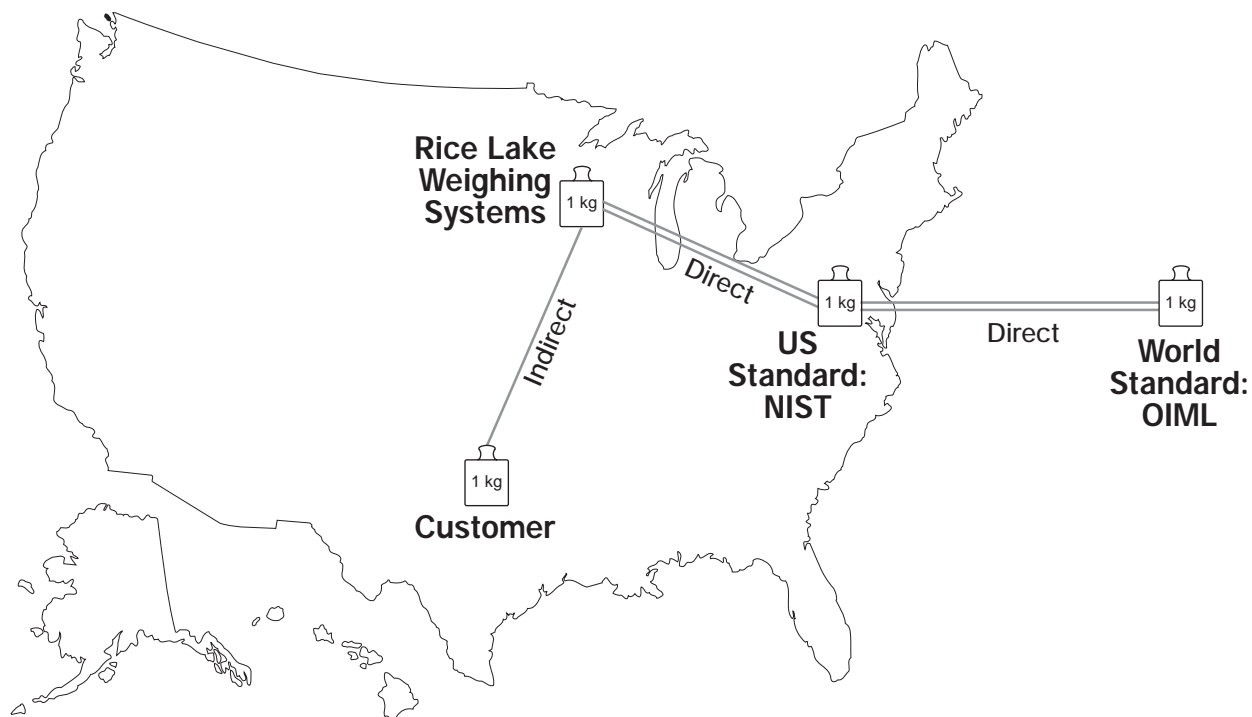


Traceability



What is Traceability?

Traceability is documentation—essentially a pedigree—showing a direct link to the official U.S. 1 kg weight standards housed at the National Institute of Standards and Technology (NIST) in Gaithersburg, MD. These NIST standards are in turn calibrated to the international 1 kg standard maintained at the BIPM lab in Sevres, France.

Traceability not only means that a weight or mass standard has links to the NIST 1 kg standard, but also that the measurements were appropriate for the accuracy class required for the application. Traceability also requires proof that all environmental factors affecting accuracy were considered at the lab doing the measurement.

There are two types of traceability: direct and indirect.

Direct traceability means a weight or mass standard has been tested by NIST. NIST then issues a report number to the organization for whom they have performed measurements. Because the report is valid only for the items tested by NIST, a calibration lab such as Rice Lake Weighing Systems must submit its set of mass standards to NIST for testing. This report provides direct traceability for the lab's mass standards, which can then be used in calibrating weights for clients.

Indirect traceability exists when a client's weight or mass standard is tested by a metrology lab that has direct traceability and has the necessary measurement control program in place. An important aspect of this measurement control and testing program is the participation in a NIST-certified measurement assurance program, which reduces the possibility of errors.

To clarify the two types of traceability, remember that direct traceability comes directly from NIST. For example, Rice Lake Weighing Systems' Calibration Lab has direct traceability, as shown in the diagram above. The calibrations we perform for our customers provide indirect traceability. Likewise, when that customer uses its Rice Lake Weighing Systems calibrated test weights to calibrate a balance or scale, it is providing indirect traceability.

When is Traceability Necessary?

