



State of Wisconsin
Governor Scott Walker

Department of Agriculture, Trade and Consumer Protection

Ben Brancel, Secretary

Wisconsin Weights and Measures Laboratory

***Calibration Certificate
Statement of
Uncertainty, Traceability, Limitations, and Conditions***
for calibration work performed for:

FOX VALLEY INDUSTRIAL SCALE, INC.

109 FORD DR STE D
NEW LENOX
IL
60451-3669
(815) 463-1209

Date Received: 3/9/2017
Date of Test: 3/9/2017
Date Due:

State Test No.: W17-089

Uncertainty Statement

For the weights used in this calibration, some components can be assessed through a Type A evaluation, the method for assessing uncertainty by a statistical analysis of measured quantity values obtained under defined measurement conditions. In addition, other components were assessed from a Type B evaluation of standard uncertainty, based on scientific judgement using all of the relevant information available. The combined standard uncertainties multiplied by those coverage factors specified in our standard calibration records, to provide an expanded uncertainty. This uncertainty defined an interval having a level of confidence of approximately 95 per cent, assuming normal distribution. The expanded uncertainty presented in this report is consistent with the ISO/IEC Guide to the Expression of Uncertainty in Measurement using the method Root Sum Squares (JCGM 100:2008).

Traceability Statement

The standards used by the Wisconsin State laboratory demonstrate an unbroken traceable chain to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) and are part of a comprehensive measurement assurance program for ensuring continued accuracy and measurement traceability within the level of uncertainty reported by this laboratory. The laboratory maintains documented calibration intervals and uses documented procedures, all under the performance of trained personnel who demonstrate suitable measurement assurance for the information listed in this calibration report. The laboratory test number identified above is the unique report number to be used in referencing measurement traceability for the artifacts identified in this report. The State Standards are traceable to the SI unit for mass, the kilogram.

Limitations and Conditions Statement

These results relate only to the items calibrated in this report. Weights calibrated to NIST Handbook 105-1 (1990), Specifications and Tolerances for Reference Standards and Field Standard Weights and Measures, using NISTIR 6969, Selected Laboratory Measurement Practices and Procedures to Support Basic Mass Calibrations (2014). Class F tolerances are usable for testing commercial weighing devices in Wisconsin, following NIST Handbook 44, Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices. Weights calibrated to ASTM tolerance 7 by this laboratory cannot be used for testing commercial weighing devices in Wisconsin, by definition (See NIST Handbook 105-1, Specification 1). Weight calibrated by ASTM Standard Specification E617-13 are not checked for density [Stainless steel weights are assumed 8.0 g/cm³], or for magnetism.

The following standard(s) were used: Avoirdupois Weight Set WS-1

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Paul Masterson

Paul Masterson, Metrologist

Justin Lien

Justin Lien, Laboratory Director



State of Wisconsin
Governor Scott Walker

Department of Agriculture, Trade and Consumer Protection

Ben Brancel, Secretary

Wisconsin Weights and Measures Laboratory

Calibration Certificate

Date Received: March 09, 2017
Date of Test: March 09, 2017

State Test No.: W17-089
Item(s) Submitted: Weight Kit
Manufacturer: Rice Lake
Condition: Good
Tolerance Class: NIST HB 105-1 (1990), Class F
Kit Serial #: S910
Balance ID#: 6&7
Procedure Used: NISTIR 6969 (2014), SOP 8
Temperature: 19.0 °C
Relative Humidity: 52.0 %
Pressure: 742.4 mmHg

Customer: FOX VALLEY INDUSTRIAL SCALE, INC.
Address: 109 FORD DR STE D
NEW LENOX, IL 60451-3669
Contact: T J OEHMEN
Phone: (815) 463-1209
PO Number: SB053

