

**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

REPORT OF CALIBRATION

**LAB TEST NUMBER: MP3366
DATE OF REPORT: 02/18/2015
DATE RECEIVED: 02/16/2015
DATE OF TEST: 02/17-18/2015**



Submitted By: Scale Center
Contact: Tim Huber
Mailing Address: 2900 West Russell
City, State, Zip: Sioux Falls, SD 57107
Phone: 605-838-7107 1-800-456-1486
S/A Number:

Standards Submitted:

- | | |
|--------------------------|----------------------------|
| 1 -WEIGHT CARTS | 3 -AVOIRDUPOIS WEIGHT KITS |
| 18 -1000 LB TEST WEIGHTS | 3 -METRIC WEIGHT KITS |
| 50 -50 LB TEST WEIGHTS | |
| 2 -25 LB TEST WEIGHTS | |

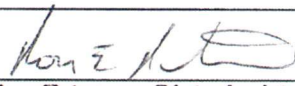
Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard, the standard uncertainty for the measurement process, and a component of uncertainty to account for any observed deviations from values that are less than surveillance limits. The combined 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 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. All established Uncertainties are less than 1/3 applicable Class "F" tolerances.

Traceability statement:

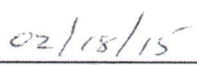
The Standards of the SD Metrology Laboratory are traceable to the International System of Units (SI) through the National Institute of Standards and Technology. The laboratory test number identified above is the unique report number to be used in referencing measurement traceability for artifacts identified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

The artifacts submitted for calibration have been examined by the State of South Dakota and found to be appropriate for the intended use and to be accurate within Class "F" Tolerances as established by the National Institute of Standards and Technology-Weights and Measures Division. Test methods are in accordance with NIST Handbook 145 and NIST IR 6969 and/or NIST IR 7383.

This document does not represent or imply endorsement by NIST Office of Weights and Measures, NMI, 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

Peterbilt

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/17/15
Manufacturer:	Unknown	Condition of Cart:	GOOD
Serial Number:	Engine SN 36202	Temperature (c):	20.0
Test Method Used:	SOP 33/ Double Sub.	Humidity:	40.0%
Nominal (lb):	3000	Pressure (mm/Hg):	716.1
Tolerance (lb):	1.00		

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)
10.31	-0.05	0.13

The weight cart was cleaned and painted (if needed) and 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 were adjusted as close as possible to the full/reference marks. Liquid 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.

This weight cart and associated uncertainties were evaluated against NIST Handbook 105-8 Specifications and Tolerances for Field Standard Weight Carts and was within tolerance at the time of calibration.

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 and have known values. The assigned test number provides documented evidence for measurement traceability.



Ron Peterson, Metrologist

02/18/2015

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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:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/17/15
Artifacts Submitted	1000 lb test weights	Condition of Weights:	GOOD
Manufacturer:	Rice Lake/ Iowa	Temperature (c):	21.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	46.5
Equipment Used:	Russell Balance/ Vaisala PTU301	Pressure (mm/Hg):	719.6

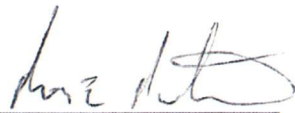
Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

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

The values reported below relate only to those observations made at the time and conditions of the test. This test report, so

Nominal	Serial Number	Correction As Found		Correction As Left		Tolerance	Uncertainty	K
1000 lb	1.10	-0.327 lb	-148 g	-0.002 lb	-1 g	45 g	7 g	2.05
1000 lb	1.09	0.032 lb	15 g	0.032 lb	15 g	45 g	7 g	2.05
1000 lb	2.09	-0.002 lb	-1 g	-0.002 lb	-1 g	45 g	7 g	2.05
1000 lb	3.09	0.021 lb	10 g	0.021 lb	10 g	45 g	7 g	2.05
1000 lb	4.09	0.041 lb	19 g	0.041 lb	19 g	45 g	7 g	2.05
1000 lb	5.09	0.059 lb	27 g	0.059 lb	27 g	45 g	7 g	2.05
1000 lb	6.09	0.016 lb	7 g	0.016 lb	7 g	45 g	7 g	2.05
1000 lb	7.09	0.022 lb	10 g	0.022 lb	10 g	45 g	7 g	2.05
1000 lb	8.09	0.017 lb	8 g	0.017 lb	8 g	45 g	7 g	2.05
1000 lb	9.09	0.091 lb	41 g	-0.001 lb	-1 g	45 g	7 g	2.05
1000 lb	10.09	0.009 lb	4 g	0.009 lb	4 g	45 g	7 g	2.05
1000 lb	11.09	0.025 lb	11 g	0.025 lb	11 g	45 g	7 g	2.05
1000 lb	12.09	0.062 lb	28 g	0.062 lb	28 g	45 g	7 g	2.05
1000 lb	13.09	0.076 lb	34 g	0.076 lb	34 g	45 g	7 g	2.05
1000 lb	14.09	0.048 lb	22 g	0.048 lb	22 g	45 g	7 g	2.05
1000 lb	15.09	0.044 lb	20 g	0.044 lb	20 g	45 g	7 g	2.05
1000 lb	16.09	0.009 lb	4 g	0.009 lb	4 g	45 g	7 g	2.05
1000 lb	17.09	0.060 lb	27 g	0.060 lb	27 g	45 g	7 g	2.05



Ron Peterson, Metrologist

02/18/2015

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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:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/17/15
Artifacts Submitted	50 lb Test Weights	Condition of Weights:	GOOD
Manufacturer:	Minnesota	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47.8%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	716.1


Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD Lab 50 lb and/or 25 lb 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

Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	K
50 lb	A	581 mg	581 mg	2300 mg	282 mg	2.08
50 lb	D	-634 mg	-634 mg	2300 mg	282 mg	2.08
50 lb	E	-194 mg	-194 mg	2300 mg	282 mg	2.08
50 lb	F	-734 mg	-734 mg	2300 mg	282 mg	2.08
50 lb	G	-984 mg	-984 mg	2300 mg	282 mg	2.08
50 lb	H	-1004 mg	-1004 mg	2300 mg	282 mg	2.08
50 lb	I	-799 mg	-799 mg	2300 mg	282 mg	2.08
50 lb	J	-584 mg	-584 mg	2300 mg	282 mg	2.08
50 lb	K	-1139 mg	-1139 mg	2300 mg	282 mg	2.08
50 lb	L	-379 mg	-379 mg	2300 mg	282 mg	2.08
50 lb	N	-734 mg	-734 mg	2300 mg	282 mg	2.08
50 lb	O	-924 mg	-924 mg	2300 mg	282 mg	2.08
50 lb	P	-904 mg	-904 mg	2300 mg	282 mg	2.08
50 lb	Q	-569 mg	-569 mg	2300 mg	282 mg	2.08
50 lb	R	-449 mg	-449 mg	2300 mg	282 mg	2.08
50 lb	S	-369 mg	-369 mg	2300 mg	282 mg	2.08
50 lb	SC 17	-1064 mg	-1064 mg	2300 mg	282 mg	2.08
50 lb	SC 18	136 mg	136 mg	2300 mg	282 mg	2.08
50 lb	SC 46	-469 mg	-469 mg	2300 mg	282 mg	2.08
50 lb	T	-599 mg	-599 mg	2300 mg	282 mg	2.08


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02/18/2015
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SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/17-18/2015
Artifacts Submitted	50 lb Test Weights	Condition of Weights:	GOOD
Manufacturer:	Toledo	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47.8%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	716.1

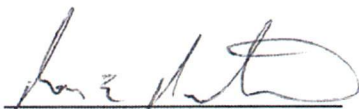
Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD Lab 50 lb and/or 25 lb 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

Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	K
50 lb	SC 005	361 mg	361 mg	2300 mg	282 mg	2.08
50 lb	SC 50.003	-769 mg	-769 mg	2300 mg	282 mg	2.08
50 lb	SC 50.005	-1754 mg	31 mg	2300 mg	282 mg	2.08
50 lb	SC 50.013	196 mg	196 mg	2300 mg	282 mg	2.08
50 lb	SCH 50.018	191 mg	191 mg	2300 mg	282 mg	2.08
50 lb	SCH 50.020	21 mg	21 mg	2300 mg	282 mg	2.08
50 lb	TS 011	696 mg	696 mg	2300 mg	282 mg	2.08
50 lb	TS 051	-454 mg	-454 mg	2300 mg	282 mg	2.08
50 lb	TS 052	1171 mg	1171 mg	2300 mg	282 mg	2.08
50 lb	TS 093	196 mg	196 mg	2300 mg	282 mg	2.08


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Office: 118 West Capitol Avenue Phone: 605-773-3697

Pierre, SD 57501

Submitted by:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/17-18/2015
Artifacts Submitted	50 lb Test Weights	Condition of Weights:	GOOD
Manufacturer:	Unknown	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47.8%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	716.1

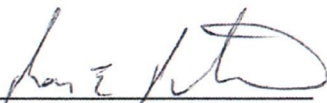
Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD Lab 50 lb and/or 25 lb Working Standards.

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Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	K
50 lb	35	176 mg	176 mg	2300 mg	282 mg	2.08
50 lb	MA 206	596 mg	596 mg	2300 mg	282 mg	2.08
50 lb	MA 206	-1354 mg	-1354 mg	2300 mg	282 mg	2.08
50 lb	SC 021	-189 mg	-189 mg	2300 mg	282 mg	2.08
50 lb	SC 025	-184 mg	-184 mg	2300 mg	282 mg	2.08
50 lb	SC 026	391 mg	391 mg	2300 mg	282 mg	2.08
50 lb	SC 03	286 mg	286 mg	2300 mg	282 mg	2.08
50 lb	SC 035	266 mg	266 mg	2300 mg	282 mg	2.08
50 lb	SC 101	-2404 mg	31 mg	2300 mg	282 mg	2.08
50 lb	SC 102	-874 mg	-874 mg	2300 mg	282 mg	2.08
50 lb	SC 105	-2054 mg	16 mg	2300 mg	282 mg	2.08
50 lb	SC 106	256 mg	256 mg	2300 mg	282 mg	2.08
50 lb	SC 107	-329 mg	-329 mg	2300 mg	282 mg	2.08
50 lb	SC 108	86 mg	86 mg	2300 mg	282 mg	2.08
50 lb	SC 110	-989 mg	-989 mg	2300 mg	282 mg	2.08
50 lb	Sc 164	-869 mg	-869 mg	2300 mg	282 mg	2.08
50 lb	SC 189	1011 mg	1011 mg	2300 mg	282 mg	2.08
50 lb	SC 25.1	-1224 mg	-399 mg	2300 mg	282 mg	2.08
50 lb	SC B	1951 mg	41 mg	2300 mg	282 mg	2.08
50 lb	SC TD-1	-724 mg	-724 mg	2300 mg	282 mg	2.08
50 lb	TS 053	661 mg	661 mg	2300 mg	282 mg	2.08
50 lb	TS 058	-59 mg	-59 mg	2300 mg	282 mg	2.08


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SOUTH DAKOTA WEIGHTS AND MEASURES / METROLOGY LAB

Lab: 1500 N. Garfield-E. Truck Bypass Phone: 605-773-3170

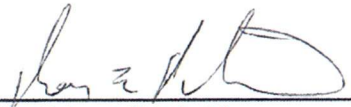
Office: 118 West Capitol Avenue Phone: 605-773-3697

Pierre, SD 57501

Submitted by:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/18/15
Artifacts Submitted	Advoirdupois 21 piece weight kit	Condition of Weights:	GOOD
Serial Number:	MAS-2A86	Temperature (c):	20.3
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	49.7
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	722.4

