

# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA. MAINE 04333-0028

Amanda E. Beal COMMISSIONER

Celeste Paulin

## CERTIFICATE OF CALIBRATION MAINE TEST NUMBER 7982ME

Metric Weight Kit: 5 kg to 1 g SN: 74742

Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North Auburn, ME 05210

The mass standards described above have been compared with standards of the State of Maine, by NIST SOP 8 Modified Substitution, and were found to be, or adjusted to within NIST 105-1 (1990) Class F tolerances. Weights received in good condition.

Standards of the State of Maine are traceable to the National Institute of Standards and Technology through Oregon State test number OR-18-257-C. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values at the time of test as indicated in the tabulation on the following page. Weights received in an out of tolerance condition will show a value in a "before adjustment" column if required.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy: (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.02 (k=2.02) representing approximately a 95% confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

Page 1 of 2



### Maine Scale Company MAINE TEST NUMBER 7982ME

Page 2 of 2

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017

Nominal &	Correction	NIST class F	Uncertainty
Marking	mg	Tolerance, mg	mg
5 kg	152	500	31
2 kg	59	200	13
2 kg *	63	200	13
1 kg	27.7	100	7,0
500 g	8.1	70	5.6
200 g	0.6	40	4.4
200 g *	14.6	40	4.4
100 g	10.4	20	1.2
50 g	4.64	10	0.61
20 g	1.03	4.0	0.27
20 g *	0.79	4.0	0.27
10 g	0.65	2.0	0.13
5 g	0.24	1.5	0.10
2 g	0.703	1.1	0.083
2 g *	0.423	1.1	0.083
1 g	0.103	0.90	0.062

Environmental conditions at time of test:

Temperature: 20.8 °C Relative Humidity: 40.8 %

Barometric Pressure: 754.66 mmHg.

Data reduction sheets are on file at the laboratory.

Date Received: December 12, 2022 Date of Test: December 19, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal Commissioner

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7985ME

2 kg precision weight, SN: 64640 Compared to ASTM E617-18 Class 2 tolerances Date of Report: February 3, 2023

SUBMITTED BY: MaineCal, Inc. 4 Washington St North Auburn, ME 04210

The mass standard described above has been compared with standards of the State of Maine by NIST SOP 4 Weighing by Double Substitution (May 2019) and found to have mass values at time of test as indicated in the following tabulation. The weight was assumed to be stainless steel with a density of 7.84 g/cm<sup>3</sup> at 20 °C for air buoyancy correction. Measurements conducted by this laboratory are traceable to the International System of Units (S.I.). Weight was received in good condition.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard, including bias, 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 k (k=2.18) representing approximately a 95% confidence level. Magnetism screening was not conducted and is not represented in the uncertainty budget. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0g/cm<sup>3</sup> at 20 °C. The combined measurement uncertainty and result have been taken in to account when issuing statements of compliance. Weights found in an out of tolerance condition will have conventional mass correction values in bold.

Nominal	Conventional Mass	Conventional Mass	Uncertainty	ASTM Class 2
	g	Correction, mg	mg	Tolerance, mg
2000 g	1999.9977	-2.3	1.7	10

Page 1 of 2



## MaineCal, Inc. Maine Test Number 7985ME Page 2 of 2

Data reduction sheets are on file at the laboratory. Values reported are "as found", no adjustments have been made. Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017.

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Standards of the State of Maine are traceable to the National Institute of Standards and Technology through State of Oregon Department of Agriculture State Test No: OR-18-257-C. The Maine Metrology Laboratory is recognized at mass accuracy Echelon II by NIST, OWM under the "Laboratory Metrology Program" for 2023.

Laboratory environmental range:

Temperature: 19.91 °C Relative humidity: 42.9 %

Barometric pressure: 769.27 mmHg

Date Received: December 12, 2022 Date of test: December 27, 2022 Calibration due: December 31, 2023

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal Commissioner

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7986ME

(3) 100g precision weight, SN: 61821 Compared to ASTM E617-18 Class 1 tolerances Date of Report: February 3, 2023

SUBMITTED BY: MaineCal, Inc. 4 Washington St North Auburn, ME 04210

The mass standard described above has been compared with standards of the State of Maine by NIST SOP 4 Weighing by Double Substitution (May 2019) and found to have mass values at time of test as indicated in the following tabulation. The weight was assumed to be stainless steel with a density of 7.84 g/cm<sup>3</sup> at 20 °C for air buoyancy correction. Measurements conducted by this laboratory are traceable to the International System of Units (S.I.). Weight was received in good condition.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy: (1) Type B, systematic errors relative to the reference standard, including bias, 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 k (k=2.18) representing approximately a 95% confidence level. Magnetism screening was not conducted and is not represented in the uncertainty budget. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0g/cm<sup>3</sup> at 20 °C. The combined measurement uncertainty and result have been taken in to account when issuing statements of compliance. Weights found in an out of tolerance condition will have conventional mass correction values in bold.

