

South Dakota Department of Public Safety
Office of Weights and Measures
Metrology Lab
 Lab: 1500 N Garfield – E. Truck Bypass Phone: 605-773-3170
 Office: 118 West Capitol Avenue Phone: 605-773-3697
 Pierre SD 57501

REPORT OF CALIBRATION

LAB TEST NUMBER: MP3693
 DATE OF REPORT: 02/08/2017
 DATE RECEIVED: 02/01/2017
 DATE OF TEST: 02/06-07/2017

Submitted By: Capital Scale Company
Contact: Travis Will
Mailing Address: 3021 Valley Forge Dr
City, State, Zip: Bismarck, ND 58503
Phone: 701-255-1556
S/A Number: 61

Standards Submitted:
 20 - 1000 lb weights
 71 - 50 lb weights
 2 - 2000 lb carts
 4 weight kits

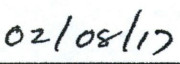
Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard and the standard uncertainty for the measurement process. The combined standard uncertainty is multiplied by a coverage factor *k* to provide an expanded uncertainty which defines an interval having a level of confidence of approximately 95 percent. The expanded uncertainty presented in this report is consistent with the 1995 ISO/IEC Guide to the Expression of Uncertainty in Measurement. The expanded uncertainty is not to be confused with a tolerance limit for the user during application.

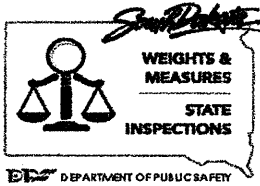
Traceability statement:
 The Standards of the SD Metrology Laboratory used for comparison are traceable to the International System of Units (SI) through the National Institute of Standards and Technology. The laboratory test number identified above is the unique report number to be used in referencing measurement traceability for artifacts identified in this report only.

This document does not represent or imply endorsement by NIST Office of Weights and Measures or any agency of the State and/or national governments. The reported test values relate only to the observations made at the time and conditions of the test. This report may not be reproduced, except in full without the written approval of this laboratory. The client must not use this document to claim product endorsement by this laboratory.


Ron Peterson, Metrologist




Date



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Lab: 1500 N Garfield – E. Truck Bypass Phone: 605-773-3170
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Pierre SD 57501

Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/07/17
Manufacturer:	Unknown	Condition of Cart:	GOOD
Serial Number:	Unknown	Temperature (c):	20.0
Test Method Used:	SOP 33 Calibrations of Weight Carts, Jan 2016	Humidity:	40.0%
Nominal (lb):	2000	Pressure (mm/Hg):	712.7
Tolerance (lb):	0.50		

The values reported below relate only to those observations made at the time and conditions of the test. This test report, so numbered, may not be reproduced, except in full, without approval of the laboratory.

As Found (lb)	As Left (lb)	Uncertainty-lb. (k=)
-2.63	0.05	0.20

The weight cart was allowed to come to environmental equilibrium in the laboratory prior to calibration. The weight cart was adjusted, as needed and noted above, as close as possible to zero error. All fluid levels must be maintained as close to reference levels as possible during use. Any maintenance, repairs or damage to weight cart or its components will likely result in an out-of-tolerance condition; therefore, maintenance or replacement of components such as batteries, tires, filters, etc. will require calibration of the weight cart prior to subsequent use.

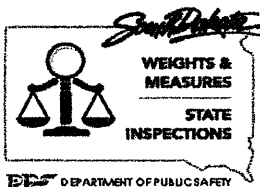
Test equipment used include recently calibrated weights and a Sartorius PR 6246/33 load cell.

The above weight cart was compared with standards of the State of South Dakota, which are traceable the National Institute of Standards and Technology(NIST) Weights and Measures Division. The assigned test number provides documented evidence for measurement traceability.

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02/08/2017

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Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/07/17
Manufacturer:	Unknown	Condition of Cart:	GOOD
Serial Number:	SN 541094	Temperature (c):	20.0
Test Method Used:	SOP 33 Calibrations of Weight Carts, Jan 2016	Humidity:	40.0%
Nominal (lb):	2000	Pressure (mm/Hg):	712.7
Tolerance (lb):	0.50		

The values reported below relate only to those observations made at the time and conditions of the test. This test report, so numbered, may not be reproduced, except in full, without approval of the laboratory.

