INFRARED BREATH TESTING DEVICE

DATAMASTER DMT ADDENDUM

Vermont Criminal Justice Training Council/Vermont Department of Health
May 2008

CONTENTS

FIGURES

TRAINING GOALS AND OBJECTIVES

Training Goal:

To certify Vermont law enforcement officers in the operation of the DataMaster DMT and enable them to obtain a valid evidential breath sample from a DUI subject to determine the breath alcohol concentration.

Objectives:

As a result of this training, students will be able to:

A) Ensure that an adequate observation period is properly administered prior to obtaining a subject test.

B) Determine that the DataMaster DMT breath testing instrument is prepared to analyze a breath sample.

C) Operate the DataMaster DMT breath testing instrument in accordance with the specified procedure incorporated in this training.

D) Verify that the DataMaster DMT completes and passes all quality control checks prior to obtaining a subject test.

E) Inspect the test record (evidence report) to ensure that all case specific information is recorded accurately.

F) Make a log book entry of the subject test at the time the test is completed.

G) Ensure that the subject has a copy of the evidence report.

H) Be prepared to testify in court about the procedure followed in operating the DataMaster DMT.

SECTION I

OPERATIONAL PRINCIPLES

The information provided in this section is for reference purposes only. An understanding of this material is not necessary for the effective operation of the DataMaster DMT breath testing device.

BASIC COMPONENTS OF THE DATAMASTER DMT

1) **IR Source**: A lamp which emits infrared energy.

2) **Sample Chamber**: The sample chamber consists of a 23 ml folded light path through which the IR energy passes.

3) **Filters**: Infrared filters specific for wavelengths at 3.37, 3.44 and 3.5 microns.

4) **Internal Standard**: A quartz plate with known infrared absorption for verification of calibration.

5) **Chopper:** A device which breaks up the light into pulses before they reach the detector in order to provide a reference point on which to measure.

6) **Microprocessor:** The microprocessor controls the test sequence and all measurements.

DATAMASTER DMT OPTICAL BENCH

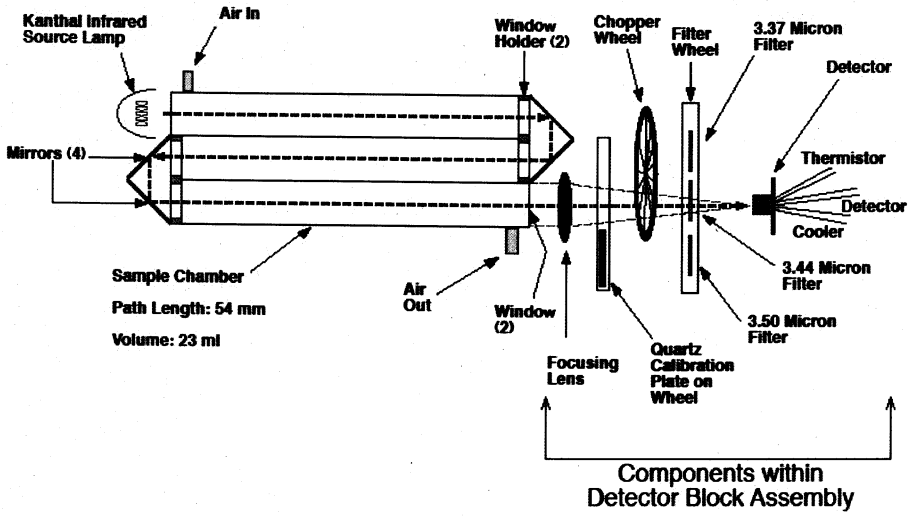


Figure 1: DataMaster DMT Optical Bench

EXTERNAL FEATURES OF THE DATAMASTER DMT

1) **LCD:** Touch screen display identifies each part of the test procedure as it occurs and provides information to the instrument operator to complete the test.

2) **Keyboard:** Used for data entry.

3) **Stylus:** Used to select options in the software.

4) **Power ON/OFF Switch**: Located on the back of the instrument and only to be used under special circumstances as the normal mode for the instrument is to have the power on.

5) **Heated Breath Tube:** The breath tube is electrically heated and provides a path for the breath sample from the mouth piece to the sample chamber. The breath tube also contains an RFI antenna.

6) **Simulator:** An external attachment used to simulate a breath alcohol sample containing a known amount of alcohol to act as a quality control check.

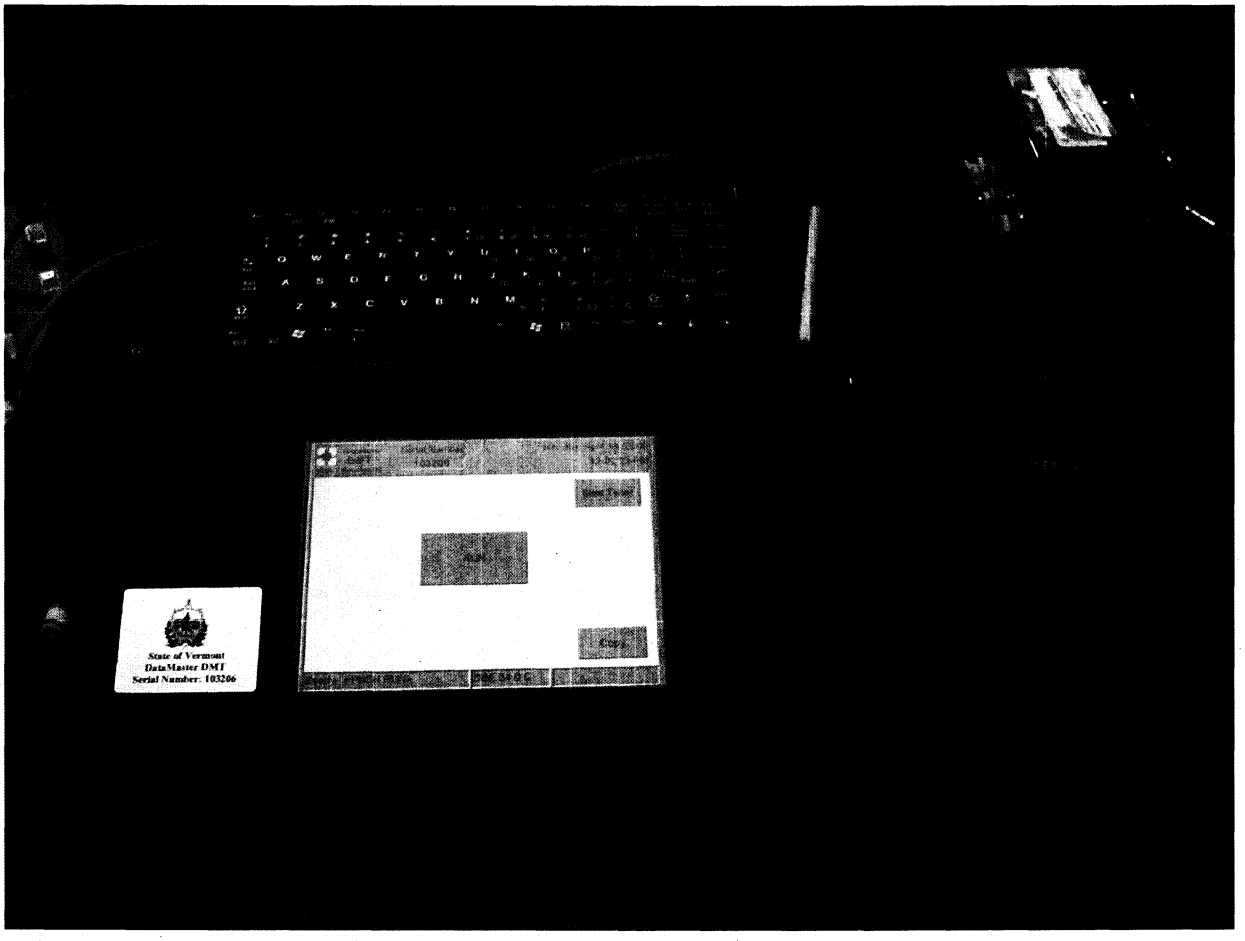


Figure 2: The DataMaster DMT

DATAMASTER DMT OVERVIEW

The DataMaster DMT breath testing instrument is designed to undergo a number of processing steps to ensure a fair and accurate analysis of a breath sample introduced to it. These steps include checking components for function, checking detector response, adjusting a measurement baseline to ambient air, introducing an external standard of simulated breath containing alcohol vapor, measuring the quality of breath and monitoring heated zones within the system.

The figure below is a general graphic example of the monitoring of a breath sample to ensure that what is measured meets the minimum criteria. As a sample is introduced into the instrument the flow rate is continually monitored. When the minimum flow rate is achieved it must remain at or above that rate for enough time to account for delivery of at least 1.5 liters of breath. Simultaneously the alcohol concentration in the sample is monitored four times per second. A valid breath sample is expected to show a fairly constant amount of alcohol as breath continues to flow. If these criteria are met the instrument will report a breath alcohol concentration.