- Federal agencies require measurement traceability to national standards for contract work.
- Military contracts invariably require traceability.
- Pharmaceutical, scientific, and medical products manufacturers usually specify traceability.
- ISO-9000 registered companies nearly always require proof of traceability to the international standard.

Accuracy, Traceable and Calibration Certificates

Certificate Of Accuracy

This certificate states that the mass (weight) has been compared to a known standard. The standards used must have traceability to NIST and the certificate will list the report number, nominal value, description of weight (or kit), serial number, class and tolerance.

Traceable Certificate

This certificate conforms to ANSI/NCSL Z540-1 and includes all the necessary information that is required by the superseded Military Standard Spec 45662A. We use a modified weighing design, and provide the following information: nominal and correction values, tolerance for the specific class, assumed density, and the environmental conditions present at the time the tests were performed. Weights that include this certificate are traceable to NIST.

Calibration Certificate

This certificate also conforms to ANSI/NCSL Z540-1 and the superseded Military Standard Spec 45662A. The weighing designs used for this calibration are extensive and consist of repeated comparisons, the same as those used at the national level (NIST). When these calibrations are performed, the 4-to-1 uncertainty to tolerance ratio is met for a weight range of 10 kg to 1 mg, thus giving the most accurate values of the weights as possible. Weights that include this certificate are traceable to NIST.

Traceable vs Calibration Certificate

The major difference between the two is the method in which the weights are compared to the known standard. Both certificates give the actual values and uncertainties. The calibration certificate will, however, give a smaller uncertainty and a more precise value of the actual mass due to the multiple measurements that are made during the calibrating process.

Both the Traceable and Calibration Certificate will include the following information:

- Actual mass values or the corrections to the nominal mass of the weight being calibrated vs. 8 grams/cm³.
- The uncertainty of the measurement process as it relates to the item being calibrated.
- The environmental conditions present during the test.
- The assumed density of the weight being tested so that atmospheric buoyancy corrections can be applied.

Which Certificate Do I Need?

This is one of the most frequently asked questions we hear at our Mass Metrology Laboratory.

Sometimes the answer is obvious, as when a company has legal or contractual requirements that mandate a specific certification. Government contracts may dictate a certificate to meet certain Military Standard specifications. Often the need for quality control requirements for ISO-9000 guidelines specify that certain standards be met in their weight certificates.

In the absence of any programs or guidelines within your company, the Accuracy Classes for Mass Standards and Test Weights chart on page 2 can be used as a guide to define whether a Calibration or Traceable Certificate is required.

A Certificate of Accuracy is adequate if the actual values and stated uncertainties of the weights are not necessary, and only the tolerances of the specific class are needed. These certificates are normally adequate for weights used to calibrate industrial balances and scales more than 6 kg in capacity. The mass standards used by Rice Lake Weighing Systems are used to verify that those weights are within the necessary tolerances and are traceable to NIST. Weights with this certificate do not meet the requirements needed in legal-for-trade scale applications.

Legal-for-Trade Weight Applications

NIST Class F weights are required for all legal-for-trade applications which include any product that is sold by weight. This would include all retail scales and floor and truck scales. For these applications we recommend a traceable certificate, which will give actual values and uncertainties of the weights. Most State Weights and Measures Departments require this information as a minimum to allow weights to be put into field service. This is usually the same information that the state gives when they certify weights. Check with your state and local Weights and Measures Department for acceptance of our certifications.

** Refer to page 18 for Calibration Service Selection Guide.*

How Will a NVLAP-Accredited Calibration Lab Benefit Me?

While the present benefits of using a NVLAP-accredited lab for your weight calibration services are readily apparent now, the future benefits—both in the U.S. and abroad—when the NVLAP program gains widespread approval, will be truly exciting.

Rice Lake Weighing Systems is proud to have its new mass calibration laboratory awarded the NIST/NVLAP recognition of excellence. Its metrology staff has participated in basic, intermediate, and advanced NIST/OWM training seminars, regional metrology groups such as MidMAP, and round-robin measurement programs with state labs since regional groups were established in the early 1980s. Now, with the NVLAP program in place, Rice Lake Weighing Systems has demonstrated its ability to meet accreditation requirements equal to the state calibration labs.

For international customers, NVLAP-accredited calibration validates the traceable link to the BIPM international standard so often required by ISO-9000 registered companies.

