VERMONT

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Agency of Agriculture Food & Markets

Vermont Weights and Measures Metrology Laboratory
Test Report

Issued To:

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

Date of Receipt: January 24, 2025
Vermont Test Number: VT25-33A
Date of Test: January 27, 2025
Report of Test for Item (Make/Model/Serial Number(s)/#Pieces):

Various/Cast Field Standards/See Chart/40 - 50 lb, 6 - 25 lb

The mass standards described above have been compared to the standards of the State of Vermont, by NISTIR 6969, SOP 8 (2019), and have been found at time of test, or been adjusted, to meet the maxium permissible errors stated in ASTM E617-23 Standard Specification for Laboratory Weights and Precision Mass Standards. Standards of the State of Vermont are traceable to the SI and National Institute of Standards and Technology (NIST). The Vermont Laboratory is recognized by NIST, under the Laboratory Metrology Program at Mass Echelon III. The mass standards described above were found to have a mass value at the time of test as indicated in the following tabulation. Weights 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. Weights received with a conventional mass outside the MPE show a value in the “before adjustment“ column.

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

Environmental conditions at time of test:
Temperature: 21.5 ºC to 21.6 ºC
Relative Humidity: 44.5 % to 44.6 %
Barometric Pressure: 754.00 mmHg to 755.00 mmHg
Mass Comparator: MT XP64003L
Technician: Scott, Stanley

Nominal & Marking	Conventional Mass Correction Before Adjustment	Conventional Mass Correction As Left	Uncertainty	ASTM Class 6 MPE	Units	*k* Factor
50 lb 100	-2110	51	103	2300	mg	2.01
50 lb 101	-2244	-19	103	2300	mg	2.01
50 lb 102		-1629	103	2300	mg	2.01
50 lb 103	-3030	141	103	2300	mg	2.01
50 lb 104		-1549	103	2300	mg	2.01
50 lb 105		-1329	103	2300	mg	2.01
50 lb 106	-3119	-44	103	2300	mg	2.01
50 lb 107	-3339	111	103	2300	mg	2.01
50 lb 108	-3889	766	103	2300	mg	2.01
50 lb 109		-1834	103	2300	mg	2.01
50 lb 110		-1064	103	2300	mg	2.01
50 lb 111	-2754	181	103	2300	mg	2.01
50 lb 112		-1549	103	2300	mg	2.01
50 lb 113		-1679	103	2300	mg	2.01
50 lb 114	-2309	191	103	2300	mg	2.01
50 lb 115		-1044	103	2300	mg	2.01
50 lb 116	-2315	116	103	2300	mg	2.01
50 lb 117	-2820	-219	103	2300	mg	2.01
50 lb 118		-1929	103	2300	mg	2.01
50 lb 119	-2729	171	103	2300	mg	2.01
50 lb 300	-2844	1266	103	2300	mg	2.01
50 lb 301	-3284	-229	103	2300	mg	2.01
50 lb 302		-1484	103	2300	mg	2.01
50 lb 303		-844	103	2300	mg	2.01
50 lb 304		-164	103	2300	mg	2.01
50 lb 305	-3099	671	103	2300	mg	2.01
50 lb 306		-1394	103	2300	mg	2.01
50 lb 307		-1379	103	2300	mg	2.01
50 lb 308		-1554	103	2300	mg	2.01
50 lb 309	-2784	-39	103	2300	mg	2.01
50 lb 310	-2859	-514	103	2300	mg	2.01
50 lb 311	-2054	-69	103	2300	mg	2.01
50 lb 312	-3489	431	103	2300	mg	2.01
50 lb 313	-3339	-294	103	2300	mg	2.01
50 lb 314	-2284	-19	103	2300	mg	2.01
50 lb 315	-3744	871	103	2300	mg	2.01
50 lb 316		-1779	103	2300	mg	2.01
50 lb 317		-1659	103	2300	mg	2.01
50 lb 318	-2724	-299	103	2300	mg	2.01
50 lb 319		-1939	103	2300	mg	2.01
25 lb 160	-1714	356	47	1100	mg	2.01
25 lb 161		-639	47	1100	mg	2.01
25 lb 260		-489	47	1100	mg	2.01
25 lb 261		-839	47	1100	mg	2.01
25 lb 360	-2245	671	47	1100	mg	2.01

25 lb 361	-1089	-49	47	1100	mg	2.01

MPE: Maximum Permissible Error

In addition to meeting ASTM E617-23 Class 6 MPE, all standard also meet NIST Class F Tolerance requiremnts.

The following weights were adjusted: 22 - 50 lb, 3 - 25 lb

Calibration Performed at:
163 Admin Drive
Randolph Center, VT 05061

Additional documentation material available on request.

Scott Dolan Digitally signed by Scott Dolan
Date: 2025.01.29 08:46:48 -05'00'

Scott Dolan/Vermont Agency of Agriculture
Consumer Protection Section/Metrologist
Weights & Measures Specialist

End of Report