As Found (lb)	As Left (lb)	Uncertainty-lb. (k=)
0.00	0.00	0.20

The weight cart was allowed to come to environmental equilibrium in the laboratory prior to calibration. The weight cart was adjusted, as needed and noted above, as close as possible to zero error. All fluid levels must be maintained as close to reference levels as possible during use. Any maintenance, repairs or damage to weight cart or its components will likely result in an out-of-tolerance condition; therefore, maintenance or replacement of components such as batteries, tires, filters, etc. will require calibration of the weight cart prior to subsequent use.

Test equipment used include recently calibrated weights and a Sartorius PR 6246/33 load cell.

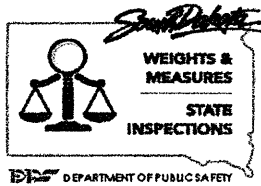
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Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/07/17
Artifacts Submitted	1000 lb weights	Condition of Weights:	GOOD
		Temperature (c):	20.1
Test Method Used:	SOP 8/ MODIFIED SUB, Jun 2015	Humidity:	47
Equipment Used:	Russell Balance/ Vaisala PTU301	Pressure (mm/Hg):	712.1

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight.

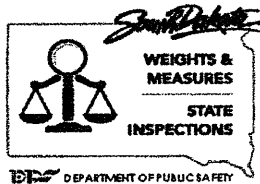
Standards Used: SD Lab 1000 lb and/or 500 lb Working Standards.

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Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	k
1000 lb	13.10	-0.078 lb -35.6 g	0.002 lb 0.9 g	45 g	5.9 g	2.04
1000 lb	13.11	-0.063 lb -28.8 g	0.001 lb 0.3 g	45 g	5.9 g	2.04
1000 lb	13.12	-0.011 lb -5.2 g	-0.011 lb -5.2 g	45 g	5.9 g	2.04
1000 lb	13.13	-0.052 lb -23.5 g	0.000 lb -0.1 g	45 g	5.9 g	2.04
1000 lb	13.14	-0.072 lb -32.4 g	0.002 lb 1.0 g	45 g	5.9 g	2.04
1000 lb	13.15	-0.056 lb -25.3 g	0.003 lb 1.2 g	45 g	5.9 g	2.04
1000 lb	13.16	-0.074 lb -33.4 g	-0.001 lb -0.4 g	45 g	5.9 g	2.04
1000 lb	13.17	-0.046 lb -21.1 g	-0.046 lb -21.1 g	45 g	5.9 g	2.04
1000 lb	13.18	-0.025 lb -11.3 g	-0.025 lb -11.3 g	45 g	5.9 g	2.04
1000 lb	13.19	-0.015 lb -6.8 g	-0.015 lb -6.8 g	45 g	5.9 g	2.04
1000 lb	13.20	-0.030 lb -13.5 g	-0.030 lb -13.5 g	45 g	5.9 g	2.04
1000 lb	13.21	-0.004 lb -2.0 g	-0.004 lb -2.0 g	45 g	5.9 g	2.04
1000 lb	13.22	-0.033 lb -15.0 g	-0.033 lb -15.0 g	45 g	5.9 g	2.04
1000 lb	13.23	-0.021 lb -9.5 g	-0.021 lb -9.5 g	45 g	5.9 g	2.04
1000 lb	13.24	-0.032 lb -14.5 g	-0.032 lb -14.5 g	45 g	5.9 g	2.04
1000 lb	13.25	-0.055 lb -24.9 g	0.000 lb -0.2 g	45 g	5.9 g	2.04
1000 lb	13.26	-0.050 lb -22.5 g	-0.050 lb -22.5 g	45 g	5.9 g	2.04
1000 lb	13.27	-0.042 lb -19.1 g	-0.042 lb -19.1 g	45 g	5.9 g	2.04
1000 lb	13.28	-0.024 lb -11.1 g	-0.024 lb -11.1 g	45 g	5.9 g	2.04
1000 lb	13.29	-0.022 lb -9.8 g	-0.022 lb -9.8 g	45 g	5.9 g	2.04


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Pierre SD 57501


Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/06-07/2017
Artifacts Submitted	50 lb weights	Condition of Weights:	GOOD
		Temperature (c):	20.2
Test Method Used:	SOP 8/ MODIFIED SUB, Jun 2015	Humidity:	48.6%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	705.4

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight.

