



# CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

**American Lab**  
85 Saratoga Avenue, #130  
Santa Clara, CA 95051

Fulfills the requirements of

**ISO/IEC 17025:2017**

and national standard

**ANSI/NCSL Z540-1-1994 (R2002)**

In the field of

**CALIBRATION**

This certificate is valid only when accompanied by a current scope of accreditation document.  
The current scope of accreditation can be verified at [www.anab.org](http://www.anab.org).

A handwritten signature in black ink, appearing to be 'J. Stine', is positioned above a horizontal line.

Jason Stine, Vice President  
Expiry Date: 27 July 2024  
Certificate Number: AC-1468



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.  
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).

**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017**  
**AND**  
**ANSI/NCSL Z540-1-1994 (R2002)**

**American Lab**  
85 Saratoga Avenue, #130  
Santa Clara, CA 95051  
Ken Silva 408-997-8911

**CALIBRATION**

Valid to: **July 27, 2024**

Certificate Number: **AC-1468**

**Electrical – DC/Low Frequency**

| Parameter/Equipment                 | Range   | Expanded Uncertainty of Measurement (+/-)            | Reference Standard, Method, and/or Equipment |
|-------------------------------------|---|--|--|
| DC Voltage – Measure <sup>1,2</sup> | (6 to 600) V  | 0.36 % of reading + 80 mV                            | Fluke 179<br>True RMS<br>Digital Multimeter  |
| AC Voltage – Measure <sup>1,2</sup> | (45 to 500) Hz<br>(6 to 600) V<br>500 Hz to 1 kHz<br>(600 to 1 000) V | 1.2 % of reading + 50 mV<br>2.3 % of reading + 3.5 V | Fluke 179<br>True RMS<br>Digital Multimeter  |
| DC Current – Measure <sup>1,2</sup> | (60 to 400) mA  | 1.9 % of reading + 0.4 mA                            | Fluke 179<br>True RMS<br>Digital Multimeter  |
| AC Current – Measure <sup>1,2</sup> | 45 Hz to 1 kHz<br>(60 to 400) mA                                      | 1.2 % of reading + 3.2 mA                            | Fluke 179<br>True RMS<br>Digital Multimeter  |

**Length – Dimensional Metrology**

| Parameter/Equipment                                   | Range       | Expanded Uncertainty of Measurement (+/-) | Reference Standard, Method, and/or Equipment         |
|---|-------------|---|--|
| Bench Micrometer <sup>3</sup>                         | Up to 10 in | (71 + 0.7L) μin                           | Gage Blocks  |
| Dial/Digital Calipers <sup>1</sup><br>(ID, OD, Depth) | Up to 24 in | 150 μin                                   | Gage Blocks,<br>Micrometer Standards<br>(1 to 11) in |

**Length – Dimensional Metrology**

| Parameter/Equipment   | Range                         | Expanded Uncertainty of Measurement (+/-) | Reference Standard, Method, and/or Equipment         |
|---|-------------------------------|---|--|
| Height Gages/Height Master <sup>1</sup><br>(Various Types)                                    | Up to 24 in                   | (17 + 0.4L) μin                           | Gage Blocks,<br>Micrometer Standards<br>(1 to 11) in |
| Dial/Test Indicators <sup>1</sup>   | Up to 4 in                    | 80 μin                                    | Gage Blocks  |
| Dial/Digital Micrometers <sup>1,3</sup><br>(Blade, Depth, Flange,<br>Micrometer Head, ID, OD) | Up to 12 in                   | (65 + 23L) μin                            | Gage Blocks,<br>Micrometer Standards<br>(1 to 11) in |
| Micrometer Standards <sup>3</sup>   | (1 to 11) in                  | (71 + 1.2L) μin                           | P & W Super-micrometer,<br>Gage Blocks               |
| Pitch Diameter/External<br>Threads <sup>1</sup>   | Up to 4 in                    | 60 μin                                    | P & W Super-micrometer,<br>Thread Wires              |
| Gage Blocks <sup>3</sup>  | (0.05 to 1) in<br>(1 to 4) in | (13 + 0.9L) μin<br>(71 + 0.3L) μin        | P & W Super-micrometer,<br>Master Gage Blocks        |

**Mass and Mass Related**

| Parameter/Equipment                                       | Range            | Expanded Uncertainty of Measurement (+/-) | Reference Standard, Method, and/or Equipment   |
|---|------------------|---|--|
| Force Devices <sup>1</sup>                                | 20 g to 7 000 g  | 0.04 % of reading + 4.6 mg                | Class F Weights  |
| Force – Measure <sup>1</sup><br>(Tension and Compression) | Up to 440 lbf    | 1 % of reading + 0.2 lbf                  | Digital Force Gage   |
| Torque Tools <sup>1</sup>                                 | (5 to 50) lbf·in | 6 % of reading + 0.11 lbf·in              | CDI Torque Tester  |
| Scales and Balances <sup>1,4</sup>                        | Up to 2 000 g    | 0.2 % of reading + 0.6 g                  | NIST Class F Weights and<br>internal procedure #045<br>utilized for the calibration<br>of the weighing system. |

**Thermodynamic**

| Parameter/Equipment                | Range           | Expanded Uncertainty of Measurement (+/-) | Reference Standard, Method, and/or Equipment  |
|------------------------------------|-----------------|---|---|
| Temperature – Measure <sup>1</sup> | (-40 to 500) °F | 0.3 % of reading + 2.4 °C                 | Fluke 52 II<br>Digital Thermocouple<br>Thermometer,<br>Type K Thermocouple<br>Probe |

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ( $k=2$ ), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. Uncertainties for Electrical-DC/Low Frequency do not include possible contributions to uncertainty from a “best available” unit under test.
3.  $L$  = length in inches.
4. The CMC for Scales and Balances is highly dependent upon the resolution of the device under test (DUT). The CMC expressed here does not contain does not contain the resolution of the DUT. The resolution will be included in the measurement uncertainty at the time of calibration.
5. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1468.



Jason Stine, Vice President

