

STATE OF VERMONT  
DEPARTMENT OF PUBLIC SAFETY  
VERMONT FORENSIC LABORATORY  
45 STATE DRIVE  
P.O. BOX 47  
WATERBURY, VERMONT 05676-0047




TEL: 802•244•8788  
FAX: 802•241•5557  
E-MAIL: DPS.ForensicLab@vermont.gov  
<http://vfl.vermont.gov>

**NOW COMES Amanda Bolduc, affiant, being duly sworn and on oath, deposes and says:**

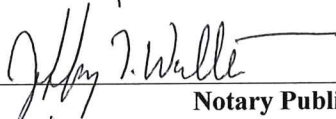
- 1) I am a Senior Forensic Chemist employed by the Vermont Forensic Laboratory as the Toxicology Section Supervisor. This position oversees breath and blood testing for ethyl alcohol, subsequently referred to as alcohol.
- 2) I have been recognized in the courts of the state of Vermont as an expert in the theory, operation and maintenance of the DMT; analytical chemistry; retrograde extrapolation; and alcohol physiology and pharmacology.
- 3) I am familiar with the Vermont Department of Public Safety's rules concerning analysis of breath samples for alcohol content (effective 3/29/2013).
- 4) The evidential breath alcohol testing device in use in Vermont is the DMT, an instrument which employs infrared absorption as its method of analysis. Through rulemaking, the principle of absorption of infrared energy has been adopted as an approved method of breath alcohol testing.
- 5) I have been trained by the manufacturer of the DMT to operate, calibrate, and maintain these instruments.
- 6) The DMT has been tested and approved by the federal government as an evidentiary device. The DMT appears on the Department of Transportation, National Highway Traffic Safety Administration's list of Conforming Products published in the Federal Register (Federal Register Vol. 82, No. 211, Thursday, November 2, 2017).
- 7) The Vermont Forensic Laboratory has been assessed by the ANSI National Accreditation Board and has met the accreditation requirements of ISO/IEC 17025:2017 and AR 3125:2023 ANAB Forensic Testing & Calibration while demonstrating technical competence in the field of Forensic Calibration. Certificate Number: FC-0015, valid to 9/30/2027.
- 8) Through rulemaking performance standards have been established for evidential instrumentation. The DMT meets the performance standards because:
  - A) The DMT is capable of accepting and analyzing a subject's expired alveolar, or deep lung, air (breath).
  - B) The DMT is capable of analyzing replicate samples containing a known concentration of alcohol with a precision of plus or minus 5% from their mean when alcohol concentrations are reported to three significant figures. The DMT reports results as the number of grams of alcohol per 210 liter of breath (g/210L).
  - C) The DMT meets and exceeds the minimum test accuracy required by rule for alcohol testing of plus or minus 10% or 0.005 g/210L, whichever is greater, when analyzing a simulated breath sample of a known concentration, when alcohol concentrations are reported to three significant figures. This demonstrated capability directly extends to accurately evaluating a breath sample.
  - D) The DMT is capable of detecting the presence of compounds in breath which could potentially interfere with the accurate determination of a breath alcohol concentration.
  - E) The DMT and the methods used for determination of breath alcohol concentration for evidential purposes have been approved by the Commissioner of Public Safety (effective 9/19/2024).

- 9) Based upon testing performed within and outside the state of Vermont, my knowledge of the scientific literature regarding breath alcohol testing, and my training and experience with the instrument, it is my opinion that the DMT is an accurate and reliable instrument for determining the alcohol concentration in a sample of a person's breath.
- 10) The DMT provides a reliable and accurate means for analysis of breath alcohol samples. The software on the DMT is designed as a fail-safe; in order to proceed with a subject test and report an ethanol result, the instrument must meet all internal and external quality control checks. The reporting of an alcohol concentration of a person's breath by the DMT is evidence that the instrument successfully met the performance standards contained in the rules at the time the breath sample was analyzed.
- 11) A DMT result obtained by an officer certified to operate the instrument and when taken in accordance with the procedures incorporated in the Vermont Criminal Justice Council Student Manual in effect at the time of testing for the instrument used and approved by the Commissioner of Public Safety is accurate and reliable and is in compliance with the provisions of the Department of Public Safety's rules.

Dated at Waterbury, in the county of Washington, Vermont this 23<sup>rd</sup> day of September, 2024.

  
Amanda Bolduc, MFS  
Affiant

Subscribed to and sworn before me at Waterbury, Vermont on this 23<sup>rd</sup> day of September, 2024.

  
Notary Public

Commission Expires: 1/31/2025