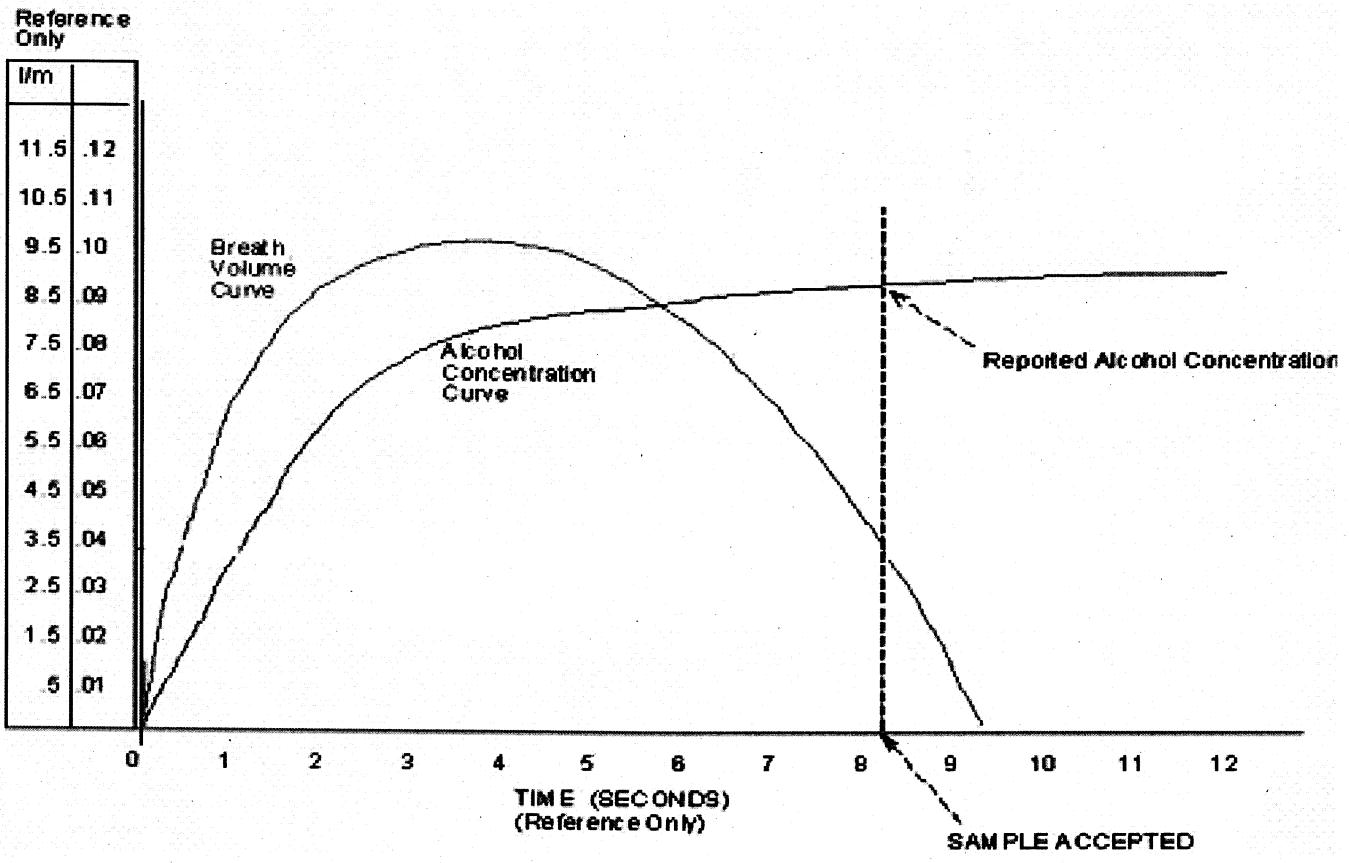


Figure 3: Typical Breath Profile

SECTION II

PROCESS FOR OBTAINING AN EVIDENTIAL SAMPLE

PROCESS FOR OBTAINING AN EVIDENTIAL DATAMASTER DMT DUI SUBJECT TEST

PREPARATION:

STEP 1: If the screen saver is active, tap the screen to remove the DataMaster DMT from standby mode.

STEP 2: Confirm that the power to the DataMaster DMT is on and that the instrument displays "READY, PUSH RUN." If the instrument is turned off or if it displays "OUT OF SERVICE," proceed to a different DataMaster site.

STEP 3: Visually observe the subject for any evidence of food, gum, tobacco or any other foreign matter in the mouth. Ask the subject if he/she has anything in their mouth. Have anything in their mouth removed prior to starting the next step. Tongue piercings and dentures may remain in the mouth.

STEP 4: The DataMaster DMT is programmed with a mandatory 15 minute timer for the observation period. The 15 minute timer must be satisfied before a subject test is allowed. Press the "START TIMER" button to start the timer.

STEP 5: Observe the subject for 15 uninterrupted minutes. The subject must be within visual and audio proximity for the entire 15 minutes preceding the test. If at any time the subject burps, belches or vomits, the observation period must be restarted. If at any time the subject puts something into their mouth, the item must be removed and the observation period started again.

OPERATING THE INSTRUMENT:

STEP 1: Push "RUN" to begin the test process.

STEP 2: The instrument will then prompt "TYPE OF TEST? DUI or CHECK-IN". Select DUI.

STEP 3: The DataMaster DMT will then prompt the operator to enter the information which pertain to the subject and circumstances of the incident. The questions are addressed in Section III of this manual, *Data Entry and Review*.

STEP 4: Review the information entered into the DataMaster DMT. Correct any errors if necessary and answer "NO" when the Review Data question prompts for a second time.

STEP 5: If the 15 minute timer was not started prior to pressing the "RUN" button, the DataMaster DMT will now prompt "TIMER STARTED". Press "OK" to start the timer. The test sequence will automatically begin once the 15 minute timer is satisfied.

STEP 6: The instrument will sequentially display the following.

"PURGING"	Room air is being pumped into the sample chamber through the breath tube.
"AMBIENT ZEROING"	Establishing zero reference based on room air in the sample chamber.
"BLANK TEST"	Confirms that the air in the sample chamber is alcohol free.
"INTERNAL STANDARD"	The quartz plate is analyzed to verify that the calibration performed in the laboratory is still valid.
"SIMULATOR VAPOR"	A simulated breath sample is analyzed as a quality control check standard.

The results of the external standard test should be within +/- 5% of the certified solution concentration. After the external standard is analyzed, the instrument will then display as before:

"PURGING"

"AMBIENT ZEROING"

"BLANK TEST"

STEP 7: After the instrument completes its quality control checks it will display "SUBJECT TAKE TEST? YES or NO"

A) If the subject consents to provide a breath test select "YES" or press the Y key on the keyboard

B) If the subject refuses to provide a breath sample, select "NO" or press the N key on the keyboard. The instrument will then prompt "REFUSAL or INCAPABLE". If the subject is physically incapable of providing a sample,

select "INCAPABLE". If the subject refuses to provide a sample, select "REFUSAL". In both instances another box will pop up asking for a reason. Type in a reason why the subject did not provide a sample. The evidence report will document the reason and the breath testing sequence will automatically end.

STEP 8: If the subject has consented to provide a breath test, the display will flash "PLEASE BLOW" and an intermittent tone will be heard.

A) Insert a new mouthpiece into the breath tube. For sanitary purposes, avoid directly touching the mouthpiece.

B) Instruct the subject to provide a slow, continuous breath sample through the mouthpiece attached to the breath tube of the instrument. This may take 6 seconds or longer depending on the individual. The internal electronics of the instrument determine when an adequate sample has been obtained. It is not necessary to instruct the subject to take a deep breath.

C) The test operator should hold the breath tube during delivery of the breath sample and confirm that the breath tube is warm to the touch.

D) As the subject provides an appropriate breath sample the words "PLEASE BLOW" will no longer flash, but remain steady on the screen and a steady tone will be heard. An individual should be allowed to deliver a sample until they are unable to do so.

E) While the subject is blowing the screen will display in real time the breath and alcohol profiles.

F) After an adequate breath sample is obtained the instrument will display the subjects alcohol result. The test operator must inform the subject of the results of the evidentiary test and ask the subject if they wish to have a second test.

G) The operator should immediately remove the mouthpiece and discard it.

STEP 9: The following displays will then appear on the screen:

"PURGING"

"SUBJECT TAKE SECOND TEST? YES or NO"

A) If the subject declines the second test, the operator should enter "NO" and an evidence report will be printed. The evidence report will indicate the results of the evidentiary test and will also show "SECOND TEST NOT REQUESTED" and the simulator solution concentration information.

B) If the subject requests a second test, the operator should enter "YES." The instrument will then display:

"PURGING"

"AMBIENT ZEROING"

"BLANK TEST"

"INTERNAL STANDARD"

"SIMULATOR VAPOR"

"PURGING"

"AMBIENT ZEROING"

"BLANK TEST"

Following completion of the blank test the instrument will again display:

"SUBJECT TAKE SECOND TEST? YES or NO"

C) If the subject again consents to a second test, the operator should enter "YES." The instrument will display:

"PLEASE BLOW"

D) The operator should insert a new mouthpiece into the breath tube and instruct the subject to provide a breath sample as before.

E) Once the sample is accepted the operator should immediately remove the mouthpiece and discard it.

STEP 10: The evidence report is printed in triplicate at completion of the test sequence and will include all information entered in Step 3, the test sequence(s) and the simulator solution concentration information.

A) One copy of the report should go with the rest of the case paperwork to the State's Attorney.

B) One copy of the report is retained by the arresting officer.

C) One copy of the report should be given to the subject.

STEP 11: Make entries regarding the test in the DataMaster Operator Use log book as well as your own personal Infrared log, if one is maintained.

PROCESS FOR OBTAINING A DATAMASTER DMT CHECK-IN CONFIRMATION TEST

PREPARATION:

STEP 1: If the screen saver is active, tap the screen to remove the DataMaster DMT from standby mode.

STEP 2: Confirm that the power to the DataMaster DMT is on and that the instrument displays "READY, PUSH RUN." If the instrument is turned off or if it displays "OUT OF SERVICE," proceed to a different DataMaster site.

STEP 3: Visually observe the subject for any evidence of food, gum, tobacco or any other foreign matter in the mouth. Ask the subject if he/she has anything in their mouth. Have anything in their mouth removed prior to starting the next step. Tongue piercings and dentures may remain in the mouth.

OPERATING THE INSTRUMENT:

STEP 1: Push "RUN" to begin the test process.

STEP 2: The instrument will then prompt "TYPE OF TEST? DUI or CHECK-IN". Select "CHECK-IN"

STEP 3: The DataMaster DMT will then prompt the operator to enter information which pertains to the subject. The questions are addressed in Section III of this manual, *Data Entry and Review*.