Nominal Mass	Mass Unit	Serial No.	Conventional Mass Correction (mg)		NIST HB 105-1 (1990), Class F		Uncertainty (mg)	Coverage Factor (k)
			As Found	As Left	As Found	As Left		
10	lb		132	132	Pass	Pass	55	2.08
10	lb	*	159	159	Pass	Pass	55	2.08
5	lb		56	56	Pass	Pass	28	2.08
1	lb		22.3	22.3	Pass	Pass	8.9	2.08
1	lb	*	16.3	16.3	Pass	Pass	8.9	2.08
1	lb	**	26.3	26.3	Pass	Pass	8.9	2.08
1	lb	***	19.3	19.3	Pass	Pass	8.9	2.08
1	lb	****	15.3	15.3	Pass	Pass	8.9	2.08
4	oz		6.9	6.9	Pass	Pass	2.7	2.03
4	oz	*	7.5	7.5	Pass	Pass	2.7	2.03
4	oz	**	11.8	11.8	Pass	Pass	2.7	2.03
1	oz		1.99	1.99	Pass	Pass	0.64	2.03
1	oz	*	3.03	3.03	Pass	Pass	0.64	2.03
1	oz	**	2.33	2.33	Pass	Pass	0.64	2.03
1/2	oz		0.53	0.53	Pass	Pass	0.34	2.03
1/2	oz	*	0.81	0.81	Pass	Pass	0.34	2.03
1/4	oz		0.56	0.56	Pass	Pass	0.2	2.03
1/4	oz	*	0.66	0.66	Pass	Pass	0.2	2.03

The following standard(s) were used: Avoirdupois Weight Set WS-1

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Date Received: 3/9/2017
Date of Test: 3/9/2017
Date Due:

State Test No.: W17-089

Uncertainty Statement

For the weights used in this calibration, some components can be assessed through a Type A evaluation, the method for assessing uncertainty by a statistical analysis of measured quantity values obtained under defined measurement conditions. In addition, other components were assessed from a Type B evaluation of standard uncertainty, based on scientific judgement using all of the relevant information available. The combined standard uncertainties multiplied by those coverage factors specified in our standard calibration records, to provide an expanded uncertainty. This uncertainty defined an interval having a level of confidence of approximately 95 per cent, assuming normal distribution. The expanded uncertainty presented in this report is consistent with the ISO/IEC Guide to the Expression of Uncertainty in Measurement using the method Root Sum Squares (JCGM 100:2008).

Traceability Statement

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The following standard(s) were used: 2500 lb: 18987-10, 500 lb: 90499

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Justin Lien

Justin Lien, Laboratory Director



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Calibration Certificate

Date Received: March 09, 2017
Date of Test: March 09, 2017

State Test No.: W17-089
Item(s) Submitted: Weight Kit
Manufacturer: Rice Lake
Condition: Good
Tolerance Class: NIST HB 105-1 (1990), Class F
Kit Serial #: 2TJ
Balance ID#: 6&7
Procedure Used: NISTIR 6969 (2014), SOP 8
Temperature: 18.9 °C
Relative Humidity: 51.2 %
Pressure: 742.2 mmHg

Customer: FOX VALLEY INDUSTRIAL SCALE, INC.
Address: 109 FORD DR STE D
NEW LENOX, IL 60451-3669
Contact: T J OEHMEN
Phone: (815) 463-1209
PO Number: SB053

Nominal Mass	Mass Unit	Serial No.	Conventional Mass Correction (mg)		NIST HB 105-1 (1990), Class F		Uncertainty (mg)	Coverage Factor (k)
			As Found	As Left	As Found	As Left		
2000	g	2TJY	101	101	Pass	Pass	25	2.08
1000	g	2TJW	46	46	Pass	Pass	12	2.08
500	g	2TJU	18.5	18.5	Pass	Pass	8.7	2.08
200	g	M2	9.6	9.6	Pass	Pass	4.8	2.03
100	g	2TJS	5.2	5.2	Pass	Pass	2.4	2.03
50	g	2TJQ	4.5	4.5	Pass	Pass	1.2	2.03

The following standard(s) were used: Metric Weight Set WS-2

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FOX VALLEY INDUSTRIAL SCALE, INC.