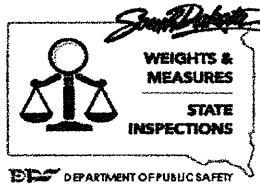
Standards Used: SD Lab Working Standards.

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Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	k
50 lb	1	-1649 mg	-74 mg	2300 mg	283 mg	2.04
50 lb	2	591 mg	591 mg	2300 mg	283 mg	2.04
50 lb	4	-1114 mg	-1114 mg	2300 mg	283 mg	2.04
50 lb	6	-824 mg	-824 mg	2300 mg	283 mg	2.04
50 lb	7	891 mg	891 mg	2300 mg	283 mg	2.04
50 lb	8	-1339 mg	-1339 mg	2300 mg	283 mg	2.04
50 lb	10	-1789 mg	-39 mg	2300 mg	283 mg	2.04
50 lb	14	-1619 mg	-59 mg	2300 mg	283 mg	2.04
50 lb	15	-1584 mg	171 mg	2300 mg	283 mg	2.04
50 lb	16	681 mg	681 mg	2300 mg	283 mg	2.04
50 lb	18	1 mg	1 mg	2300 mg	283 mg	2.04
50 lb	20	-1639 mg	-69 mg	2300 mg	283 mg	2.04
50 lb	21	-1439 mg	56 mg	2300 mg	283 mg	2.04
50 lb	22	-394 mg	-394 mg	2300 mg	283 mg	2.04
50 lb	23	471 mg	471 mg	2300 mg	283 mg	2.04
50 lb	24	-324 mg	-324 mg	2300 mg	283 mg	2.04
50 lb	26	256 mg	256 mg	2300 mg	283 mg	2.04
50 lb	27	1346 mg	1346 mg	2300 mg	283 mg	2.04
50 lb	28	-539 mg	-539 mg	2300 mg	283 mg	2.04
50 lb	32	-174 mg	-174 mg	2300 mg	283 mg	2.04
50 lb	33	-149 mg	-149 mg	2300 mg	283 mg	2.04
50 lb	35	-214 mg	-214 mg	2300 mg	283 mg	2.04
50 lb	36	-1184 mg	-1184 mg	2300 mg	283 mg	2.04
50 lb	37	1261 mg	1261 mg	2300 mg	283 mg	2.04
50 lb	39	-1444 mg	-1444 mg	2300 mg	283 mg	2.04


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Pierre SD 57501

Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/06-07/2017
Artifacts Submitted	50 lb weights	Condition of Weights:	GOOD
		Temperature (c):	20.2
Test Method Used:	SOP 8/ MODIFIED SUB, Jun 2015	Humidity:	48.6%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	705.4

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight.

Standards Used: SD Lab Working Standards.

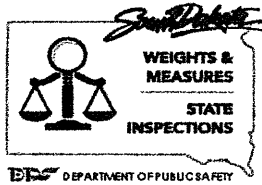
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Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	k
50 lb	40	-459 mg	-459 mg	2300 mg	283 mg	2.04
50 lb	41	61 mg	61 mg	2300 mg	283 mg	2.04
50 lb	43	-1229 mg	-1229 mg	2300 mg	283 mg	2.04
50 lb	44	1466 mg	1466 mg	2300 mg	283 mg	2.04
50 lb	45	656 mg	656 mg	2300 mg	283 mg	2.04
50 lb	47	461 mg	461 mg	2300 mg	283 mg	2.04
50 lb	49	1126 mg	1126 mg	2300 mg	283 mg	2.04
50 lb	50	-1384 mg	-1384 mg	2300 mg	283 mg	2.04
50 lb	51	-864 mg	-864 mg	2300 mg	283 mg	2.04
50 lb	52	-209 mg	-209 mg	2300 mg	283 mg	2.04
50 lb	53	-99 mg	-99 mg	2300 mg	283 mg	2.04
50 lb	54	-614 mg	-614 mg	2300 mg	283 mg	2.04
50 lb	55	1371 mg	1371 mg	2300 mg	283 mg	2.04
50 lb	56	981 mg	981 mg	2300 mg	283 mg	2.04
50 lb	61	671 mg	671 mg	2300 mg	283 mg	2.04
50 lb	62	2081 mg	321 mg	2300 mg	283 mg	2.04
50 lb	65	-379 mg	-379 mg	2300 mg	283 mg	2.04
50 lb	66	-2399 mg	-59 mg	2300 mg	283 mg	2.04
50 lb	70	961 mg	961 mg	2300 mg	283 mg	2.04
50 lb	80	2196 mg	-19 mg	2300 mg	283 mg	2.04


