



Mass Calibration Certificate



Certificate #: 93478

This calibration is accredited under the laboratory's ISO/IEC 17025 accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation AC-1222.

Calibration Performed By
PREMIER SCALES & SYSTEMS
4901 NORTH SAINT JOSEPH AVE.
EVANSVILLE, IN 47720

Customer
KOENIG SCALE
4779 EAST MARGARET DRIVE
TERRE HAUTE, IN 47803

Weight and Test Information

Equipment I.D.: **OTN7**
Description: TEST WEIGHTS, STAINLESS STEEL
Manufacturer: RICE LAKE
Denomination: KIT: 5 KG TO 1 G
Class: ASTM CLASS 1
Condition of Item(s) as Received: OUT OF TOLERANC

Serial Number: OTN7
Temp. / Humidity / Pressure: 20.40 °C / 50.3 % / 756.2 mmHg
Performed By: *Randolph Hundt* RHUNDT
Receive Date: 21-Jan-20
Calibration Date: 23-Jan-20
Calibration Due: **23-Jan-21**

Comments

Tested AsFound, adjusted calibration and retested to SOP 4 specifications

Calibration Results

Nominal / I.D.	Results	As Found	Tolerance ±	Uncertainty ±	Results	As Left	Assumed Density (g/cm ³)
5 kg	P	0.41 mg	12.00 mg	0.84 mg	P	0.41 mg	7.95
3 kg	P	-3.36 mg	7.50 mg	0.79 mg	P	-3.36 mg	7.95
2 kg	P	-1.53 mg	5.00 mg	0.45 mg	P	-1.53 mg	7.95
1 kg	P	-0.1 mg	2.5 mg	0.2 mg	P	-0.1 mg	7.95
500 g	P	-0.12 mg	1.20 mg	0.13 mg	P	-0.12 mg	7.95
300 g	P	0.35 mg	0.75 mg	0.12 mg	P	0.35 mg	7.95
200 g	P	0.00 mg	0.50 mg	0.12 mg	P	0.00 mg	7.95
100 g	*F	-0.774 mg	0.250 mg	0.034 mg	P	-0.011 mg	7.95
50 g	*F	-0.168 mg	0.120 mg	0.022 mg	P	-0.030 mg	7.95
30 g	*F	-0.153 mg	0.074 mg	0.019 mg	P	0.045 mg	7.95
20 g	NP	0.075 mg	0.074 mg	0.010 mg	P	0.031 mg	7.95
10 g	*F	0.0674 mg	0.0500 mg	0.0074 mg	P	-0.0197 mg	7.95
5 g	P	0.0194 mg	0.0340 mg	0.0044 mg	P	0.0194 mg	7.95
3 g	P	0.0169 mg	0.0340 mg	0.0035 mg	P	0.0169 mg	7.95
2 g	P	0.0037 mg	0.0340 mg	0.0032 mg	P	0.0037 mg	7.95
1 g	P	0.0063 mg	0.0340 mg	0.0038 mg	P	0.0063 mg	7.95

Test Point Descriptors:

P = Pass : Compliance - The measurement result is within the specification limit when the measurement uncertainty is taken into account.

***F = Fail** : Non-compliance - The measurement result is outside the specification limit when the measurement uncertainty is taken into account.

NP = Not Possible : It is not possible to state compliance even though the measurement result ± the uncertainty value overlaps the specification limit.

All values listed were determined by comparing the artifacts to Premier Scales & Systems' reference standards which are traceable to the International System of Units (SI), by an accredited lab or a NIST recognized state laboratory, through the traceability number(s) listed. All "As Found" and "As Left" values are reported as the correction value of the conventional mass of the artifact. Documented results contained within this calibration certificate relate only to the artifacts calibrated on the date listed. The uncertainty is obtained by taking the root sum square of the Type A and Type B components and multiplying by a *k* factor of 2 to obtain a confidence level of approximately 95 %. The uncertainty values and measurement results are included in the pass / fail condition of the artifact(s). The uncertainty values do not include a component for magnetic properties, air buoyancy corrections or handling and use. Premier Scales & Systems shall not be held liable for any inaccuracies of the artifacts after time of test. This document may not be reproduced, except in full, without the written approval of Premier Scales & Systems.

ANSI/NCSL Z540-1-1994: Part 1 & ISO/IEC 17025 Compliant

Chris O. Crawford Page 1 of 2
1/29/2020



Mass Calibration Certificate



Certificate #: 93478

This calibration is accredited under the laboratory's ISO/IEC 17025 accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation AC-1222.

Standard(s) Used

<u>Kit/I.D. Number</u>	<u>Description</u>	<u>Traceability Number</u>	<u>Calibration Due</u>
2XQL	METRIC WORKING STANDARD KIT	2407650J	3/29/2020
306781	THERMOMETER, DIGITAL	86114	6/26/2020
BP-0581	BAROMETER, DIGITAL	CI047-29645-510	2/16/2020
EWS-RH	HYGROMETER, DIGITAL	81978	3/5/2020

Procedure(s) Used

<u>Procedure Number</u>	<u>Description</u>	<u>Revision Level</u>	<u>Revision Date</u>
NISTIR 6969 SOP 4	DOUBLE SUBSTITUTION	2019	5/31/2019

Test Point Descriptors:

P = Pass : Compliance - The measurement result is within the specification limit when the measurement uncertainty is taken into account.

***F = Fail :** Non-compliance - The measurement result is outside the specification limit when the measurement uncertainty is taken into account.

NP = Not Possible : It is not possible to state compliance even though the measurement result \pm the uncertainty value overlaps the specification limit.

All values listed were determined by comparing the artifacts to Premier Scales & Systems' reference standards which are traceable to the International System of Units (SI), by an accredited lab or a NIST recognized state laboratory, through the traceability number(s) listed. All "As Found" and "As Left" values are reported as the correction value of the conventional mass of the artifact. Documented results contained within this calibration certificate relate only to the artifacts calibrated on the date listed. The uncertainty is obtained by taking the root sum square of the Type A and Type B components and multiplying by a k factor of 2 to obtain a confidence level of approximately 95 %. The uncertainty values and measurement results are included in the pass / fail condition of the artifact(s). The uncertainty values do not include a component for magnetic properties, air buoyancy corrections or handling and use. Premier Scales & Systems shall not be held liable for any inaccuracies of the artifacts after time of test. This document may not be reproduced, except in full, without the written approval of Premier Scales & Systems.

ANSI/NCSL Z540-1-1994: Part 1 & ISO/IEC 17025 Compliant