STEP 4: Review the information entered into the DataMaster DMT. Correct any errors if necessary and answer "NO" when the Review Data question prompts for a second time.

STEP 5: The instrument will sequentially display the following.

"PURGING"	Room air is being pumped into the sample chamber through the breath tube.

"AMBIENT ZEROING"	Establishing zero reference based on room air in the sample chamber.
"BLANK TEST"	Confirms that the air in the sample chamber is alcohol free.
"INTERNAL STANDARD"	The quartz plate is analyzed to verify that the calibration performed in the laboratory is still valid.
"SIMULATOR VAPOR"	A simulated breath sample is analyzed as a quality control check standard.

The results of the external standard test should be within +/- 5% of the certified solution concentration. After the external standard is analyzed, the instrument will then display as before:

"PURGING"

"AMBIENT ZEROING"

"BLANK TEST"

STEP 6: The DataMaster DMT will then flash "PLEASE BLOW" and an intermittent tone will be heard.

A) Insert a new mouthpiece into the breath tube. For sanitary purposes, avoid directly touching the mouthpiece.

B) Instruct the subject to provide a slow, continuous breath sample through the mouthpiece attached to the breath tube of the instrument. This may take 6 seconds or longer depending on the individual. The internal electronics of the instrument determine when an adequate sample has been obtained. It is not necessary to instruct the subject to take a deep breath.

C) The test operator should hold the breath tube during delivery of the breath sample and confirm that the breath tube is warm to the touch.

D) As the subject provides an appropriate breath sample the words "PLEASE BLOW" will no longer flash, but remain steady on the screen and a steady tone will be heard. An individual should be allowed to deliver a sample until they are unable to do so.

E) While the subject is blowing the screen will display in real time the breath and alcohol profiles.

F) Once and adequate sample is accepted the operator should immediately remove the mouthpiece and discard it.

STEP 7: The evidence report is printed in triplicate at completion of the test sequence and will include all information entered in Step 3, the test sequence(s) and the simulator solution concentration information.

A) One copy of the report should go with the rest of the case paperwork to the State's Attorney.

B) One copy of the report is retained by the arresting officer.

C) One copy of the report should be given to the subject.

STEP 8: Make entries regarding the test in the DataMaster Operator Use log book as well as your own personal Infrared log, if one is maintained.

SECTION III

DATA ENTRY AND REVIEW

INSTRUMENT QUESTION DISPLAYS AND FORMAT

DUI SUBJECT TEST:

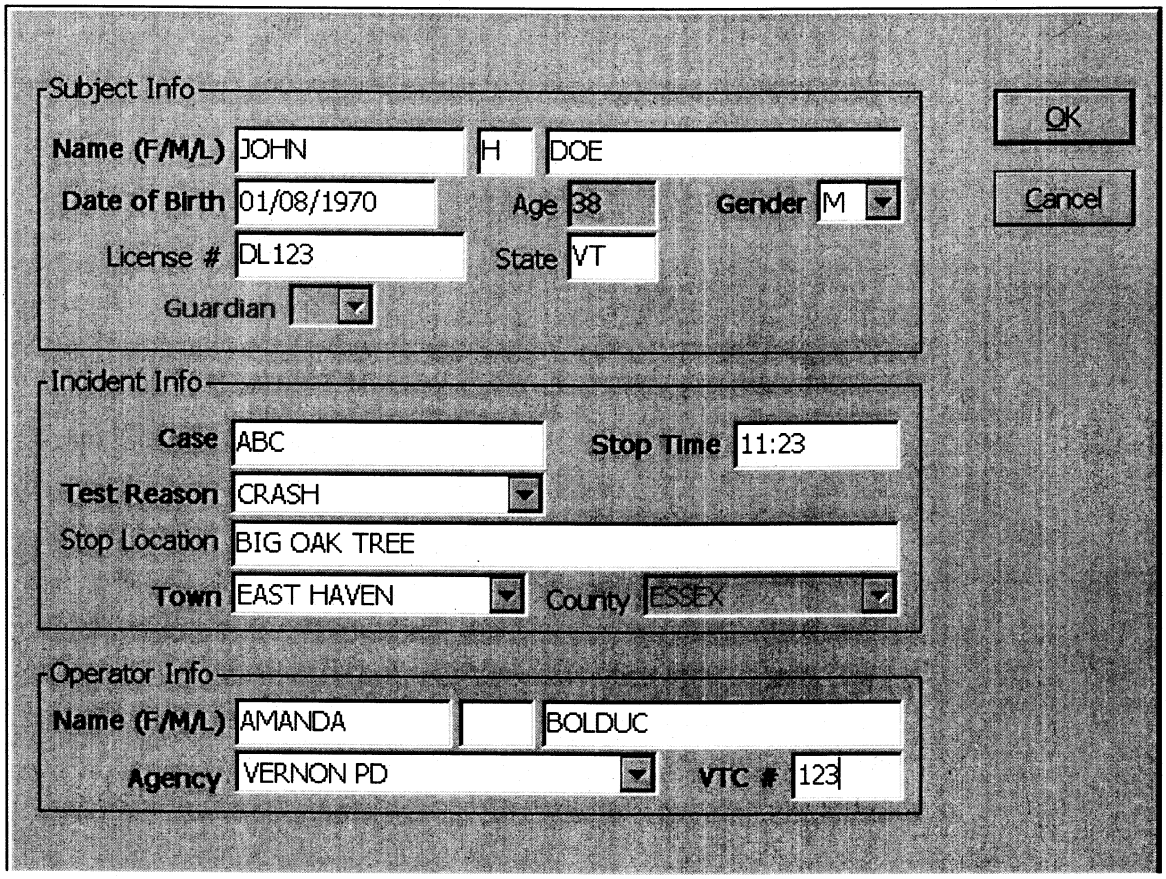


Figure 4: DUI Subject test data entry screen

A) Enter information in the boxes as requested.

B) All boxes in which the command is **bold** are required fields.

C) Use the TAB key on the keyboard to move between fields.

D) **Subject Info:** The suspected DUI subject.

E) **Date of Birth:** Once the date of birth has been entered the DataMaster DMT will automatically populate the age field.

F) **Guardian:** If the subject is under 18 years of age, the **Guardian** box will become active. If a guardian is present select "Y" if not select "N".

G) **Gender:** Select "M" for male and "F" for female.

H) **License # / State:** Enter the identification number and state of issue is a license is available

I) **Case:** The case number assigned by the processing agency.

J) **Stop Time:** The time the subject was operating, attempting to operate or in actual physical control of the motor vehicle.

K) **Test Reason:** Select either "CRASH" "STOP" "CHECKPOINT" or "OTHER".

L) **Stop Location:** The location where the incident occurred. Up to 40 characters may be entered.

M) **Town:** The name of the town in which the incident occurred. To select a town, scroll through the alphabetical list or jump to the first letter of the town name by pressing the corresponding letter key on the keyboard.

N) **County:** This field will automatically populate based on the town in which the incident occurred.

O) **Operator Info:** The processing officer who is operating the DataMaster DMT.

P) **Agency:** The name of the agency for which the processing officer works. To select an agency, scroll through the alphabetical list or jump to the first letter of the agency name by pressing the corresponding letter key on the keyboard.

Q) **VTC #:** The test operator's Vermont Traffic Complaint (VTC) number used in traffic violation cases.

R) Once all of the information is entered hit "OK" on the screen or press the Enter key on the keyboard.

S) A box will pop up prompting "REVIEW DATA? YES or NO". Press "YES" on the screen or the Y key on the keyboard and review all data entered.

T) Once all data is correct hit OK on the screen or press the Enter key on the keyboard. The "REVIEW DATA? YES or NO" box will pop up again. Enter "NO" or press the N key once you have reviewed your data and you wish to proceed to the test sequence.

CHECK-IN CONFIRMATION TEST:

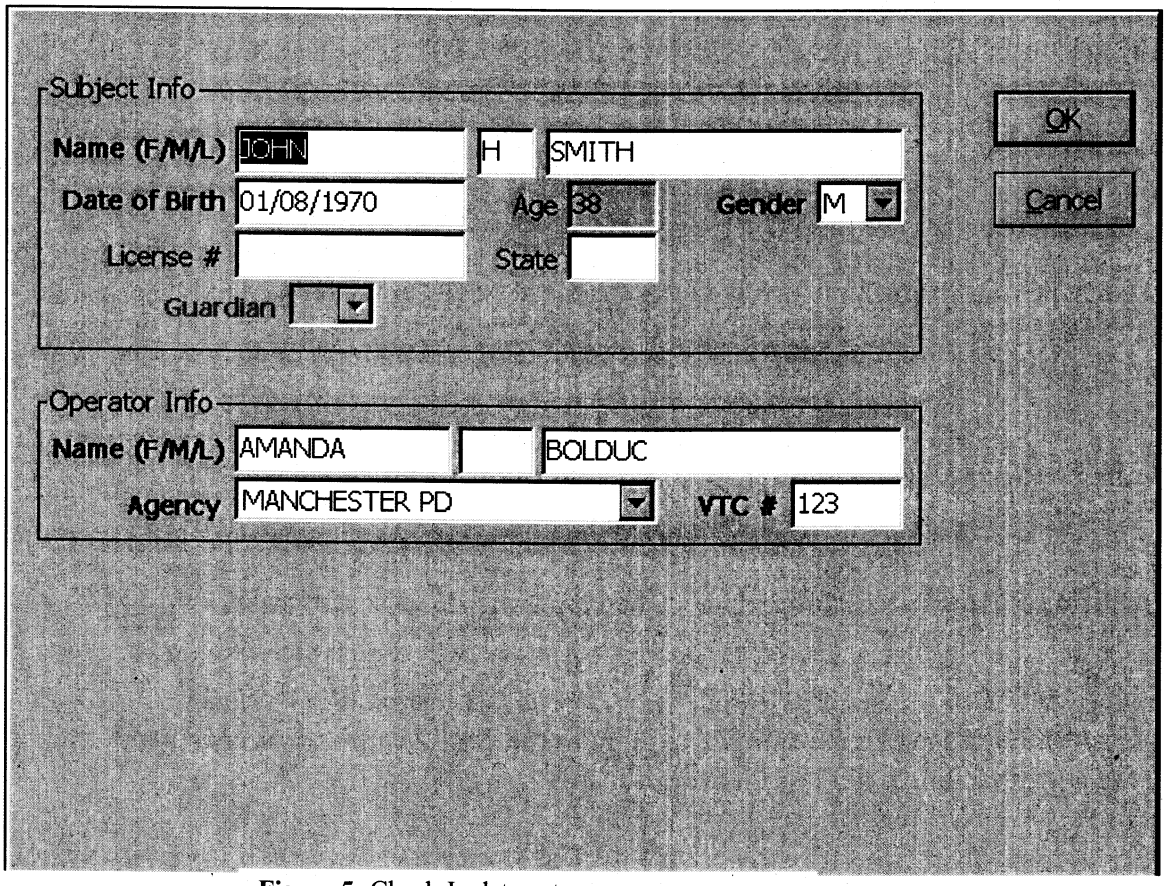


Figure 5: Check-In data entry screen

A) Enter information in the boxes as requested.

