



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

ATLAS MATERIAL TESTING TECHNOLOGY LLC
ATLAS WEATHERING SERVICES GROUP
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CALIBRATION

Valid To: August 31, 2026

Certificate Number: 0717.04

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the organization's compliance with A2LA's Calibration Program Requirements), accreditation is granted to this laboratory to perform the following calibrations^{1,3,7}:

I. Electrical DC/Low Frequency

Parameter/Equipment	Range	CMC ^{2,4,5} (±)	Comments
DC Voltage – Generate	Up to 200 mV (0.2 to 2) V (2 to 20) V (20 to 200) V (200 to 1000) V	0.002 % 0.001 % 0.001 % 0.001 % 0.001 %	Transmille 3010A
DC Current – Generate	Up to 200 µA (0.2 to 2) mA (2 to 20) mA (20 to 200) mA (0.2 to 2) A (2 to 20) A (20 to 30) A	0.02 % 0.01 % 0.01 % 0.01 % 0.01 % 0.03 % 0.04 %	Transmille 3010A

Parameter/Range	Frequency	CMC ^{2, 4, 5} (±)	Comments
AC Voltage – Generate			
100 nV to 202 mV	45 Hz to 1 kHz (1 to 20) kHz (20 to 100) kHz (100 to 500) kHz	0.03 % 0.05 % 1.3 % 1.3 %	Transmille 3010A
(0.2 to 2) V	(10 to 44) Hz 45 Hz to 1 kHz (1 to 20) kHz (20 to 100) kHz (100 to 500) kHz	0.06 % 0.03 % 0.04 % 0.09 % 0.40 %	
(2 to 20) V	(10 to 44) Hz 45 Hz to 1 kHz (1 to 20) kHz (20 to 100) kHz	0.06 % 0.02 % 0.03 % 0.08 %	
(20 to 200) V	(30 to 44) Hz 45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz	0.06 % 0.03 % 0.03 % 0.05 %	
(200 to 1000) V	(30 to 44) Hz 45 Hz to 1 kHz (1 to 10) kHz	0.08 % 0.03 % 0.04 %	
AC Current – Generate			
Up to 200 µA	(10 to 44) Hz 45 Hz to 1 kHz (1 to 10) kHz	0.33 % 0.15 % 1.1 %	Transmille 3010A
(0.2 to 2) mA	(10 to 44) Hz 45 Hz to 1 kHz (1 to 10) kHz	0.19 % 0.06 % 0.49 %	
(2 to 20.2) mA	(10 to 44) Hz 45 Hz to 1 kHz (1 to 10) kHz	0.19 % 0.06 % 0.26 %	
(20 to 202) mA	(10 to 44) Hz 45 Hz to 1 kHz (1 to 10) kHz	0.19 % 0.06 % 0.49 %	

Parameter/Range	Frequency	CMC ^{2, 4, 5} (±)	Comments
AC Current – Generate (cont)			
(0.2 to 2.02) A	(10 to 44) Hz 45 Hz to 1 kHz (1 to 5) kHz	0.19 % 0.06 % 0.49 %	Transmille 3010A
(2 to 20) A	(10 to 44) Hz (45 to 100) Hz (0.1 to 1) kHz	0.28 % 0.08 % 0.72 %	

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
Capacitance – Generate	1 nF 10 nF to 10 mF	2.3 % 0.26 %	Transmille 3010A
Resistance – Generate	0.1 Ω 1 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ	5.8 % 0.58 % 0.06 % 0.01 % 0.002 % 0.001 % 0.002 %	Transmille 3010A
2 Wire Only	1 MΩ 10 MΩ 100 MΩ 1000 MΩ	0.003 % 0.01 % 0.20 % 0.001 %	
DC Voltage – Measure	100 mV to 1000 V	0.003 %	Fluke 8845A
Resistance – Measure	Up to 100 Ω 100 Ω to 1 kΩ (1 to 10) kΩ (10 to 100) kΩ 100 kΩ to 1 MΩ (1 to 10) MΩ (10 to 100) MΩ	0.01 % 0.004 % 0.003 % 0.004 % 0.004 % 0.02 % 0.21 %	Fluke 8845A

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
DC Current – Measure	20 µA to 20 A	0.0053 %	Fluke 8845A w / Ohm Labs CS-20 current shunt

Parameter/Range	Frequency	CMC ^{2, 4, 5} (±)	Comments
AC Current – Measure 10 mA to 10 A	10 Hz to 10 kHz	0.55 %	Fluke 8845A
AC Voltage – Measure Up to 100 mV	10 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz	0.11 % 0.29 % 2.5 % 2.6 %	Fluke 8845A
100 mV to 1 V	10 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz	0.11 % 0.11 % 0.35 % 0.66 %	
(1 to 10) V	1 Hz to 10 kHz (10 kHz to 20 kHz) (20 to 50) kHz (50 to 100) kHz	0.04 % 0.11 % 0.12 % 0.15 %	
(10 to 100) V	1 Hz to 10 kHz (10 kHz to 20 kHz) (20 to 50) kHz (50 to 100) kHz	0.04 % 0.07 % 0.08 % 0.12 %	
(100 to 750) V	1 Hz to 10 kHz (10 to 45) kHz	0.05 % 0.04 %	

