

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, 2020

Vermont Test Number: VT20-24

Date of Test: January 27, 2020

Report of Test for Item (Make/Model/Serial Number(s)/#Pieces):

Various/Class F Cast Field Standard/See Chart/40 - 50 lb, 6 - 25 lb, 2 - 20 kg, 3 - 10 kg

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 tolerances stated in NIST Handbook 105-1 (1990) Specifications and Tolerances for Reference Standards and Field Standard Weights and Measures. 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 in tolerance when the absolute value of the conventional mass correction plus the uncertainty is less than or equal to the specified tolerance. Weights received in an out of tolerance condition 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: 22.0 °C to 22.1 °C

Relative Humidity: 45.3 % to 46.5 %

Barometric Pressure: 714.30 mmHg to 714.30 mmHg

Mass Comparator: MT XP64003L

Technician: Scott Dolan, Mike Larose, Sumner Kuehne



Nominal & Marking	Before Adjustment	Conventional Mass Correction	Uncertainty	NIST Class F Tolerance	Units	<i>k</i> Factor
50 lb 100	-2792	393	85	2300	mg	2.02
50 lb 101	-2247	-207	85	2300	mg	2.02
50 lb 102		-957	85	2300	mg	2.02
50 lb 103		-1617	85	2300	mg	2.02
50 lb 104	-2062	533	85	2300	mg	2.02
50 lb 105		-907	85	2300	mg	2.02
50 lb 106		213	85	2300	mg	2.02
50 lb 107	-2192	-267	85	2300	mg	2.02
50 lb 108		-1942	85	2300	mg	2.02
50 lb 109		-1367	85	2300	mg	2.02
50 lb 110	-2652	308	85	2300	mg	2.02
50 lb 111		-1842	85	2300	mg	2.02
50 lb 112		-1052	85	2300	mg	2.02
50 lb 113		-1647	85	2300	mg	2.02
50 lb 114		-687	85	2300	mg	2.02
50 lb 115		-1517	85	2300	mg	2.02
50 lb 116		-1942	85	2300	mg	2.02
50 lb 117		-592	85	2300	mg	2.02
50 lb 118		-587	85	2300	mg	2.02
50 lb 119	-2792	48	85	2300	mg	2.02
50 lb 300		-727	85	2300	mg	2.02
50 lb 301	-2652	708	85	2300	mg	2.02
50 lb 302		-612	85	2300	mg	2.02
50 lb 303	-2367	-117	85	2300	mg	2.02
50 lb 304		-582	85	2300	mg	2.02
50 lb 305		-762	85	2300	mg	2.02
50 lb 306		-232	85	2300	mg	2.02
50 lb 307	-2207	23	85	2300	mg	2.02
50 lb 308		878	85	2300	mg	2.02
50 lb 309		-1067	85	2300	mg	2.02
50 lb 310		-1682	85	2300	mg	2.02
50 lb 311	-2937	18	85	2300	mg	2.02
50 lb 312		-1482	85	2300	mg	2.02
50 lb 313		-1652	85	2300	mg	2.02
50 lb 314	-2592	528	85	2300	mg	2.02
50 lb 315		-1137	85	2300	mg	2.02
50 lb 316		-67	85	2300	mg	2.02
50 lb 317		468	85	2300	mg	2.02
50 lb 318		-1092	85	2300	mg	2.02
50 lb 319	-2192	508	85	2300	mg	2.02
25 lb 160		-108	32	1100	mg	2.02
25 lb 161		-113	32	1100	mg	2.02
25 lb 260		-228	32	1100	mg	2.02
25 lb 261		-28	32	1100	mg	2.02
25 lb 360		-378	32	1100	mg	2.02
25 lb 361		-858	32	1100	mg	2.02
20 kg 431		390	80	2000	mg	2.02
20 kg 432		-1125	80	2000	mg	2.02

10 kg 430		323	28	1000	mg	2.02
10 kg 433		-167	28	1000	mg	2.02
10 kg 434		-587	28	1000	mg	2.02

The following weights were adjusted: 11 - 50 lb

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

Additional documentation material available on request.

Scott Dolan Digitally signed by Scott Dolan
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Scott Dolan/Vermont Agency of Agriculture
Consumer Protection Section/Metrologist
Consumer Protection Specialist

End of Report