B) All boxes in which the command is **bold** are required fields.

C) Use the TAB key on the keyboard to move between fields.

D) **Subject Info:** The Check-In subject.

E) **Date of Birth:** Once the date of birth has been entered the DataMaster DMT will automatically populate the age field.

F) **Guardian:** If the subject is under 18 years of age, the **Guardian** box will become active. If a guardian is present select "Y" if not select "N".

G) **Gender:** Select "M" for male and "F" for female.

H) **License # / State:** Enter the identification number and state of issue is a license is available

I) **Operator Info:** The processing officer.

J) **Agency:** The name of the agency for which the processing officer works. To select an agency, scroll through the alphabetical list or jump to the first letter of the agency name by pressing the corresponding letter key on the keyboard.

K) **VTC #:** The test operator's Vermont Traffic Complaint (VTC) number used in traffic violation cases.

L) Once all of the information is entered hit "OK" on the screen or press the Enter key on the keyboard.

M) A box will pop up prompting "REVIEW DATA? YES or NO". Press "YES" on the screen or the Y key on the keyboard and review all data entered.

N) Once all data is correct hit OK on the screen or press the Enter key on the keyboard. The "REVIEW DATA? YES or NO" box will pop up again. Enter "NO" or press the N key once you have reviewed your data and you wish to proceed to the test sequence.

TIME RESTRICTIONS ON DATA ENTRY AND PROCESSING

Once the 15 minute observation timer is satisfied, the DataMaster DMT Operator will have an additional 15 minutes to press the "RUN" button and begin data entry. If the "RUN" button is not pressed in this time, the 15 minute observation timer will need to be restarted.

When prompted to enter data approximately five minutes is allotted. If data entry is not finished within the five (5) minutes the instrument will return to "READY, PUSH RUN."

When prompted to make a decision such as "SUBJECT TAKE TEST? YES or NO" or "USE PREVIOUS DATA," one (1) minute is allotted.

When prompting "PLEASE BLOW" the subject will have two (2) minutes to provide an adequate breath sample. If at the end of this time an adequate breath sample has not been provided the instrument will again prompt "SUBJECT TAKE TEST? YES or NO". After three failures to obtain an adequate breath sample the instrument will time out and print a report reflecting an incomplete test.

SECTION IV

UNDERSTANDING TEST REPORTS

EXAMPLES OF BREATH AND ALCOHOL GRAPHS

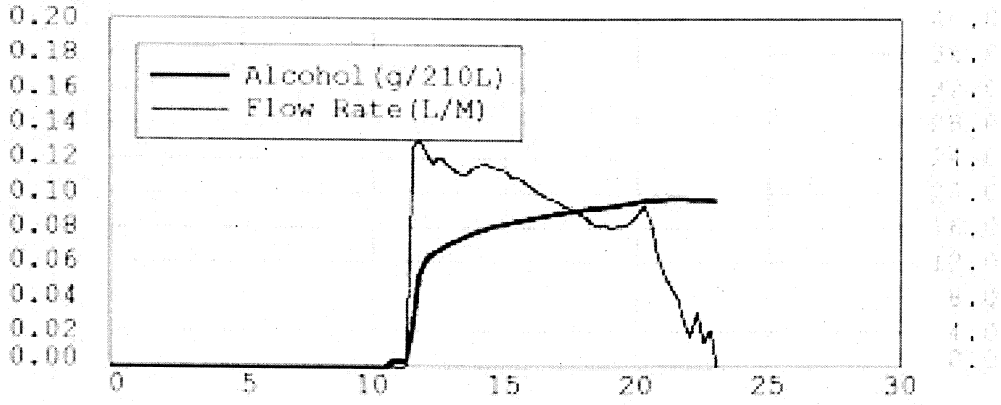


Figure 6: Normal breath pattern and alcohol curve.

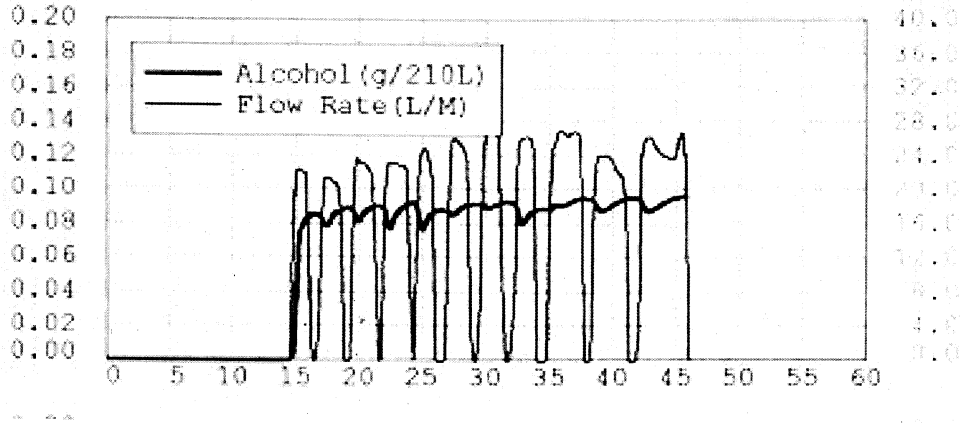


Figure 7: Huffing and puffing breath pattern

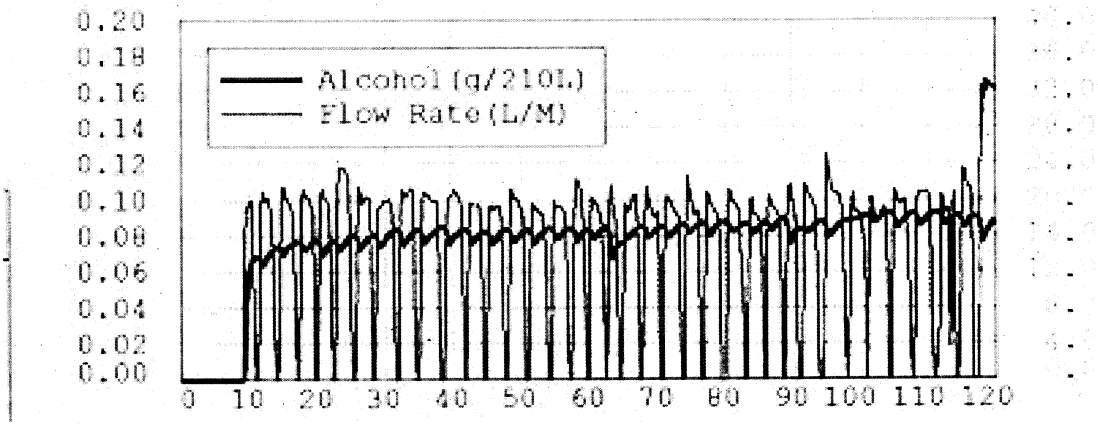


Figure 8: Incomplete breath sample with huffing and puffing.