Nominal	Conventional Mass	Conventional Mass	Uncertainty	ASTM Class 1
	g	Correction, mg	mg	Tolerance, mg
100 g *	99.99992	-0.08	0.050	0.25
100 g **	100.00013	0.13	0.050	0.25
100 g ***	100.00000	0.00	0.050	0.25

Page 1 of 2



## MaineCal, Inc. Maine Test Number 7986ME Page 2 of 2

Data reduction sheets are on file at the laboratory. Values reported are "as found", no adjustments have been made. Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017.

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Standards of the State of Maine are traceable to the National Institute of Standards and Technology through State of Oregon Department of Agriculture State Test No: OR-18-257-C. The Maine Metrology Laboratory is recognized at mass accuracy Echelon II by NIST, OWM under the "Laboratory Metrology Program" for 2023.

Laboratory environmental range:

Temperature: 19.50 °C Relative humidity: 44.1 %

Barometric pressure: 769.09 mmHg

Date Received: December 12, 2022 Date of test: December 27, 2022 Calibration due: December 31, 2023

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Boal COMMISSIONER

Celeste Poulin

### CERTIFICATE OF CALIBRATION MAINE TEST NUMBER 7989ME

Metric Weight Kit: 2 kg to 5 mg SN: MS54

Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North Auburn, ME 05210

The mass standards described above have been compared with standards of the State of Maine, by NIST SOP 8 Modified Substitution, and were found to be, or adjusted to within NIST 105-1 (1990) Class F tolerances. Weights received in good condition.

Standards of the State of Maine are traceable to the National Institute of Standards and Technology through Oregon State test number OR-18-257-C. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values at the time of test as indicated in the tabulation on the following page. Weights received in an out of tolerance condition will show a value in a "before adjustment" column if required.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.02 (k=2.02) representing approximately a 95% confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

Page 1 of 3



PHONE: (207) 287-7587

FAX: (207) 287-7161

### Maine Scale Company MAINE TEST NUMBER 7989ME

Page 2 of 3

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017

Nominal &	Correction	ASTM E617-18	Uncertainty
Marking	mg	Tolerance, mg	mg
2 kg	38	200	13
l kg	4.7	100	7.0
500 g	6.1	70	5.6
200 g	5.6	40	4.4
200 g *	6.6	40	4.4
100 g	3.6	20	1.2
50 g	3.24	10	0.61
20 g	0.76	4.0	0.27
20 g *	0.68	4.0	0.27
10 g	0.67	2.0	0.13
5 g	0.41	1.5	0.10
2 g	0.233	1.1	0.083
2g*	0.083	1.1	0.083
1 g	0.153	0.90	0.062
500 mg	0.187	0.72	0.053
200 mg	0.075	0.54	0.045
200 mg *	0.095	0.54	0.045
100 mg	0.017	0.43	0.037
50 mg	0.064	0.35	0.034
20 mg	-0.004	0.26	0.031
20 mg *	0.016	0.26	0.031
10 mg	0.036	0.21	0.029
5 mg	0.025	0.17	0.017

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.



## Maine Scale Company MAINE TEST NUMBER 7989ME

Page 3 of 3

Environmental conditions at time of test:

Temperature: 20.9 °C Relative Humidity: 40.7 %

Barometric Pressure: 754.84 mmHg.

Data reduction sheets are on file at the laboratory.

Date Received: December 12, 2022 Date of Test: December 19, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA. MAINE 04333-0028

Amanda E. Beal COMMISSIONER

Celeste Poulin

## CERTIFICATE OF CALIBRATION MAINE TEST NUMBER 7990ME

Metric Weight Kit: 5 kg to 1 g SN: 28620

Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North Auburn, ME 05210

The mass standards described above have been compared with standards of the State of Maine, by NIST SOP 8 Modified Substitution, and were found to be, or adjusted to within NIST 105-1 (1990) Class F tolerances. Weights received in good condition.

Standards of the State of Maine are traceable to the National Institute of Standards and Technology through Oregon State test number OR-18-257-C. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023, Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values at the time of test as indicated in the tabulation on the following page. Weights received in an out of tolerance condition will show a value in a "before adjustment" column if required.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.02 (k=2.02) representing approximately a 95% confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

Page 1 of 3



PHONE: (207) 287-7587

FAX: (207) 287-7161

## Maine Scale Company MAINE TEST NUMBER 7990ME

Page 2 of 3

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017

Nominal & Marking	Correction mg	NIST class F Tolerance, mg	Uncertainty mg
5 kg	124	500	31
5 kg *	141	500	31
2 kg	65	200	13
2 kg *	49	200	13
l kg	24.7	.100	7.0
500 g *	16.1	70	5.6
500 g **	18.1	70	5.6
500 g ***	13.1	70	5.6
500 g ****	24.1	70	5.6
500 g ****	23.1	70	5.6
200 g	14.6	40	4.4
200 g *	15.6	40	4,4
100 g	4.7	20	1.2
50 g	4.44	10	0.61
20 g	0.95	4.0	0.27
20 g *	0.77	4.0	0.27
10 g	0.69	2.0	0.13
5 g	0.48	1.5	0.10
2 g	, 0.253	1.1	0.083
2 g *	0.273	1.1	0.083
1 g	0.393	0.90	0.062

Environmental conditions at time of test:

Temperature: 21.1 °C Relative Humidity: 40.2 %

Barometric Pressure: 762.39 mmHg.