In the very near future, the NVLAP program should bring a measure of reciprocity and universal standardization that the weights and measures industry has long sought. The NVLAP standards were tailored to the calibration require-

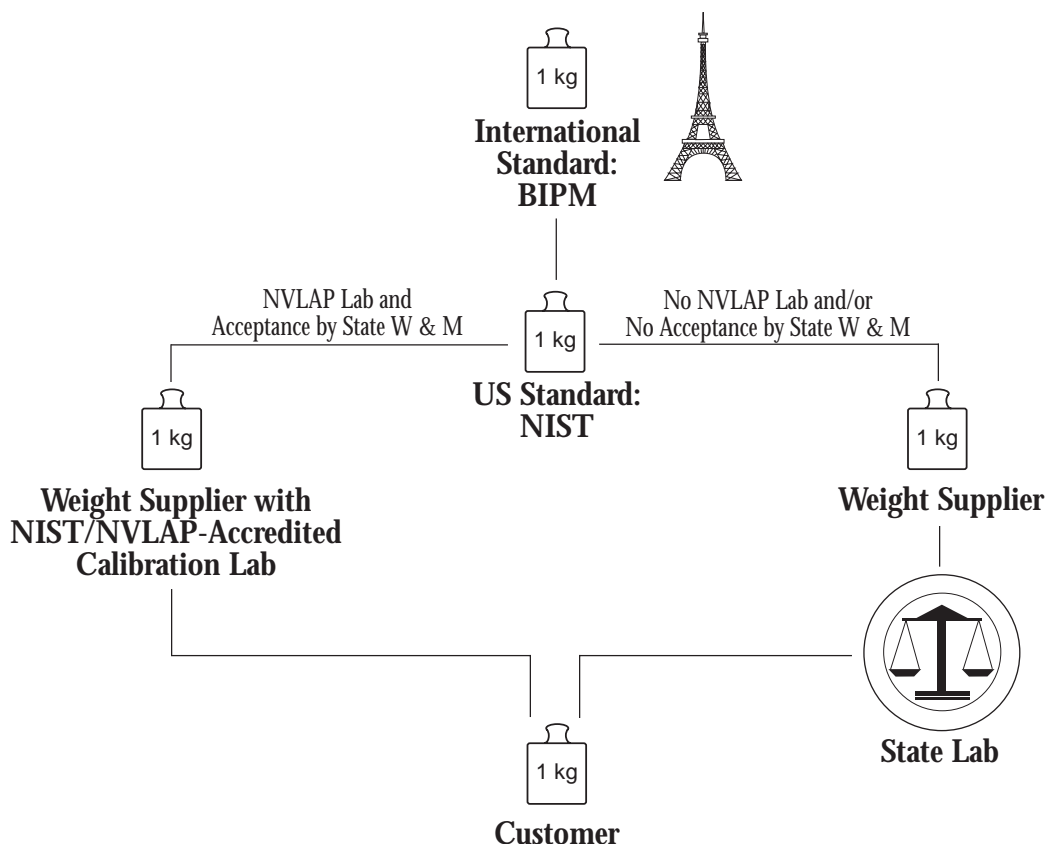
ments of the major European accreditation bodies, so ready acceptance of calibrations from American NVLAP-accredited labs is expected by the European community.

Acceptance of NVLAP by individual states in the U.S. is currently under way. If your state recognizes NVLAP accreditation and grants reciprocity, Rice Lake Weighing Systems can calibrate and ship certified test weights to any location in your state.

If your state has not granted reciprocity for NVLAP-accredited calibrations, we will continue to send commercial test weights and mass standards to your local state lab for certification (or to another state lab with a reciprocity agreement). You may place your legal-for-trade test weights into service only after that official lab performs its tests.

Check with your state or local Weights and Measures officials to determine the approval status of legal-for-trade weights in your state before ordering certification by Rice Lake Weighing Systems.

Rice Lake Weighing Systems' NVLAP-accredited lab can certify weights to accuracy echelon I, II, and III, and ship them directly to customers. See page 2 for typical uses of these accuracy classes.



* Refer to page 18 for Calibration Service Selection Guide.

NVLAP Traceable Certificate

When a customer requests a Traceable Certificate, he needs proof of traceability to NIST, actual mass values and uncertainties. Comparisons must be made between the item being tested and the official 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 submitted for testing, 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.

Only after the proper procedures and standards have been utilized is a report issued. This report should contain all of the data related to the tolerance test. After testing, a Traceable Certificate is issued and should 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, a 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 the standards
- 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.

* Refer to page 18 for Calibration Service Selection Guide.