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.
 Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.
 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.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 lb	1	64 mg	64 mg	230 mg	28 mg	2.07
5 lb	2	-200 mg	-200 mg	230 mg	28 mg	2.07
5 lb	3	75 mg	75 mg	230 mg	28 mg	2.07
5 lb	4	60 mg	60 mg	230 mg	28 mg	2.07
5 lb	5	43 mg	43 mg	230 mg	28 mg	2.07
1 lb	1	-4.8 mg	-4.8 mg	70 mg	8.5 mg	2.06
1 lb	2	8.2 mg	8.2 mg	70 mg	8.5 mg	2.06
1 lb	3	20.2 mg	20.2 mg	70 mg	8.5 mg	2.06
1 lb	4	-1.8 mg	-1.8 mg	70 mg	8.5 mg	2.06
1 lb	5	-19.8 mg	-19.8 mg	70 mg	8.5 mg	2.06
8 oz		26.8 mg	26.8 mg	45 mg	5.4 mg	2.07
4 oz		6.4 mg	6.4 mg	23 mg	2.8 mg	2.08
2 oz		4.5 mg	4.5 mg	11 mg	1.3 mg	2.08
1 oz		1.60 mg	1.60 mg	5.4 mg	0.65 mg	2.07
1 oz	Toledo	7.35 mg	7.35 mg	5.4 mg	0.65 mg	2.07
1/2 oz		0.63 mg	0.63 mg	2.8 mg	0.34 mg	2.07
1/4 oz		-0.15 mg	-0.15 mg	1.7 mg	0.21 mg	2.07
1/8 oz		0.09 mg	0.09 mg	1.3 mg	0.16 mg	2.07
1/16 oz		0.27 mg	0.27 mg	1.1 mg	0.14 mg	2.07
1/32 oz		0.35 mg	0.35 mg	0.87 mg	0.13 mg	2.07
1/32 oz		0.18 mg	0.18 mg	0.87 mg	0.13 mg	2.07



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SOUTH DAKOTA WEIGHTS AND MEASURES / METROLOGY LAB

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Pierre, SD 57501


Submitted by:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/18/15
Artifacts Submitted	Advoirdupois 22 piece weight kit	Condition of Weights:	GOOD
Serial Number	031012A	Temperature (c):	20.3
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	49.7
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	722.4

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.
 Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD Lab Working Standards.

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Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 lb	1	111 mg	111 mg	230 mg	28 mg	2.07
5 lb	2	48 mg	48 mg	230 mg	28 mg	2.07
5 lb	3	52 mg	52 mg	230 mg	28 mg	2.07
5 lb	4	81 mg	81 mg	230 mg	28 mg	2.07
5 lb	5	49 mg	49 mg	230 mg	28 mg	2.07
1 lb	1	23.2 mg	23.2 mg	70 mg	8.5 mg	2.06
1 lb	2	23.2 mg	23.2 mg	70 mg	8.5 mg	2.06
1 lb	3	13.2 mg	13.2 mg	70 mg	8.5 mg	2.06
1 lb	4	21.2 mg	21.2 mg	70 mg	8.5 mg	2.06
1 lb	5	11.2 mg	11.2 mg	70 mg	8.5 mg	2.06
8 oz		11.8 mg	11.8 mg	45 mg	5.4 mg	2.07
0.2 lb		8.9 mg	8.9 mg	18 mg	2.2 mg	2.08
0.2 lb		7.1 mg	7.1 mg	18 mg	2.2 mg	2.08
0.1 lb		4.9 mg	4.9 mg	9.1 mg	1.1 mg	2.08
0.05 lb		2.43 mg	2.43 mg	4.5 mg	0.55 mg	2.08
0.02 lb		0.60 mg	0.60 mg	1.8 mg	0.22 mg	2.08
0.02 lb		0.21 mg	0.21 mg	1.8 mg	0.22 mg	2.08
0.01 lb		0.41 mg	0.41 mg	1.5 mg	0.19 mg	2.08
0.005 lb		0.66 mg	0.66 mg	1.2 mg	0.16 mg	2.08
0.002 lb		0.57 mg	0.57 mg	0.87 mg	0.11 mg	2.08
0.002 lb		0.40 mg	0.40 mg	0.87 mg	0.11 mg	2.08
0.001 lb		0.36 mg	0.36 mg	0.70 mg	0.10 mg	2.08



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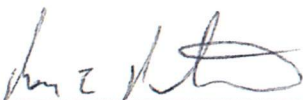
Submitted by:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/18/15
Artifacts Submitted	Advoirdupois 18 piece weight kit	Condition of Weights:	GOOD
Serial Number:	SC-4-87	Temperature (c):	20.3
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	49.7
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	722.4

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.
 Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

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	1	35 mg	35 mg	450 mg	54 mg	2.08
10 lb	2	-70 mg	-70 mg	450 mg	54 mg	2.08
5 lb		34 mg	34 mg	230 mg	28 mg	2.07
1 lb	1	-25.8 mg	-25.8 mg	70 mg	8.5 mg	2.06
1 lb	2	-23.8 mg	-23.8 mg	70 mg	8.5 mg	2.06
1 lb	3	6.2 mg	6.2 mg	70 mg	8.5 mg	2.06
1 lb	4	-19.8 mg	-19.8 mg	70 mg	8.5 mg	2.06
1 lb	5	18.2 mg	18.2 mg	70 mg	8.5 mg	2.06
4 oz	1	4.0 mg	4.0 mg	23 mg	2.8 mg	2.08
4 oz	2	0.5 mg	0.5 mg	23 mg	2.8 mg	2.08
4 oz	3	2.7 mg	2.7 mg	23 mg	2.8 mg	2.08
1 oz		1.18 mg	1.18 mg	5.4 mg	0.65 mg	2.07
1 oz		2.15 mg	2.15 mg	5.4 mg	0.65 mg	2.07
1 oz		2.31 mg	2.31 mg	5.4 mg	0.65 mg	2.07
1/2 oz		1.83 mg	1.83 mg	2.8 mg	0.34 mg	2.07
1/2 oz		1.55 mg	1.55 mg	2.8 mg	0.34 mg	2.07
1/4 oz		0.74 mg	0.74 mg	1.7 mg	0.21 mg	2.07
1/4 oz		1.09 mg	1.09 mg	1.7 mg	0.21 mg	2.07



