State of Vermont
Department of Public Safety
VERMONT FORENSIC LABORATORY
45 State Dr. Waterbury, VT 05671

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DPS.DMT@vermont.gov
http://vfl.vermont.gov

Certification of Calibration

Intox DMT Serial # 100140

Date of Adjustment: 08/01/25
Date of Calibration: 08/01/25

Calibration Results:

Instrument was adjusted and calibrated in accordance with Vermont Forensic Laboratory procedure TOX_P200_DMT Manual. The calibration of this instrument is valid for 12 months from the date of calibration. Calibration results are reported as X ± Y, where at measured value X, measurement uncertainty equals Y.

As Left

Measured Value		Uncertainty	
0.021	±	0.001	g/210 L
0.080	±	0.004	g/210 L
0.099	±	0.005	g/210 L
0.161	±	0.007	g/210 L
0.357	±	0.016	g/210 L

The measurement uncertainty for determining the ethanol concentration of aqueous solutions during the in-house calibration of the DMT evidential breath testing instrument is: **4.3%**

k = 2.0

Uncertainty is expressed as an expanded uncertainty at a 95.45% level of confidence and a coverage factor (k) denoted above, in accordance with ISO/IEC 17025 and ANAB Accreditation Requirements for Forensic Testing and Calibration. The uncertainty associated with this analytical method has been calculated to incorporate uncertainty from the NIST traceable certified reference materials used to adjust and calibrate the instrument, simulator temperature calibration, simulator performance, and analytical performance of the instrument. The uncertainty estimate was evaluated using the VFL fleet of DMT instruments deployed in the field, including the DMT certified in this report.

Traceability to SI through NIST

This calibration is traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) via an unbroken chain of comparisons. The DMT instrument was calibrated using certified reference materials (CRMs). The performance of the calibration was evaluated using NIST traceable control material from an ISO 17034 accredited supplier.

Analyzed CRM materials were prepared using pipettes calibrated by an ISO 17025 accredited calibration vendor. The instrument used to analyze the CRMs was calibrated using NIST traceable certified reference materials from an ISO 17034 accredited supplier. The performance of the method was evaluated using NIST traceable control materials from an ISO 17034 accredited supplier.

Calibration Certified by: _____
Title: Forensic Chemist
Date: 8/6/2025

This document pertains only to the instrument being calibrated and shall not be reproduced, except in full, without written permission of the Vermont Forensic Laboratory.

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DMT Technical Support Inquiry

DMT Serial #: 100140
Date Initiated: 7/29/2025
Initiated By: BMS/JSD

Problem:
N/A

Work Performed:
DMT adjustment, calibration, and verification performed prior to "redeployment". DMT is now ready for installation in the field.

Performed On-Site ☐
Performed In-House ☑

Performed By: Jeff Dukette JSD **Date:** 8/6/2025
Technical Reviewer: [signature] **Date:** 8/8/25
Administrative Reviewer: [signature] **Date:** 8/8/25
Director Reviewer: [signature] **Date:** 8/8/2025

ADJUSTMENT REPORT

DataMaster DMT: 100140
Adjustment Date: 8/1/2025
Adjusted by: JEFF DUKETTE
Lot: 25-13-100

```
Ca  = 0.102
CAL = 0.971656   0.800  <= CAL < 1.200
b1  = 0.000      0.000  <=  b1 < 0.004
b2  = 0.005      0.002  <=  b2 < 0.010
b3  = 0.000      0.000  <=  b3 < 0.004
a21 = 1.232750   1.050  <= a21 < 1.300
a31 = 0.531358   0.300  <= a31 < 0.800
```

Performed by JD **Date** 8/1/2025

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CALIBRATION REPORT

DataMaster DMT: 100140
Adjustment Date: 8/1/2025
Calibration Date: 8/1/2025
Calibrated by: JEFF DUKETTE

Diagnostic Results

VERSIONS
DMT: 2.07
PIC: 2.08
Modem: 3.0
Questions: 3.0

TEMPERATURES

Sample Chamber	= 48.8°C
Breath Tube	= 45.5°C
Digital Sim	= 34.0°C

SETTINGS

Lamp Voltage	= 1.80 V
Cooler Voltage	= 1.76 V
Bias Voltage	= 80 V
Chopper Freq	= 555 Hz

PUMP INFO
Flow Rate = 5.518 L/M

DETECTOR INFO

PUMP	ON	OFF
MAX(V)	-0.0541	-0.0518
MIN(V)	-0.0567	-0.0539

FILTER INFO

Filter 1	-0.052	Zero = true
Filter 2	-0.216	Zero = true
Filter 3	0.563	Zero = true

Options

OPTIONS
Units
Alcohol..... g/210L
Simulator
Tolerance Check..... yes
Standard Type..... wet
Nominal..... 0.100
Digital Simulator..... Guth
Subject
Ask Questions..... yes
Number of Tests..... 2
Alcohol Display..... yes
Volume Display..... yes
Query Refusal..... yes
Copies..... 3
Simulator Before..... yes
Simulator Between..... yes
Simulator After..... no
Observation Time..... 0
Supervisor
Number of Tests..... 10
Adjustment
Standard Type..... wet
Nominal..... 0.100
Nominal(Dry Gas)..... 0.100
Number of Tests..... 1
Printer
Printer On..... yes
Software Configuration
Data Collection..... yes