TRACEABLE CERTIFICATE

Contractor: 16 RICE LAKE WEIGHING SYSTEMS
230 WEST COLEMAN ST.
RICE LAKE, WI 54868

Purchase Order #: 17 RICE LAKE WEIGHING SYSTEMS
RLWS
230 WEST COLEMAN ST.
RICE LAKE, WI 54868

Client: 10 APR 2000
24 APR 2000
21.43 to 21.83 °C
734.1 to 734.2 mmHg
40 to 42 %
1.1511 to 1.1529 mg/cm³

Address: 8 5698288
822/260017-98 9

City and State: 11 Modified Substitution (SOP B)
13 AUG 1998 Due: 13 AUG 2002

Date Received: 2 S.S. KIT, CLASS "F", S/N RLWS 2

Date Calibrated: 7

Temperature Range: 6

Pressure Range: 13

Relative Humidity Range: 13

Air Density: 13

Traceable Report #: 13

NIST Certificate #: 13

Tested By: 13

Procedure: 13

Primary Standard Calibration Date: 13

Description of Weights: 13

Nominal Value	Id.	Conventional	Mass Corr.	As Found (mg)	As Left (mg)	Unc. K=2 (mg)	Tol. (mg)	Balance Used	Standard Set Used	Calibrated/due	Assumed Density
1/32 oz	4	0.363	0.363	0.363	0.363	0.066	0.87	1017Q	D564Q	03-23-00/09-23-00	7.84
1/32 oz	4	0.429	0.429	0.429	0.429	0.066	0.87	1017Q	D564Q	03-23-00/09-23-00	7.84
1/16 oz	4	0.468	0.468	0.468	0.468	0.066	1.1	1017Q	D564Q	03-23-00/09-23-00	7.84
1/8 oz	4	0.471	0.471	0.471	0.471	0.066	1.3	1017Q	D564Q	03-23-00/09-23-00	7.84
1/4 oz	4	0.572	0.572	0.572	0.572	0.066	1.7	1017Q	D564Q	03-23-00/09-23-00	7.84
1/2 oz	4	1.049	1.049	1.049	1.049	0.066	2.8	1017Q	D564Q	03-23-00/09-23-00	7.84
1 oz	4	4.931	4.931	4.931	4.931	0.066	5.4	1017Q	D564Q	03-23-00/09-23-00	7.84
2 oz	4	0.468	0.468	0.468	0.468	0.066	11	1017Q	D564Q	03-23-00/09-23-00	7.84
4 oz	4	15.2	15.2	15.2	15.2	0.066	23	859Q	D564Q	03-23-00/09-23-00	7.84
8 oz	4	27.1	27.1	27.1	27.1	0.066	45	859Q	D564Q	03-23-00/09-23-00	7.84
1 lb	4	30.7	30.7	30.7	30.7	0.066	70	859Q	D564Q	03-23-00/09-23-00	7.84
2 lb	4	34.6	34.6	34.6	34.6	0.066	91	859Q	D564Q	03-23-00/09-23-00	7.84
5 lb	4	78.9	78.9	78.9	78.9	0.066	230	859Q	D564Q	03-23-00/09-23-00	7.84
10 lb	4	112	112	112	112	0.066	450	859Q	D564Q	03-23-00/09-23-00	7.84

Calibration At: 1 RICE LAKE WEIGHING SYSTEMS
METROLOGICAL PRODUCTS & SERVICES GROUP
A NVLAP Accredited Mass Lab
230 West Coleman Street • Rice Lake, WI 54868 • USA
TEL: 715-234-9171 • FAX: 715-234-6967
This report is not to be used to claim product endorsement by Rice Lake Weighing Systems, NVLAP or any agency of the U.S. Government.
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ISO 9001

Page 1 of 1 Page

Dated 10 MAY 2002
Russ Schmitt
Authorized Signatory

NVLAP Calibration Report

A customer requesting a Weight Calibration Report needing traceability to NIST, is looking for actual weight readings, corrections and uncertainty values. To produce this document, a calibration laboratory must maintain a statistical measurement process acceptable by NIST. Also, depending on the weight class and the accuracy required, different standards and procedures need to be incorporated to make sure the level of uncertainty is appropriate for the item being tested. The Weight Calibration Report is in compliance with ISO International Standard 17025 and ANSI/NCSL Z540-1 requirements.

The special software used to produce the NVLAP calibration Report was developed specifically for Rice Lake Weighing Systems. These programs and procedures allow Rice Lake Weighing Systems to achieve and help maintain lower uncertainties.