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Office: 118 West Capitol Avenue Phone: 605-773-3697
Pierre SD 57501

Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/06-07/2017
Artifacts Submitted	50 lb weights	Condition of Weights:	GOOD
		Temperature (c):	20.2
Test Method Used:	SOP 8/ MODIFIED SUB, Jun 2015	Humidity:	48.6%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	705.4

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight.

Standards Used: SD Lab Working Standards.

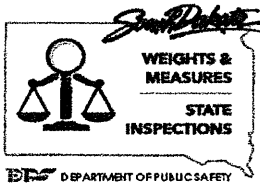
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Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	k
50 lb	A	-189 mg	-189 mg	2300 mg	283 mg	2.04
50 lb	B	-1119 mg	-1119 mg	2300 mg	283 mg	2.04
50 lb	C	1026 mg	1026 mg	2300 mg	283 mg	2.04
50 lb	D	306 mg	306 mg	2300 mg	283 mg	2.04
50 lb	E	911 mg	911 mg	2300 mg	283 mg	2.04
50 lb	F	226 mg	226 mg	2300 mg	283 mg	2.04
50 lb	G	2331 mg	-64 mg	2300 mg	283 mg	2.04
50 lb	H	-1254 mg	-1254 mg	2300 mg	283 mg	2.04
50 lb	I	1611 mg	111 mg	2300 mg	283 mg	2.04
50 lb	J	516 mg	516 mg	2300 mg	283 mg	2.04
50 lb	K	1586 mg	1586 mg	2300 mg	283 mg	2.04
50 lb	L	-1319 mg	-1319 mg	2300 mg	283 mg	2.04
50 lb	M	811 mg	811 mg	2300 mg	283 mg	2.04
50 lb	N	-259 mg	-259 mg	2300 mg	283 mg	2.04
50 lb	O	-2659 mg	121 mg	2300 mg	283 mg	2.04
50 lb	P	-1489 mg	-1489 mg	2300 mg	283 mg	2.04
50 lb	Q	-1564 mg	136 mg	2300 mg	283 mg	2.04
50 lb	R	1391 mg	1391 mg	2300 mg	283 mg	2.04
50 lb	S	1841 mg	71 mg	2300 mg	283 mg	2.04
50 lb	T	1091 mg	1091 mg	2300 mg	283 mg	2.04
50 lb	U	2631 mg	306 mg	2300 mg	283 mg	2.04
50 lb	V	2361 mg	121 mg	2300 mg	283 mg	2.04
50 lb	W	951 mg	951 mg	2300 mg	283 mg	2.04
50 lb	X	706 mg	706 mg	2300 mg	283 mg	2.04
50 lb	Y	-1144 mg	-1144 mg	2300 mg	283 mg	2.04
50 lb	Z	3016 mg	116 mg	2300 mg	283 mg	2.04


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Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/07/17
Artifacts Submitted	20 piece avoirdupois weight kit SN 010813A	Condition of Weights:	GOOD
Test Method Used:	SOP 8/ MODIFIED SUB, Jun 2015	Temperature (c):	20
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Humidity:	49.5
		Pressure (mm/Hg):	711.3

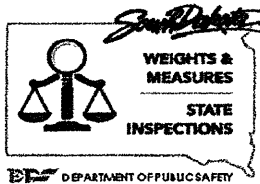
Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight.
Standards Used: SD Lab Working Standards.

