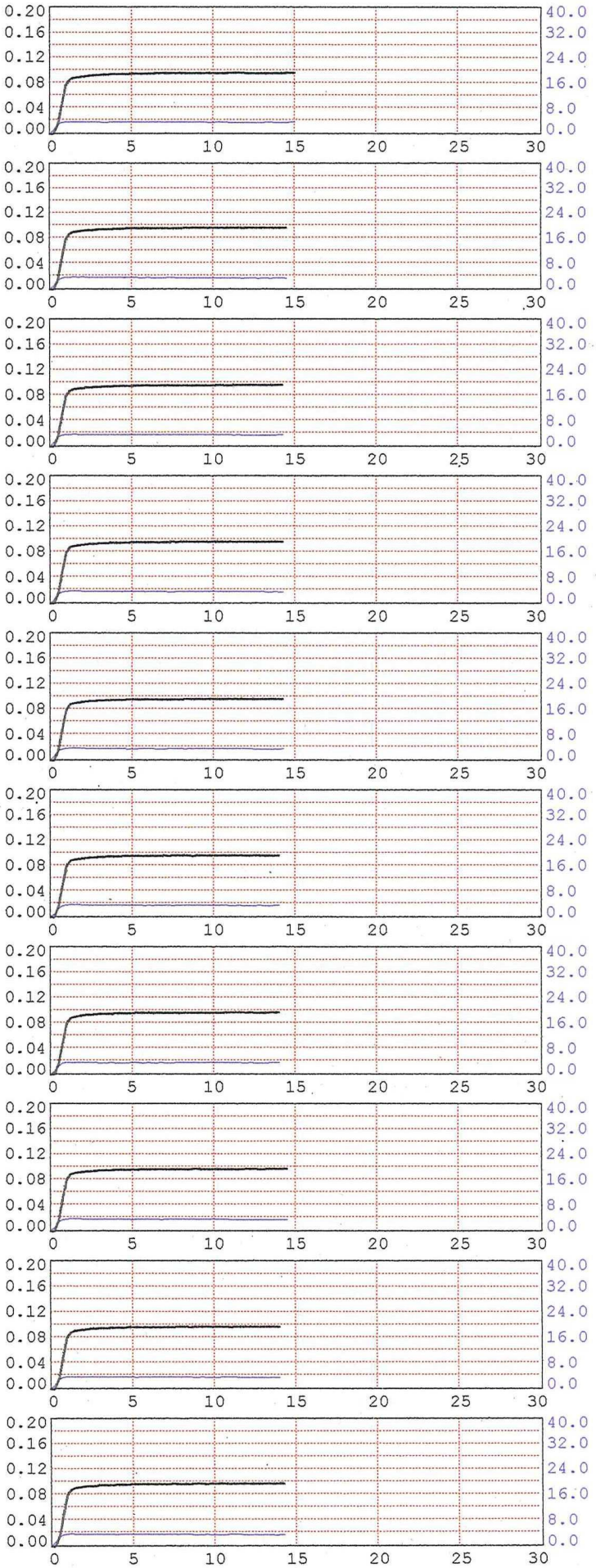
SUPERVISOR NAME:
STEVEN R MERRILL

SOLUTION LOT #: GUTH 11050
SOLUTION CONCENTRATION: 0.100

BLANK TEST	0.000	14:24
CALIBRATION CHECK	PASSED	14:24
SIMULATOR VAPOR 34.0°C	0.097	14:25
SIMULATOR VAPOR 34.0°C	0.097	14:26
SIMULATOR VAPOR 34.0°C	0.097	14:27
SIMULATOR VAPOR 34.0°C	0.097	14:28
SIMULATOR VAPOR 34.0°C	0.097	14:29
SIMULATOR VAPOR 34.0°C	0.097	14:30
SIMULATOR VAPOR 34.1°C	0.097	14:31
SIMULATOR VAPOR 34.0°C	0.098	14:32
SIMULATOR VAPOR 34.0°C	0.098	14:34
SIMULATOR VAPOR 34.1°C	0.097	14:35
BLANK TEST	0.000	14:36