Data reduction sheets are on file at the laboratory.

Date Received: December 12, 2022 Date of Test: December 28, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder



## Maine Scale Company MAINE TEST NUMBER 7990ME

Page 3 of 3

Bradford Bachelder. Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISSIONER

Celeste Poulin
Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7993ME

(36) 50 lb. & (1) 25 lb. cast iron grip weights Date of Report: January 25, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution, and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements conducted by this laboratory are traceable to the International System of Units (S.I.). Standards of the State of Maine are traceable to the National Institute of Standards and Technology through Maine State Test Number 7497ME. Weights were received in good condition.

The mass standards described above were found to have mass values at the time of test as indicated in the following tabulation. Weights received in an out of tolerance condition show a bold value in the "before adjustment" column. Weights received in good condition. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.0 (k=2) representing approximately a 95 % confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

Page 1 of 3



FAX: (207) 287-7161

## Maine Scale Company Maine Test Number 7993ME

Page 2 of 3

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number	'	ខ្ន	Tolerance, g	g	Adjustment, g
2	50 lb.	-1.73	2.3	0.14	
3	50 lb.	-0.32	2.3	0.14	
7	50 lb.	0.79	2.3	0.14	
10	50 lb.	0.64	2.3	0.14	2.75
12	50 lb.	0.73	2.3	0.14	===
14	50 lb.	-1.42	2.3	0.14	
16	50 lb.	-0.69	2.3	0.14	
18	50 lb.	0.59	2.3	0.14	
20	50 lb.	1.49	2.3	0.14	
21	50 lb.	0.13	2.3	0.14	***
23	50 lb.	-0.10	2.3	0.14	
24	50 lb.	0.38	2.3	0.14	2.85
29	50 lb.	0.22	2.3	0.14	
31	50 lb.	0.80	2.3	0.14	3.63
32	50 lb.	-1.00	2.3	0.14	
34	50 lb.	0.01	2.3	0.14	
37	50 lb.	0.46	2.3	0.14	
38	50 lb.	-0.08	2.3	0.14	
40	50 lb.	-1.53	2.3	0.14	
76	50 lb.	0.44	2.3	0.14	
81	50 lb.	0.81	2.3	0.14	
84	50 lb.	0.11	2.3	0.14	
85	50 lb.	-1.41	2.3	0.14	~
86	50 lb.	-0.99	2.3	0.14	
89	50 lb.	1.43	2.3	0.14	
310	50 lb.	-1.19	2.3	0.14	
601	50 lb.	-0.30	2.3	0.14	
2458	50 lb.	0.24	2.3	0.14	
19C2	50 lb.	0.13	2.3	0.14	5.32
1911	50 lb.	1.18	2.3	0.14	
MCI001	50 lb.	0.57	2.3	0.14	-5.38
MCI002	50 lb.	-1.13	2.3	0.14	
MCI006	50 lb.	0.44	2.3	0.14	-2,42
MCI009	50 lb.	-0.15	2.3	0.14	
MCI010	50 lb.	0.39	2.3	0.14	***
MCI012	50 lb.	0.22	2.3	0.14	===



## Maine Scale Company Maine Test Number 7993ME

Page 3 of 3

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number		g	Tolerance, g	g	Adjustment, g
ST15	25 lb.	0.06	1.1	0.71	

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 20.3 °C

Relative Humidity: 40.8 % Pressure: 749.26 mmHg

Data reduction sheets are on file at the laboratory.

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017.

SI conversion: 1-pound avoirdupois equals <u>0.45359237</u> kilograms.

Date Received: December 5, 2022 Date of Test: December 12, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





### DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISSIONER

> Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7994ME

(33) 50 lb. & (3) 25 lb. cast iron grip weights Date of Report: January 27, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North

Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution, and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements conducted by this laboratory are traceable to the International System of Units (S.I.). Standards of the State of Maine are traceable to the National Institute of Standards and Technology through Maine State Test Number 7497ME. Weights were received in good condition.

The mass standards described above were found to have mass values at the time of test as indicated in the following tabulation. Weights received in an out of tolerance condition show a bold value in the "before adjustment" column. Weights received in good condition. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.0 (k=2) representing approximately a 95 % confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