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JD
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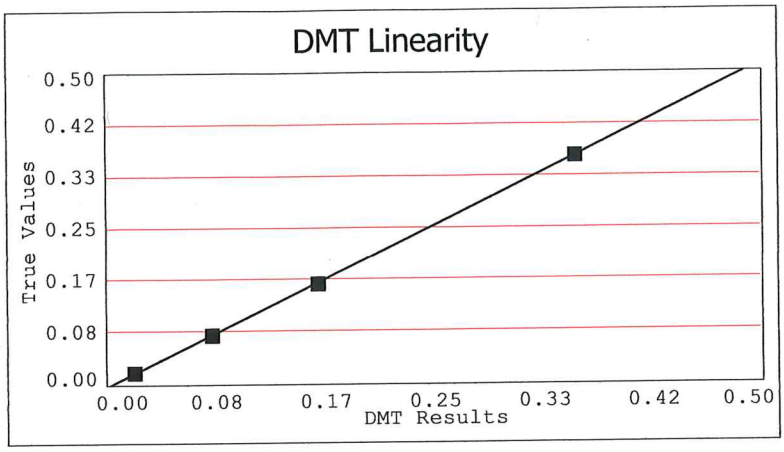
Linearity Check Results

True Value	Reported Average	Std Dev
0.020 g/210L	0.021 g/210L	0.0004
Lot # 25-07-020		
0.080 g/210L	0.080 g/210L	0.0004
Lot # 24-13-080		
0.162 g/210L	0.161 g/210L	0.0004
Lot # 25-05-160		
0.367 g/210L	0.357 g/210L	0.0004
Lot # 24-18-360		

