



INTERNATIONAL
ACCREDITATION
SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest

PETROSCIENTIFIC MIDDLE EAST CALIBRATION LABORATORY

UNIT 12 – 14 HAIL CENTER
AL KHOBAR 31952, SAUDI ARABIA

Calibration Laboratory CL-159

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Expiration Date July 1, 2026

Effective Date February 7, 2025



International Accreditation Service
Issued under the authority of IAS management

Visit www.iasonline.org for current accreditation information.

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

PETROSCIENTIFIC MIDDLE EAST CALIBRATION LABORATORY

www.petroscientific.com

Contact Name Aldrin Bueno

Contact Phone +966-13-8571899

Accredited to ISO/IEC 17025:2017

Effective Date February 7, 2025

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Dimensional			
Calipers (Dial, Digital & Vernier)	Up to 150 mm 150 mm to 600 mm Up to 1000 mm	8 µm 10 µm 20 µm	Caliper Checker and Grade 0 Gauge Blocks NAVAIR 17-20MD-07 and NAVAIR 17-20MD-85
Micrometer – Outside and Inside	Up to 25 mm 25 mm to 150 mm	0.9 µm 1.1 µm	Grade 0 Gauge Blocks NAVAIR 17-20MD-06
Extension & Setting Rods	Up to 100 mm 100 mm to 600 mm	2 µm 10 µm	Grade 0 Gauge Blocks, Caliper Checker and Height Gauge NAVAIR 17-20MD-76
Dial Indicators (Plunger)	Up to 100 mm	0.7 µm	Grade 0 Gauge Blocks NAVAIR 17-20MD-11
Height Gauge (Dial, Digital and Vernier)	Up to 600 mm	6 µm	Caliper Checker and Grade 0 Gauge Blocks NAVAIR 17-20MD-17
Plain Plug Gauge	1 mm to 100 mm 100 mm to 500 mm	2.2 µm 8.5 µm	Caliper Checker, Grade 0 Gauge Block and Height Gauge NAVAIR 17-20MD-21
Plain Ring Gauge	3 mm to 100 mm 100 mm to 500 mm	2.1 µm 8.6 µm	Caliper Checker, Grade 0 Gauge Block and Height Gauge NAVAIR 17-20MD-21
Mechanical			
Weighing Scale ⁵	1 mg to 2 g 2 g to 200 g 200 g to 1 kg	0.08 mg 0.1 mg 2 mg	Standard weight of E2 /F1 /M1 class by comparison method

* If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.

CL-159

PETROSCIENTIFIC MIDDLE EAST CALIBRATION LABORATORY

Effective Date February 7, 2025

Page 2 of 7

IAS/CL/100-3



SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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Weighing Scale ⁵ continued	1 kg to 10 kg 10 kg to 100 kg 100 kg to 1000 kg	0.01 g 1 g 0.6 kg	ASTM E898-20 Standard weight of E2 /F1 /M1 class by comparison method
Weights	1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg 20 kg	0.013 mg 0.013 mg 0.013 mg 0.013 mg 0.013 mg 0.013 mg 0.013 mg 0.013 mg 0.013 mg 0.02 mg 0.02 mg 0.03 mg 0.03 mg 0.06 mg 0.06 mg 0.06 mg 0.16 mg 0.16 mg 1.4 mg 1.4 mg 13 mg 13 mg 13 mg 120 mg	Standard Weight E2/F1 Class and Balance as per ABA Method OIML R111-1:2004-E, Annex C
Torque	150 N·m to 300 N·m 300 N·m to 1000 N·m 1000 N·m to 2700 N·m	0.75 %FS 1.0 %FS 1.1 %FS	Torque Tool Tester, direct method BS EN 6789
Pneumatic Pressure Gauge / Switch / Transmitter / Transducer ⁵	-14.5 psi to -0.001 psi 0.001 psi to 500 psi	0.085 % 0.085 %	Pressure Calibrator by comparison Method EURAMET CG-17
Hydraulic Pressure Gauge / Switch / Transmitter / Transducer ⁵	10 psi to 15000 psi	0.03 %	Dead Weight Tester by comparison method BS EN 837-1:1998
Liquid Flow Meters ⁵	1 LPM to 50 LPM	0.015 %	Gravimetric (at lab) NIST, SOP 19
Volume (Pipette, Burette, etc.)	10 µL to 10 mL 10 mL to 200 mL 200 mL to 1000 mL	0.015 % 0.02 % 0.028 %	Weighing balance and distilled water by gravimetric method ASTM E1154
Rotational Speed ⁵	10 rpm to 99999 rpm	0.01 %	Fluke 5520A & Digital Tachometer NAVAIR 17-20MA-03

