SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

DC SCIENTIFIC, INC.
6750 McLean Way, Suite D
Glen Burnie, MD 21060
Doug Sisson Phone: 410 863 1700

CALIBRATION

Valid To: April 30, 2024 Certificate Number: 4364.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1]:

I. Fluid Quantities

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments[5]
Viscosity Working Viscometers Direct Flow – Suspended Level (Transparent Liquids)	<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 100 000) mm^2/s	0.30 % 0.33 % 0.35 % 0.39 % 0.43 %	ASTM D446 ISO 3104
Viscosity Working Viscometers Reverse Flow (Transparent and Opaque) Liquids	<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 100 000) mm^2/s	0.27 % 0.30 % 0.33 % 0.37 % 0.41 %	ASTM D446 ISO 3104
Viscosity Working Viscometers Modified Ostwald	<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 100 000) mm^2/s	0.24 % 0.27 % 0.30 % 0.34 % 0.39 %	ASTM D446 ISO 3104

II. Mechanical

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Petroleum Product Analyzer Calibrations for:			
Dry Vapor Pressure Equivalent (DVPE)[3]	(1.0 to 18.6) psi	1.1 %	ASTM D5191
Vapor-Liquid Ratio Temperature Determination (VLR)[3]	(36 to 80) ºC (97 to 176) ºF	1.1 %	ASTM D5188
Vapor Pressure of Crude Oil ($VPCR_x$)[3]	(25 to 180) kPa at 37.8 ºC	1.1 %	ASTM D6377
Distillation at Atmospheric Pressure[3]	(0 to 400) °C	0.69 %	ASTM D86
Flash Point by Pensky-Martens Closed Cup[3]	(40 to 370) °C	1.1 %	ASTM D93
Color by Automatic Tristimulus Method[3]	Saybolt D156 (-16 to +30) ASTM D1500 (0 to 8)	0.9 %	ASTM D6045

[1] This laboratory offers commercial calibration 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] 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 to be read as percent of reading unless otherwise noted.

[5] Viscometers are calibrated to ASTM D446/ISO 3104 using certified reference materials to ASTM D2162.

Accredited Laboratory

A2LA has accredited

DC SCIENTIFIC, INC.

Glen Burnie, MD

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 17th day of February 2022.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 4364.01
Valid to April 30, 2024
Revised March 22, 2024

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