$R^2 = 0.9999$



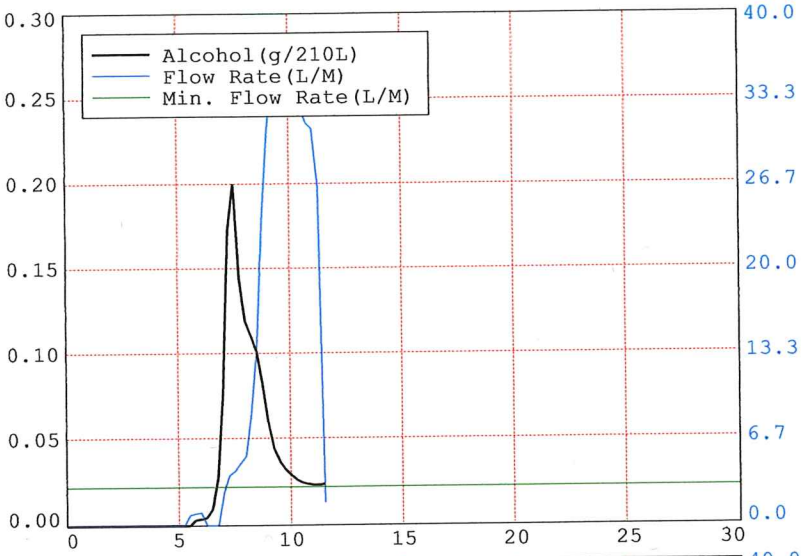
Acetone Interference Test

Lot # 25-08-08A01

Interference Detected

Mouth Alcohol Test

Mouth Alcohol Detected

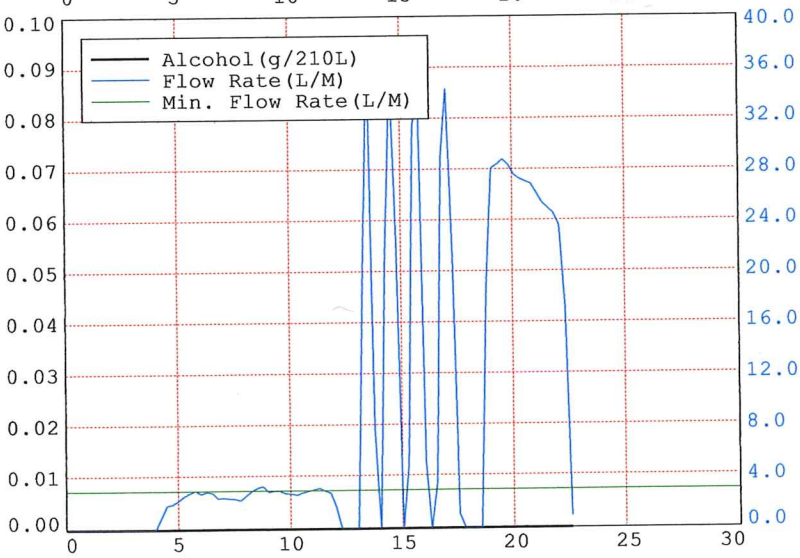


RF Detection Test

Passed

Sample Acceptance Test

Passed



CALIBRATION PASSED

Performed by _____ **Date** 8/1/2025

Reviewed by _____ **Date** 8/8/25

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ACCURACY & PRECISION REPORT

STATE OF VERMONT

DataMaster DMT: 100140

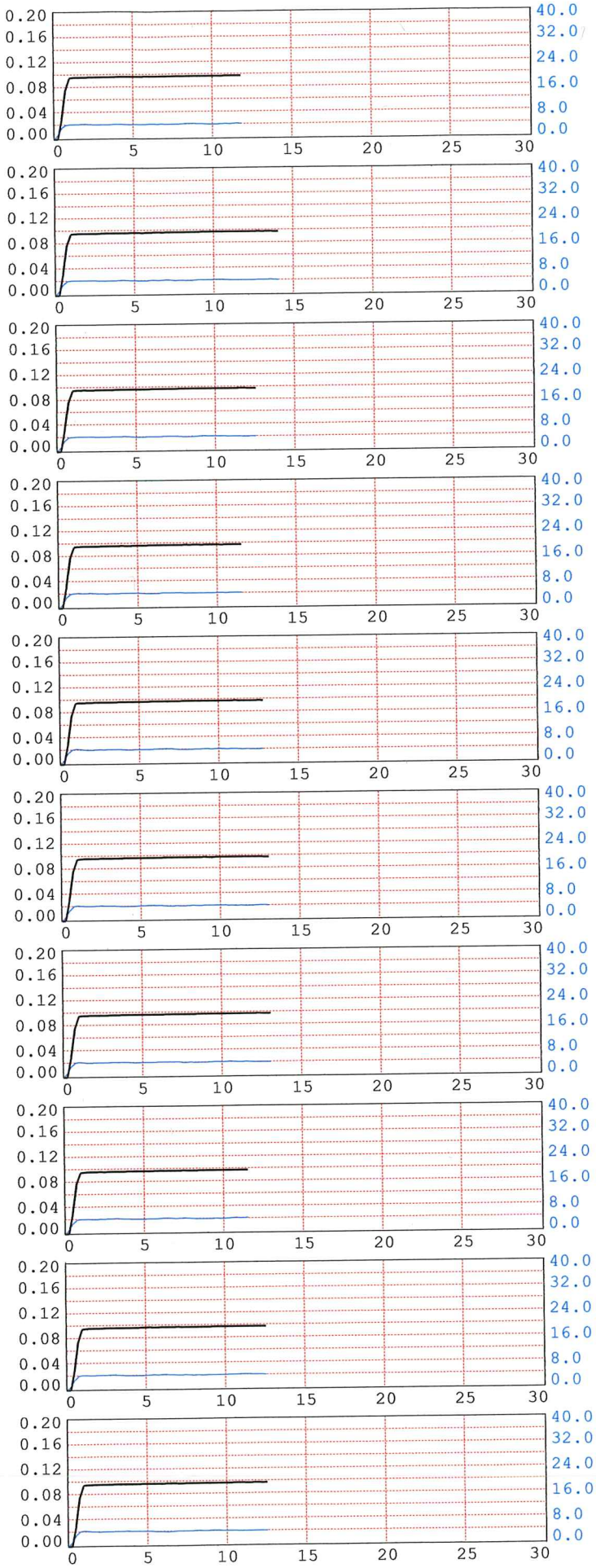
Date: 8/1/2025
Time: 11:59:36

SUPERVISOR NAME:
JSD MCS

SOLUTION LOT #: 24GP41260
SOLUTION CONCENTRATION: 0.100

BLANK TEST		0.000	12:00
SIMULATOR VAPOR 34.0°C		0.098	12:00
X[1] = 0.0985	(0.0003)	(0.0016)	
SIMULATOR VAPOR 34.0°C		0.099	12:02
X[1] = 0.0989	(-0.0008)	(0.0011)	
SIMULATOR VAPOR 34.0°C		0.099	12:03
X[1] = 0.0988	(-0.0010)	(0.0010)	
SIMULATOR VAPOR 34.0°C		0.099	12:04
X[1] = 0.0986	(-0.0010)	(0.0011)	
SIMULATOR VAPOR 34.0°C		0.099	12:05
X[1] = 0.0987	(-0.0011)	(0.0007)	
SIMULATOR VAPOR 34.0°C		0.099	12:06
X[1] = 0.0991	(-0.0007)	(0.0011)	
SIMULATOR VAPOR 34.0°C		0.098	12:08
X[1] = 0.0985	(-0.0010)	(0.0009)	
SIMULATOR VAPOR 34.0°C		0.099	12:09
X[1] = 0.0989	(-0.0021)	(0.0012)	
SIMULATOR VAPOR 34.0°C		0.099	12:10
X[1] = 0.0988	(-0.0009)	(0.0008)	
SIMULATOR VAPOR 34.0°C		0.098	12:11
X[1] = 0.0984	(-0.0029)	(0.0007)	
BLANK TEST		0.000	12:12

Average = 0.099
Std Dev = 0.0002



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