



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

QAL-TEK ASSOCIATES
3998 Commerce Circle
Idaho Falls, ID 83401
James Erickson Phone: 208 360 1304

CALIBRATION

Valid To: January 31, 2025

Certificate Number: 2521.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1,7}:

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
Indicators ³ Linear Variable Differential Transformers (LVDT) ³	Up to 2 in Up to 2 in	0.000 08 in 0.000 08 in	Indicator calibrator

II. Ionizing Radiation and Radioactivity

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Radiation			
Protection/Health Physics Instruments –			
Gamma Cs-137 ^{1,3,6}	(80 to 4000) µR/hr	6.2 %	Mini gamma range
	400 µR/hr to 300 R/hr	2.4 %	Irradiator
Pulser (cpm)	Up to 9e ⁹ CPM	2.3 %	Pulser
Simulate			
Up to 400 µR/hr	Up to 9e ⁹ CPM	6.5 % of CPM rate	Mini pulser
Up to 400 µR/hr	Up to 9e ⁹ CPM	3.9 % of CPM rate	Pulser
Digital Voltmeter Multimeter with Voltage Divider Probe	(0.01 to 2500) V	1.2%	Multimeter
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, ASTM D7759/D7759M, density blocks
Nuclear Density Gauges ³ – Moisture	Up to 33 lb/ft ³	0.40 lb/ft ³	ASTM 6938, 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 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 ^{2,5} (±)	Comments
Ovens ³	(0 to 600) °C	2.3 °C	Thermocouple, thermometer (J&K)
Digital Thermometers ³ – Measure	(0 to 200) °C	0.21 °C	ThermoWorks – reference Thermapen

SATELLITE FACILITY

QAL-TEK ASSOCIATES
 2111 Sam Bass Rd. Ste. A300
 Round Rock, TX 78681
 James Erickson Phone: 208 360 1304

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
Indicators ³ Linear Variable Differential Transformers (LVDT) ³	Up to 2 in Up to 2 in	0.000 08 in 0.000 08 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, ASTM D7759/D7759M, density blocks
Nuclear Density Gauges ³ – Moisture	Up to 33 lb/ft ³	0.40 lb/ft ³	ASTM 6938, 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
Pressure ³ – Measure Pneumatic Absolute	Up to 300 psig Up to 775 mmHg	0.33 psig 3.8 mmHg	Digital pressure tester 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, 5} (±)	Comments
Ovens ³	(0 to 600) °C	2.3 °C	Thermocouple, Thermometer (J&K)
Digital Thermometers ³ – Measure	(0 to 200) °C	0.21 °C	ThermoWorks – reference Thermanpen

SATELLITE FACILITY

QAL-TEK ASSOCIATES
 550 East University Dr
 Mesa, AZ 85203
 James Erickson Phone: 208 360 1304

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
Indicators ³ Linear Variable Differential Transformers (LVDT) ³	Up to 2 in Up to 2 in	0.000 08 in 0.000 08 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, ASTM D7759/D7759M, density blocks
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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
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 ^{2,5} (±)	Comments
Ovens ³	(0 to 600) °C	2.3 °C	Thermocouple, thermometer (J&K)
Digital Thermometers ³ – Measure	(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.

⁶This 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 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 20th day of February 2023.

A blue ink signature of Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2521.01
Valid to January 31, 2025
Revised December 7, 2023

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