CL-159

PETROSCIENTIFIC MIDDLE EAST CALIBRATION LABORATORY

Effective Date February 7, 2025

Page 3 of 7

IAS/CL/100-3



SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

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Fume Hood - Face Velocity ⁵	0.1 m/s to 4 m/s	0.07 m/s	Anemometer/ ASHRAE 110
Force – Compression / Tension ⁵	0.001 kN to 50 kN 50 kN to 100 kN 100 kN to 2000 kN	0.19 % 0.33 % 0.74 %	Load Cells, Digital Indicator & Standard Weights BS EN ISO 7500-1
Thermal			
RTD / Thermocouple, Temp Gauges, Glass Type Thermometer	-20 °C to 100 °C 100 °C to 285 °C	0.06 °C 0.03 °C	SPRT and oil bath, using comparison method NAVAIR 17-20ST-03
Infrared Thermometers ⁵	50 °C to 500 °C	1.7 °C	Infrared Thermometer and Calibrator (Black-Body) Comparison method ASTM E2847
Ovens & Furnaces ⁵	25 °C to 300 °C 300 °C to 1200 °C	0.15 °C 0.86 °C	Thermocouples & Data Logger USBR 1020-89 and AMS 2750F
Controller/Indicator of Refrigerator, Dry Well Block, Liquid Bath	-80 °C to 600 °C	0.032 °C	SPRT, single-position calibration T.O. 33K5-4-330-1, EURAMET CG-13 and ASTM E2488-09
Humidity (Measure)	20 %RH to 70 %RH @ 20 °C, 30 °C, 40 °C	1.2 %RH	Precision Hygrometer NAVAIR 17-20MH-09
Electrical – DC/LF			
Temperature Simulation - RTD Generate	-200 °C to 660 °C	0.3 °C	Time Electronics 5025E by direct method T.O. 33K5-4-384-1
Temperature Simulation - RTD Measure	-200 °C to 850 °C	0.004 °C	Precision Multimeter Fluke 8846A by direct method EURAMET CG-11
Temperature Simulation - Thermocouple Generate “K” Type “J” Type “T” Type “R” Type	10 °C to 1000 °C 10 °C to 700 °C 10 °C to 300 °C 10 °C to 1000 °C	0.23 °C 0.21 °C 0.22 °C 0.28 °C	Time Electronics 5025E by direct method NAVAIR 17-20SR-183
Temperature Simulation - Thermocouple Measure “K” Type “J” Type “T” Type “R” Type “S” Type	-200 °C to 1372 °C -210 °C to 1200 °C -270 °C to 400 °C -50 °C to 1768 °C -50 °C to 1768 °C	0.24 °C 0.23 °C 0.24 °C 0.24 °C 0.24 °C	Fluke 8846A by direct Method EURAMET CG-11

CL-159

PETROSCIENTIFIC MIDDLE EAST CALIBRATION LABORATORY

Effective Date February 7, 2025

Page 4 of 7

IAS/CL/100-3



SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

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DC Voltage – Generate ³	0 mV to 200 mV 0.2 V to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	0.014 mV 0.43 mV 1.1 mV 55 mV 1.5 V	Time Electronics 5025E by direct method NAVAIR 17-20AQ-299 and NAVAIR 17-20AN-61
AC Voltage – Generate ³	20 mV to 200 mV (60 Hz to 10 kHz) 200 mV to 2 V (60 Hz to 10 kHz) (10 kHz to 20 kHz) 2 V to 20 V (60 Hz to 10 kHz) (10 kHz to 20 kHz) 20 V to 200 V (45 Hz to 10 kHz) 200 V to 1000 V (45 Hz to 1 kHz)	0.23 mV 0.0005 V 0.0011 V 0.0055 V 0.0085 V 0.072 V 0.32 V	Time Electronics 5025E by direct method NAVAIR 17-20AQ-299 and NAVAIR 17-20AN-61 Time Electronics 5025E by direct method NAVAIR 17-20AQ-299 and NAVAIR 17-20AN-61
DC Current – Generate ³	0 µA to 200 µA 0.2 mA to 2 mA 2 mA to 20 mA 20 mA to 200 mA 0.2 A to 1 A 1 A to 2 A 2 A to 20 A 20 A to 1000 A	0.042 µA 0.0065 mA 0.0083 mA 0.021 mA 0.24 mA 1.5 mA 62 mA 460 mA	Time Electronics 5025E by direct method NAVAIR 17-20AQ-299 and NAVAIR 17-20AQ-32 Fluke 5025E and 50-turn coil
DC Current Measure ⁴	0 µA to 100 µA 100 µA to 1 mA 1 mA to 10 mA 10 mA to 100 mA 100 mA to 400 mA 400 mA to 1 A 1 A to 10 A	0.64 µA 0.018 µA 0.004 mA 0.02 mA 0.11 mA 0.00022 A 0.0045 A	Reference Multimeter Fluke 8508A by direct method NAVAIR 17-20AR-130, NAVAIR 17-20AR-134 and NAVAIR 17-20AR-57
AC Current – Generate ³	0.2 mA to 2 mA (200 Hz) 2 mA to 20 mA (200 Hz) 20 mA to 200 mA (200 Hz)	0.0074mA 0.031 mA 0.25 mA	Fluke 5520A, direct method NAVAIR 17-20AQ-299 and NAVAIR 17-20AQ-32

