RICE LAKE Certificate of Weight Calibration

ISO/IEC 17025:2017 & ANSI/NCSL-Z540-1-1994 ACCREDITED

Traceable Certificate Number: 3689134A
Contractor: ADVANCED SCALE INC
13 DELTA DR UNIT 6
LONDONDERRY, NH 03053

Purchase Order Number: 10349
Client: ADVANCED SCALE INC
13 DELTA DR UNIT 6
LONDONDERRY, NH 03053

Date Received: 06 Mar 2024
Date Calibrated: 08 Mar 2024 to 12 Mar 2024
Recalibration Date: 28 Feb 2025
NIST Certificate Number: 684/O-0000046697
If there are two NIST numbers, one or both may apply
Calibrated By: 05, 17
Procedure: WI05-0095 Rev. D
Condition of Weights: Acceptable for Calibration
Description of Weights: 5 mg to 100 g Polished Weight Set, ASTM Class 1, S/N 0M31
Comments:

Key Notes

Finish	Indicates the weight does not meet the finish requirements
Material	Indicates the weight does not meet the material requirements
New Wt	Indicates new weight
Missing Wt	Indicates replaced missing weight with new weight
Damaged Wt	Indicates replaced damaged weight
Replaced OOT	Indicates replaced out of tolerance weight
OOT	Indicates correction plus or minus Uncertainty greater than or equal to MPE
Magnetic Wt	Indicates replaced magnetic weight
Design	Indicates the weight does not meet the design or shape requirements
Repainted	Indicates the weight was repainted after As Found obtained
Other	See comments above

Cleaning Levels

A	Dusted with brush or cloth
B	Spot cleaned with ethyl alcohol
C	Full surface cleaned with ethyl alcohol
D	Spot cleaned with non-alcohol solvent followed by ethyl alcohol
E	Full surface cleaned with non-alcohol solvent followed by ethyl alcohol
F	No cleaning performed

Material Abbreviations

AL	Aluminum	TA	Tantalum
SS	Stainless Steel	BR	Brass
CI	Cast Iron	PL	Platinum
IR	Iron	NS	Nickel Silver
MS	Mild Steel	OR	Other/Unknown

Check with your local state agency for certification of compliance on Legal-for-Trade items. The weight accuracy class is referenced in the Description of Weights. Unless otherwise noted, the weights calibrated meet the requirements of the accuracy class. Results relate only to weights calibrated. The Surface Finishes of weights are evaluated visually. Weights are screened for magnetism using work instruction WI05-0035 when they are new, when requested by the customer or when weights are suspected of not meeting specifications. Density if measured is measured using OIML R111-1 (2004) method A2. Conventional Mass is reported based on a reference density of 8.0 g/cm^3. The Uncertainty of Measurement is included in the determination of Maximum Permissible Error (MPE) Pass/Fail Criteria. The specifications for Maximum Permissible Error (MPE) can be found in NIST Handbook 105-1 (2019), NIST Handbook 105-1 (1990), ASTM E617-23 or OIML R111-1 (2004), manufacturer specifications or customer specifications.

The Uncertainty assigned to the Conventional Mass values are the result of the root-sum-square of the type A and type B components, calculated in accordance with NIST SOP 29 and the Guide to the expression of uncertainty in measurement, with coverage factor (k=2), to express the expanded uncertainty with an approximate 95.45% confidence level. This report is not to be used to claim product certification, approval, or endorsement by NVLAP, NIST, A2LA, or any government agency. **This document and all data within, shall not be reproduced, except in full, without the written approval of Rice Lake Weighing Systems**.