The values reported below relate only to those observations made at the time and conditions of the test. This test report, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism and effects of magnetism is not included in the uncertainties.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 lb	1	69 mg	69 mg	230 mg	28 mg	2.04
5 lb	2	68 mg	68 mg	230 mg	28 mg	2.04
5 lb	3	69 mg	69 mg	230 mg	28 mg	2.04
5 lb	4	65 mg	65 mg	230 mg	28 mg	2.04
5 lb	5	65 mg	65 mg	230 mg	28 mg	2.04
1 lb	1	23.6 mg	23.6 mg	70 mg	8.5 mg	2.04
1 lb	2	23.6 mg	23.6 mg	70 mg	8.5 mg	2.04
1 lb	3	26.6 mg	26.6 mg	70 mg	8.5 mg	2.04
1 lb	4	18.6 mg	18.6 mg	70 mg	8.5 mg	2.04
1 lb	5	28.6 mg	28.6 mg	70 mg	8.5 mg	2.04
8 oz		21.1 mg	21.1 mg	45 mg	5.6 mg	2.04
4 oz		8.5 mg	8.5 mg	23 mg	2.8 mg	2.05
2 oz		2.5 mg	2.5 mg	11 mg	1.3 mg	2.05
1 oz		1.74 mg	1.74 mg	5.4 mg	0.66 mg	2.04
1/2 oz		0.91 mg	0.91 mg	2.8 mg	0.34 mg	2.04
1/4 oz		0.50 mg	0.50 mg	1.7 mg	0.21 mg	2.04
1/8 oz		0.55 mg	0.55 mg	1.3 mg	0.16 mg	2.04
1/16 oz		0.15 mg	0.15 mg	1.1 mg	0.14 mg	2.04
1/32 oz		0.18 mg	0.18 mg	0.87 mg	0.14 mg	2.05
1/32 oz		0.28 mg	0.28 mg	0.87 mg	0.14 mg	2.05


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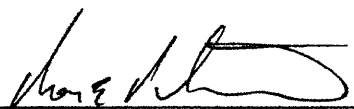
Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/07/17
Artifacts Submitted	13 piece avoirdupois kit	Condition of Weights:	GOOD
	Rice Lake SN 11905A	Temperature (c):	20
Test Method Used:	SOP 8/ MODIFIED SUB, Jun 2015	Humidity:	49.5
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	711.3

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight.

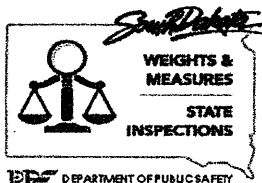
Standards Used: SD Lab Working Standards.

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Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
10 lb		58 mg	58 mg	450 mg	55 mg	2.05
10 lb		93 mg	93 mg	450 mg	55 mg	2.05
5 lb		-88 mg	-88 mg	230 mg	28 mg	2.04
2 lb		33 mg	33 mg	91 mg	11 mg	2.05
2 lb		15 mg	15 mg	91 mg	11 mg	2.05
1 lb		-2.4 mg	-2.4 mg	70 mg	8.5 mg	2.04
8 oz		12.1 mg	12.1 mg	45 mg	5.6 mg	2.04
4 oz		-4.8 mg	-4.8 mg	23 mg	2.8 mg	2.05
1 oz		2.96 mg	2.96 mg	5.4 mg	0.66 mg	2.04
1 oz		2.97 mg	2.97 mg	5.4 mg	0.66 mg	2.04
1 oz		1.62 mg	1.62 mg	5.4 mg	0.66 mg	2.04
1/2 oz		1.33 mg	1.33 mg	2.8 mg	0.34 mg	2.04
1/4 oz		-1.05 mg	-1.05 mg	1.7 mg	0.21 mg	2.04


Ron Peterson, Metrologist

02/08/2017
Date of Report



South Dakota Department of Public Safety
Office of Weights and Measures
Metrology Lab
 Lab: 1500 N Garfield – E. Truck Bypass Phone: 605-773-3170
 Office: 118 West Capitol Avenue Phone: 605-773-3697
 Pierre SD 57501

Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	0207/17
Artifacts Submitted	Rice Lake 14 piece metric kit	Condition of Weights:	GOOD
	SN 11905E	Temperature (c):	20
Test Method Used:	SOP 8/ MODIFIED SUB, Jun 2015	Humidity:	49.5
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	711.3