II. Optical Quantities

Parameter/Equipment	Range	CMC ^{2, 4, 6} (\pm)	Comments
<p>Direct Solar Irradiance – Measure</p> <p>Secondary Pyrheliometers (0.29 to 3.0) μm</p> <p>Field Pyrheliometers (0.29 to 3.0) μm</p>	<p>Up to 1000 W/m² day</p> <p>Up to 1000 W/m² day</p>	<p>0.64 %</p> <p>0.93 %</p>	<p>ASTM E816; ISO 9059</p> <p>Eppley AHF primary cavity pyrheliometer</p> <p>Basis: 1000 W/m² day</p> <p>Secondary pyrheliometer</p> <p>Basis: 1000 W/m² day</p>
<p>Global Solar Irradiance – Measure</p> <p>Reference Pyranometers: (0.29 to 3.0) μm</p>	<p>Up to 1000 W/m² day Normal Incidence</p> <p>(0° to 45°) Tilt</p>	<p>0.43 %</p> <p>0.48 %</p>	<p>ASTM G167; ISO 9846</p> <p>Eppley AHF primary cavity pyrheliometer</p>
<p>Global Solar Irradiance – Measure</p> <p>Field Pyranometers (0.29 to 3.0) μm</p>	<p>Up to 1000 W/m² day Normal Incidence</p> <p>(0° to 45°) Tilt</p>	<p>1.5 %</p> <p>1.5 %</p>	<p>ASTM E824; ISO 9847</p> <p>Reference pyranometer</p>
<p>Spectral Irradiance – Measure</p> <p>Spectroradiometers Using a Standard Light Source (Normal Incidence to Source)</p> <p>(0.280 to 0.315) μm</p> <p>(0.280 to 0.400) μm</p> <p>(0.295 to 0.385) μm</p> <p>(0.300 to 0.400) μm</p> <p>(0.315 to 0.400) μm</p> <p>(0.250 to 0.800) μm</p>	<p>Up to 120 W/m²</p>	<p>3.1 %</p> <p>3.2 %</p> <p>3.1 %</p> <p>3.1 %</p> <p>3.1 %</p> <p>3.3 %</p>	<p>ASTM G138</p> <p>Standard of spectral irradiance (lamp)</p>

Parameter/Equipment	Range	CMC ^{2, 4, 6} (±)	Comments
Spectral Irradiance – Measure (cont)			
Reference Ultraviolet Radiometers using a Spectroradiometer			
(0.280 to 0.315) μm	Up to 9 W/m ²	5.6 %	ASTM G130 Spectroradiometer
(0.280 to 0.400) μm	Up to 100 W/m ²	3.8 %	
(0.295 to 0.385) μm	Up to 100 W/m ²	3.8 %	
(0.300 to 0.400) μm	Up to 100 W/m ²	3.7 %	
(0.315 to 0.400) μm	Up to 100 W/m ²	3.6 %	
Field Ultraviolet Radiometers – using a Reference Ultraviolet Radiometer			
UV-B Ultraviolet Radiometers (0.280 to 0.315) μm	Up to 9 W/m ²	6.0 %	ASTM E824; ISO 9847 reference UV radiometers
Total Ultraviolet Radiometers (0.295 to 0.385) μm	Up to 100 W/m ²	4.3 %	
UV-A Ultraviolet Radiometers (0.300 to 0.400) μm (0.315 to 0.400) μm	Up to 100 W/m ²	4.0 % 3.9 %	

¹ This laboratory offers commercial 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 Calibrations are performed under reasonably controlled conditions of clear skies to minimize atmospheric effects, high solar radiance approaching 1000 W/m² to preclude linearity effects and near-normal incidence for all calibrations unless stated otherwise to preclude cosine effects. It should be recognized that the uncertainties associated with the use of carefully calibrated radiometers under the diverse conditions of field use would be significantly higher.

⁴In the statement of CMC, percentages are to be read as a percentage of the reading unless otherwise noted.

⁵The stated measured values are determined using the indicated instrument (see Comments). This capability is suitable for the calibration of the devices intended to measure or generate the measured value in the ranges indicated. CMC's are expressed as either a specific value that covers the full range or as a percent or fraction of the reading plus a fixed floor specification.

⁶The 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.

⁷This scope meets A2LA's *P112 Flexible Scope Policy*.



Accredited Laboratory

A2LA has accredited

ATLAS MATERIAL TESTING TECHNOLOGY LLC ATLAS WEATHERING SERVICES GROUP

Phoenix, AZ

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 any additional program requirements in the field of calibration. 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 11th day of September 2024.

A blue ink signature of Mr. Trace McInturff.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0717.04
Valid to August 31, 2026

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