 Ron Peterson, Metrologist

02/18/2015
Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/18/15
Artifacts Submitted	Metric 24 piece weight kit	Condition of Weights:	GOOD
Serial Number:	SC-2006-1	Temperature (c):	20.7
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47%
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	722.1

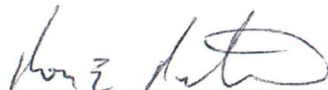
Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD 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.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 kg		201 mg	201 mg	500 mg	61 mg	2.12
2 kg		45 mg	45 mg	200 mg	24 mg	2.10
2 kg		43 mg	43 mg	200 mg	24 mg	2.10
1 kg		18 mg	18 mg	100 mg	12 mg	2.09
500 g		15.4 mg	15.4 mg	70 mg	8.6 mg	2.09
200 g		18.3 mg	18.3 mg	40 mg	5.0 mg	2.09
200 g		8.8 mg	8.8 mg	40 mg	5.0 mg	2.09
100 g		4.3 mg	4.3 mg	20 mg	2.4 mg	2.09
50 g		2.1 mg	2.1 mg	10 mg	1.2 mg	2.09
20 g		1.68 mg	1.68 mg	4 mg	0.49 mg	2.08
20 g		0.44 mg	0.44 mg	4 mg	0.49 mg	2.08
10 g		0.61 mg	0.61 mg	2 mg	0.25 mg	2.08
5 g		0.33 mg	0.33 mg	1.5 mg	0.39 mg	2.09
2 g		0.46 mg	0.46 mg	1.1 mg	0.14 mg	2.09
2 g		0.09 mg	0.09 mg	1.1 mg	0.14 mg	2.09
1 g		0.25 mg	0.25 mg	0.9 mg	0.12 mg	2.09
500 mg		0.23 mg	0.23 mg	0.72 mg	0.10 mg	2.10
200 mg		0.30 mg	0.30 mg	0.54 mg	0.08 mg	2.11
200 mg		0.21 mg	0.21 mg	0.54 mg	0.08 mg	2.11
100 mg		0.14 mg	0.14 mg	0.43 mg	0.08 mg	2.11
50 mg		0.05 mg	0.05 mg	0.35 mg	0.06 mg	2.11
20 mg		0.01 mg	0.01 mg	0.26 mg	0.10 mg	2.11
10 mg		-0.01 mg	-0.01 mg	0.21 mg	0.07 mg	2.11


 Ron Peterson, Metrologist

02/18/2015
 Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/18/15
Artifacts Submitted	Metric 22 piece weight kit	Condition of Weights:	GOOD
Serial Number:	030512B	Temperature (c):	20.7
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47%
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	722.1

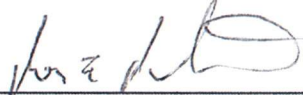
Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD 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.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 kg		68 mg	68 mg	500 mg	61 mg	2.12
2 kg		83 mg	83 mg	200 mg	24 mg	2.10
2 kg		78 mg	78 mg	200 mg	24 mg	2.10
1 kg		29 mg	29 mg	100 mg	12 mg	2.09
500 g		15.5 mg	15.5 mg	70 mg	8.6 mg	2.09
200 g		15.9 mg	15.9 mg	40 mg	5.0 mg	2.09
200 g		14.2 mg	14.2 mg	40 mg	5.0 mg	2.09
100 g		6.9 mg	6.9 mg	20 mg	2.4 mg	2.09
50 g		2.0 mg	2.0 mg	10 mg	1.2 mg	2.09
20 g		1.60 mg	1.60 mg	4 mg	0.49 mg	2.08
20 g		0.37 mg	0.37 mg	4 mg	0.49 mg	2.08
10 g		0.47 mg	0.47 mg	2 mg	0.25 mg	2.08
5 g		0.65 mg	0.65 mg	1.5 mg	0.39 mg	2.09
2 g		0.42 mg	0.42 mg	1.1 mg	0.14 mg	2.09
2 g		0.39 mg	0.39 mg	1.1 mg	0.14 mg	2.09
1 g		0.14 mg	0.14 mg	0.9 mg	0.12 mg	2.09
500 mg		0.17 mg	0.17 mg	0.72 mg	0.10 mg	2.10
200 mg		0.28 mg	0.28 mg	0.54 mg	0.08 mg	2.11
200 mg		0.22 mg	0.22 mg	0.54 mg	0.08 mg	2.11
100 mg		0.19 mg	0.19 mg	0.43 mg	0.08 mg	2.11
20 mg		0.01 mg	0.01 mg	0.26 mg	0.10 mg	2.11
10 mg		-0.01 mg	-0.01 mg	0.21 mg	0.07 mg	2.11



 Ron Peterson, Metrologist

02/18/2015

 Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3366
Mailing Address:	2900 West Russell	Date Received:	02/16/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/18/15
Artifacts Submitted	Metric 22 piece weight kit	Condition of Weights:	GOOD
Serial Number:	31609A	Temperature (c):	20.7
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47%
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	722.1

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.


Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD Working Standards.

