

Vermont Weights and Measures Metrology Laboratory
Test Report

Issued To:

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

Vermont Test Number: VT17-4

Date of Test: January 23, 2017

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

Various/Class F Cast Iron /In Chart/40-50 lb, 6-25 lb, 3-10 kg, 2-20 kg.

The mass standards described above have been compared to the standards of the State of Vermont, by SOP 8 (modified substitution), and have been found at time of test, or been adjusted, to meet the requirements stated in NIST Handbook 105-1 Specifications and Tolerances for Reference Standards and Field Standard Weights and Measures (Class F). 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 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 errors relative to the reference standard and procedure used, and (2) Type A, random errors 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: 20.2^o C

Relative Humidity: 46.0%

Mass Comparator: MT XP64003L



Weight	Nominal	Before Adjustment	Correction	Uncertainty	NIST Class F Tolerance	Units	k Factor
100	50 lb	-3269	-99	88	2300	mg	2.06
101	50 lb		1731	88	2300	mg	2.06
102	50 lb		1031	88	2300	mg	2.06
103	50 lb	-2509	-159	88	2300	mg	2.06
104	50 lb		-1009	88	2300	mg	2.06
105	50 lb	-2409	-109	88	2300	mg	2.06
106	50 lb		-1799	88	2300	mg	2.06
107	50 lb		-89	88	2300	mg	2.06
108	50 lb	-3639	-59	88	2300	mg	2.06
109	50 lb	-3579	-129	88	2300	mg	2.06
110	50 lb	-2729	271	88	2300	mg	2.06
111	50 lb	-2779	661	88	2300	mg	2.06
112	50 lb		-1439	88	2300	mg	2.06
113	50 lb		-1699	88	2300	mg	2.06
114	50 lb		-1939	88	2300	mg	2.06
115	50 lb	-2089	61	88	2300	mg	2.06
116	50 lb	-2509	-19	88	2300	mg	2.06
117	50 lb		-849	88	2300	mg	2.06
118	50 lb		-1509	88	2300	mg	2.06
119	50 lb	-2859	521	88	2300	mg	2.06
300	50 lb	-2049	201	88	2300	mg	2.06
301	50 lb		-1109	88	2300	mg	2.06
302	50 lb		-1509	88	2300	mg	2.06
303	50 lb		-1539	88	2300	mg	2.06
304	50 lb	-2239	-39	88	2300	mg	2.06
305	50 lb		-339	88	2300	mg	2.06
306	50 lb	-2489	-19	88	2300	mg	2.06
307	50 lb	-2919	451	88	2300	mg	2.06
308	50 lb	-3149	91	88	2300	mg	2.06
309	50 lb		-839	88	2300	mg	2.06
310	50 lb		91	88	2300	mg	2.06
311	50 lb		-989	88	2300	mg	2.06
312	50 lb		-519	88	2300	mg	2.06
313	50 lb		-1769	88	2300	mg	2.06
314	50 lb		-859	88	2300	mg	2.06
315	50 lb		-729	88	2300	mg	2.06
316	50 lb		-319	88	2300	mg	2.06
317	50 lb		131	88	2300	mg	2.06
318	50 lb		-689	88	2300	mg	2.06
319	50 lb		-119	88	2300	mg	2.06
160	25 lb	-1959	2	66	1100	mg	2.07
161	25 lb	-1329	232	66	1100	mg	2.07
260	25 lb		-599	66	1100	mg	2.07
261	25 lb		-849	66	1100	mg	2.07
360	25 lb	-1499	2	66	1100	mg	2.07
361	25 lb	-1139	172	66	1100	mg	2.07
431	20 kg		-1462	83	2000	mg	2.07
432	20 kg		-292	83	2000	mg	2.07

430	10 kg		-608	65	1000	mg	2.07
433	10 kg		-328	65	1000	mg	2.07
434	10 kg		-718	65	1000	mg	2.07

Additional documentation material available on request.

The following weights were adjusted: 15-50 lb and 4-25 lb.

 1-23-2017

Marc Paquette/Vermont Agency of Agriculture
Consumer Protection Section/Metrologist
Weights and Measures Specialist

End of Report