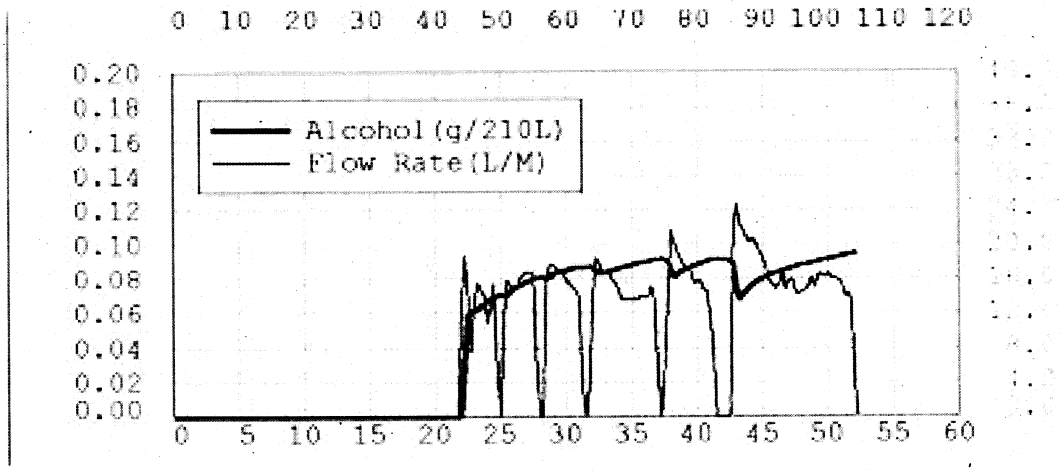


Figure 9: Starting and stopping, attempting to deliver a complete sample

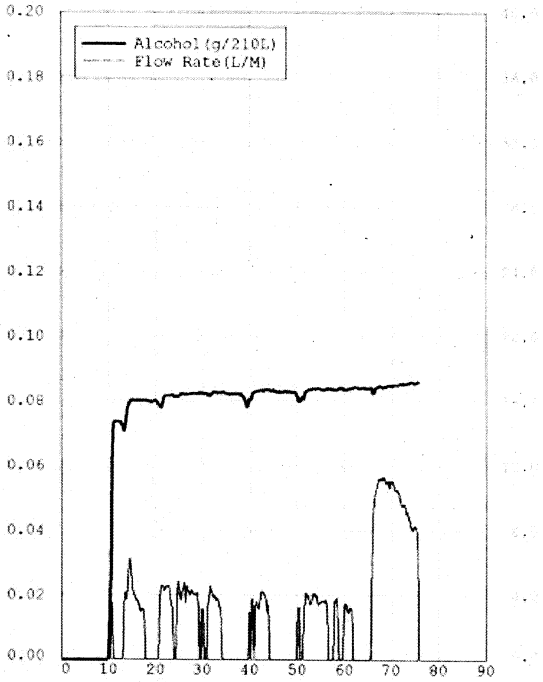


Figure 10: Low breath flow followed by a full breath

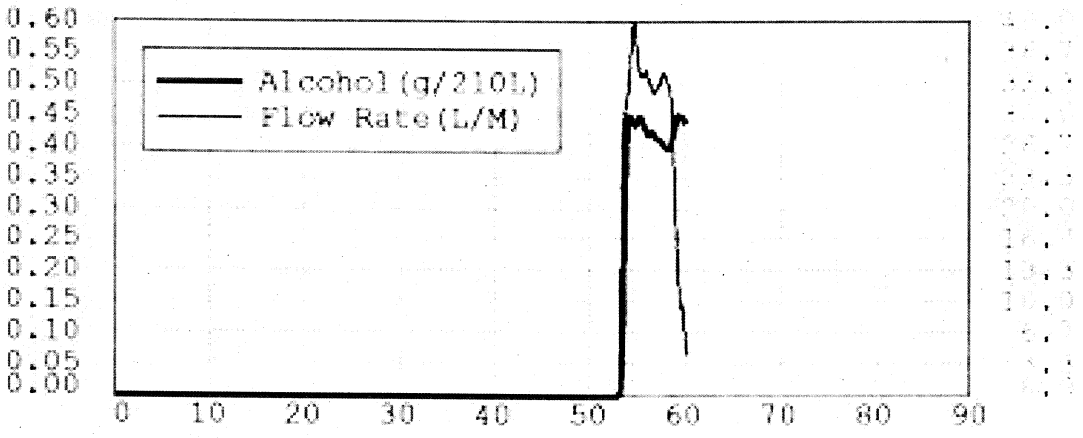


Figure 11: Mouth Alcohol

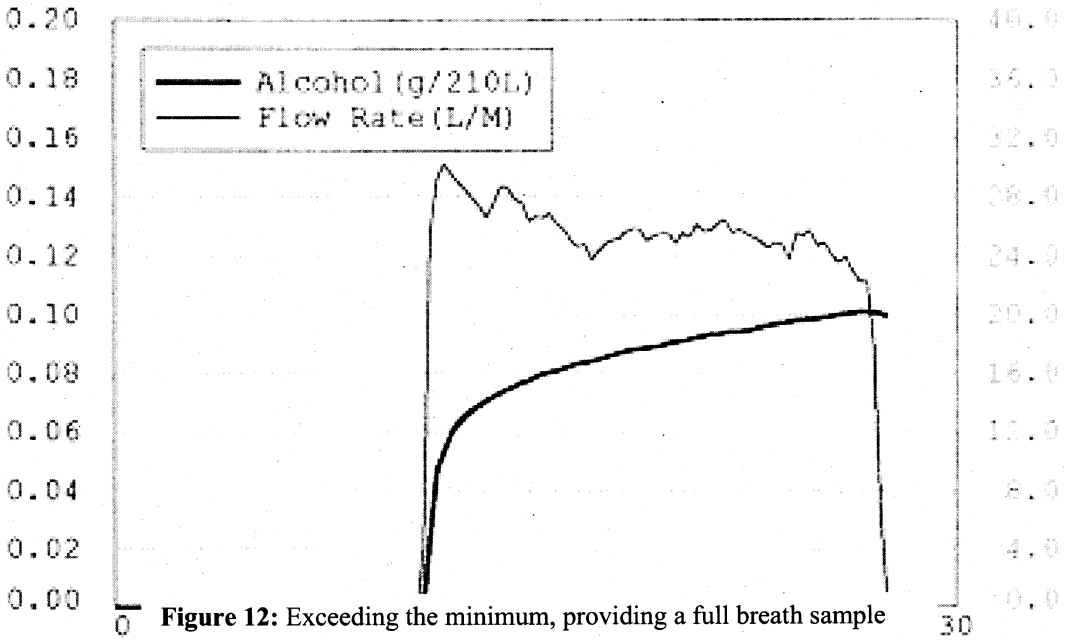


Figure 12: Exceeding the minimum, providing a full breath sample

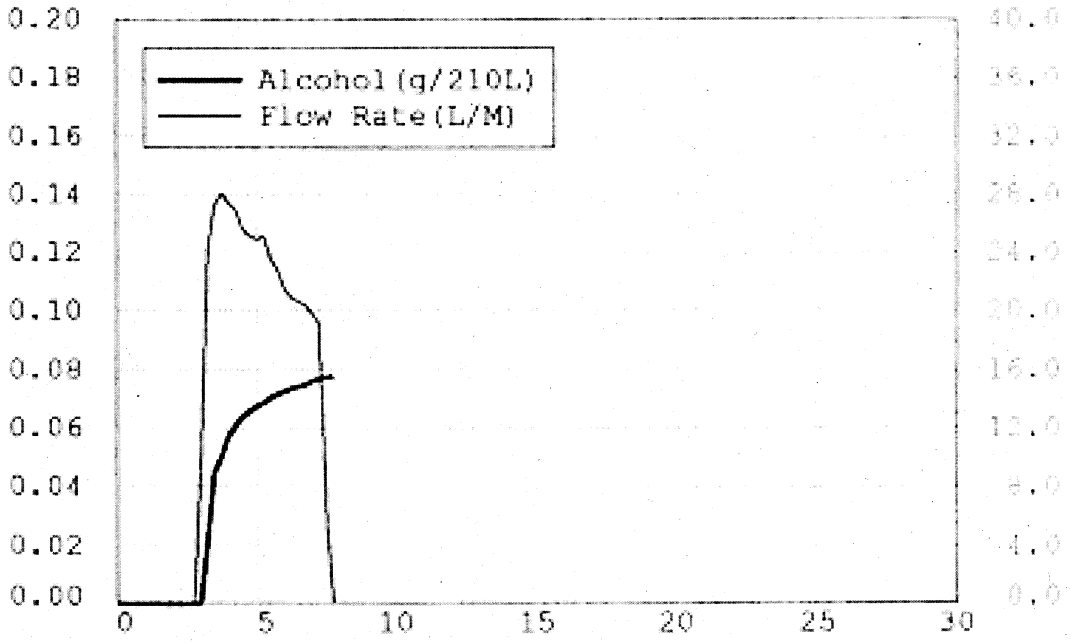
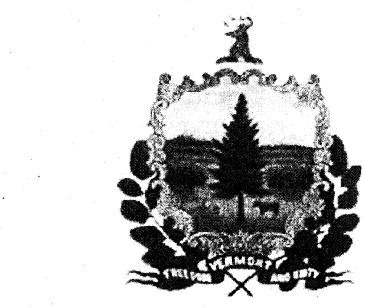


Figure 13: Meeting the minimum breath volume criteria

Figures 13 and 14 are consecutive breath samples from the same individual. In figure 13, the subject provided a full breath sample until they could no longer blow out. In this sample the breath volume measured approximately 6.8L and the alcohol result was 0.099g/210L. In figure 14 the same subject only provided a partial breath sample. While they met the minimum volume requirement, the individual did not blow out to their full capacity. In this sample, the breath volume measured approximately 1.7L and the alcohol result was 0.077g/210L.

EXAMPLES OF SUBJECT TEST REPORTS



DUI Subject Test

STATE OF VERMONT

DataMaster DMT: 103006
VDH LAB
Certification Date: 04/18/2008
Installation Date: 04/22/2008

Date: 05/06/2008
Time: 08:11:12

Subject Name: LOW FLOW TEST
Date of Birth: 10/06/1980 Age: 27
Gender: F
License #:

Case #: 1
Time of Operation: 08:00
Location of Incident:
Town: ALBANY
County: ORLEANS

Test Operator Name: A L B
Agency: ADDISON COUNTY SO

Obs. Period Start:		08:10
BLANK TEST	0.000	08:12
INTERNAL STANDARD	PASSED	08:12
SIMULATOR VAPOR	0.099	08:12
BLANK TEST	0.000	08:13
SUBJECT SAMPLE (Vol=1.6L)	0.086	08:14