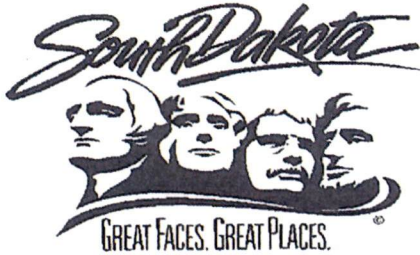
The values reported below relate only to those observations made at the time and conditions of the test. This test report, so numbered, may not be reproduced, except in full, without approval of the laboratory.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 kg		181 mg	181 mg	500 mg	61 mg	2.12
2 kg		76 mg	76 mg	200 mg	24 mg	2.10
2 kg		54 mg	54 mg	200 mg	24 mg	2.10
1 kg		21 mg	21 mg	100 mg	12 mg	2.09
500 g		26.5 mg	26.5 mg	70 mg	8.6 mg	2.09
200 g		10.5 mg	10.5 mg	40 mg	5.0 mg	2.09
200 g		14.3 mg	14.3 mg	40 mg	5.0 mg	2.09
100 g		8.7 mg	8.7 mg	20 mg	2.4 mg	2.09
50 g		2.3 mg	2.3 mg	10 mg	1.2 mg	2.09
20 g		1.68 mg	1.68 mg	4 mg	0.49 mg	2.08
20 g		1.89 mg	1.89 mg	4 mg	0.49 mg	2.08
10 g		0.67 mg	0.67 mg	2 mg	0.25 mg	2.08
5 g		0.65 mg	0.65 mg	1.5 mg	0.39 mg	2.09
2 g		0.43 mg	0.43 mg	1.1 mg	0.14 mg	2.09
2 g		0.51 mg	0.51 mg	1.1 mg	0.14 mg	2.09
1 g		0.44 mg	0.44 mg	0.9 mg	0.12 mg	2.09
500 mg		0.37 mg	0.37 mg	0.72 mg	0.10 mg	2.10
200 mg		0.22 mg	0.22 mg	0.54 mg	0.08 mg	2.11
200 mg		0.13 mg	0.13 mg	0.54 mg	0.08 mg	2.11
100 mg		0.17 mg	0.17 mg	0.43 mg	0.08 mg	2.11
50 mg		0.17 mg	0.17 mg	0.35 mg	0.06 mg	2.11
20 mg		0.01 mg	0.01 mg	0.26 mg	0.10 mg	2.11
20 mg		0.01 mg	0.01 mg	0.26 mg	0.10 mg	2.11
10 mg		-0.01 mg	-0.01 mg	0.21 mg	0.07 mg	2.11

End of Report


 Ron Peterson, Metrologist

02/18/2015
 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



REPORT OF CALIBRATION

**LAB TEST NUMBER: MP3368
DATE OF REPORT: 02/23/2015
DATE RECEIVED: 02/18/2015
DATE OF TEST: 02/19-23/2015**

Submitted By: Scale Center
Contact: Tim Huber
Mailing Address: 2900 West russell
City, State, Zip: Sioux Falls, SD 57107
Phone: 605-838-7107 1-800-456-1486
S/A Number:

Standards Submitted:

- | | |
|--------------------------|----------------------------|
| 1 -WEIGHT CARTS | 3 -AVOIRDUPOIS WEIGHT KITS |
| 18 -1000 LB TEST WEIGHTS | 2 -METRIC WEIGHT KITS |
| 30 -50 LB TEST WEIGHTS | |
| 3 -25 LB TEST WEIGHTS | |
| 1 -WEIGHT CARTS | |

Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard, the standard uncertainty for the measurement process, and a component of uncertainty to account for any observed deviations from values that are less than surveillance limits. 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 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. All established Uncertainties are less than 1/3 applicable Class "F" tolerances.

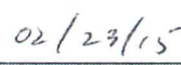
Traceability statement:
The Standards of the SD Metrology Laboratory are traceable to the International System of Units (SI) through the National Institute of Standards and Technology. The laboratory test number identified above is the unique report number to be used in referencing measurement traceability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

The artifacts submitted for calibration have been examined by the State of South Dakota and found to be appropriate for the intended use and to be accurate within Class "F" Tolerances as established by the National Institute of Standards and Technology-Weights and Measures Division. Test methods are in accordance with NIST Handbook 145 and NIST IR 6969 and/or NIST IR 7383.

This document does not represent or imply endorsement by NIST Office of Weights and Measures, NMI, 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

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/23/15
Manufacturer:	B-Tek	Condition of Cart:	GOOD
Serial Number:	TC.202.138	Temperature (c):	20.0
Test Method Used:	SOP 33/ Double Sub.	Humidity:	40.0%
Nominal (lb):	3500	Pressure (mm/Hg):	714.1
Tolerance (lb):	1.00		

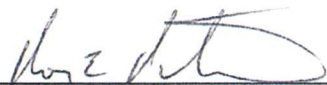
The values reported below relate only to those observations made at the time and conditions of the test. This test report, so numbered, may not be reproduced, except in full, without approval of the laboratory.

As Found (lb)	As Left (lb)	Uncertainty-lb. (K=2)
0.01	0.01	0.13

The weight cart was cleaned and painted (if needed) and 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 were adjusted as close as possible to the full/reference marks. Liquid 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.

This weight cart and associated uncertainties were evaluated against NIST Handbook 105-8 Specifications and Tolerances for Field Standard Weight Carts and was within tolerance at the time of calibration.

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 and have known values. The assigned test number provides documented evidence for measurement traceability.



 Ron Peterson, Metrologist

02/23/2015

 Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/19/15
Artifacts Submitted	1000 lb Test Weights	Condition of Weights:	GOOD
Manufacturer:	Iowa and Toledo	Temperature (c):	22.2
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	43.9
Equipment Used:	Russell Balance/ Vaisala PTU301	Pressure (mm/Hg):	716.5


Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

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

The values reported below relate only to those observations made at the time and conditions of the test. This test report, so

