

Receipt Date: January 16, 2018
Cal. Date: January 17, 2018
Report Date: January 17, 2018

Report No.: 338771
Set Serial No.: 123, 128
Barcode: 201216

Calibration Certificate

FARM COUNTRY SCALE LLC
9449 COUNTY ROAD 81
FAIRMOUNT, ND 58030
Contact: JOEL BOMMERSBACH
Phone: 701-361-4483
PO Number: NONE
Procedure: NIST SOP 8
Technician ID: 11

Item(s) Submitted: Cast Cube Weights
Manufacturer: Rice Lake
Weight Type: II
Equipment ID: None
Condition: Good
Temperature: 18.7 °C
Pressure: 743.0 mmHg
Relative Humidity: 47.9 %

Nominal Value	Serial No.	CM Correction (g)		NIST HB105-1 Class		k	U (g)
		As Found	As Left	As Found	As Left		
2500 lb	123	141.3	45.3	*	F	2.05	8.5
2500 lb	128	152.3	5.3	*	F	2.05	8.5

* Weight(s) as found exceed NIST HB105-1 Class F tolerance.

The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm³ density and an air density of 1.2 mg/cm³ at 20 °C. The items listed above have been calibrated using the Standards of the State of Minnesota which are currently in control. These standards are traceable to the SI through NIST. Calibration processes were monitored and found to be in control. All of the tolerances and specifications were evaluated according to NIST Handbook 105-1 (1990). Uncertainty calculations contain the components in NIST SOP 8 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to items identified in this report only.

Pete Whebbe

Metrologist

Reviewed by:

Erik Alfvin

Metrologist





DEPARTMENT OF COMMERCE
WEIGHTS & MEASURES DIVISION



14305 Southcross Drive #150
Burnsville, MN 55306-7008
mn.gov/commerce/
651.539.1555 FAX 952.435.4040
An equal opportunity employer

Receipt Date: January 16, 2018
Cal. Date: January 17, 2018
Report Date: January 17, 2018

Report No.: 338769
Set Serial No.: 1 thru 4
Barcode: 203144

Calibration Certificate

FARM COUNTRY SCALE LLC
9449 COUNTY ROAD 81
FAIRMOUNT, ND 58030
Contact: JOEL BOMMERSBACH
Phone: 701-361-4483
PO Number: NONE
Procedure: NIST SOP 8
Technician ID: 11

Item(s) Submitted: Cast Cube Weights
Manufacturer: Rice Lake
Weight Type: II
Equipment ID: None
Condition: Good/#4 Wet Inside
Temperature: 18.5 °C
Pressure: 745.1 mmHg
Relative Humidity: 48.8 %

Nominal Value	Serial No.	CM Correction (g)		NIST HB105-1 Class		k	U (g)
		As Found	As Left	As Found	As Left		
1000 lb	1	23.5	23.5	F	F	2.01	1.6
1000 lb	2	41.5	41.5	F	F	2.01	1.6
1000 lb	3	28.5	28.5	F	F	2.01	1.6
1000 lb	4	99.5	1.5	*	F	2.01	1.6

* Weight(s) as found exceed NIST HB105-1 Class F tolerance.

The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm³ density and an air density of 1.2 mg/cm³ at 20 °C. The items listed above have been calibrated using the Standards of the State of Minnesota which are currently in control. These standards are traceable to the SI through NIST. Calibration processes were monitored and found to be in control. All of the tolerances and specifications were evaluated according to NIST Handbook 105-1 (1990). Uncertainty calculations contain the components in NIST SOP 8 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to items identified in this report only.

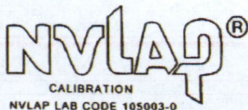
Pete Whebbe

Pete Whebbe
Metrologist

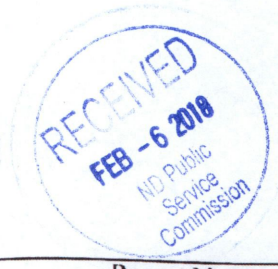
Reviewed by:

Erik Alfvin

Erik Alfvin
Metrologist



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Receipt Date: January 16, 2018
Cal. Date: January 17, 2018
Report Date: January 17, 2018

Report No.: 338770
Set Serial No.: 1 thru 20
Barcode: 203143

Calibration Certificate

FARM COUNTRY SCALE LLC
9449 COUNTY ROAD 81
FAIRMOUNT, ND 58030
Contact: JOEL BOMMERSBACH
Phone: 701-361-4483
PO Number: NONE
Procedure: NIST SOP 8
Technician ID: 11