Average = 0.097
Std Dev = 0.000

2nd Source Cal Check 12/13/11 SRM



SECTION 6

ERROR REPORTS

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/07/2011
Time: 14:56:56

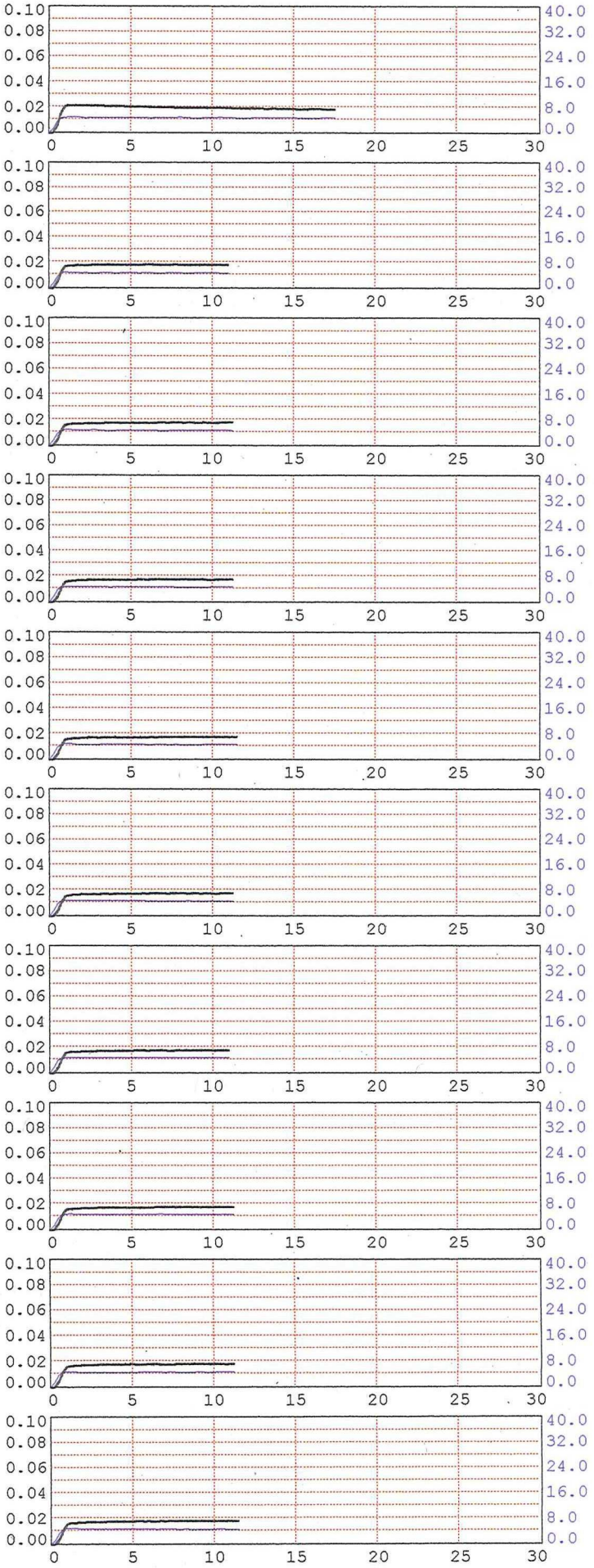
SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 12-35-020
SOLUTION CONCENTRATION: 0.020

BLANK TEST	0.000	14:57
CALIBRATION CHECK	PASSED	14:57
SIMULATOR VAPOR 34.1°C	0.020	14:58
SIMULATOR VAPOR 34.1°C	0.019	14:59
SIMULATOR VAPOR 34.0°C	0.019	15:00
SIMULATOR VAPOR 34.1°C	0.019	15:01
SIMULATOR VAPOR 34.0°C	0.019	15:02
SIMULATOR VAPOR 34.0°C	0.019	15:03
SIMULATOR VAPOR 34.1°C	0.019	15:04
SIMULATOR VAPOR 34.1°C	0.019	15:05
SIMULATOR VAPOR 34.0°C	0.019	15:06
SIMULATOR VAPOR 34.0°C	0.019	15:07
BLANK TEST	0.000	15:08