109 FORD DR STE D
NEW LENOX
IL
60451-3669
(815) 463-1209

Date Received: 3/9/2017
Date of Test: 3/9/2017
Date Due:

State Test No.: W17-089

Uncertainty Statement

For the weights used in this calibration, some components can be assessed through a Type A evaluation, the method for assessing uncertainty by a statistical analysis of measured quantity values obtained under defined measurement conditions. In addition, other components were assessed from a Type B evaluation of standard uncertainty, based on scientific judgment using all of the relevant information available. The combined standard uncertainties multiplied by those coverage factors specified in our standard calibration records, to provide an expanded uncertainty. This uncertainty defined an interval having a level of confidence of approximately 95 per cent, assuming normal distribution. The expanded uncertainty presented in this report is consistent with the ISO/IEC Guide to the Expression of Uncertainty in Measurement using the method Root Sum Squares (JCGM 100:2008).

Traceability Statement

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Limitations and Conditions Statement

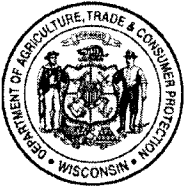
These results relate only to the items calibrated in this report. Weights calibrated to NIST Handbook 105-1 (1990), Specifications and Tolerances for Reference Standards and Field Standard Weights and Measures, using NISTIR 6969, Selected Laboratory Measurement Practices and Procedures to Support Basic Mass Calibrations (2014). Class F tolerances are usable for testing commercial weighing devices in Wisconsin, following NIST Handbook 44, Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices. Weights calibrated to ASTM tolerance 7 by this laboratory cannot be used for testing commercial weighing devices in Wisconsin, by definition (See NIST Handbook 105-1, Specification 1). Weight calibrated by ASTM Standard Specification E617-13 are not checked for density [Stainless steel weights are assumed 8.0 g/cm³], or for magnetism.

The following standard(s) were used: 1000 lb: 392

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Calibration Certificate

Date Received: March 09, 2017
Date of Test: March 09, 2017

State Test No.: W17-089
Item(s) Submitted: Cast Weight
Manufacturer: Rice Lake
Condition: Good
Tolerance Class: NIST HB 105-1 (1990), Class F
Kit Serial #:
Balance ID#: 10
Procedure Used: NISTIR 6969 (2014), SOP 8
Temperature: 20.9 °C
Relative Humidity: 45.0 %
Pressure: 742.6 mmHg

Customer: FOX VALLEY INDUSTRIAL SCALE, INC.
Address: 109 FORD DR STE D
NEW LENOX, IL 60451-3669
Contact: T J OEHMEN
Phone: (815) 463-1209
PO Number: SB053

Nominal Mass	Mass Unit	Serial No.	Conventional Mass Correction (mg)		NIST HB 105-1 (1990), Class F		Uncertainty (mg)	Coverage Factor (k)
			As Found	As Left	As Found	As Left		
1000	lb	109	26,940	26,940	Pass	Pass	5800	2.07
1000	lb	108	23,440	23,440	Pass	Pass	5800	2.07
1000	lb	110	22,740	22,740	Pass	Pass	5800	2.07
1000	lb	105	25,340	25,340	Pass	Pass	5800	2.07
1000	lb	102	23,440	23,440	Pass	Pass	5800	2.07
1000	lb	103	22,740	22,740	Pass	Pass	5800	2.07
1000	lb	100	26,040	26,040	Pass	Pass	5800	2.07
1000	lb	101	23,740	23,740	Pass	Pass	5800	2.07
1000	lb	106	26,040	26,040	Pass	Pass	5800	2.07
1000	lb	104	25,440	25,440	Pass	Pass	5800	2.07
1000	lb	107	20,940	20,940	Pass	Pass	5800	2.07
1000	lb	111	21,940	21,940	Pass	Pass	5800	2.07

The following standard(s) were used: 1000 lb: 392

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