Item(s) Submitted: Cast Hand Weights
Manufacturer: Rice Lake
Weight Type: II
Equipment ID: None
Condition: Good
Temperature: 18.7 °C
Pressure: 744.4 mmHg
Relative Humidity: 50.7 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
50 lb	1	324	324	F	F	2.01	54
50 lb	2	504	504	F	F	2.01	54
50 lb	3	374	374	F	F	2.01	54
50 lb	4	864	864	F	F	2.01	54
50 lb	5	324	324	F	F	2.01	54
50 lb	6	464	464	F	F	2.01	54
50 lb	7	524	524	F	F	2.01	54
50 lb	8	24	24	F	F	2.01	54
50 lb	9	584	584	F	F	2.01	54
50 lb	10	224	224	F	F	2.01	54
50 lb	11	614	614	F	F	2.01	54
50 lb	12	474	474	F	F	2.01	54
50 lb	13	754	754	F	F	2.01	54
50 lb	14	504	504	F	F	2.01	54
50 lb	15	494	494	F	F	2.01	54
50 lb	16	284	284	F	F	2.01	54
50 lb	17	524	524	F	F	2.01	54
50 lb	18	-56	-56	F	F	2.01	54
50 lb	19	424	424	F	F	2.01	54
50 lb	20	614	614	F	F	2.01	54

The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm³ density and an air density of 1.2 mg/cm³ at 20 °C. The items listed above have been calibrated using the Standards of the State of Minnesota which are currently in control. These standards are traceable to the SI through NIST. Calibration processes were monitored and found to be in control. All of the tolerances and specifications were evaluated according to NIST Handbook 105-1 (1990). Uncertainty calculations contain the components in NIST SOP 8 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to items identified in this report only.

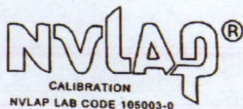
Pete Whebbe

Pete Whebbe
Metrologist

Reviewed by:

Erik Alfvin

Erik Alfvin
Metrologist





**DEPARTMENT OF COMMERCE
WEIGHTS & MEASURES DIVISION**



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651.539.1555 FAX 952.435.4040
An equal opportunity employer

Receipt Date: January 16, 2018
Cal. Date: January 18, 2018
Report Date: January 18, 2018

Report No.: 338767
Set Serial No.: NONE
Barcode: 203142

Calibration Certificate

FARM COUNTRY SCALE LLC
9449 COUNTY ROAD 81
FAIRMONT, ND 58030
Contact: JOEL BOMMERSBACH
Phone: 701-361-4483
PO Number: NONE
Procedure: NIST SOP 8
Technician ID: 09

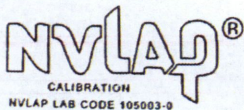
Item(s) Submitted: 30 lb kit w/ fractions
Manufacturer: RICE LAKE
Weight Type: I & II
Equipment ID: None
Condition: Excellent
Temperature: 19.4 °C
Pressure: 733.9 mmHg
Relative Humidity: 50.6 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
5 lb		63.2	63.2	F	F	2.03	5.7
5 . lb		60.2	60.2	F	F	2.03	5.7
5 .. lb		59.2	59.2	F	F	2.03	5.7
5 :: lb		64.2	64.2	F	F	2.03	5.7
5 ::: lb		60.2	60.2	F	F	2.03	5.7
1 lb		16.2	16.2	F	F	2.03	1.2
1 . lb		23.8	23.8	F	F	2.03	1.2
1 .. lb		23.0	23.0	F	F	2.03	1.2
1 :: lb		19.4	19.4	F	F	2.03	1.2
1 ::: lb		23.5	23.5	F	F	2.03	1.2
8 oz		15.10	15.10	F	F	2.03	0.69
4 oz		7.06	7.06	F	F	2.00	0.33
2 oz		4.69	4.69	F	F	2.00	0.16
1 oz		1.60	1.60	F	F	2.00	0.11
1/2 oz		0.994	0.994	F	F	2.00	0.082
1/4 oz		0.496	0.496	F	F	2.00	0.051
1/8 oz		0.374	0.374	F	F	2.00	0.038
1/16 oz		0.557	0.557	F	F	2.00	0.032
1/32 oz		0.275	0.275	F	F	2.00	0.021
1/32 . oz		0.463	0.463	F	F	2.00	0.021

The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm³ density and an air density of 1.2 mg/cm³ at 20 °C. The items listed above have been calibrated using the Standards of the State of Minnesota which are currently in control. These standards are traceable to the SI through NIST. Calibration processes were monitored and found to be in control. All of the tolerances and specifications were evaluated according to NIST Handbook 105-1 (1990). Uncertainty calculations contain the components in NIST SOP 8 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to items identified in this report only.