The Calibration Report includes the following information:

- 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 A statement of the estimated value of uncertainty¹
- 7 Your Traceable Report Number
- 8 NIST Certificate number
- 9 Environmental condition at time of test
- 10 Procedure used
- 11 NVLAP Accreditation logo
- 12 Information on the Traceable Standards used
- 13 Contractor name and address
- 14 Client name and address

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

TMAR CALIBRATION REPORT

Contractor: 13 RICE LAKE WEIGHING SYSTEMS
230 WEST COLEMAN ST.
RICE LAKE, WI 54868

Purchase Order #: 14 RICE LAKE WEIGHING SYSTEMS
230 WEST COLEMAN ST.
RICE LAKE, WI 54868

Client: 14 RICE LAKE WEIGHING SYSTEMS
230 WEST COLEMAN ST.
RICE LAKE, WI 54868

Address: 14 RICE LAKE WEIGHING SYSTEMS
230 WEST COLEMAN ST.
RICE LAKE, WI 54868

City & State: RICE LAKE, WI 54868

Date Received: 14 APR 2000

Date Calibrated: 24 APR 2000

Temperature Range: 21.30 to 21.96 °C

Pressure Range: 733.2 to 734.2 mmHg

Relative Humidity Range: 9 41 %

Air Density: 1.1499 to 1.1531 mg/cm³

Traceable Report #: 7 561456A

NIST Certificate #: 8 822/260017-98

Tested By: 10 Weighing Design HB 952

Procedure: 13 AUG 1998

Primary Standard Calibration Date: Due: 13 AUG 2002

Description of Weights: 2 RLWS, 1MG-100G S/N RLWS 1 CLASS "1"

Nominal Value	Id.	Conventional Mass Corr.		Unc. K=2 (mg)	Tol. (mg)	Balance Used	Standard Set Used	Calibrated/due MM-DD-YY/MM-DD-YY (g)
		As Found (mg)	As Left (mg)					
1 mg		0.0054	0.0054	0.0012	0.010	501Q	K594Q	02-18-00/06-18-00
2 mg		0.0021	0.0021	0.0011	0.010	501Q	K594Q	02-18-00/06-18-00
5 mg		0.0051	0.0051	0.0012	0.010	501Q	K594Q	02-18-00/06-18-00
10 mg		0.0011	0.0011	0.0012	0.010	501Q	K594Q	02-18-00/06-18-00
20 mg		-0.0002	-0.0002	0.0015	0.010	501Q	K594Q	02-18-00/06-18-00
50 mg		0.0051	0.0051	0.0014	0.010	501Q	K594Q	02-18-00/06-18-00
100 mg		-0.0020	-0.0020	0.0018	0.010	501Q	K594Q	02-18-00/06-18-00
200 mg		-0.0057	-0.0057	0.0021	0.010	501Q	K594Q	02-18-00/06-18-00
500 mg		-0.0035	-0.0035	0.0027	0.034	501Q	K594Q	02-18-00/06-18-00
1 g		-0.0055	-0.0055	0.0029	0.034	501Q	K594Q	02-18-00/06-18-00
2 g		0.0072	0.0072	0.0026	0.034	501Q	K594Q	02-18-00/06-18-00
5 g		0.0049	0.0049	0.0026	0.034	676Q	K594Q	02-18-00/06-18-00
10 g		0.0041	0.0041	0.0037	0.050	676Q	K594Q	02-18-00/06-18-00
20 g		-0.0019	-0.0019	0.0082	0.074	676Q	K594Q	02-18-00/06-18-00
50 g		0.0001	0.0001	0.010	0.12	973Q	K594Q	02-18-00/06-18-00
100 g		0.0204	0.0204	0.010	0.12	973Q	K594Q	02-18-00/06-18-00
2 g		0.036	0.036	0.017	0.25	973Q	K594Q	02-18-00/06-18-00
5 g		0.034	0.034	0.032				
10 g		0.032	0.032					
20 g		0.083	0.083					

☐ This report contains data not covered by the NVLAP Accreditation. Check with your local state agency for certification of compliance on legal-for-trade items.

Rice Lake Weighing Systems accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the specific scope of activity.

Calibration At: 1 RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale
A NVLAP Accredited Mass Lab
230 West Coleman Street • Rice Lake, WI 54868 • USA
TEL: 715-234-9171 • FAX: 715-234-6967

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Page 1 of 1 Page

* Refer to page 18 for Calibration Service Selection Guide.

Ordering Traceable and Weight Calibration Certificates

New Weights

Traceable and Weight Calibration Certificates can be purchased with every weight we sell. To order either certificate with your purchase of a new weight or weight set, you should:

1. Note on your purchase order to add these services.
2. Call or fax the order and we will quote you the additional price immediately.

Existing Weights

Your existing weights should be recertified at least once a year, and possibly more often depending upon their use. Our state-of-the-art metrology lab is equipped to calibrate your existing weights and mass standards and can provide either a Traceable or Weight Calibration Certificate at your request.