Nominal	Serial Number	Correction As Found		Correction As Left		Tolerance	Uncertainty	K
1000 lb	18.09	-0.026 lb	-12 g	-0.026 lb	-12 g	45 g	7 g	2.05
1000 lb	19.09	-0.015 lb	-7 g	-0.015 lb	-7 g	45 g	7 g	2.05
1000 lb	20.09	-0.008 lb	-4 g	-0.008 lb	-4 g	45 g	7 g	2.05
1000 lb	21.09	-0.003 lb	-1 g	-0.003 lb	-1 g	45 g	7 g	2.05
1000 lb	22.09	-0.024 lb	-11 g	-0.024 lb	-11 g	45 g	7 g	2.05
1000 lb	23.09	0.053 lb	24 g	0.053 lb	24 g	45 g	7 g	2.05
1000 lb	24.09	-0.023 lb	-11 g	-0.023 lb	-11 g	45 g	7 g	2.05
1000 lb	25.09	0.038 lb	17 g	0.038 lb	17 g	45 g	7 g	2.05
1000 lb	26.09	0.040 lb	18 g	0.040 lb	18 g	45 g	7 g	2.05
1000 lb	27.09	0.086 lb	39 g	0.000 lb	0 g	45 g	7 g	2.05
1000 lb	28.09	0.010 lb	5 g	0.010 lb	5 g	45 g	7 g	2.05
1000 lb	29.09	0.012 lb	5 g	0.012 lb	5 g	45 g	7 g	2.05
1000 lb	30.09	-0.047 lb	-21 g	-0.047 lb	-21 g	45 g	7 g	2.05
1000 lb	31.09	-0.049 lb	-22 g	-0.049 lb	-22 g	45 g	7 g	2.05
1000 lb	33.09	-0.004 lb	-2 g	-0.004 lb	-2 g	45 g	7 g	2.05
1000 lb	34.09	0.016 lb	7 g	0.016 lb	7 g	45 g	7 g	2.05
1000 lb	36.09	-0.006 lb	-3 g	-0.006 lb	-3 g	45 g	7 g	2.05
1000 lb	TS A12	-0.042 lb	-19 g	-0.042 lb	-19 g	45 g	7 g	2.05


 Ron Peterson, Metrologist

02/23/2015

Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/23/15
Artifacts Submitted	50 lb test weights	Condition of Weights:	GOOD
Manufacturer:	Toledo	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47.8%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	718.6

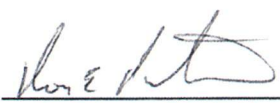
Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD Lab 50 lb and/or 25 lb 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

Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	K
50 lb	C31	-44 mg	-44 mg	2300 mg	282 mg	2.08
50 lb	SC-056	-2239 mg	296 mg	2300 mg	282 mg	2.08
50 lb	SC-46	-14 mg	-14 mg	2300 mg	282 mg	2.08
50 lb	SC-48	286 mg	286 mg	2300 mg	282 mg	2.08
50 lb	SC-C1	476 mg	476 mg	2300 mg	282 mg	2.08
50 lb	SC-C27	-709 mg	-709 mg	2300 mg	282 mg	2.08
50 lb	SC-C29	-699 mg	-699 mg	2300 mg	282 mg	2.08
50 lb	SC-C4	-934 mg	-934 mg	2300 mg	282 mg	2.08
50 lb	SC-C42	-424 mg	-424 mg	2300 mg	282 mg	2.08
50 lb	SC-C45	301 mg	301 mg	2300 mg	282 mg	2.08
50 lb	SC-CA	-264 mg	-264 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.002	-1919 mg	-64 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.004	-1434 mg	-1434 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.006	-54 mg	-54 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.007	-379 mg	-379 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.008	-999 mg	-999 mg	2300 mg	282 mg	2.08


 Ron Peterson, Metrologist

02/23/2015
 Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/23/15
Artifacts Submitted	50 lb test weights	Condition of Weights:	GOOD
Manufacturer:	Toledo	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47.8%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	718.6

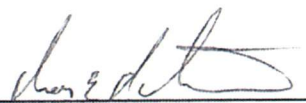
Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD Lab 50 lb and/or 25 lb 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

Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	K
50 lb	SCH.50.010	-19 mg	-19 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.011	-1289 mg	-1289 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.012	-574 mg	-574 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.014	-1174 mg	-1174 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.015	-1489 mg	-1489 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.016	141 mg	141 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.017	-2364 mg	-64 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.019	-1249 mg	-1249 mg	2300 mg	282 mg	2.08
50 lb	SCH.50.08	-1924 mg	6 mg	2300 mg	282 mg	2.08
50 lb	TS-067	-1234 mg	-1234 mg	2300 mg	282 mg	2.08
50 lb	TS-C54	-1264 mg	-1264 mg	2300 mg	282 mg	2.08
50 lb	TS-C56	-1359 mg	-1359 mg	2300 mg	282 mg	2.08
50 lb	TS-C91	-889 mg	-889 mg	2300 mg	282 mg	2.08
50 lb	TS-C-92	-564 mg	-564 mg	2300 mg	282 mg	2.08


 Ron Peterson, Metrologist

02/23/2015
 Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/23/15
Artifacts Submitted	25 lb Test Weights	Condition of Weights:	GOOD
Manufacturer:	Toledo	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47.8%
Equipment Used:	Mettler KA-30/ Vaisala PTU301	Pressure (mm/Hg):	718.6

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD Lab 50 lb and/or 25 lb 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

Nominal	Serial Number	Correction As Found	Correction As Left	Tolerance	Uncertainty	K
25 lb	TS-D-2	-153 mg	-153 mg	1100 mg	137 mg	2.10
25 lb	TS-D-4	172 mg	172 mg	1100 mg	137 mg	2.10
25 lb	TS-D-8	-263 mg	-263 mg	1100 mg	137 mg	2.10



Ron Peterson, Metrologist

02/23/2015

Date of Report

Office of Weights and Measures
118 W. Capitol Ave.
Pierre, SD 57501

Phone:605-773-3697
Fax:605-773-6631
www.dps.sd.gov

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/19-23/2015
Artifacts Submitted	Advoirdupois 22 piece weight kit	Condition of Weights:	GOOD
Serial Number:	031012B	Temperature (c):	20.7
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	47.5
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	716.6