Page 1 of 3



# Maine Scale Company Maine Test Number 7994ME Page 2 of 3

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number		g	Tolerance, g	g	Adjustment, g
1	50 lb.	0.53	2.3	0.14	
6	50 lb.	0.02	2.3	0.14	
11	50 lb.	-1.51	2.3	0.14	
13	50 lb.	0.64	2.3	0.14	-3.50
15	50 lb.	-0.08	2.3	0.14	***
17	50 lb.	0.66	2.3	0.14	5.63
19	50 lb.	-0.39	2.3	0.14	
27	50 lb.	1.94	2.3	0.14	
28	50 lb.	0.59	2.3	0.14	
33	50 lb.	-0.38	2.3	0.14	
35	50 lb.	-0.11	2.3	0.14	
37	50 lb.	-2.02	2.3	0.14	
50	50 lb.	-0.29	2.3	0.14	****
52	50 lb.	-1.59	2.3	0.14	
53	50 lb.	0.66	2.3	0.14	-5.67
54	50 lb.	1.68	2.3	0.14	40 40-40-
56	50 lb.	0.01	2.3	0.14	===
57	50 lb.	1.07	2.3	0.14	
58	50 lb.	1.34	2.3	0.14	
60	50 lb.	0.48	2.3	0.14	-2.52
64	50 lb.	-0.39	2.3	0.14	
71	50 lb.	0.01	2.3	0.14	
73	50 lb.	0.23	2.3	0.14	
74	50 lb.	0.09	2.3	0.14	
75	50 lb.	-0.44	2.3	0.14	*=*
82	50 lb.	-1.83	2.3	0.14	
88	50 lb.	0.73	2.3	0.14	
581	50 lb.	1.01	2.3	0.14	
1913	50 lb.	0.64	2.3	0.14	2.67
2460	50 lb.	0.59	2.3	0.14	2.79
MC1003	50 lb.	0.76	2.3	0.14	===
MCI004	50 lb.	-1.67	2.3	0.14	10-0 th
MCI011	50 lb.	1.03	2.3	0.14	***



### Maine Scale Company Maine Test Number 7994ME

#### Page 3 of 3

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number		g	Tolerance, g	g	Adjustment, g
1	25 lb.	0.44	1.1	0.71	####
2	25 lb.	0.09	1.1	0.71	
3311	25 lb.	0.27	1.1	0.71	4.43

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism. limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 20.4 °C Relative Humidity: 41.2 % Pressure: 746.00 mmHg

Data reduction sheets are on file at the laboratory.

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017.

SI conversion: 1-pound avoirdupois equals <u>0.45359237</u> kilograms.

Date Received: December 5, 2022 Date of Test: December 19, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISSIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7976ME

(21) 50 lb. cast iron grip weights Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution, and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements conducted by this laboratory are traceable to the International System of Units (S.I.). Standards of the State of Maine are traceable to the National Institute of Standards and Technology through Maine State Test Number 7497ME. Weights were received in good condition.

The mass standards described above were found to have mass values at the time of test as indicated in the following tabulation. Weights received in an out of tolerance condition show a bold value in the "before adjustment" column. Weights received in good condition. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.0 (k-2) representing approximately a 95 % confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

Page 1 of 3



## Maine Scale Company Maine Test Number 7976ME

Page 2 of 3

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number		ā	Tolerance, g	g	Adjustment,
		_			g
6	50 lb.	-0.82	2.3	0.14	
7	50 lb.	-1.34	2.3	0.14	
8	50 lb.	0.41	2.3	0.14	-3.50
9	50 lb.	0.14	2.3	0.14	
13	50 lb.	2.02	2.3	0.14	
19	50 lb.	1.54	2.3	0.14	
22	50 lb.	0.94	2.3	0.14	
25	50 lb.	0.65	2.3	0.14	m +++
26	50 lb.	0.97	2.3	0.14	
30	50 lb.	-0.26	2.3	0.14	400
36	50 lb.	1.75	2.3	0.14	
39	50 lb.	0.34	2.3	0.14	
58	50 lb.	-0.11	2.3	0.14	
70	50 lb.	0.39	2.3	0.14	
72	50 lb.	-1.67	2.3	0.14	
78	50 ib.	-1.68	2.3	0.14	
79	50 lb.	0.60	2.3	0.14	
80	50 lb.	1.17	2.3	0.14	
83	50 lb.	-1.51	2.3	0.14	
87	50 lb.	-1.03	2.3	0.14	
2468	50 lb.	0.70	2.3	0.14	***

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 21.0 °C Relative Humidity: 40.6 % Pressure: 762.41 mmHg

Data reduction sheets are on file at the laboratory.



## Maine Scale Company Maine Test Number 7976ME Page 3 of 3

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017.

SI conversion: 1-pound avoirdupois equals <u>0.45359237</u> kilograms.

Date Received: December 21, 2022 Date of Test: December 28, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISSIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7975ME

(50) 1000 lb. Cast Iron Weights & (4) 500 lb. Cast Iron Weights Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution, and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

Standards of the state of Maine are traceable to the National Institute of Standards and Technology through Oklahoma Bureau of Standards test no. OBS 17-1193. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values at the time of test as indicated in the following tabulation. Weights received in an out of tolerance condition show a bold value in the "before adjustment" column. Weights received in good condition. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.0 (k=2.0) representing approximately a 95 % confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