When calibrating existing weights there are many factors that affect the cost: age, design, abuse, required finish, tolerance and class needed. To accurately estimate the cost of our calibration service, we offer the following 24-hour response options:

- Send us the weight and designate which service you would like us to perform. We will evaluate the weight and phone you with a quote.
- Photocopy the ISO FASTCALSM Rapid Response form found on the last page of this catalog, or call us and we will fax you a new form. Simply complete and return the form and we will get back to you with an estimate.
- Call and tell us what weights you have and what service you need and we will give you a quote over the phone.

Our normal turnaround time for weight services is two weeks. If you have a specific date that you need the weights back, call ahead and schedule an appointment. Our metrology lab will then schedule your work before we receive your weights.

Please call 1-800-357-8627 (TMAP) to receive a copy of the ISO FASTCAL Rapid Response form or to schedule a time for certification of your weights.

Definitions

Traceability: The continuous link between the weights in question and the World Standard which is kept at BIPM in Sevres, France.

Tolerance: The allowable limits within each class that a mass can deviate from the nominal value.

Adjustment: The process of changing the mass either by polishing or adding and subtracting material, to bring the mass within the tolerance of a specified class.

As Found: The value of the mass recorded by Rice Lake Weighing Systems after cleaning and before any adjustment based on a density of 8g/cm³ at 20°C.

As Left: The value of the mass after any necessary adjustments are made based on a density of 8g/cm³ at 20°C.

Calibration: The set of operations that establishes, under specified conditions, the process of finding the mass value of an unknown through a series of intercomparisons with known mass standards, by determining the difference between them. An UNCERTAINTY value must be assigned to the reported mass value of the unknown for a true calibration.

Uncertainty: The parameter of possible deviation associated with the result of a measurement due to any one or all of the following conditions: measuring equipment, environment, operator technique, and the assumed value of the standards which is a direct result of the measurements back to the World Standard (TRACEABILITY).

Correction: The deviation from the nominal value based on the true mass or referenced density.

Density: The unit of mass divided by its volume. For a precision calibration, density testing is required to calculate buoyancy correction.

Buoyancy Correction: The calculation needed to compensate for the varying air density in order to ascertain the true mass value.

ISO FASTCALSM RAPID RESPONSE SERVICES For Precision Test Weights, Mass Standards, Calibration & Repair

PHONE: (715) 234-9171
FAX: (715) 234-6967

CUSTOMER INFORMATION

COMPANY NAME: _____ SHIP TO: _____
 CUSTOMER #: _____ STATE: _____ ZIP: _____ PHONE: _____ FAX: _____
 ADDRESS: _____
 CITY: _____
 COUNTRY: _____

TECHNICAL CONTACTS

1. **AVAILABLE SERVICES**

☐ NVLAP Accredited Certifications Available:
☐ Certificate of Accuracy
☐ NVLAP[®] Traceable Certificate
 (Both NVLAP certificates conform to international standard
 ANSI/NCSL Z540-1, ISO/IEC 17025, and are traceable to NIST)

2. Specify name and address to be printed on Certificate:

3. **Weight Class:**
☐ NIST ☐ OIML
☐ ASTM ☐ Other: _____

4. **Specify material and density:**
☐ Stainless Steel ☐ Cast
☐ Brass ☐ Other: _____

5. **Are these weights in a self-contained kit?**
☐ Yes ☐ No
 If yes, what range? _____
 Part #, if applicable: _____

6. **Standard weight kits consist of 5-3-2-1 or 5-2-2-1 combinations.**
 If not a standard weight kit, please list all individual weights below:

6. **To order new weights please list:**

Part #	Quantity	Description

Are the individual weights serialized? ☐ Yes ☐ No
 (Serial numbers are required for traceability)

If NO, specify service(s) required:
 (Note: Certain sizes of weights and polished weights cannot be serialized and will be marked with dots) as applicable
☐ Serialize kit only ☐ Serialize kit and weights
☐ Serialize weight(s) only ☐ Weights/kits have serial number
 (Add \$7.50 per serial number issued)

8. **Has this item(s) been exposed to hazardous contamination?**
☐ Yes ☐ No
 If yes, send documentation that proves items have been decontaminated.