2nd TEST NOT REQUESTED

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Simulator Temp 34.1°C

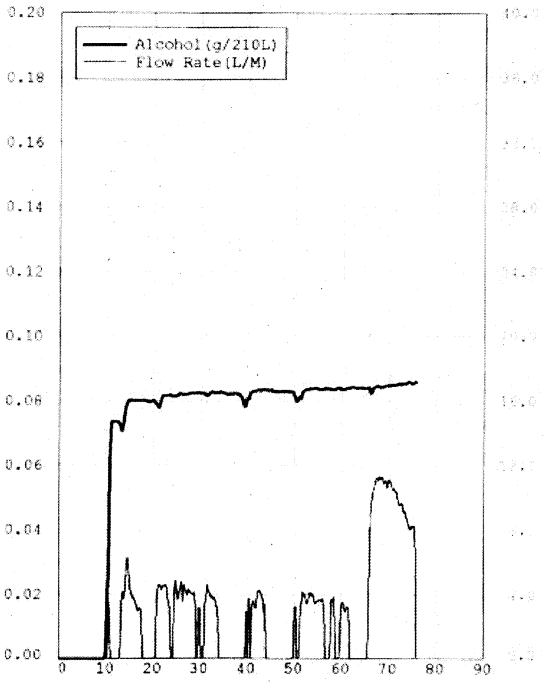


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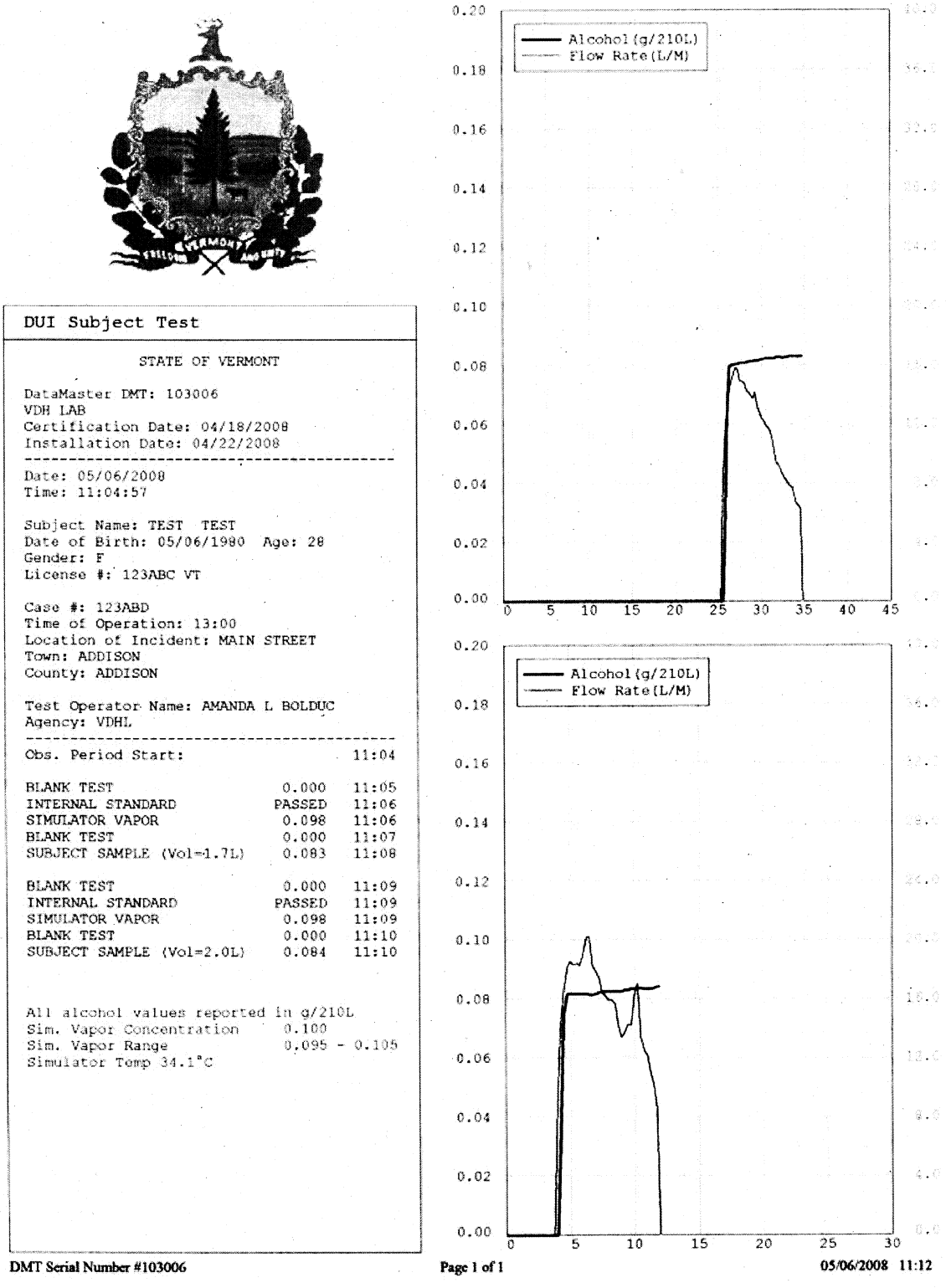
Figure 14: One test DUI Subject Report



DUI Subject Test

STATE OF VERMONT

DataMaster DMT: 103006
VDH LAB
Certification Date: 04/18/2008
Installation Date: 04/22/2008

Date: 05/06/2008
Time: 11:04:57

Subject Name: TEST TEST
Date of Birth: 05/06/1980 Age: 28
Gender: F
License #: 123ABC VT

Case #: 123ABD
Time of Operation: 13:00
Location of Incident: MAIN STREET
Town: ADDISON
County: ADDISON

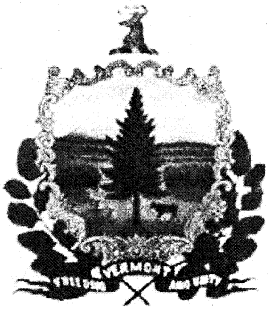
Test Operator Name: AMANDA L BOLDUC
Agency: VDHL

Obs. Period Start:		11:04
BLANK TEST	0.000	11:05
INTERNAL STANDARD	PASSED	11:06
SIMULATOR VAPOR	0.098	11:06
BLANK TEST	0.000	11:07
SUBJECT SAMPLE (Vol=1.7L)	0.083	11:08
BLANK TEST	0.000	11:09
INTERNAL STANDARD	PASSED	11:09
SIMULATOR VAPOR	0.098	11:09
BLANK TEST	0.000	11:10
SUBJECT SAMPLE (Vol=2.0L)	0.084	11:10

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Simulator Temp 34.1°C

DMT Serial Number #103006 Page 1 of 1 05/06/2008 11:12

Figure 15: Two test DUI Subject Report



DUI Subject Test

STATE OF VERMONT

DataMaster DMT: 103006
VDH LAB
Certification Date: 04/18/2008
Installation Date: 04/18/2008

Date: 04/22/2008
Time: 14:09:26

Subject Name: TEST T TEST
Date of Birth: 11/19/1977 Age: 30
Gender: F
License #: 32JI4H214UI3R VT

Case #: 9999999
Time of Operation: 11:08
Location of Incident:
Town: MILTON
County: CHITTENDEN

Test Operator Name: DARCY M RICHARDSON
Agency: VERMONT DEPT OF HEALTH

Obs. Period Start:		14:09
BLANK TEST	0.000	14:10
INTERNAL STANDARD	PASSED	14:10
SIMULATOR VAPOR	0.101	14:10
BLANK TEST	0.000	14:11
SUBJECT SAMPLE	REFUSED	14:11

Subject Said No

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Simulator Temp 34.1°C

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Figure 16: Refusal DUI Subject Report

DUI Subject Test

STATE OF VERMONT

DataMaster DMT: 103006
VDH LAB
Certification Date: 04/18/2008
Installation Date: 04/18/2008

Date: 04/22/2008
Time: 14:09:26

Subject Name: TEST T TEST
Date of Birth: 11/19/1977 Age: 30
Gender: F
License #: 32JI4H214UI3R VT

Case #: 9999999
Time of Operation: 11:08
Location of Incident:
Town: MILTON
County: CHITTENDEN

Test Operator Name: DARCY M RICHARDSON
Agency: VERMONT DEPT OF HEALTH

Obs. Period Start:		14:09
BLANK TEST	0.000	14:10
INTERNAL STANDARD	PASSED	14:10
SIMULATOR VAPOR	0.101	14:10
BLANK TEST	0.000	14:11
SUBJECT SAMPLE	REFUSED	14:11

Subject incapable of providing sample.

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Simulator Temp 34.1°C

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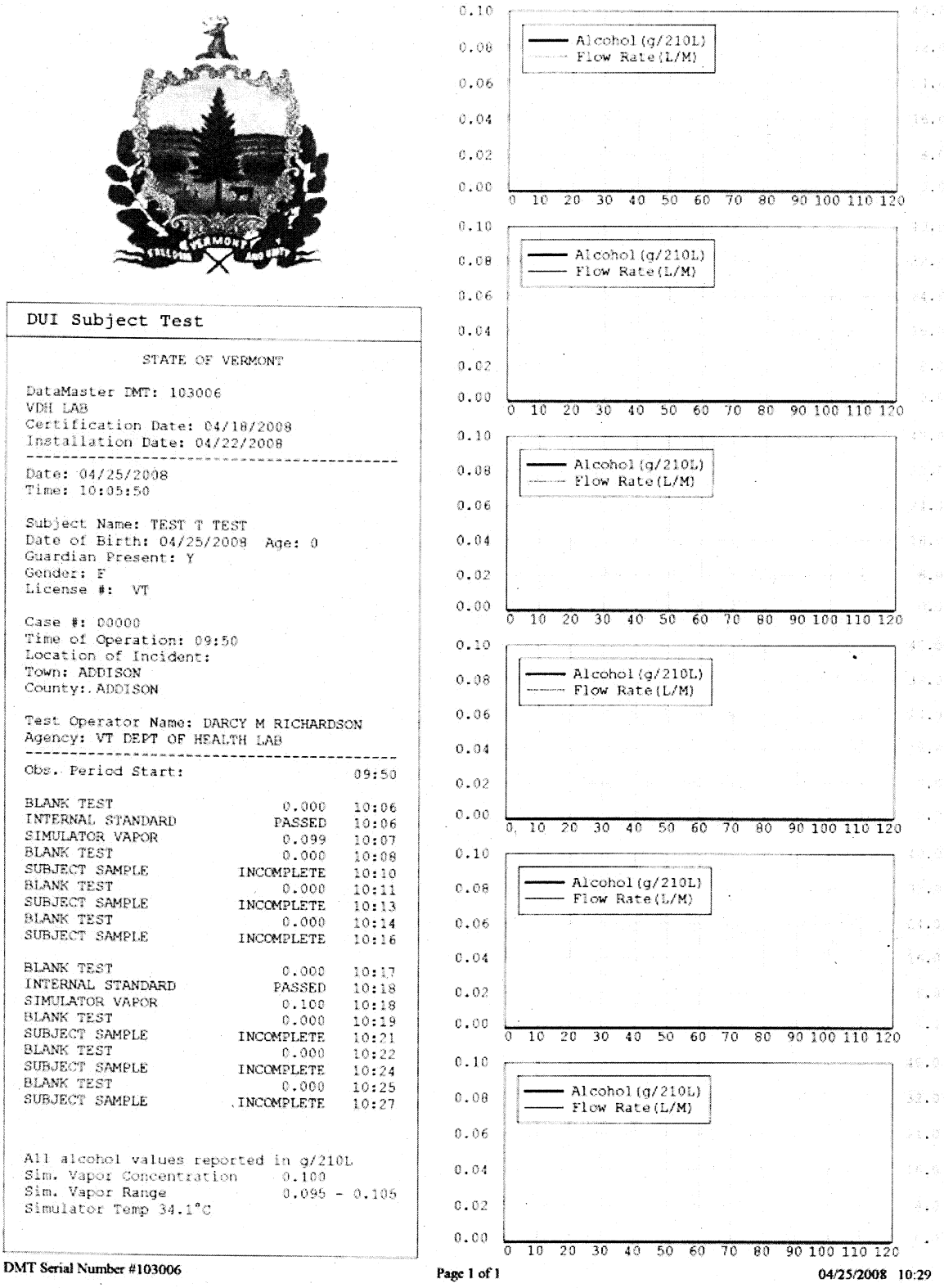
Figure 17: Incapable DUI Subject Report



