



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

LDS VACUUM PRODUCTS
 773 Big Tree Drive
 Longwood, FL 32750
 Cindy Lee Phone: 407 862 4643

CALIBRATION

Valid To: August 31, 2021

Certificate Number: 1566.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1,5}:

I. Mechanical Quantities (Leak Standards and Vacuum Gages)

Parameter	Range ³	CMC ^{2,4} (±)	Comments
Leak Rate – Helium Gas Leak Standards Other Gas Leak Standard Gases	(1 × 10 ⁻¹⁰ to 9 × 10 ⁻²) scm ³ /s (1 × 10 ⁻⁷ to 9 × 10 ⁻⁴) scm ³ /s	2.7 % 15 %	LDS gas leak comparison system
High Vacuum & Ultra High Vacuum Gauges – Ion & Cold Cathode Gauges	(1 × 10 ⁻³ to 1 × 10 ⁻⁷) torr	1.9 %	LDS vacuum gauge comparison system using spinning rotor gauge
Rough Vacuum Gauges – Thermocouple, Pirani Gauges, Convection Gauges, Capacitance Manometers	(1000 to 1 × 10 ⁻³) torr	0.25 %	LDS vacuum gauge comparison system using high accuracy capacitance manometers

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 The unit scm^3/s , standard cubic centimeters per second, is equivalent to one atmospheric cubic centimeter per second.

⁴ In the statement of CMC, percentages represent percent of reading, unless noted otherwise.

⁵ This scope meets A2LA's *P112 Flexible Scope Policy*.



Accredited Laboratory

A2LA has accredited

LDS VACUUM PRODUCTS

Longwood, FL

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 28th day of June 2019.

A handwritten signature in blue ink, positioned above a horizontal line.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1566.01
Valid to August 31, 2021

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