SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

QAL-TEK ASSOCIATES
3998 Commerce Circle
Idaho Falls, ID 83401
KC Nii Phone: 208 270 4321

CALIBRATION

Valid To: January 31, 2023 Certificate Number: 2521.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location above as well as the two satellite laboratories listed below to perform the following calibrations[1, 6]:

I. Dimensional

Parameter/Equipment	Range	CMC[2] (±)	Comments
Micrometers[3]	Up to 1 in	0.000 61 in	Micrometer master
Calipers[3] – Outside and Inside	Up to 6 in Up to 12 in	0.000 40 in	Caliper master
Dial Indicators[3]	Up to 2 in	0.000 32 in	Indicator calibrator

5202 Presidents Court, Suite 220 | Frederick, MD 21703-8515 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2LA.org

II. Ionizing Radiation and Radioactivity

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Radiation Protection/Health Physics Instruments –			
Gamma Cs^{137}	(80 to 4000) µR/hr	6.2 %	Mini gamma range
	400 µR/hr to 300 R/hr	2.4 %	Irradiator
Pulser (CPM)	($9e^2$ to $9e^6$) CPM	2.3 %	Ludlum pulser
Simulate – Up to 400 µR/hr	($9e^2$ to $9e^6$) CPM	6.5 % of CPM rate	Pulser for mini gamma range
Up to 400 µR/hr	($9e^2$ to $9e^6$) CPM	3.9 % of CPM rate	Pulser for irradiator
Nuclear Density Gauges, Fixed Points[3] – Density	111 lb/ft^3 137 lb/ft^3 169 lb/ft^3	0.060 lb/ft^3 0.056 lb/ft^3 0.081 lb/ft^3	ASTM 6938 and ASTM D7759/D7759M density blocks
Nuclear Density Gauges[3] – Moisture	Up to 33 lb/ft^3	0.40 lb/ft^3	ASTM 6938 and ASTM D7759/D7759M moisture block

III. Mechanical

Parameter/Equipment	Range	CMC[2, 4, 5] (±)	Comments
Force[3] – Measure, Compression	(10 to 500) lbf (50 to 2000) lbf (2000 to 25 000) lbf (25 000 to 50 000) lbf (50 000 to 500 000) lbf	0.19 % of full scale 0.13 % of full scale 0.11 % of full scale 0.13 % of full scale 0.22 % of full scale	ASTM E4 using load cells

Parameter/Equipment	Range	CMC[2, 5] (±)	Comments
Pressure[3] – Measure			
Pneumatic	Up to 300 psig	0.33 psig	Digital pressure tester
Absolute	Up to 775 mmHg	3.8 mmHg	Digital manometer
Scales and Balances[3]	Up to 200 g Up to 1 kg Up to 5 kg Up to 30 kg	6.7 mg 37 mg 50 mg 0.32 g	Class 1 weights
	Up to 225 lb	0.20 lb	Class F weights

IV. Thermodynamic

Parameter/Equipment	Range	CMC[2] (±)	Comments
Ovens[3]	(0 to 600) °C	2.3 °C	Thermocouple thermometer (J&K)
Digital Thermometers[3]	(0 to 200) °C	0.21 °C	ThermoWorks – reference thermapen

SATELLITE FACILITY

QAL-TEK ASSOCIATES
1107 Wonder Dr
Round Rock, TX 78681
KC Nii Phone: 208 270 4321

I. Dimensional

Parameter/Equipment	Range	CMC[2] (±)	Comments
Micrometers[3]	Up to 1 in	0.000 61 in	Micrometer master
Calipers[3] – Outside and Inside	 Up to 6 in Up to 12 in	 0.000 40 in	 Caliper master
Dial Indicators[3]	Up to 2 in	0.000 32 in	Indicator calibrator

II. Ionizing Radiation and Radioactivity

Parameter/Equipment	Range	CMC[2] (±)	Comments
Nuclear Density Gauges, Fixed Points[3] – Density	111 lb/ft^3 137 lb/ft^3 169 lb/ft^3	0.060 lb/ft^3 0.056 lb/ft^3 0.081 lb/ft^3	ASTM 6938 and ASTM D7759/D7759M density blocks
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Parameter/Equipment	Range	CMC[2, 4, 5] (±)	Comments
Force[3] – Measure Compression	(10 to 500) lbf (50 to 2000) lbf (2000 to 25 000) lbf (25 000 to 50 000) lbf (50 000 to 500 000) lbf	0.19 % of full scale 0.13 % of full scale 0.11 % of full scale 0.13 % of full scale 0.22 % of full scale	ASTM E4 using load cells
Pressure[3] – Measure			
Pneumatic	Up to 300 psig	0.33 psig	Digital pressure tester
Absolute	Up to 775 mmHg	3.8 mmHg	Digital manometer
Scales and Balances[3]	Up to 200 g Up to 1 kg Up to 5 kg Up to 30 kg Up to 225 lb	6.7 mg 37 mg 50 mg 0.32 g 0.20 lb	Class 1 weights Class F weights

IV. Thermodynamic

Parameter/Equipment	Range	CMC[2] (±)	Comments
Ovens[3]	(0 to 600) °C	2.3 °C	Thermocouple thermometer (J&K)
Digital Thermometers[3]	(0 to 200) °C	0.21 °C	ThermoWorks – reference thermapen

SATELLITE FACILITY

QAL-TEK ASSOCIATES
550 East University Dr
Mesa, AZ 85203
KC Nii Phone: 208 270 4321

I. Dimensional

Parameter/Equipment	Range	CMC[2] (±)	Comments
Micrometers[3]	Up to 1 in	0.000 61 in	Micrometer master
Calipers[3] – Outside and Inside	Up to 6 in Up to 12 in	0.000 40 in	Caliper master
Dial Indicators[3]	Up to 2 in	0.000 32 in	Indicator calibrator

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Parameter/Equipment	Range	CMC[2] (±)	Comments
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IV. Thermodynamic

Parameter/Equipment	Range	CMC[2] (±)	Comments
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Digital Thermometers[3]	(0 to 200) °C	0.21 °C	ThermoWorks – reference thermapen

[1] This laboratory offers commercial calibration service and field calibration service.

[2] Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

[3] Field calibration service is available for this calibration. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

[4] In the statement of CMC, percentages are percentage of reading, unless otherwise indicated.

[5] The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

[6] This scope meets A2LA's *P112 Flexible Scope Policy.*

Accredited Laboratory

A2LA has accredited

QAL-TEK ASSOCIATES

Idaho Falls, ID

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 4th day of February 2021.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2521.01
Valid to January 31, 2023

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.