CL-159

PETROSCIENTIFIC MIDDLE EAST CALIBRATION LABORATORY

Effective Date February 7, 2025

Page 5 of 7

IAS/CL/100-3



SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

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AC Current – Generate ³ continued	0.2 A to 2 A (200 Hz)	0.0018 A	Fluke 5025E, direct method NAVAIR 17-20AQ-299 and NAVAIR 17-20AQ-32
	2 A to 10 A (200 Hz)	0.013 A	Fluke 5025E and 50-Turns Coil
	10 A to 20 A (200 Hz)	0.036 A	
	20 A to 1000 A (60 Hz)	0.86 A	
AC Current Measure ⁴ @ 60 Hz to 1 kHz	30 µA to 1 mA 1 mA to 10 mA 10 mA to 100 mA 100 mA to 400 mA 400 mA to 1 A 1 A to 10 A	1.1 µA 0.007 mA 0.0024 mA 0.050 mA 0.002 A 0.028 A	Reference Multimeter Fluke 8508A by direct method NAVAIR 17-20AR-130, NAVAIR 17-20AR-134 and NAVAIR 17-20AR-57
DC Resistance – Generate ³ /Measure ⁴	0 Ω to 11 Ω 11 Ω to 33 Ω 33 Ω to 110 Ω 110 Ω to 1.1 kΩ 1.1 kΩ to 11 kΩ 11 kΩ to 110 kΩ 110 kΩ to 1.1 MΩ 1.1 MΩ to 3.3 MΩ 3.3 MΩ to 11 MΩ 11 MΩ to 33 MΩ 33 MΩ to 110 MΩ 110 MΩ to 330 MΩ 330 MΩ to 1100 MΩ	0.0014 Ω 0.0024 Ω 0.0045 Ω 0.0021 kΩ 0.020 kΩ 0.20 kΩ 0.03 kΩ 0.23 kΩ 1.5 kΩ 11 kΩ 0.06 MΩ 0.6 MΩ 1.7 MΩ	Fluke 5025E, Fluke 8508A NAVAIR 17-20AQ-299 and NAVAIR 17-20AR-27 Fluke 5520A, Fluke 8846A NAVAIR 17-20AQ-299 and NAVAIR 17-20AR-27
Capacitance – Generate ^{3,6} @ 1 kHz	010.0920 nF 20.0870 nF 50.0880 nF 100.50 nF 1.0023 µF	0.065 nF 0.29 nF 0.29 nF 0.29 nF 0.004 µF	Fluke 5025EA, direct method NAVAIR 17-20AQ-299
Time and Frequency			
Timer / Stop Watch	1 s to 3 h 3 h to 10 h	0.002 s 0.02 s	Frequency Counter and Stop Watch by comparison method NIST, Special Publication 960-12
Chemical/Gas			
pH Meters	4 pH to 10 pH	0.035 pH	pH Buffer Solution, NIST Cert. NAVAIR 17-20SC-42

CL-159

PETROSCIENTIFIC MIDDLE EAST CALIBRATION LABORATORY

Effective Date February 7, 2025

Page 6 of 7

IAS/CL/100-3



SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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Conductivity Meters	700 µS/cm to 1413 µS/cm	1.0 %	Standard Solution, NIST Cert. NAVAIR 17-20SC-40

¹The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

²When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.

³Capability is suitable for the calibration of measuring devices in the stated ranges.

⁴Capability is suitable for the calibration of devices intended to generate the indicated quantity in the stated ranges.

⁵Also available as site calibration. Note that actual measurement uncertainties achievable at a customer's site can normally be expected to be larger than the uncertainties listed on this Scope of Accreditation.

⁶The actual frequency applied by the calibrator cannot be selected and may be dependent on the measurement device under calibration. Approximate frequency ranges for a given capacitance or capacitance range may be found in the Fluke 5520A's published specifications.