Average = 0.019
Std Dev = 0.000

analyzed
Before
Cert date
AHK
12-13-11



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/07/2011
Time: 15:15:41

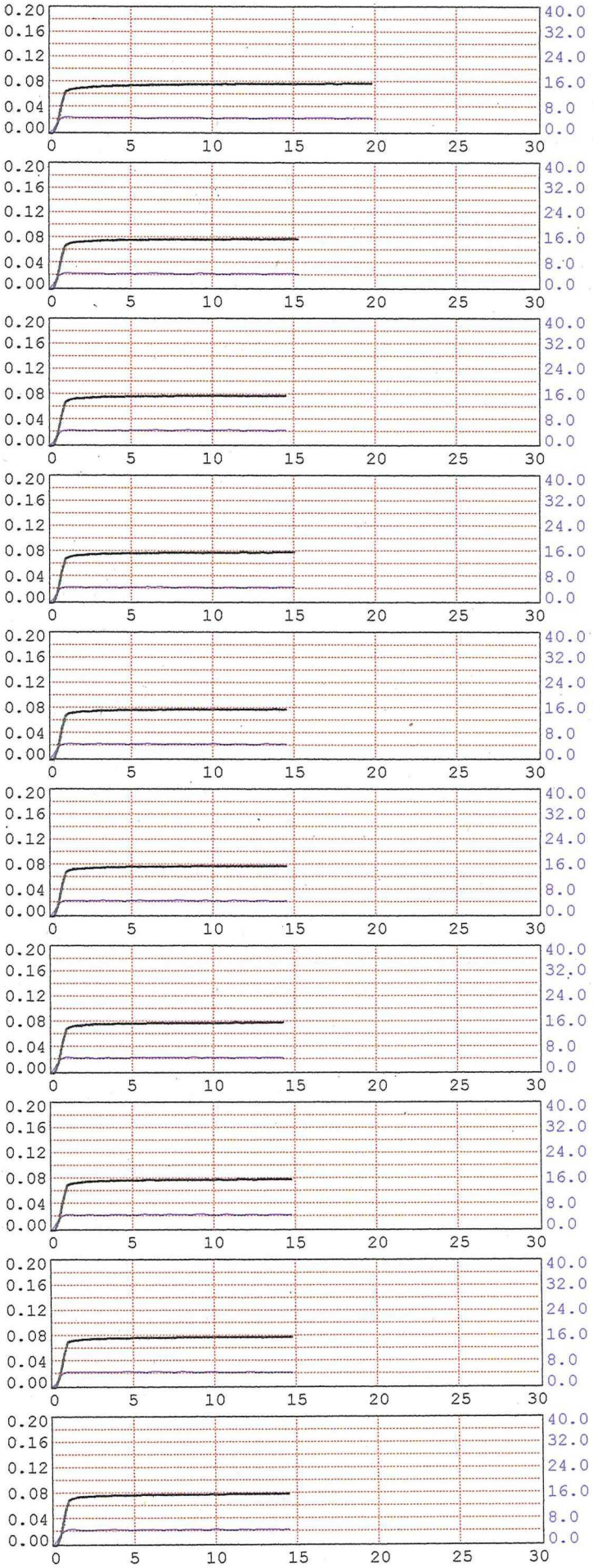
SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 12-37-080
SOLUTION CONCENTRATION: 0.081

BLANK TEST	0.000	15:16
CALIBRATION CHECK	PASSED	15:16
SIMULATOR VAPOR 34.0°C	0.078	15:17
SIMULATOR VAPOR 34.0°C	0.078	15:18
SIMULATOR VAPOR 34.0°C	0.079	15:19
SIMULATOR VAPOR 34.1°C	0.079	15:20
SIMULATOR VAPOR 34.1°C	0.079	15:21
SIMULATOR VAPOR 34.1°C	0.079	15:22
SIMULATOR VAPOR 34.0°C	0.079	15:23
SIMULATOR VAPOR 34.0°C	0.079	15:24
SIMULATOR VAPOR 34.1°C	0.079	15:25
SIMULATOR VAPOR 34.1°C	0.079	15:27
BLANK TEST	0.000	15:27

Average = 0.078
Std Dev = 0.000

Analyzed before Cert done
12-13-11



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/09/2011
Time: 11:24:58

SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 12-26-040A1
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	11:25
CALIBRATION CHECK	PASSED	11:25

