

TMAP Traceable Certificate

A customer requesting a TMAP 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.

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 report.

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

- 1 Name and address of the calibration laboratory
- 2 Identification of the calibrated item and serial number, if applicable
- 3 Nominal mass value
- 4 As found condition of the weight
- 5 As left condition of the weight
- 6 Tolerance for the specific class
- 7 A statement of the estimated value of uncertainty¹
- 8 Your Traceable Report Number
- 9 NIST Certificate number
- 10 Environmental condition at time of test
- 11 Procedure used

In addition, our NVLAP-accredited lab will also include:

- 12 The NVLAP official logo will be displayed when the documentation meets the scope of accreditation under Lab Code 105001
- 13 Record of the weighing equipment
- 14 Calibration and due date of RLWS standards. This represents the date that the 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.

TMAP Traceable Calibration REPORT

Contractor: **16** Rice Lake Weighing Systems
230 West Coleman Street
Rice Lake, WI 54860

Purchase Order #: RLWS
Client: **17** Rice Lake Weighing Systems
Address: 230 West Coleman Street

City & State: Rice Lake, WI 54860
Date Received: 28 FEB 2005
Date Calibrated: 04 MAR 2005
Temperature Range: 21.25 to 21.34 C
Pressure Range: 735.3 to 739.0 mmHg
Relative Humidity Range: **10** 45-47%
Air Density: 1.1669 to 1.1697 mg/cm³
Traceable Report #: **8** 747739
NIST Certificate#: **9** 822-090017-05
Tested By: **11** (U)
Procedure: **11** Modified Substitution (MISO-0023)
Contractor Req Recall Date: 1 Year

Primary Standard Calibration Date: 13 AUG 2000 Due: 13 AUG 2005
Description of Weights: **2** 3 mg-100 g, s/n 17558, Polished Wts, Class 3

3	4	5	6	7	8	9	10	11	12	13	14	15
Nominal Value	Id.	Conventional Mass Cert. As Found (mg)	As Left (mg)	Unc. ¹ Kx2 (mg)	Sol. (mg)	Balance Used	Standard Set Used Calibrated/Bus	MM-DD-YY/MM-DD-YY	Assumed Density (g/cm ³)			
100 g		0.523	0.523	0.023	1.0	SP32	K3952	03-06-05/06-06-05	8.00			
50 g		0.134	0.134	0.013	0.50	SP33	K3952	03-06-05/06-06-05	8.00			
30 g		0.1935	0.1935	0.0394	0.45	SP33	K3952	03-06-05/06-06-05	8.00			
20 g		0.1804	0.1804	0.0360	0.35	SP32	K3952	03-06-05/06-06-05	8.00			
10 g		0.1080	0.1080	0.0281	0.25	SP32	K3952	03-06-05/06-06-05	8.00			
5 g		0.0486	0.0486	0.0124	0.15	SP10	K3952	03-06-05/06-06-05	8.00			
3 g		-0.0131	-0.0131	0.0028	0.15	SP10	K3952	03-06-05/06-06-05	8.00			
2 g		-0.0140	-0.0140	0.0021	0.13	SP10	K3952	03-06-05/06-06-05	8.00			
1 g		0.0453	0.0453	0.0021	0.10	SP10	K3952	03-06-05/06-06-05	8.00			
500 mg		0.0121	0.0121	0.0017	0.090	SP10	K3952	03-06-05/06-06-05	7.95			
300 mg		0.0257	0.0257	0.0014	0.070	SP10	K3952	03-06-05/06-06-05	7.95			
200 mg		-0.0344	-0.0344	0.0043	0.060	SP10	K3952	03-06-05/06-06-05	16.8			
100 mg		-0.0129	-0.0129	0.0015	0.050	SP10	K3952	03-06-05/06-06-05	16.8			
50 mg		-0.0131	-0.0131	0.0012	0.040	SP10	K3952	03-06-05/06-06-05	16.8			
20 mg		-0.0234	-0.0234	0.0011	0.030	SP10	K3952	03-06-05/06-06-05	2.70			
10 mg		0.0066	0.0066	0.0010	0.020	SP10	K3952	03-06-05/06-06-05	2.70			
5 mg		0.0075	0.0075	0.0012	0.020	SP10	K3952	03-06-05/06-06-05	7.95			
		-0.0081	-0.0081	0.00078	0.020	SP10	K3952	03-06-05/06-06-05	8.00			

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

Prepared By: **1** **12**

13 **RICE LAKE WEIGHING SYSTEMS**
A NVLAP ACCREDITED MASS LAB
230 West Coleman Street • Rice Lake, WI 54860 • USA
TEL: 715.726.9171 FAX: 715.726.0987

- 15 Assumed density of the weights being tested
- 16 Contractor name and address
- 17 Client name and address

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