DUI Subject Test

STATE OF VERMONT

DataMaster DMT: 103006
VDH LAB
Certification Date: 04/18/2008
Installation Date: 04/22/2008

Date: 04/25/2008
Time: 10:05:50

Subject Name: TEST T TEST
Date of Birth: 04/25/2008 Age: 0
Guardian Present: Y
Gender: F
License #: VT

Case #: 00000
Time of Operation: 09:50
Location of Incident:
Town: ADDISON
County: ADDISON

Test Operator Name: DARCY M RICHARDSON
Agency: VT DEPT OF HEALTH LAB

Obs. Period Start:		09:50
BLANK TEST	0.000	10:06
INTERNAL STANDARD	PASSED	10:06
SIMULATOR VAPOR	0.099	10:07
BLANK TEST	0.000	10:08
SUBJECT SAMPLE	INCOMPLETE	10:10
BLANK TEST	0.000	10:11
SUBJECT SAMPLE	INCOMPLETE	10:13
BLANK TEST	0.000	10:14
SUBJECT SAMPLE	INCOMPLETE	10:16
BLANK TEST	0.000	10:17
INTERNAL STANDARD	PASSED	10:18
SIMULATOR VAPOR	0.100	10:18
BLANK TEST	0.000	10:19
SUBJECT SAMPLE	INCOMPLETE	10:21
BLANK TEST	0.000	10:22
SUBJECT SAMPLE	INCOMPLETE	10:24
BLANK TEST	0.000	10:25
SUBJECT SAMPLE	INCOMPLETE	10:27

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Simulator Temp 34.1°C

DMT Serial Number #103006

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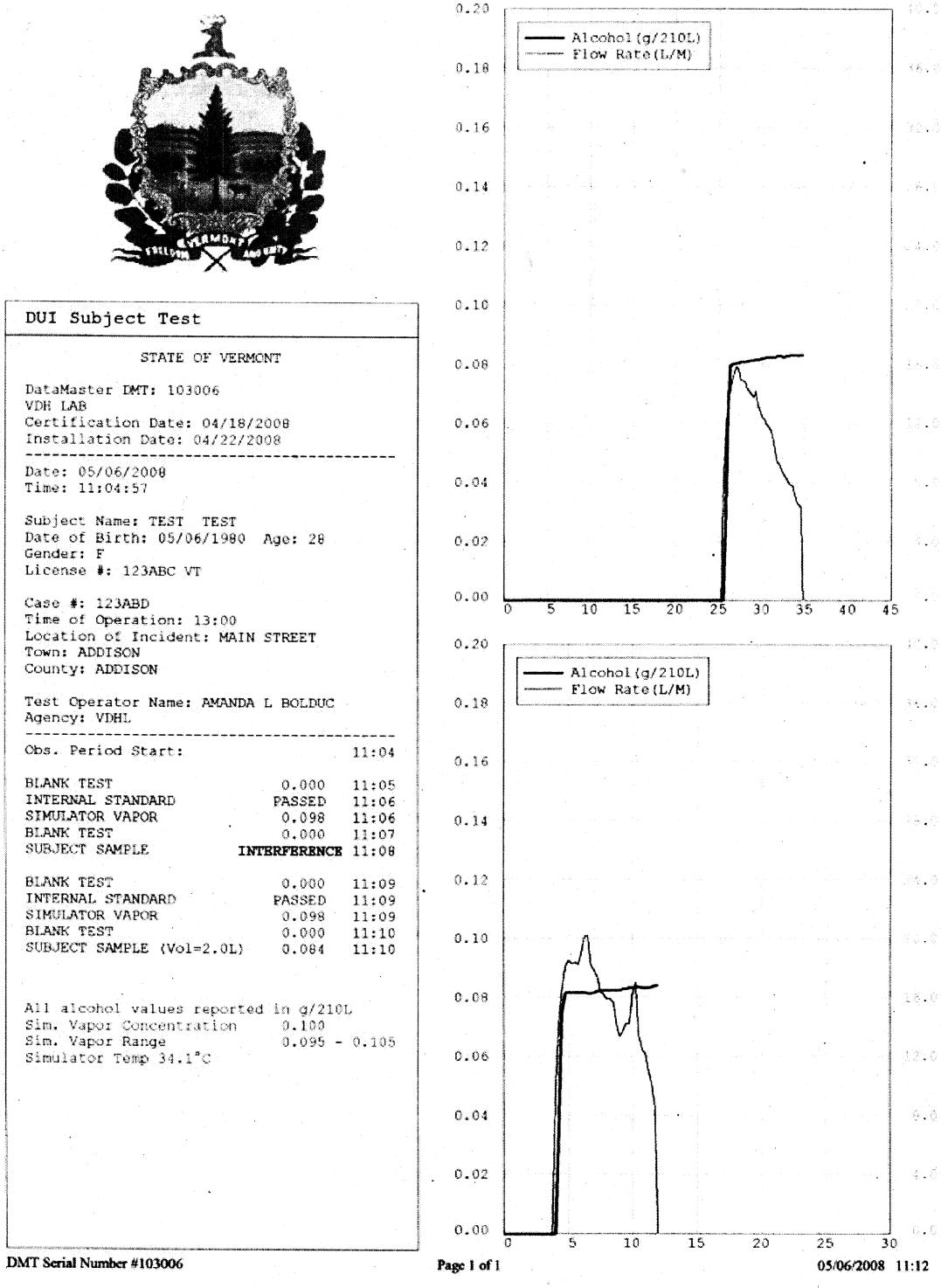
Figure 18: Incomplete sample DUI Subject Report



DUI Subject Test

STATE OF VERMONT

DataMaster DMT: 103006
VDH LAB
Certification Date: 04/18/2008
Installation Date: 04/22/2008

Date: 05/06/2008
Time: 11:04:57

Subject Name: TEST TEST
Date of Birth: 05/06/1980 Age: 28
Gender: F
License #: 123ABC VT

Case #: 123ABD
Time of Operation: 13:00
Location of Incident: MAIN STREET
Town: ADDISON
County: ADDISON

Test Operator Name: AMANDA L BOLDUC
Agency: VDHL

Obs. Period Start:		11:04
BLANK TEST	0.000	11:05
INTERNAL STANDARD	PASSED	11:06
SIMULATOR VAPOR	0.098	11:06
BLANK TEST	0.000	11:07
SUBJECT SAMPLE	**INTERFERENCE**	11:08
BLANK TEST	0.000	11:09
INTERNAL STANDARD	PASSED	11:09
SIMULATOR VAPOR	0.098	11:09
BLANK TEST	0.000	11:10
SUBJECT SAMPLE (Vol=2.0L)	0.084	11:10

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Simulator Temp 34.1°C

DMT Serial Number #103006

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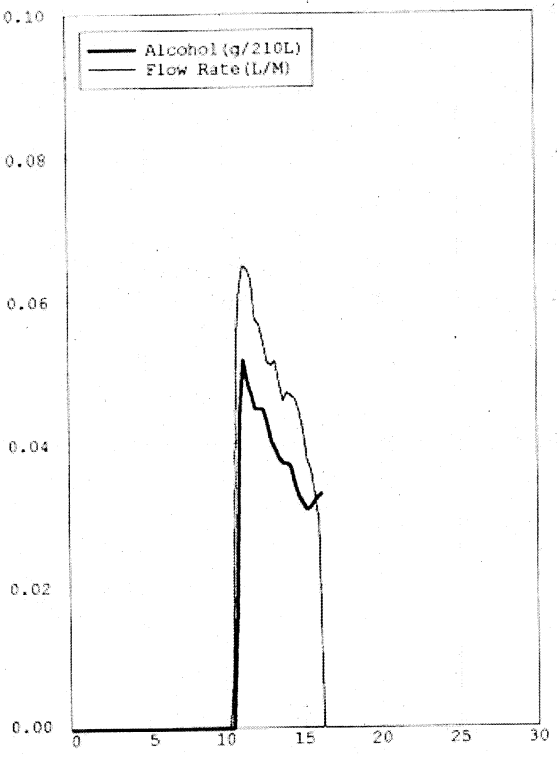
Figure 19: Interference Detected DUI Subject Report



DUI Subject Test

STATE OF VERMONT

DataMaster DMT: 103006
VDH LAB
Certification Date: 04/18/2008
Installation Date: 04/22/2008

