VERMONT

Agency of Agriculture Food & Markets
Consumer Protection Section
116 State Street
Montpelier, VT 05620
agriculture.vermont.gov

Certificate Number: VT26-29

Vermont Agriculture & Environmental Laboratory
Vermont Metrology Laboratory
163 Admin Drive
Randolph Center, VT 05061
802-828-2426

Vermont Metrology Laboratory
Calibration Certificate

Submitted by:

Advanced Scale
13 Delta Drive Unit 6
Londonderry, NH 03053-2372
603-626-0242

Calibration Date: January 26, 2026
Date Received: January 23, 2026
Calibration Due: Not Specified
Manufacturer: N/A
Serial Number: VT05-181
Material: Stainless Steel
Number of Pieces: 21
Description: 2 kg to 1 g Weight Kit

The mass standard(s) described herein have been compared to the standards of the State of Vermont by NISTIR 6969, SOP 8 (2019), and have been found at time of calibration, or been adjusted, to meet the maxium permissible errors in ASTM E617-23 Standard Specification for Laboratory Weights and Precision Mass Standards. These mass standard(s) were found to have a conventional mass correction at the time of calibration as indicated in the following tabulation. Mass standards are considered within the MPE when the absolute value of the conventional mass correction plus the uncertainty is less than or equal to the specified MPE. Standards received with a conventional mass outside the MPE show a value in the “before adjustment“ column.

Standards of the State of Vermont are metrologically traceable to the International System of Units (SI) and the National Institute of Standards and Technology (NIST). The Vermont Laboratory is recognized by NIST under the Laboratory Metrology Program at Mass Echelon III. SI conversion - 1 lb is equal to 0.453 592 37 kg

The uncertainties shown are expressed as the sum of the following sources; (1) Type A, random uncertainties determined by the standard deviation of the measurement process, and (2) Type B, systematic uncertainties relative to the reference standard and procedure used. Type A and Type B uncertainties are combined by the root sum squared method and multiplied by a coverage factor *(k)* for an approximate 95 % confidence interval.

Technician: Scott Dolan
Mass Comparator(s): MT XP5003S, MT XP205, MT XP2U

Environmental Conditions During Calibration
Temperature: 21.7 °C to 21.7 °C
Relative Humidity: 44.5 % to 44.8 %
Barometric Pressure: 752 mmHg to 752 mmHg

Scott Dolan
Digitally signed by Scott Dolan
Date: 2026.01.26 15:14:01 -05'00'

Scott Dolan, Weights & Measures Specialist

Nominal & Marking	Conventional Mass Correction Before Adjustment	Conventional Mass Correction As Left	Uncertainty	ASTM Class 5 MPE	Units	*k* Factor
2 kg		33.9	6.1	100	mg	2.01
2 kg		36.9	6.1	100	mg	2.01
2 kg *		39.9	6.1	100	mg	2.01
2 kg ***		7.9	6.1	100	mg	2.01
2 kg ****		22.9	6.1	100	mg	2.01
500 g		3.1	2.5	35	mg	2.01
500 g *		7.1	2.5	35	mg	2.01
500 g *		0.1	2.5	35	mg	2.01
500 g **		15.1	2.5	35	mg	2.01
500 g ****		11.1	2.5	35	mg	2.01
200 g		-5.9	1.9	20	mg	2.01
200 g *		7.1	1.9	20	mg	2.01
100 g		5.19	0.48	10	mg	2.01
50 g		3.28	0.24	5	mg	2.01
20 g		1.67	0.10	2.0	mg	2.01
20 g *		1.59	0.10	2.0	mg	2.01
10 g		0.744	0.052	1.0	mg	2.01
5 g		0.504	0.042	0.8	mg	2.01
2 g		0.325	0.027	0.6	mg	2.02
2 g *		0.403	0.027	0.6	mg	2.02
1 g		0.107	0.023	0.5	mg	2.04

MPE: Maximum Permissible Error

In addition to meeting ASTM E617-23 Class 5 MPE, all standard also meet NIST Class F Tolerance requiremnts.

The following weights were adjusted: None

End of Certificate