Heidi Jones
Heidi Jones
Laboratory Administrator

Reviewed by:
Pete Whebbe
Pete Whebbe
Metrologist



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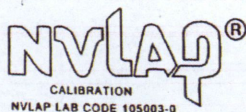
Report No.: 338768
Set Serial No.: NONE
Barcode: 203141

Calibration Certificate

FARM COUNTRY SCALE LLC
9449 COUNTY ROAD 81
FAIRMONT, ND 58030
Contact: JOEL BOMMERSBACH
Phone: 701-361-4483
PO Number: NONE
Procedure: NIST SOP 8
Technician ID: 09

Item(s) Submitted: Metric Weight Set
Manufacturer: RICE LAKE
Weight Type: I & II
Equipment ID: None
Condition: Good
Temperature: 19.7 °C
Pressure: 740.3 mmHg
Relative Humidity: 46.6 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
2000 g		58.1	58.1	F	F	2.01	5.6
1000 g		29.4	29.4	F	F	2.02	2.4
500 g		19.6	19.6	F	F	2.01	1.7
200 g		8.65	8.65	F	F	2.02	0.53
200 . g		9.24	9.24	F	F	2.02	0.53
100 g		5.59	5.59	F	F	2.02	0.25
50 g		4.45	4.45	F	F	2.02	0.16
20 g		1.00	1.00	F	F	2.02	0.11
20 . g		0.87	0.87	F	F	2.02	0.11
10 g		0.461	0.461	F	F	2.02	0.070
5 g		0.606	0.606	F	F	2.02	0.050
2 g		0.409	0.409	F	F	2.02	0.042
2 . g		0.500	0.500	F	F	2.02	0.042
1 g		0.330	0.330	F	F	2.05	0.036





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Report No.: 338768
Set Serial No.: NONE
Barcode: 203141

Continued,

Calibration Certificate

FARM COUNTRY SCALE LLC
9449 COUNTY ROAD 81
FAIRMONT, ND 58030
Contact: JOEL BOMMERSBACH
Phone: 701-361-4483
PO Number: NONE
Procedure: NIST SOP 8
Technician ID: 09

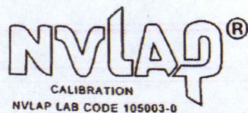
Item(s) Submitted: Metric Weight Set
Manufacturer: RICE LAKE
Weight Type: I & II
Equipment ID: None
Condition: Good
Temperature: 19.7 °C
Pressure: 740.3 mmHg
Relative Humidity: 46.6 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
0.5 g		0.343	0.343	F	F	2.05	0.021
0.2 g		0.223	0.223	F	F	2.04	0.015
0.2 g		0.260	0.260	F	F	2.04	0.015
0.1 g		0.176	0.176	F	F	2.05	0.013
0.05 g		0.146	0.146	F	F	2.06	0.011
0.02 g		0.0295	0.0295	F	F	2.05	0.0091
0.02 g		0.1285	0.1285	F	F	2.05	0.0091
0.01 g		0.1044	0.1044	F	F	2.05	0.0084

The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm³ density and an air density of 1.2 mg/cm³ at 20 °C. The items listed above have been calibrated using the Standards of the State of Minnesota which are currently in control. These standards are traceable to the SI through NIST. Calibration processes were monitored and found to be in control. All of the tolerances and specifications were evaluated according to NIST Handbook 105-1 (1990). Uncertainty calculations contain the components in NIST SOP 8 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to items identified in this report only.

Heidi Jones
Heidi Jones
Laboratory Administrator

Reviewed by:
Pete Whebbe
Peter J. Whebbe
Metrologist



United States Department of Commerce

National Institute of Standards and Technology

Certificate of Metrological Traceability For:

Minnesota

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.

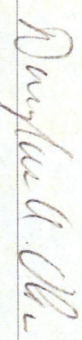
The Office of Weights and Measures Program assesses laboratories to NIST Handbook 143 - Program Handbook for State Weights and Measures Laboratories and ISO/IEC 17025:2005.

Scope

Mass Echelon I	Mass Echelon III	Volume Gravimetric, I
20 kg to 1 mg	50 kg to 1 mg	20 L to 10 mL
50 lb to 0.001 lb	5000 lb to 0.001 lb	100 gal to 0.25 gal
Mass Echelon II	4 oz to 0.03125 oz	Volume Transfer, II
20 kg to 1 mg	Weight Carts	1500 gal to 5 gal
1000 lb to 500 lb	10 000 lb to 2000 lb	200 gal to 25 gal LPG
50 lb to 0.001 lb	Wheel Load Weighers	
4 oz to 0.03125 oz	20 000 lb to 2000 lb	
	Railroad Test Cars	
	110 000 lb to 80 000 lb	



2018 to 2019


Douglas A. Olson, Chief
NIST Office of Weights and Measures

Effective Dates: 2018-01-01 to 2019-12-31