Dan Demers, Metrologist

12 Mar 2024
Issued Date: **Duplicate**

NVLAP CALIBRATION
NVLAP LAB CODE 105001-0

Prepared By:
Rice Lake Weighing Systems®●PN 64784●12/21
230 West Coleman Street●Rice Lake, WI 54868●USA
TEL: 715-234-9171●FAX: 715-234-6967
Definitions: http://certs.ricelake.com/certs/DefinitionsV2.docx

A2LA ACCREDITED Certificate #4363.01

RICE LAKE Certificate of Weight Calibration

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Traceable Certificate Number: 3689134A
Client: ADVANCED SCALE INC
Date Calibrated: 08 Mar 2024 to 12 Mar 2024

Temperature Range: 21.58 °C to 21.71 °C
Pressure Range: 724.20 mmHg to 732.10 mmHg
Relative Humidity Range: 45 % to 51 %

As Left Data (As Found Data is undifferentiated from As Left Data unless listed in As Found Data table)

Nominal Value	Unique ID	True Mass (Same UOM as Nom.)	True Mass Corr. (mg)	Conv. Mass (Same UOM as Nom.)	Conv. Mass Corr. (mg)	(*k*=2) Unc. (± mg)	MPE (± mg)	MPE Pass (Y=Pass N=Fail)	Assumed Density (g/cm^3)	Assumed Material	Const. Type	Balance Used	Reference Standard Set Used	Air Density (mg/cm^3)	Clean Level
5 mg	**0M31**	5.00210	0.00210	**5.00209**	**0.00209**	0.00099	0.010	Y	7.95	SS	I	503Q	T535Q	1.1353	A
20 mg	**0M31**	20.0007	0.0007	**20.0007**	**0.0007**	0.0013	0.010	Y	7.95	SS	I	503Q	T535Q	1.1355	A
200 mg	**0M31**	200.00198	0.00198	**200.00179**	**0.00179**	0.00087	0.010	Y	7.95	SS	I	2022Q	L595Q	1.1480	A
200 mg	**0M31.**	199.99855	-0.00145	**199.99837**	**-0.00163**	0.00087	0.010	Y	7.95	SS	I	2022Q	L595Q	1.1480	A
500 mg	**0M31**	500.0030	0.0030	**500.0025**	**0.0025**	0.0012	0.010	Y	7.95	SS	I	2022Q	L595Q	1.1480	A
1 g	**0M31**	1.0000139	0.0139	**1.0000130**	**0.0130**	0.0020	0.034	Y	7.95	SS	I	2022Q	L595Q	1.1480	A
2 g	**0M31**	2.0000085	0.0085	**2.0000066**	**0.0066**	0.0019	0.034	Y	7.95	SS	II	2022Q	L595Q	1.1480	A
2 g	**0M31.**	2.0000069	0.0069	**2.0000050**	**0.0050**	0.0019	0.034	Y	7.95	SS	II	2022Q	L595Q	1.1423	A
5 g	**0M31**	5.0000232	0.0232	**5.0000185**	**0.0185**	0.0033	0.034	Y	7.95	SS	II	2022Q	L595Q	1.1480	A
10 g	**0M31**	10.0000080	0.0080	**9.9999985**	**-0.0015**	0.0059	0.050	Y	7.95	SS	II	2060Q	U520Q	1.1410	A
20 g	**0M31**	20.0000018	0.0018	**19.9999830**	**-0.0170**	0.0061	0.074	Y	7.95	SS	II	2060Q	U520Q	1.1410	A
20 g	**0M31.**	19.9999918	-0.0082	**19.9999730**	**-0.0270**	0.0061	0.074	Y	7.95	SS	II	2060Q	U520Q	1.1410	A
50 g	**0M31**	50.000001	0.001	**49.999953**	**-0.047**	0.012	0.12	Y	7.95	SS	II	2060Q	U520Q	1.1410	A
100 g	**0M31**	100.000118	0.118	**100.000024**	**0.024**	0.024	0.25	Y	7.95	SS	II	2060Q	U520Q	1.1410	A

As Found Data

Nominal Value	Unique ID	True Mass (Same UOM as Nom.)	True Mass Corr. (mg)	Conv. Mass (Same UOM as Nom.)	Conv. Mass Corr. (mg)	(*k*=2) Unc. (± mg)	MPE (± mg)	MPE Pass (Y=Pass N=Fail)	Assumed Density (g/cm^3)	Assumed Material	Const. Type	Balance Used	Reference Standard Set Used	Air Density (mg/cm^3)	Clean Level
2 g	**0M31.**	2.0000359	0.0359	**2.0000340**	**0.0340**	0.0019	0.034	N ☒	7.95	SS	II	2022Q	L595Q	1.1480	A