



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

CANNON INSTRUMENT COMPANY
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CALIBRATION

Valid To: May 31, 2019

Certificate Number: 1262.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Fluid Quantities

Parameter	Range	CMC ^{2,3} (±)	Comments
Kinematic Viscometer Calibration	< 10 mm ² /s	0.16 %	ASTM D445, D446; ISO 3104, 3105
	(10 to 100) mm ² /s	0.22 %	
	(100 to 1000) mm ² /s	0.29 %	
	(1000 to 10 000) mm ² /s	0.38 %	
	(10 000 to 100 000) mm ² /s	0.44 %	
Vacuum Viscometer Calibration (CMVV)	Size:		ASTM D2171
	(6 to 8)	0.74 %	
	(9 to 11)	0.96 %	
	12	1.0 %	
	13	1.5 %	
14	1.6 %		

II. Thermodynamics

Parameter	Range	CMC ² (±)	Comments
Temperature – Measure	-40 °C to 150 °C	0.02 °C	Comparison to SPRT

CHEMICAL

Chemical Tests – Not Calibration

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on fluids¹:

Test	Range	Test Uncertainty ⁴ (±)	Test Methods
Kinematic Viscosity	< 10 mm ² /s (10 to 100) mm ² /s (100 to 1000) mm ² /s (1000 to 10 000) mm ² /s (10 000 to 150 000) mm ² /s	0.16 % 0.22 % 0.29 % 0.38 % 0.44 %	ASTM D445, D446; ISO 3104, 3105
Dynamic Viscosity	(36 to 3600) mPa·s (3600 to 36 000) mPa·s (36 000 to 120 000) mPa·s (120 000 to 360 000) mPa·s (360 000 to 8 000 000) mPa·s	0.84 % 1.1 % 1.1 % 1.6 % 1.8 %	ASTM D2171
Density – -56 °C to 150 °C	(0.7 to 1.1) g/cm ³	0.05 kg/m ³	ASTM D4052, D1480, D1217

¹ This laboratory offers commercial calibration and chemical testing services.

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 In the statement of CMC, percentages are read as percent of value, unless otherwise noted.

⁴ In the statement of Test Uncertainty, percentages are read as percent of value, unless otherwise noted.





Accredited Laboratory

A2LA has accredited

CANNON INSTRUMENT COMPANY

State College, PA

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *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 8 January 2009*).



Presented this 13th day of June 2017.

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 1262.01
Valid to May 31, 2019

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