

# Traceable Certificate

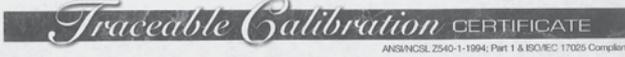
A customer requesting a Traceable Certificate, needs proof of traceability to NIST, actual mass values and uncertainties. Comparisons must be made between the item being tested and a known standard being used. The laboratory performing the testing must verify that the proper procedures and standards are being used so that the uncertainties are suitable for the test that is required. The known standard and procedure used for the tolerance test is essential to the traceable document. The Traceable Certificate is in compliance with ISO International Standard 17025 and ANSI/NCSL 2540-1 requirements.

Prior to the comparison between the known standard and the item(s) submitted for test, the known standard must be sufficiently tested over time to produce predictable measurements. Also, the procedure used to do the comparison must be accurate enough so the uncertainty of the measurement is small enough to generate a valid certificate.

**This certificate should contain all of the data related to the tolerance test. After testing, a Traceable Certificate is issued and will include:**

- 1 Name and address of the calibration laboratory
  - 2 Contractor name and address
  - 3 Client name and address
  - 4 Environmental condition at time of test
  - 5 Your Traceable Certificate Number
  - 6 NIST Certificate number
- Procedure Used:**
- 7 Modified Substitution
  - 8 Identification of the calibrated item and serial number, if applicable
  - 9 Nominal mass value
  - 10 As found condition of the weight
  - 11 As left condition of the weight
  - 12 A statement of the estimated value of uncertainty<sup>1</sup>
  - 13 Tolerance for the specific class
  - 14 Record of the weighing equipment
  - 15 Calibration and due date of RLWS standards. This represents the date that RLWS standard is due for recalibration. This RLWS standard was used to check the performance of your weight. This date in no way reflects an expiration date of the certificate, nor does it infer or specify a recall date. The expiration of the certificate and the specification of a recall date are user assigned responsibilities under NIST H150-1.
  - 16 Assumed density of the weight being tested
  - 17 Date Calibrated
  - 18 Recall Date
  - 19 The NVLAP official logo will be displayed when the documentation meets the scope of accreditation under Lab Code 105001

<sup>1</sup> A reported value without all required parameters cannot be used in any link of traceability. Therefore, a traceable certificate without an uncertainty statement is useless.



ANSI/NCSL 2540-1:1994 Part 1 & ISO/IEC 17025 Compliant

**Contractor:** 2 Rice Lake Weighing Systems  
230 W Coleman St  
Rice Lake, WI 54988

**Purchase Order #:** SAMPLE-V  
**Client:** Rice Lake Weighing Systems  
**Address:** 230 W Coleman St  
Rice Lake, WI 54988

**City & State:** Rice Lake, WI 54988  
**Date Received:** 18 JUL 2011  
**Date Calibrated:** 20 JUL 2011 to 21 JUL 2011

**Temperature Range:** 21.76 to 22.37 °C  
**Pressure Range:** 721.3 to 727.9 mmHg  
**Relative Humidity Range:** 49 to 50 %  
**Air Density:** 1.1278 to 1.1406 mg/cm<sup>3</sup>

**Traceable Report #:** SAMPLE-V  
**NIST Certificate #:** 681260058-10, 822278785-10

**Tested By:** 12, 19, 22  
**Procedure:** Modified Substitution (W105-0023)

**Contractor Req Recall Date:** 2 Years  
**Primary Standard Calibration Date:** 02/11/11, 10/1/10  
**Due:** 02/11/15, 10/21/13

**Description of Weights:** 10 mg - 100 g Satin Finish Weight Kit, NIST Class F, SIN SAMPLE-V  
Although there are two NIST numbers, one or both may apply.

9	Nominal Value	10	Conventional Mass Corr.		Unc. K=2 (mg)	Tol. (mg)	Balance Used	Standard Set Used Calibrated/Due MM-DD-YY/MM-DD-YY	16	Assumed Density (g/cm <sup>3</sup> )
			As Found (mg)	As Left (mg)						
	10 mg	0.0900	0.0900	0.0013	0.21	501Q	K594Q	05-17-11/08-17-11	7.95	
	20 mg	0.1211	0.1211	0.0013	0.26	501Q	K594Q	05-17-11/08-17-11	7.95	
	20 mg	0.1220	0.1220	0.0013	0.26	501Q	K594Q	05-17-11/08-17-11	7.95	
	50 mg	0.1115	0.1115	0.0014	0.35	501Q	K594Q	05-17-11/08-17-11	7.95	
	100 mg	0.1963	0.1963	0.0012	0.43	501Q	K594Q	05-17-11/08-17-11	7.95	
	200 mg	0.2351	0.2351	0.0012	0.54	501Q	K594Q	05-17-11/08-17-11	7.95	
	200 mg	0.2377	0.2377	0.0012	0.54	501Q	K594Q	05-17-11/08-17-11	7.95	
	500 mg	0.1725	0.1725	0.0015	0.72	501Q	K594Q	05-17-11/08-17-11	7.95	
	1 g	0.396	0.396	0.008	0.90	639Q	D563Q	03-30-11/09-30-11	7.84	
	2 g	0.36	0.36	0.11	1.12	639Q	D563Q	03-30-11/09-30-11	7.84	
	2 g	0.18	0.18	0.11	1.12	639Q	D563Q	03-30-11/09-30-11	7.84	
	5 g	0.639	0.639	0.097	1.5	639Q	D563Q	03-30-11/09-30-11	7.84	
	10 g	0.79	0.79	0.11	2.0	639Q	D563Q	03-30-11/09-30-11	7.84	
	20 g	1.65	1.65	0.29	4.0	1221Q	D563Q	03-30-11/09-30-11	7.84	
	20 g	1.72	1.72	0.29	4.0	1221Q	D563Q	03-30-11/09-30-11	7.84	
	50 g	3.70	3.70	0.32	10	1221Q	D563Q	03-30-11/09-30-11	7.84	
	100 g	7.08	7.08	0.38	20	1221Q	D563Q	03-30-11/09-30-11	7.84	

This report contains data not covered by the NVLAP Accreditation if the box is checked.

Prepared By: **1** RICE LAKE  
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Dated 27 JUL 2011  
Dan Demers Metrologist

**19** NVLAP  
NVLAP Lab Code 105001

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**Procedure Used:**  
Modified Substitution using NIST SOP 8,  
RLWS Work Instruction W105-0023