9. **Notes or special instructions:**

QUOTATION FOR SERVICES SPECIFIED ABOVE

BY: _____ EXT #: _____
 PRICE ESTIMATE: \$ _____ SHIP DATE: _____

CUSTOMER AUTHORIZATION TO PROCEED

NOTE: Estimate is based on the ability of the weights to be calibrated and/or certified as required. If weights cannot be calibrated or certified and additional work is needed, I authorize Rice Lake Weighing Systems to (check appropriate option):

☐ Finish the work order and bill for any additional new weights and services. (All unusable, out-of-tolerance weights will be replaced at no charge.)
☐ Interrupt the work order, develop a new estimate, and request authorization to proceed.
☐ Stop the work order, return the weights, and bill us for actual time incurred.

YOUR PURCHASE ORDER #: _____ BY: _____
 TITLE: _____

RICE LAKE WEIGHING SYSTEMS
 METROLOGICAL PRODUCTS & SERVICES GROUP

0300 - Rev 5/00

CUSTOMER INFORMATION

COMPANY NAME: _____ SHIP TO: _____
 CUSTOMER #: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____
 COUNTRY: _____
 TECHNICAL CONTACTS: _____ PHONE: _____ FAX: _____

AVAILABLE SERVICES

1. NVLAP Accredited Certifications Available:

- ☐ Certificate of Accuracy ☐ NVLAP* Calibration Certificate
☐ NVLAP* Traceable Certificate

(Both NVLAP certificates conform to international standard
ANSI/NCSL Z540-1, ISO/IEC 17025, and are traceable to NIST)

2. Specify name and address to be printed on Certificate:

 Send Certificate to (If different than above): _____

3. Weight Class:

- ☐ NIST _____ ☐ OIML _____
☐ ASTM _____ ☐ Other: _____

4. Specify material and density:

- ☐ Stainless Steel _____ ☐ Cast _____
☐ Brass _____ ☐ Other: _____

5. Are these weights in a self-contained kit?

- ☐ Yes ☐ No

If yes, what range? _____

Part #, if applicable: _____

Number of weights in kit: _____

6. Standard weight kits consist of 5-3-2-1 or 5-2-2-1 combinations.

If not a standard weight kit, please list all individual weights below:

6. To order new weights please list:

Part #	Quantity	Description

Are the individual weights serialized? ☐ Yes ☐ No

(Serial numbers are required for traceability)

If **NO**, specify service(s) required:

(Note: Certain sizes of weights and polished weights cannot be serialized and will be marked with dot(s) as applicable)

- ☐ Serialize kit only ☐ Serialize kit and weights
☐ Serialize weight(s) only ☐ Weights/kits have serial numbers

(Add \$7.50 per serial number issued)

8. Has this item(s) been exposed to hazardous contamination?

- ☐ Yes ☐ No

If yes, send documentation that proves items have been decontaminated.

9. Notes or special instructions:

QUOTATION FOR SERVICES SPECIFIED ABOVE

BY: _____ EXT.#: _____
 PRICE ESTIMATE: \$ _____ SHIP DATE: _____

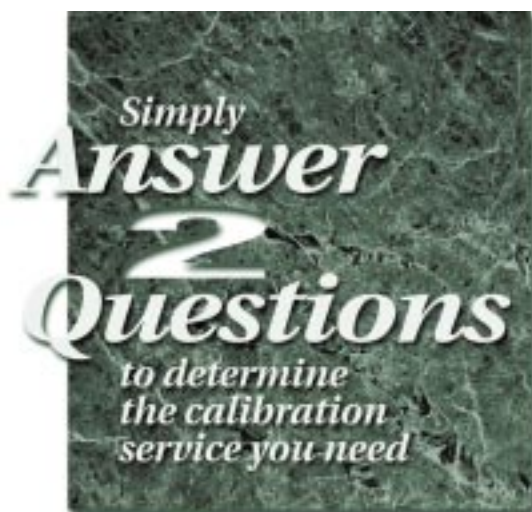
CUSTOMER AUTHORIZATION TO PROCEED

NOTE: Estimate is based on the ability of the weights to be calibrated and/or certified as requested above.
 If weights cannot be calibrated or certified and additional work is needed, I authorize Rice Lake Weighing Systems to (check appropriate option):

- ☐ **Finish** the work order and bill for any additional new weights and services. (All unusable, out-of-tolerance weights will be returned.)
☐ **Interrupt** the work order, develop a new estimate, and request authorization to proceed.
☐ **Stop** the work order, return the weights, and bill us for actual time incurred.

YOUR PURCHASE ORDER #: _____ BY: _____
 TITLE: _____

* Accredited by the National Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 105001



1

Need **accredited** laboratory certificate or report to meet **ISO/IEC Guide 25** & **ISO 9000** requirements?

YES

NO

2

What Weight Class?