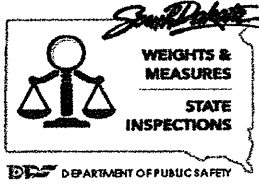
Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight.
 Standards Used: SD Lab Working Standards.
 The values reported below relate only to those observations made at the time and conditions of the test. This test report, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism and effects of magnetism is not included in the uncertainties.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
2 kg		45 mg	45 mg	200 mg	24 mg	2.05
1 kg		35 mg	35 mg	100 mg	12 mg	2.05
500 g		27.7 mg	27.7 mg	70 mg	8.6 mg	2.05
200 g		12.7 mg	12.7 mg	40 mg	5.0 mg	2.05
200 g		17.6 mg	17.6 mg	40 mg	5.0 mg	2.05
100 g		9.6 mg	9.6 mg	20 mg	2.4 mg	2.05
50 g		5.0 mg	5.0 mg	10 mg	1.2 mg	2.05
20 g		2.47 mg	2.47 mg	4 mg	0.49 mg	2.04
20 g		0.89 mg	0.89 mg	4 mg	0.49 mg	2.04
10 g		0.26 mg	0.26 mg	2 mg	0.25 mg	2.04
5 g		0.52 mg	0.52 mg	1.5 mg	0.39 mg	2.05
2 g		0.70 mg	0.70 mg	1.1 mg	0.14 mg	2.05
2 g		0.16 mg	0.16 mg	1.1 mg	0.14 mg	2.05
1 g		0.33 mg	0.33 mg	0.9 mg	0.12 mg	2.05



 Ron Peterson, Metrologist

02/08/2017
Date of Report



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Office of Weights and Measures
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Pierre SD 57501

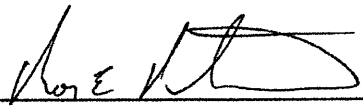
Submitted by:	Capital Scale Company	Report Number:	MP3693
Mailing Address:	3021 Valley Forge Dr	Date Received:	02/01/17
City, State, Zip:	Bismarck, ND 58503	Date tested:	02/07/17
Artifacts Submitted	Rice Lake 14 piece metric kit SN 11905F	Condition of Weights:	GOOD
Test Method Used:	SOP 8/ MODIFIED SUB, Jun 2015	Temperature (c):	20
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Humidity:	49.5
		Pressure (mm/Hg):	711.3

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight.
Standards Used: SD Lab Working Standards.

The values reported below relate only to those observations made at the time and conditions of the test. This test report, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism and effects of magnetism is not included in the uncertainties.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
2 kg		37 mg	37 mg	200 mg	24 mg	2.05
1 kg		34 mg	34 mg	100 mg	12 mg	2.05
500 g		8.7 mg	8.7 mg	70 mg	8.6 mg	2.05
200 g		10.5 mg	10.5 mg	40 mg	5.0 mg	2.05
200 g		13.2 mg	13.2 mg	40 mg	5.0 mg	2.05
100 g		6.7 mg	6.7 mg	20 mg	2.4 mg	2.05
50 g		2.2 mg	2.2 mg	10 mg	1.2 mg	2.05
20 g		1.48 mg	1.48 mg	4 mg	0.49 mg	2.04
20 g		0.43 mg	0.43 mg	4 mg	0.49 mg	2.04
10 g		0.89 mg	0.89 mg	2 mg	0.25 mg	2.04
5 g		0.42 mg	0.42 mg	1.5 mg	0.39 mg	2.05
2 g		0.87 mg	0.87 mg	1.1 mg	0.14 mg	2.05
2 g		0.67 mg	0.67 mg	1.1 mg	0.14 mg	2.05
1 g		0.52 mg	0.52 mg	0.9 mg	0.12 mg	2.05

End of Report



Ron Peterson, Metrologist

02/08/2017
Date of Report

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Metrological Traceability For:

South Dakota

This laboratory has demonstrated evidence of an unbroken chain of metrological traceability of its standards to the international system of units (SI), documented measurement uncertainties, uses documented measurement procedures, successfully completed training and proficiency tests, documented calibration intervals, submitted a quality management system, and demonstrated suitable measurement assurance for the Scope listed on this certificate.

The Office of Weights and Measures Program assesses laboratories to NIST Handbook 143 - Program Handbook for State Weights and Measures Laboratories and ISO/IEC 17025:2005.

Scope

Mass Echelon III
30 kg to 100 mg
1000 lb to 0.001 lb
8 oz to 0.03125 oz
Weight Carts
4000 lb to 2000 lb
Volume Transfer, II
5 gal



2017

Georgia L. Harris, Acting Chief
NIST Office of Weights and Measures

Effective Dates: 2017-01-01 to 2017-12-31