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.
 Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.
 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.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 lb	1	62 mg	62 mg	230 mg	28 mg	2.07
5 lb	2	75 mg	75 mg	230 mg	28 mg	2.07
5 lb	3	36 mg	36 mg	230 mg	28 mg	2.07
5 lb	4	65 mg	65 mg	230 mg	28 mg	2.07
5 lb	5	40 mg	40 mg	230 mg	28 mg	2.07
1 lb	1	21.2 mg	21.2 mg	70 mg	8.5 mg	2.06
1 lb	2	9.2 mg	9.2 mg	70 mg	8.5 mg	2.06
1 lb	3	16.2 mg	16.2 mg	70 mg	8.5 mg	2.06
1 lb	4	21.2 mg	21.2 mg	70 mg	8.5 mg	2.06
1 lb	5	29.2 mg	29.2 mg	70 mg	8.5 mg	2.06
8 oz		5.8 mg	5.8 mg	45 mg	5.4 mg	2.07
0.2 lb		7.1 mg	7.1 mg	18 mg	2.2 mg	2.08
0.2 lb	.	2.8 mg	2.8 mg	18 mg	2.2 mg	2.08
0.1 lb		4.0 mg	4.0 mg	9.1 mg	1.1 mg	2.08
0.05 lb		0.49 mg	0.49 mg	4.5 mg	0.55 mg	2.08
0.02 lb		0.53 mg	0.53 mg	1.8 mg	0.22 mg	2.08
0.02 lb	.	0.77 mg	0.77 mg	1.8 mg	0.22 mg	2.08
0.01 lb		0.42 mg	0.42 mg	1.5 mg	0.19 mg	2.08
0.005 lb		1.11 mg	0.64 mg	1.2 mg	0.16 mg	2.08
0.002 lb		0.64 mg	0.64 mg	0.87 mg	0.11 mg	2.08
0.002 lb	.	0.50 mg	0.50 mg	0.87 mg	0.11 mg	2.08
0.001 lb		0.35 mg	0.35 mg	0.70 mg	0.10 mg	2.08



 Ron Peterson, Metrologist

02/23/2015
Date of Report

SOUTH DAKOTA WEIGHTS AND MEASURES / METROLOGY LAB

Lab: 1500 N. Garfield-E. Truck Bypass Phone: 605-773-3170

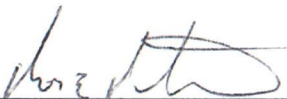
Office: 118 West Capitol Avenue Phone: 605-773-3697

Pierre, SD 57501

Submitted by:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/23/15
Artifacts Submitted	Advoirdupois 25 piece weight kit	Condition of Weights:	FAIR
Serial Number:	SC-31-1 / 041304	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	48.9
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	716.9

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.
 Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.
 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.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 lb	1	-92 mg	-92 mg	230 mg	28 mg	2.07
5 lb	2	-135 mg	-135 mg	230 mg	28 mg	2.07
5 lb	3	22 mg	22 mg	230 mg	28 mg	2.07
5 lb	4	-72 mg	-72 mg	230 mg	28 mg	2.07
5 lb	5	-20 mg	-20 mg	230 mg	28 mg	2.07
1 lb	1	43.2 mg	43.2 mg	70 mg	8.5 mg	2.06
1 lb	2	-46.8 mg	-46.8 mg	70 mg	8.5 mg	2.06
1 lb	3	11.2 mg	11.2 mg	70 mg	8.5 mg	2.06
1 lb	4	-51.8 mg	-51.8 mg	70 mg	8.5 mg	2.06
1 lb	79	-12.8 mg	-12.8 mg	70 mg	8.5 mg	2.06
0.1 lb	.	1.4 mg	1.4 mg	9.1 mg	1.1 mg	2.08
0.05 lb	..	0.42 mg	0.42 mg	4.5 mg	0.55 mg	2.08
0.05 lb	..	-0.13 mg	-0.13 mg	4.5 mg	0.55 mg	2.08
0.02 lb	...	0.45 mg	0.45 mg	1.8 mg	0.22 mg	2.08
0.02 lb	...	0.61 mg	0.61 mg	1.8 mg	0.22 mg	2.08
0.01 lb		0.05 mg	0.05 mg	1.5 mg	0.19 mg	2.08
0.005 lb		0.75 mg	0.75 mg	1.2 mg	0.16 mg	2.08
8 oz		6.78 mg	6.78 mg	45 mg	5.44 mg	2.07
4 oz		-1.38 mg	-1.38 mg	23 mg	2.78 mg	2.08
2 oz		0.09 mg	0.09 mg	11 mg	1.32 mg	2.08
1 oz		2.56 mg	2.56 mg	5.4 mg	0.65 mg	2.07
1/2 oz		0.31 mg	0.31 mg	2.8 mg	0.34 mg	2.07
1/4 oz		0.05 mg	0.05 mg	1.7 mg	0.21 mg	2.07
1/8 oz		0.28 mg	0.28 mg	1.3 mg	0.16 mg	2.07
1/16 oz		0.01 mg	0.01 mg	1.1 mg	0.14 mg	2.07



 Ron Peterson, Metrologist

02/23/2015
Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/23/15
Artifacts Submitted	Advoirdupois 15 Piece weight kit	Condition of Weights:	POOR
Serial Number:	SC-31-2	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	48.9
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	716.9

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.
 Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

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.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 lb	Rusty	-136 mg	-136 mg	230 mg	28 mg	2.07
5 lb	2	-56 mg	-56 mg	230 mg	28 mg	2.07
5 lb		-40 mg	-40 mg	230 mg	28 mg	2.07
5 lb	4	-200 mg	-200 mg	230 mg	28 mg	2.07
1 lb	2	3.2 mg	3.2 mg	70 mg	8.5 mg	2.06
1 lb	3	-13.8 mg	-13.8 mg	70 mg	8.5 mg	2.06
1 lb	4	-14.8 mg	-14.8 mg	70 mg	8.5 mg	2.06
1 lb	5	-5.8 mg	-5.8 mg	70 mg	8.5 mg	2.06
0.1 lb		5.7 mg	5.7 mg	9.1 mg	1.1 mg	2.08
0.05 lb		-0.1 mg	-0.05 mg	4.5 mg	0.55 mg	2.08
0.05 lb		-2.0 mg	-1.96 mg	4.5 mg	0.55 mg	2.08
0.02 lb		1.1 mg	1.08 mg	1.8 mg	0.22 mg	2.08
0.02 lb		1.0 mg	0.97 mg	1.8 mg	0.22 mg	2.08
0.01 lb		0.3 mg	0.29 mg	1.5 mg	0.19 mg	2.08
0.005 lb		0.3 mg	0.35 mg	1.2 mg	0.16 mg	2.08



 Ron Peterson, Metrologist

02/23/2015
Date of Report

SOUTH DAKOTA 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:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/23/15
Artifacts Submitted	Metric 24 piece weight kit	Condition of Weights:	GOOD
Serial Number:	030512A	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	49%
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	716.9

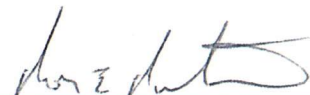
Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.

Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.

Standards Used: SD 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.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 kg		58 mg	58 mg	500 mg	61 mg	2.12
2 kg		79 mg	79 mg	200 mg	24 mg	2.10
2 kg		92 mg	92 mg	200 mg	24 mg	2.10
1 kg		32 mg	32 mg	100 mg	12 mg	2.09
500 g		14.5 mg	14.5 mg	70 mg	8.6 mg	2.09
200 g		13.3 mg	13.3 mg	40 mg	5.0 mg	2.09
200 g		9.4 mg	9.4 mg	40 mg	5.0 mg	2.09
100 g		8.6 mg	8.6 mg	20 mg	2.4 mg	2.09
50 g		1.1 mg	1.1 mg	10 mg	1.2 mg	2.09
20 g		1.53 mg	1.53 mg	4 mg	0.49 mg	2.08
20 g		1.41 mg	1.41 mg	4 mg	0.49 mg	2.08
10 g		0.74 mg	0.74 mg	2 mg	0.25 mg	2.08
5 g		0.83 mg	0.83 mg	1.5 mg	0.39 mg	2.09
2 g		0.14 mg	0.14 mg	1.1 mg	0.14 mg	2.09
2 g		0.25 mg	0.25 mg	1.1 mg	0.14 mg	2.09
1 g		0.23 mg	0.23 mg	0.9 mg	0.12 mg	2.09
500 mg		0.34 mg	0.34 mg	0.72 mg	0.10 mg	2.10
200 mg		0.26 mg	0.26 mg	0.54 mg	0.08 mg	2.11
200 mg		0.25 mg	0.25 mg	0.54 mg	0.08 mg	2.11
100 mg		0.05 mg	0.05 mg	0.43 mg	0.08 mg	2.11
50 mg		-0.01 mg	-0.01 mg	0.35 mg	0.06 mg	2.11
20 mg		0.02 mg	0.02 mg	0.26 mg	0.10 mg	2.11
20 mg		0.01 mg	0.01 mg	0.26 mg	0.10 mg	2.11
10 mg		-0.01 mg	-0.01 mg	0.21 mg	0.07 mg	2.11



 Ron Peterson, Metrologist

02/23/2015

 Date of Report

SOUTH DAKOTA 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

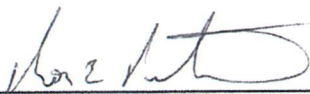
Pierre, SD 57501

Submitted by:	Scale Center	Report Number:	MP3368
Mailing Address:	2900 West russell	Date Received:	02/18/15
City, State, Zip:	Sioux Falls, SD 57107	Date tested:	02/23/15
Artifacts Submitted	Metric 19 piece weight kit	Condition of Weights:	GOOD
Serial Number:	SC 2000	Temperature (c):	20.6
Test Method Used:	SOP 8/ MODIFIED SUB	Humidity:	49%
Equipment Used:	Mettler AX 205 DR/ Mettler PR503/ Vaisala PTU301	Pressure (mm/Hg):	716.9

Treatment of artifacts prior to testing: Thermal equilibrium time/conditions were obtained by placing the artifacts in the lab overnight.
 Compliance Statement: These weights and associated uncertainties were evaluated against NIST Handbook 105-1 NIST Class F tolerances and the weights were within tolerance at the time of calibration.
 Standards Used: SD 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.

Nominal	Identifier	Correction As Found	Correction As Left	Tolerance Class F	Uncertainty	k
5 kg		154 mg	154 mg	500 mg	61 mg	2.12
1 kg		39 mg	39 mg	100 mg	12 mg	2.09
1 kg	kilo	-7 mg	-7 mg	100 mg	12 mg	2.09
500 g		21.5 mg	21.5 mg	70 mg	8.6 mg	2.09
200 g		13.7 mg	13.7 mg	40 mg	5.0 mg	2.09
200 g		16.5 mg	16.5 mg	40 mg	5.0 mg	2.09
100 g		5.3 mg	5.3 mg	20 mg	2.4 mg	2.09
50 g		4.3 mg	4.3 mg	10 mg	1.2 mg	2.09
20 g		1.53 mg	1.53 mg	4 mg	0.49 mg	2.08
20 g		2.04 mg	2.04 mg	4 mg	0.49 mg	2.08
10 g		0.81 mg	0.81 mg	2 mg	0.25 mg	2.08
5 g		0.45 mg	0.45 mg	1.5 mg	0.39 mg	2.09
2 g		0.82 mg	0.82 mg	1.1 mg	0.14 mg	2.09
2 g		0.20 mg	0.20 mg	1.1 mg	0.14 mg	2.09
1 g		0.39 mg	0.39 mg	0.9 mg	0.12 mg	2.09
200 mg		0.12 mg	0.12 mg	0.54 mg	0.08 mg	2.11
200 mg		0.27 mg	0.27 mg	0.54 mg	0.08 mg	2.11
100 mg		0.24 mg	0.24 mg	0.43 mg	0.08 mg	2.11
50 mg		-0.01 mg	-0.01 mg	0.35 mg	0.06 mg	2.11
20 mg		-0.09 mg	-0.09 mg	0.26 mg	0.10 mg	2.11

End of Report



 Ron Peterson, Metrologist

02/23/2015

 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 50 mg
1000 lb to 0.001 lb
8 oz to 0.03125 oz

Weight Carts

5000 lb to 2000 lb

Volume Transfer, II

5 gal



2015

A handwritten signature in blue ink, appearing to read "Carol T. Hockert", written over a horizontal line.

Carol T. Hockert, Chief
NIST Office of Weights and Measures

Effective Dates: 2015-01-01 to 2015-12-31