ASTM 0, 1, 2, 3; OIML E2, F1, or F2

ASTM 4, 5, 6, 7; NIST F; OIML M1, M2, M3

Traceability to NIST?

YES

NO



NVLAP Calibration Report

- Weight classes: ASTM 0–3, OIML E2, F1, F2
- Meets all the requirements of the National Voluntary Laboratory Accreditation Program (NVLAP)
- Provides traceability to NIST
- Meets requirements for ISO/IEC Guide 25 and ANSI/NCCL Z540-1
- Report cites that the test was done by RLWS, a NVLAP-accredited laboratory
- Lists the environmental conditions present at time of calibration
- Report states that RLWS is ISO 9001 registered



NVLAP Traceable Certificate

- Weight classes: ASTM 4–7, NIST F, OIML M1, M2, M3
- Meets all the requirements of the National Voluntary Laboratory Accreditation Program (NVLAP)
- Provides traceability to NIST
- Meets requirements for ISO/IEC Guide 25 and ANSI/NCCL Z540-1
- Certificate cites that the test was done by RLWS, a NVLAP-accredited laboratory
- Lists the environmental conditions present at time of calibration
- Report states that RLWS is ISO 9001 registered



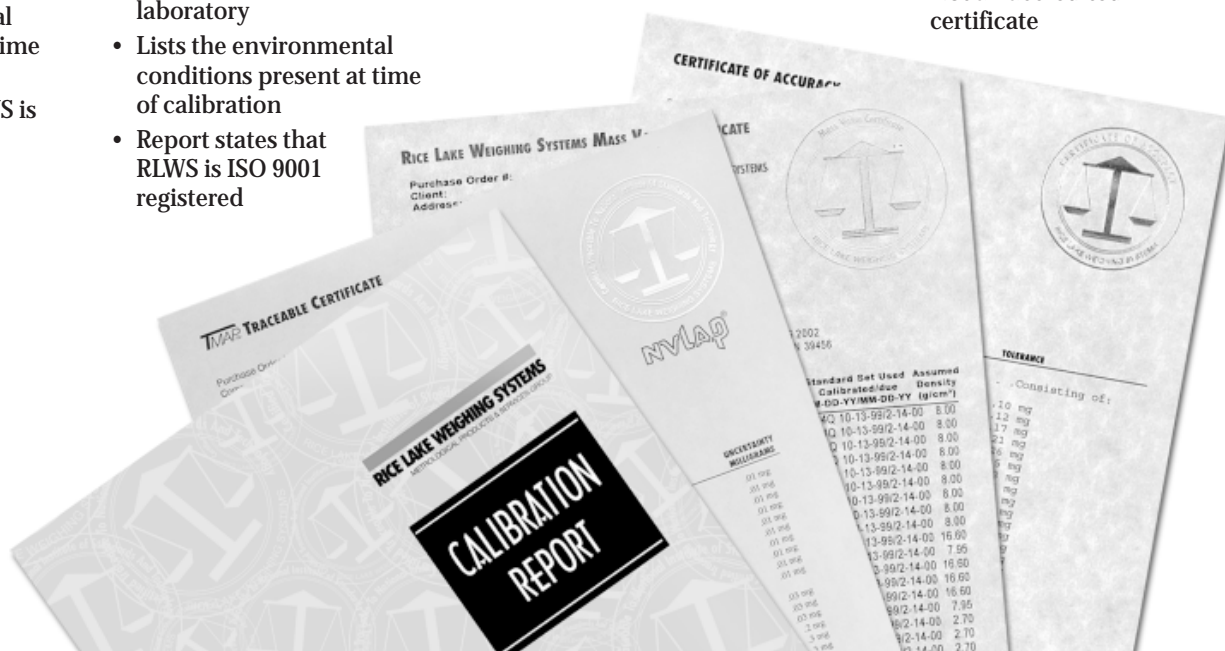
RLWS Mass Value Certificate

- Weight classes: ASTM 1–3, OIML E2, F1, F2
- Uncertainty to tolerance ratios are not guaranteed to be met
- Lists actual weight values, uncertainties, and tolerances
- Measurements are traceable to NIST
- Not an accredited certificate



Certificate of Accuracy

- All weight classes
- Tolerance statement of the weight
- Nominal value of the weight is listed
- Tolerance for the specific weight class is noted
- Does not give traceability to NIST
- Before, after, or uncertainties values are not listed
- Not an accredited certificate



* Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the specific scope of accreditation under Lab Code 105001.

† Guide 25 has been under review and is being replaced by ISO/IEC FDIS International Standard 17025. RLWS will be compliant to this standard by March 2001.