Page 1 of 4

CALIBRATION
NVLAP LAB CODE 200414-0

# Maine Scale Company Maine Test Number 7975ME Page 2 of 4

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number		g	Tolerance, g	g	Adjustment, g
1	1000 lb.	-38.5	45	3.2	
2	1000 lb.	36.1	45	3.2	
3	1000 ІЬ.	6.3	45	3.2	
4	1000 lb.	-32.1	45	3.2	
5	1000 1ь.	40.4	45	3.2	40 M To
6	1000 lb.	-16.6	45	3.2	
7	1000 lb.	41.0	45	3.2	
8	1000 lb.	13.5	45	3.2	
9	1000 lb.	24.9	45	3.2	Do and pla
10	1000 lb.	0.7	45	3.2	
11	1000 lb.	-14.0	45	3.2	
12	1000 lb.	-19.8	45	3.2	nje più sji.
13	1000 lb.	-10.0	45	3.2	
14	1000 lb.	15.6	45	3.2	
15	1000 lb.	-27.9	45	3.2	
16	1000 lb.	-19.2	45	3.2	
60	1000 lb.	6.2	45	3.2	
61	1000 lb.	-12.2	45	3.2	
62	1000 lb.	-19.2	45	3.2	
63	1000 lb.	-35.6	45	3.2	
64	1000 lb.	-19.0	45	3.2	
65	1000 lb.	-36.1	45	3.2	+==
66	1000 lb.	-18.2	45	3.2	
67	1000 lb.	-6.4	45	3.2	
68	1000 lb.	3.6	45	3.2	
69	1000 lb.	12.3	45	3.2	===
70	1000 lb.	4.5	45	3.2	<b>44</b>
71	1000 lb.	-41.5	45	3.2	
72	1000 lb.	31.8	45	3.2	,
73	1000 lb.	-19.4	45	3.2	
0201	1000 lb.	39.4	45	3.2	
0202	1000 lb.	41.5	45	3.2	
0203	1000 lb.	36.0	45	3.2	***
0205	1000 lb.	23.4	45	3.2	



## Maine Scale Company Maine Test Number 7975ME

Page 3 of 4

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number		g	Tolerance, g	g	Adjustment, g
0302	1000 lb.	8.8	45	3.2	
0303	1000 lb.	19.0	45	3.2	
0304	1000 lb.	-8.0	45	3.2	
0305	1000 lb.	-10.1	45	3.2	
0307	1000 lb.	-17.5	45	3.2	
0310	1000 lb.	-5.1	45	3.2	
0311	1000 lb.	-41.4	45	3.2	
0325	1000 lb.	-2.2	45	3.2	
0351	1000 lb.	26.2	45	3.2	***
0352	1000 lb.	6.6	45	3.2	55.2
1002	1000 lb.	13.3	45	3.2	
1006	1000 lb.	2.8	45	3.2	-56.4
1009	1000 lb.	28.4	45	3.2	State State 1989
10004	1000 lb.	0.2	45	3.2	72.1
366004	1000 lb.	-40.2	45	3.2	
366008	1000 lb.	-32.0	45	3.2	
75	500 lb.	-1.1	23	2.1	***
76	500 lb.	-9.4	23	2.1	
77	500 lb,	-19.8	23	2.1	
79	500 lb.	-14.9	23	2.1	***

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 20.7 °C to 20.9 °C Relative Humidity: 40.3 % to 40.8 % Pressure: 756.36 mmHg to 760.90 mmHg

Data reduction sheets are on file at the laboratory.



## Maine Scale Company Maine Test Number 7975ME Page 4 of 4

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017.

SI conversion: 1-pound avoirdupois equals <u>0.45359237</u> kilograms.

Date Received: December 13, 2022 & December 28, 2022 Dates of Test: December 27, 2022 & December 30, 2022

Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISSIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7976ME

(21) 50 lb. cast iron grip weights Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution, and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements conducted by this laboratory are traceable to the International System of Units (S.I.). Standards of the State of Maine are traceable to the National Institute of Standards and Technology through Maine State Test Number 7497ME. Weights were received in good condition.

The mass standards described above were found to have mass values at the time of test as indicated in the following tabulation. Weights received in an out of tolerance condition show a bold value in the "before adjustment" column. Weights received in good condition. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy: (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.0 (k=2) representing approximately a 95 % confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

Page 1 of 3



## Maine Scale Company Maine Test Number 7976ME

Page 2 of 3

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number		g	Tolerance, g	g	Adjustment,
					g
6	50 lb.	-0.82	2.3	0.14	720
7	50 lb.	-1.34	2.3	0.14	
8	50 lb.	0.41	2.3	0.14	-3.50
9	50 lb.	0.14	2.3	0.14	
13	50 lb.	2.02	2.3	0.14	
19	50 lb.	1.54	2.3	0.14	
22	50 lb.	0.94	2.3	0.14	ph size
25	50 lb.	0.65	2.3	0.14	
26	50 lb.	0.97	2.3	0.14	
30	50 lb.	-0.26	2.3	0.14	
36	50 lb.	1.75	2.3	0.14	***
39	50 lb.	0.34	2.3	0.14	
58	50 lb.	-0.11	2.3	0.14	===
70	50 lb.	0.39	2.3	0.14	
72	50 lb.	-1.67	2.3	0.14	
78	50 lb.	-1.68	2.3	0.14	
79	50 lb.	0.60	2.3	0.14	
80	50 lb.	1.17	2.3	0.14	
83	50 lb.	-1.51	2.3	0.14	
87	50 lb.	-1.03	2.3	0.14	
2468	50 lb.	0.70	2.3	0.14	

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 21.0 °C Relative Humidity: 40.6 % Pressure: 762.41 mmHg

Data reduction sheets are on file at the laboratory.