Simulator Timed Out

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/12/2011
Time: 13:52:12

SUPERVISOR NAME:
KIRK L KIMBALL

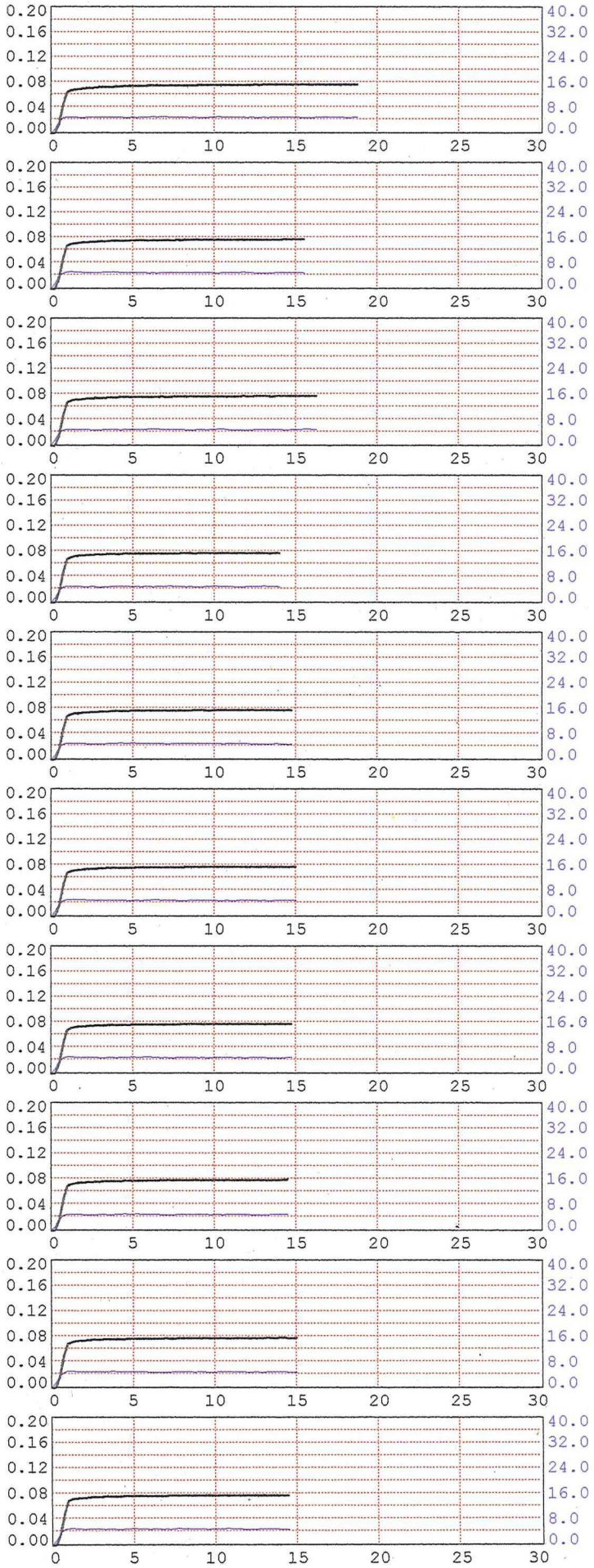
SOLUTION LOT #: 12-41-080
SOLUTION CONCENTRATION: 0.082

BLANK TEST	0.000	13:53
CALIBRATION CHECK	PASSED	13:53
SIMULATOR VAPOR 34.0°C	0.077	13:53
SIMULATOR VAPOR 34.1°C	0.077	13:54
SIMULATOR VAPOR 34.0°C	0.078	13:55
SIMULATOR VAPOR 34.0°C	0.078	13:56
SIMULATOR VAPOR 34.0°C	0.078	13:58
SIMULATOR VAPOR 34.0°C	0.078	13:59
SIMULATOR VAPOR 34.0°C	0.078	14:00
SIMULATOR VAPOR 34.1°C	0.079	14:01
SIMULATOR VAPOR 34.0°C	0.078	14:02
SIMULATOR VAPOR 34.1°C	0.078	14:03
BLANK TEST	0.000	14:04