Date: 04/25/2008
Time: 08:39:48

Subject Name: INVALID TEST
Date of Birth: 04/25/2008 Age: 0
Guardian Present: N
Gender: F
License #:

Case #: 1
Time of Operation: 08:25
Location of Incident:
Town: ADDISON
County: ADDISON

Test Operator Name: A L B
Agency: VDHL

Obs. Period Start:		08:24
BLANK TEST	0.000	08:40
INTERNAL STANDARD	PASSED	08:40
SIMULATOR VAPOR	0.099	08:41
BLANK TEST	0.000	08:41
SUBJECT SAMPLE (Vol=1.8L)	INVALID	08:42

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Simulator Temp 34.1°C

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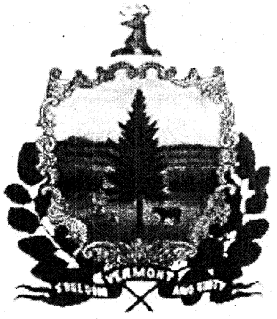
Figure 20: Mouth Alcohol Invalid DUI Subject Report



Check-In Confirmation Test

STATE OF VERMONT

DataMaster DMT: 103006
VDH LAB
Certification Date: 04/18/2008
Installation Date: 04/18/2008

Date: 04/22/2008
Time: 14:13:37

Subject Name: TEST T TEST
Date of Birth: 11/19/1900 Age: 107
Gender: F
License #: VT

Test Operator Name: DARCY M RICHARDSON
Agency: VT DEPT OF HEALTH LAB

BLANK TEST	0.000	14:14
INTERNAL STANDARD	PASSED	14:14
SIMULATOR VAPOR	0.102	14:14
BLANK TEST	0.000	14:15
SUBJECT SAMPLE (Vol=2.3L)	0.000	14:16

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Simulator Temp 34.1°C

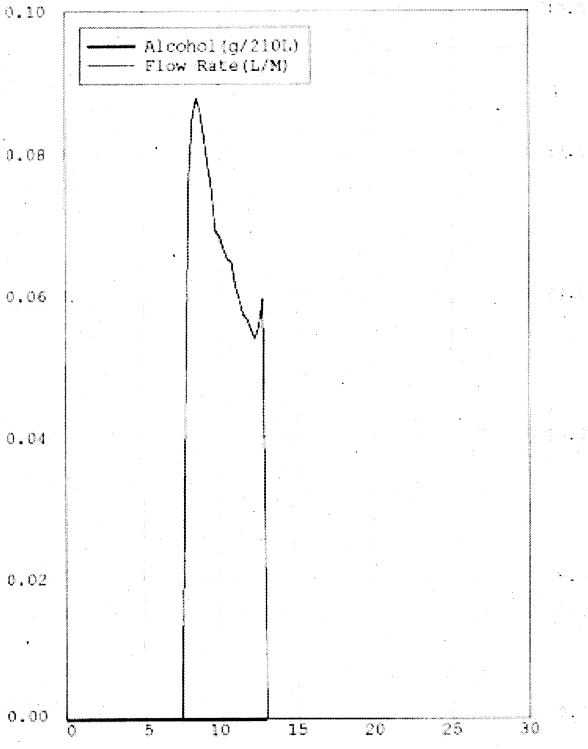


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Figure 21: Check-In Test Report

SECTION V

ERROR MESSAGES AND RESPONSES

ERROR MESSAGES AND RESPONSES

If at any time the instrument displays an error message and is unable to clear the problem to resume processing, place a notice on the instrument stating "OUT OF SERVICE" and leave a detailed message to your DataMaster DMT Supervisor regarding the message and any steps taken to clear that message.

FATAL ERRORS:

Although a DataMaster Supervisor or the Vermont Department of Health Laboratory may be able to remedy these error messages, for the purpose of processing, the officer should consider these "fatal errors" and proceed to a different DataMaster.

If another DataMaster is not reasonably available, blood may be drawn.

When encountering fatal error messages, post "OUT OF SERVICE" on the DataMaster DMT and leave a message for your DataMaster Supervisor.

1) **"STANDARD OUT OF RANGE"** Simulator concentration is not within +/- 5% of the certified concentration.

2) **"SIMULATOR TEMPERATURE OUT OF RANGE"** Simulator temperature is not within 33.5 and 34.5 °C.

3) **"INTERNAL STANDARD ERROR"** The instrument is not reading the calibration correctly.

4) **"SAMPLE CHAMBER TEMPERATURE OUT OF RANGE"** Sample chamber is not between 45 °C and 55 °C.

5) **"BREATH TUBE TEMPERATURE OUT OF RANGE"** The breath tube temperature is out of specification.

6) **"CHOPPER OUT OF REGULATION"** The chopper wheel is not activating correctly.

7) **"FILTER WHEEL ERROR"** The filter wheel is not activating properly.

8) **"FILTER # (1,2,3) WON'T ZERO"** One of the filters is not reading properly.

9) **"PUMP ERROR"** The flow detector does not detect pump operation or the pump speed is incorrect.

10) **"DETECTOR OVERFLOW"** The detector is out of range or the subject's BrAC is greater than 0.600

NON FATAL ERRORS:

The following errors may be remedied by the test operator. If after following these instructions the error remains, post "OUT OF SERVICE" and leave a detailed message to your DataMaster Supervisor regarding when the error occurred and what steps where taken to try to remedy it.

Proceed to a different DataMaster, if one is not reasonably available you may have blood drawn. If the error has been cleared, begin the testing procedure again.

1) **Keyboard does not function.**

   A) Disconnect keyboard from the back of the instrument.

   B) Reconnect the keyboard into the USB port at the back of the instrument.

   C) If available try a different USB keyboard.

2) **"AMBIENT FAIL"** The instrument is detecting alcohol in the ambient air.

   A) Remove the mouthpiece from the breath tube.

   B) Remove possible contamination sources from the processing area.

   C) Open windows or use a fan to draw fresh air into the room if possible.

3) **"BLANK ERROR"** The instrument is unable to reach zero apparent alcohol.

   A) Remove the mouthpiece from the breath tube.

   B) Remove possible contamination sources from the processing area.

   C) Open windows or use a fan to draw fresh air into the room if possible.

9) **"SIMULATOR TIME OUT"** The simulator took too long to reach plateau while running a Simulator Vapor test.

   A) Attempt the test again.

OTHER ERROR CONDITIONS:

The following error conditions should be documented but may not necessitate moving to a different DataMaster. A detailed message should be left for the DataMaster Supervisor to remedy the situation for future use.

1) **Incorrect time appears on the DataMaster DMT.**

   A) When the DataMaster DMT reports print, place a single line through the time printed and hand write the correct time on all three copies of the report.

   B) Mark this line with your initials and date.

   C) Document on your processing form the time discrepancy.

2) **Incorrect date appears on the DataMaster DMT.**

   A) When the DataMaster DMT reports print, place a single line through the date printed and hand write the correct date all three copies of the report.

   B) Mark this line with your initials and date.

   C) Document on your processing form the date discrepancy.

3) **Report is incomplete or unreadable.**

   A) If the printer is jammed, gently remove the paper. Reset the printer and press the "COPY" button on the main screen.

   B) If after several attempts you are unable to get a readable report contact your DataMaster Supervisor or DataMaster Records Administrator. They may be able to remedy the printer problem and will be able to access prior reports.

4) **"PURGE ERROR"** The instrument is unable to purge out the apparent alcohol.

   A) Remove the mouthpiece from the breath tube.

   B) Remove possible contamination sources from the processing area.

   C) Open windows or use a fan to draw fresh air into the room if possible.

5) **"COMMUNICATION ERROR"** The embedded pc is not communicating with the controller board correctly.

   A) Turn the instrument off. Wait one (1) minute and turn the instrument on.

6) **"PLEASE BLOW"** flashes but instrument does not accept a sample.

   A) Refer to graphic display to ensure subject is providing adequate air flow.

   B) Remove the mouthpiece from the breath tube and replace with a new mouthpiece.

   C) Have the subject attempt to provide another breath sample.

   D) If error remains, turn instrument off for one minute and turn back on.

7) **"UNABLE TO ESTABLISH COMMUNICATION TO PRINTER"** The instrument is unable to communicate with the printer.

   A) Ensure the USB cable is connected to both the DataMaster DMT and the printer.

   B) Press the "COPY" button to reprint reports.

   C) If after several attempts you are unable to get a readable report contact your DataMaster Supervisor or DataMaster Records Administrator. They may be able to remedy the printer problem and will be able to access prior reports.

8) **"RADIO FREQUENCY INTERFERENCE"** A radio frequency transmission has been detected in the testing environment.

   A) Turn radio off and ensure that there are no active transmitters in the processing area.

   B) After beginning a new test, answer "Y" to "USE PREVIOUS DATA? YES or NO".

4) "**INCOMPLETE**" prints on the evidentiary report across from "SUBJECT SAMPLE."

   A) The subject failed to provide an adequate breath sample within two minutes.

   B) Instruct the subject again on proper delivery of a breath sample.

   C) If it is clear that the subject is unable to provide an adequate breath sample select the option for "INCAPABLE", have blood drawn.

   D) If it is clear that the subject is unwilling to provide an adequate breath sample select the option for "REFUSAL".

5) "**INTERFERENCE DETECTED**" The ratio between the measurements at the three filters is not what is expected for ethanol.

   A) When DataMaster DMT prompts "SUBJECT TAKE SECOND TEST? YES or NO" select "YES" and have subject provide a second sample.

   B) Remove possible contamination sources from the processing area.

   C) Open windows or use a fan to draw fresh air into the room if possible.

   D) If "INTERFERENCE DETECTED" message remains you may have subject's blood drawn.

6) "**INVALID SAMPLE**" An abnormal breath profile has been obtained during sample delivery.

   A) Restart the testing process from the "RUN" screen including the fifteen minute observation period.

   B) Instruct the subject again on proper delivery of a breath sample.