## Maine Scale Company Maine Test Number 7976ME Page 3 of 3

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017.

SI conversion: 1-pound avoirdupois equals <u>0.45359237</u> kilograms.

Date Received: December 21, 2022 Date of Test: December 28, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.



# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISSIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7976ME

(21) 50 lb. cast iron grip weights Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington St North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution, and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements conducted by this laboratory are traceable to the International System of Units (S.I.). Standards of the State of Maine are traceable to the National Institute of Standards and Technology through Maine State Test Number 7497ME. Weights were received in good condition.

The mass standards described above were found to have mass values at the time of test as indicated in the following tabulation. Weights received in an out of tolerance condition show a bold value in the "before adjustment" column. Weights received in good condition. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2.0 (k=2) representing approximately a 95 % confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C.

Page 1 of 3



FAX: (207) 287-7161

## Maine Scale Company Maine Test Number 7976ME

Page 2 of 3

Serial	Nominal	Correction	NIST Class F	Uncertainty	Before
Number		g	Tolerance, g	g	Adjustment,
	'				g
6	50 lb.	-0.82	2.3	0.14	
7	50 lb.	-1.34	2.3	0.14	
8	50 lb.	0.41	2.3	0.14	-3.50
9	50 lb.	0.14	2.3	0.14	
13	50 lb.	2.02	2.3	0.14	′
19	50 lb.	1.54	2.3	0.14	
22	50 lb.	0.94	2.3	0.14	
25	50 lb.	0.65	2.3	0.14	
26	50 lb.	0.97	2.3	0.14	***
30	50 lb.	-0.26	2.3	0.14	
36	50 lb.	1.75	2.3	0.14	
39	50 lb.	0.34	2.3	0.14	
58	50 lb.	-0.11	2.3	0.14	
70	50 lb.	0.39	2.3	0.14	
72	50 lb.	-1.67	2.3	0.14	
78	50 lb.	-1.68	2.3	0.14	
79	50 lb.	0.60	2.3	0.14	
80	50 lb.	1.17	2.3	0.14	<b>元兰</b> 安
83	50 lb.	-1.51	2.3	0.14	
87	50 lb.	-1.03	2.3	0.14	
2468	50 lb.	0.70	2.3	0.14	

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 21.0 °C Relative Humidity: 40.6 % Pressure: 762.41 mmHg

Data reduction sheets are on file at the laboratory.



### Maine Scale Company Maine Test Number 7976ME Page 3 of 3

Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025:2017.

SI conversion: 1-pound avoirdupois equals <u>0.45359237</u> kilograms.

Date Received: December 21, 2022 Date of Test: December 28, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Bradford Bachelder, Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road. Augusta ME.





### DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7977ME

Weight Kit: 10 lb to 0.01 lb S/N: 28619

Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington Street North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution (NIST SOP 8), and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

Standards of the state of Maine are traceable to the National Institute of Standards and Technology through Oregon State test number OR-18-240-C. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values 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. Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025: 2017. Weights received in good condition. SI conversion: 1-pound avoirdupois equals 0.45359237 kilograms.

Nominal & marking	Correction mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
10 lb	173	450	27	
10 lb *	128	450	27	
5 lb	34	230	15	
2 lb	26.7	91	7.4	
2 lb *	27.7	91	7.4	
l lb	31.6	70	5.9	

Page 1 of 3



PHONE: (207) 287-7587

FAX: (207) 287-7161

### Maine Scale Company MAINE TEST NUMBER 7977ME

Page 2 of 3

Nominal & marking	Correction Mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
0.5 lb	14.9	45	5.0	
0.2 lb	8.1	18	1.2	
0.2 lb *	5.5	18	1.2	
0.1 lb	4.27	9.1	0.55	
0.05 lb	1.76	4.5	0.29	
0.02 lb	-0.23	1.8	0.15	
0.02 lb *	0.13	1.8	0.15	
0.01 lb	0.175	1.5	0.098	

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2 (k=2.0) representing approximately a 95% confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

Environmental conditions at time of test:

Temperature: 20.4 °C

Relative Humidity: 41.6 %.

Barometric Pressure: 752.95 mmHg

Data reduction sheets are on file at the laboratory.

Date Received: December 08, 2022 Date of Test: December 15, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.



## Maine Scale Company MAINE TEST NUMBER 7977ME Page 3 of 3

Bradford Bachelder Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7978ME

Weight Kit: 5 lb to 0.001 lb S/N: 54

Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington Street North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution (NIST SOP 8), and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

Standards of the state of Maine are traceable to the National Institute of Standards and Technology through Oregon State test number OR-18-240-C. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values 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. Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025: 2017. Weights received in good condition. SI conversion: 1-pound avoirdupois equals <u>0.45359237</u> kilograms.

