VERMONT FORENSIC LABORATORY

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DMT TECHNICAL SUPPORT INQUIRY

Agency/Site: Fair Haven PD **DMT Serial #:** 100156

Date: 10/3/2018 **DMT Supervisor:** _____

Problem: Certificate of Calibration created

Work Performed: See 2017 100156 Simulator Update packet
Calibration 3/10/2017 (RCD) & Certification 3/10/2017 (RCD)

☐ On Site X In-house

Performed By: Jeff Dukette JSD **Date:** 10/3/2018

Technical Reviewer: N/A **Date:** _____

Administrative Reviewer: _____ **Date:** 10/11/18

Director Reviewer: _____ **Date:** 10/22/2018

State of Vermont
Department of Public Safety
VERMONT FORENSIC LABORATORY
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Certification of Calibration

DMT Serial # 100156

Date of Calibration: 3/10/2017

Date of Certification: 3/10/2017

Instrument Location: Fair Haven PD

Calibration Results:

Instrument was calibrated and certified in accordance with Vermont Forensic Laboratory procedure TOX_P200_DMT Manual. Calibration results are reported as X ± Y, where at measured value X, measurement uncertainty equals Y.

Measured Value	Uncertainty	
0.096	± 0.005	g/210 L
0.019	± 0.001	g/210 L
0.078	± 0.004	g/210 L
0.156	± 0.007	g/210 L
0.355	± 0.016	g/210 L

The measurement uncertainity for determing the ethanol concentration of aqueous solutions using the DMT evidential breath testing instrument within the lab is: **4.3%**

Uncertainty is expressed as an expanded uncertainty at the 95.45% level of confidence and a coverage factor k=2, in accordance with ISO 17025 and the ANAB ISO/IEC 17025:2017 Forensic Science Testing and Calibration Laboratories Accreditation Requirements. 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) prepared gravimetrically using a qualified balance calibrated annually by an ISO 17025 accredited calibration vendor and checked monthly using NIST traceable weights. Balance calibration is verified prior to each use with NIST traceable weights. Analyzed materials were prepared using pipettes calibrated semi-annually 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 17025 accredited vendor. The performance of the method was evaluated using NIST traceable control materials from an ISO 17025 accredited vendor.

Calibration Certified by: Jeff Dukette

Title: Forensic Chemist

Date: 10/3/2018