Average = 0.077 - Low <5%
Std Dev = 0.000

range
0.078 - 0.086
KLK
12-12-11

Change
O-rings
and
retest



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/13/2011
Time: 08:01:49

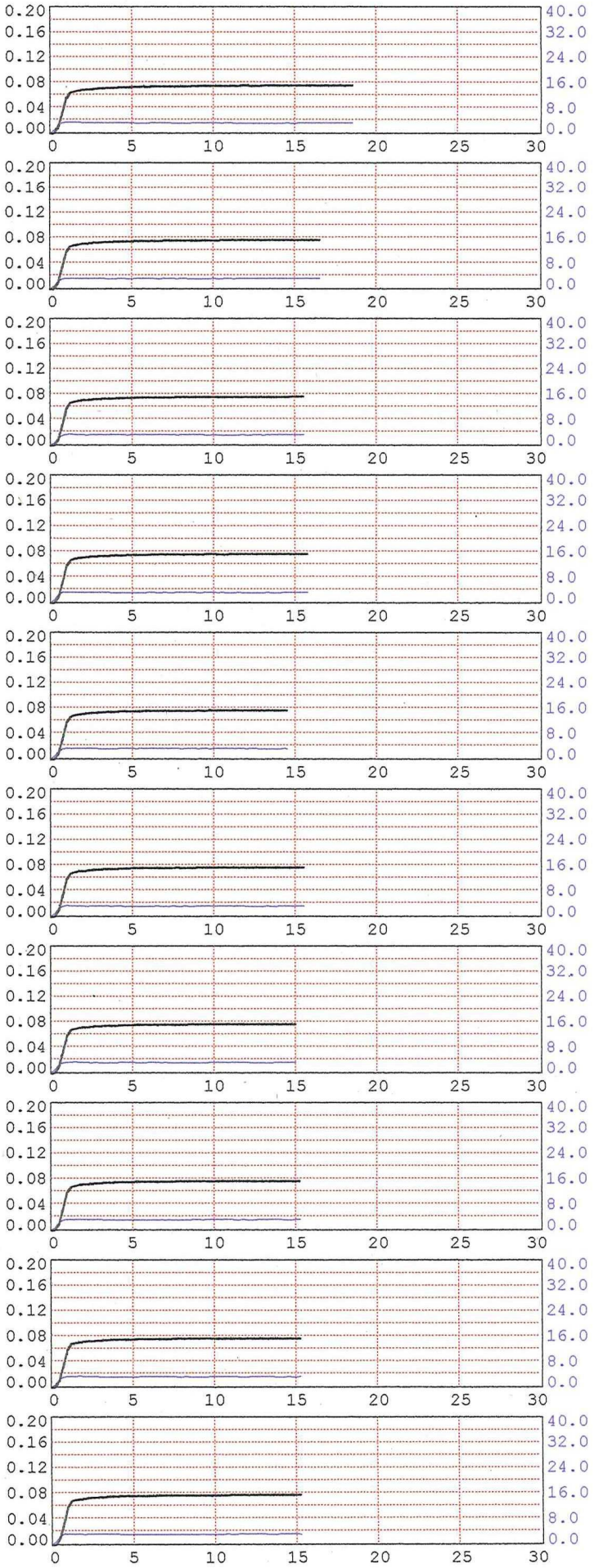
SUPERVISOR NAME:
KIRK L KIMBALL

SOLUTION LOT #: 12-41-080
SOLUTION CONCENTRATION: 0.082

BLANK TEST	0.000	08:02
CALIBRATION CHECK	PASSED	08:02
Xq = 0.083 (0.85%)		
SIMULATOR VAPOR 34.0°C	0.077	08:03
X[1] = 0.0774 (-0.0010) (0.0001)		
SIMULATOR VAPOR 34.0°C	0.077	08:04
X[1] = 0.0779 (-0.0004) (0.0003)		
SIMULATOR VAPOR 34.1°C	0.077	08:05
X[1] = 0.0777 (-0.0010) (-0.0003)		
SIMULATOR VAPOR 34.0°C	0.077	08:06
X[1] = 0.0777 (-0.0015) (-0.0002)		
SIMULATOR VAPOR 34.0°C	0.077	08:07
X[1] = 0.0778 (-0.0011) (-0.0001)		
SIMULATOR VAPOR 33.9°C	0.078	08:08
X[1] = 0.0780 (-0.0014) (0.0000)		
SIMULATOR VAPOR 34.1°C	0.078	08:09
X[1] = 0.0783 (-0.0010) (-0.0002)		
SIMULATOR VAPOR 34.0°C	0.078	08:10
X[1] = 0.0781 (-0.0010) (0.0002)		
SIMULATOR VAPOR 34.1°C	0.078	08:12
X[1] = 0.0781 (-0.0012) (-0.0001)		
SIMULATOR VAPOR 34.0°C	0.078	08:13
X[1] = 0.0785 (-0.0007) (0.0001)		
BLANK TEST	0.000	08:14

Average = 0.077 → Too low; out of range. Will redo testing. 12/13/11 SLM
Std Dev = 0.000

Last run allowed on solution 12-13-11



ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/13/2011
Time: 09:44:31

SUPERVISOR NAME:
STEVEN R MERRILL

SOLUTION LOT #: 12-42-160
SOLUTION CONCENTRATION: 0.165

BLANK TEST	0.000	09:45
CALIBRATION CHECK	PASSED	09:45

Simulator Timed Out

ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMater DMT: 104909

Date: 12/13/2011
Time: 11:55:57

SUPERVISOR NAME:
STEVEN R MERRILL

SOLUTION LOT #: 12-43-040M
SOLUTION CONCENTRATION: 0.040

BLANK TEST	0.000	11:56
CALIBRATION CHECK	PASSED	11:56

Simulator Timed Out