Nominal & marking	Correction mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
5 lb	., -15	230	15	
5 lb *	-9	230	15	
5 lb 5*	-10	230	15	
5 lb **	-13	230	15	
5 lb ****	-11	230	15	
1 lb	28.6	70	5.9	
1 lb *	26.6	70	5.9	
1 lb **	29.6	70	5.9	
1 lb ***	25.6	70	5.9	

Page 1 of 3



PHONE: (207) 287-7587

FAX: (207) 287-7161

### Maine Scale Company **MAINE TEST NUMBER 7978ME**

Page 2 of 3

Nominal & marking	Correction mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
1 lb ****	28.6	70	5.9	
0.5 lb	24.9	45	5.0	
0.2 lb	3.7	18	1.2	
0.2 lb *	5.3	18	1.2	
0.1 lb	2.67	9.1	0.55	
0.05 lb	-0.08	4.5	0.29	
0.02 lb	0.20	1.8	0.15	
0.02 lb *	-0.33	1.8	0.15	
0.01 lb	0.535	1.5	0.098	
0.005 lb	1.014	1.2	0.083	=**
0.002 lb	0.566	0.87	0.067	
0.002 lb *	0.526	0.87	0.067	
0.001 lb	0.385	0.70	0.049	

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy: (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2 (k=2.0) representing approximately a 95% confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism. limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 21.1 °C

PHONE. (207) 287-7587

Relative Humidity: 40.2 %.

Barometric Pressure: 763.55 mmHg

Data reduction sheets are on file at the laboratory.



## Maine Scale Company MAINE TEST NUMBER 7978ME Page 3 of 3

Date Received: December 8, 2022 Date of Test: December 20, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

> Bradford Bachelder Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7979ME

Weight Kit: 5 lb to 0.001 lb S/N: 6013

Date of Report: January 20, 2023

SUBMITTED BY: Maine Scale Company 4 Washington Street North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution (NIST SOP 8), and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

Standards of the state of Maine are traceable to the National Institute of Standards and Technology through Oregon State test number OR-18-240-C. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values 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. Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025: 2017. Weights received in good condition. SI conversion: 1-pound avoirdupois equals <u>0.45359237</u> kilograms.

Nominal & marking	Correction my	NIST Class F Tolerance mg	Uncertainty ing	Before Adjustment
5 lb	33	230	15	
5 lb *	31	230	15	
5 lb 5*	-84	230	15	
5 lb **	51	230	15	
5 lb ****	53	230	15	
l lb	9.6	70	5.9	
1 lb *	49.6	70	5.9	
1 lb **	28.6	70	5.9	
1 lb ***	9.6	70	5.9	

Page 1 of 3



PHONE: (207) 287-7587

FAX: (207) 287-7161

https://stateofmaine-my.sharepoint.com/personal/bradford\_bachelder\_maine\_gov/Documents/OldHomeDirectory/Metrology Lab/CALIBRATIONS/Calibration 2022/Mass III Av Small/Maine Scale\_6013\_7979ME.doc

### Maine Scale Company MAINE TEST NUMBER 7979ME

Page 2 of 3

Nominal & marking	Correction mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
1 lb ****	0.6	70	5.9	
0.5 lb	12.9	45	5.0	
0.2 lb	7.3	18	1.2	
0.2 lb *	7.8	18	1.2	
0.1 lb	0.55	9.1	0.55	
0.05 lb	0.95	4.5	0.29	
0.02 lb	0.61	1.8	0.15	1 <del>+</del>
0.02 lb *	0.73	1.8	0.15	
0.01 lb	0.685	1.5	0.098	
0.005 lb	-0.787	1.2	0.083	
0.002 lb	0.756	0.87	0.067	
0.002 lb *	-0.043	0.87	0.067	
0.001 lb	0.265	0.70	0.049	

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy: (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2 (k=2.0) representing approximately a 95% confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 20.6 °C Relative Humidity: 41.3 %.

Barometric Pressure: 752.81 mmHg

Data reduction sheets are on file at the laboratory.



## Maine Scale Company MAINE TEST NUMBER 7979ME Page 3 of 3

Date Received: December 8, 2022 Date of Test: December 15, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

> Bradford Bachelder Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.





# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7980ME

Weight Kit: 10 lb to 0.001 lb S/N: 9WCB

Date of Report: January 20, 2023

SUBMITTED BY: MaineCal, Inc. 4 Washington Street North Auburn, ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution (NIST SOP 8), and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

Standards of the state of Maine are traceable to the National Institute of Standards and Technology through Oregon State test number OR-18-240-C. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values 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. Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025: 2017. Weights received in good condition. SI conversion: 1-pound avoirdupois equals 0.45359237 kilograms.

Nominal & marking	Correction mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
10 lb	174	450	27	
5 lb *	99	230	15	
2 lb	16.7	91	7.4	
2 lb *	24.7	91	7.4	
1 lb	19.6	70	5.9	

Page 1 of 3



PHONE, (207) 287-7587

FAX: (207) 287-7161

### MaineCal, Inc. MAINE TEST NUMBER 7980ME

Page 2 of 3

Nominal & marking	Correction mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
0.5 lb	14.9	45	5.0	
0.2 lb	7.0	18	1.2	
0.2 lb *	5.9	18	1.2	
0.1 lb	4.01	9.1	0.55	
0.05 lb	2.39	4.5	0.29	
0.02 lb	0.54	1.8	0.15	
0.02 lb *	0.31	1.8	0.15	
0.01 lb	0.495	1.5	0.098	
0.005 lb	0.594	1.2	0.083	
0.002 lb	0.386	0.87	0.067	
0.002 lb *	0.096	0.87	0.067	The state of the s
0.001 lb	0.345	0.70	0.049	

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2 (k=2.0) representing approximately a 95% confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 20.5 °C Relative Humidity: 41.2 %.

Barometric Pressure: 752.74 mmHg

Data reduction sheets are on file at the laboratory.



## MaineCal, Inc. MAINE TEST NUMBER 7980ME Page 3 of 3

Date Received: December 8, 2022 Date of Test: December 15, 2022 Calibration Due: December 31, 2023 Calibration by: Bradford Bachelder

> Bradford Bachelder Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NIST. The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.



# DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY DIVISION OF QUALITY ASSURANCE AND REGULATIONS 28 STATE HOUSE STATION AUGUSTA, MAINE 04333-0028

Amanda E. Beal COMMISIONER

Celeste Poulin Director

## REPORT OF CALIBRATION MAINE TEST NUMBER 7981ME

Weight Kit: 5 lb to 0.001 lb S/N: MCI160

Date of Report: January 20, 2023

SUBMITTED BY: MaineCal, Inc. 4 Washington Street North Auburn. ME 04210

The mass standards described above have been compared with standards of the State of Maine, by modified substitution (NIST SOP 8), and were found to be, or adjusted to within NIST Handbook 105-1 Class "F" tolerances.

Standards of the state of Maine are traceable to the National Institute of Standards and Technology through Oregon State test number OR-18-240-C. The Maine Laboratory is recognized by NIST, OWM, under the "Laboratory Metrology Program", at Mass Echelon III for 2023. Measurements by this laboratory are traceable to the National Standards at NIST.

The mass standards described above were found to have mass values 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. Calibrations performed by this laboratory comply with the requirements of ISO/IEC 17025: 2017. Weights received in good condition. SI conversion: 1-pound avoirdupois equals 0.45359237 kilograms.

Nominal & marking	Correction mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
5 lb	94	230	15	
5 lb *	84	230	15	
5 lb 5*	105	230	15	
5 lb **	101	230	15	
5 lb ****	102	230	15	
1 lb	18.6	70	5.9	
1 lb *	19.6	70	5.9	
1 lb **	22.6	70	5.9	***
1 lb ***	25.6	70	5.9	

Page 1 of 3



PHONE: (207) 287-7587

FAX: (207) 287-7161

### MaineCal, Inc. MAINE TEST NUMBER 7981ME

Page 2 of 3

Nominal & marking	Correction mg	NIST Class F Tolerance mg	Uncertainty mg	Before Adjustment
1 lb ****	28.6	70	5.9	
0.5 lb	15.9	45	5.0	
0.2 lb	7.9	18	1.2	# W 4
0.2 lb *	7.7	18	1.2	
0.1 lb	4.07	9.1	0.55	
0.05 lb	2.20	4.5	0.29	
0.02 lb	-0.05	1.8	0.15	
0.02 lb *	0.05	1.8	0.15	
0.01 lb	0.565	1.5	0.098	
0.005 lb	0.645	1.2	0.083	
0.002 lb	0.156	0.87	0.067	
0.001 lb	0.135	0.70	0.067	
0.001 lb *	0.415	0.70	0.049	

The uncertainties shown with reported values are calculated on the conventional mass values and expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic errors relative to the reference standard and procedure used, including bias, 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 2 (k=2.0) representing approximately a 95% confidence level. All mass values have been determined as "conventional mass" with respect to stainless steel with a density of 8.0 g/cm<sup>3</sup> at 20 °C. The combined measurement uncertainty and measurement result have been taken in to account when issuing statements of compliance.

Magnetism, Density, & Surface Finish: The calibration performed did not include testing to determine whether the test items met the maximum susceptibility requirements for magnetism, limits for density, or maximum values for surface finish. Where applicable, our laboratory uses an assumed density which is provided by the client or weight manufacturer. It is the responsibility of the requestor of the calibration to select classifications acceptable to their needs.

Environmental conditions at time of test:

Temperature: 20.6 °C Relative Humidity: 41.3 %.

Barometric Pressure: 752.81 mmHg

Data reduction sheets are on file at the laboratory.



## MaineCal, Inc. MAINE TEST NUMBER 7981ME Page 3 of 3

Date Received: December 8, 2022 Date of Test: December 20, 2022 Calibration Duc: December 31, 2023 Calibration by: Bradford Bachelder

> Bradford Bachelder Metrologist

This report may not be reproduced, except in full, without written permission from this laboratory. This report must not be used to claim product certification, approval, or endorsement by NIST, The State of Maine, or any other state or federal government agency. Calibrations performed at 333 Cony Road, Augusta ME.