CERTIFICATE OF ACCREDITATION

This is to attest

INTER LAB ANALYSE ET METROLOGIE 'ILAM'

G19 PARC INDUSTRIEL JORF LASFAR
EL JADIDA, 24000, MOROCCO

Calibration Laboratory CL-317

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 December 1, 2026
Effective Date November 20, 2025

International Accreditation Service
Issued under the authority of IAS management

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SCOPE OF ACCREDITATION

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INTER LAB ANALYSE ET METROLOGIE 'ILAM'

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Accredited to ISO/IEC 17025:2017 *Effective Date November 20, 2025*

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Dimensional			
Caliper (External Jaw)	0 mm to 500 mm	17 µm	Direct method by using Slip Gauge Set and Length Bar
External micrometer	0 mm to 100 mm	3 µm	Direct method by using Slip Gauge Set
Depth gauge	0 mm to 150 mm	7 µm	Direct method by using Slip Gauge Block, Length Bar
Mechanical			
Non-Automatic Weighing Instrument (NAWI) with automatic equilibrium system, equipped with both analog and digital indication[5]	1 mg to 220 g 220 g to 10 kg 10 kg to 1000 kg	$(1.8 \times 10^{-6} \times M)$ + Resolution $(5.1 \times 10^{-6} \times M)$ + Resolution $(5.5 \times 10^{-5} \times M)$ + Resolution M = Mass	Using reference weight of E2, F1, F2 and M1 by direct method
	1000 kg to 3000 kg	$(2.2 \times 10^{-4} \times M)$ + Resolution M = Mass	Using reference weight of M1 by substitution method
Standard weights	1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg	0.02 mg 0.02 mg 0.02 mg 0.03 mg 0.03 mg 0.04 mg 0.02 mg 0.02 mg 0.03 mg	Comparison Method (ABBA) by using reference weights and weighing balance

** 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.*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Standard weights (continued)	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	0.03 mg 0.04 mg 0.05 mg 0.07 mg 0.08 mg 0.1 mg 0.17 mg 0.34 mg 3 mg 5 mg 34 mg 27 mg 54 mg 100 mg	Comparison Method (ABBA), by using reference weights and weighing balance
Volumetric instruments, whether pouring or receiving devices, include all fixed- and variable-volume measuring instruments (gauged or graduated, piston or non-piston types) used to deliver or contain a defined volume of liquid. Graduated cylinder/ Burettes / Pipettes / Dispensers/ Dottle-top dispensers / Dropping bottles & droppers/ Measuring jugs & beakers /Glass funnels / Automatic diluters / Volumetric tanks / Density bottles / Measuring spoons (lab -grade)	20 µL to 100 µL 100 µL to 200 µL 200 µL to 1 mL 1 mL to 2 mL 2 mL to 5 mL 5 mL to 10 mL 10 mL to 20 mL 20 mL to 50 mL 50 mL to 100 mL 100 mL to 200 mL 200 mL to 500 mL 500 mL to 1 L 1 L to 2 L	0.07 µL 0.2 µL 1.6 µL 2.9 µL 5 µL 6.7 µL 8.5 µL 12 µL 26 µL 49 µL 79 µL 110 µL 200 µL	Direct method by using Weighing Balance & Distilled water by gravimetric method
Pressure Pneumatic[5] (Mano-vacuum gauge / Metal pressure gauge / Digital pressure gauge / Pressure measurement chain)	-0.95 bar to 0 bar 0 bar to 10 bar 10 bar to 40 bar	0.016 bar 0.007 bar 0.81 bar	Using Digital pressure gauge + Pneumatic Generator by Comparison Method
Pressure Hydraulic[5] (Metal pressure gauge/ Digital pressure gauge/ Pressure measurement chain)	0 bar to 600 bar	0.13 bar	Using Digital pressure gauge + Hydraulic Generator by Comparison Method

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Density Hydrometers	800 kg/m^3 to 1400 kg/m^3	0.6 kg/m^3	Using Density standard solutions and balances – Direct Method
Thermal			
Temperature Measurement system[5] (Digital Thermometer / Dial thermometer / Analog thermometer / Temp Sensor with/without Indicator	-25 °C to 120 °C 120 °C to 500 °C 500 °C to 1000 °C 1000 °C to 1500 °C	0.04 °C 0.3 °C 1.4 °C 1.7 °C	Comparison method by using Reference Temp Sensor with indicator and Dry block calibrator
Thermostatic enclosures[5] (Furnace / Refrigerator / Freezer / Climate chamber / Oven / Incubator)	-80 °C to 120 °C 120 °C to 250 °C 250 °C to 450 °C 450 °C to 1400 °C	0.16 °C 0.48 °C 1.5 °C 2.8 °C	By using Temp Sensor with Indicator by Mapping Method
Water Bath[5]	Amb to 100 °C	0.16 °C	By using Temp Sensor with Indicator by Direct method (Single Sensor Method)
Thermo-hygrometer/ Humidity logger/ Temperature recorder/ Thermo-button/ Relative humidity/ measurement chain	6 °C to 60 °C 15 %RH to 90 %RH	0.25 °C 0.75 %RH	Comparison Method by Using Reference Sensor and Humidity Calibrator
Infrared thermometer Thermal camera Optical pyrometer	-20 °C to -15 °C -15 °C to 0 °C 0 °C to 100 °C 100 °C to 250 °C 250 °C to 500 °C	1.8 °C 1.7 °C 2.9 °C 4.2 °C 6.6 °C	Using radiant standard plane source (Infrared Calibrator) by direct method
Autoclave qualification[5] – empty and full load conditions: Temperature Pressure	 40 °C to 140 °C 0 bar to 4 bar	 0.16 °C 0.012 bar	Using temperature sensor and pressure sensors by mapping method (Direct method) as per ISO 17665, ISO 13060 and ISO 285
Chemical/Gas			
pH Meter[5]	Discrete values 4 7 10	 0.03 pH 0.03 pH 0.04 pH	By using Reference Buffer Solution- -Direct Method

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Turbidimeter[5]	Discrete values 0.1 NTU 15 NTU 100 NTU 750 NTU 2000 NTU	 0.016 NTU 0.39 NTU 1.5 NTU 8 NTU 24 NTU	By using the reference turbidity solution- Direct Method
Conductivity Meter[5]	Discrete values @ 25 °C 5 µS/cm 84 µS/cm 1413 µS/cm 12880 µS/cm	 0.1 µS/cm 1.13 µS/cm 6.3 µS/cm 106 µS/cm	By using Reference Conductivity Solution – Direct Method
Optical Radiation			
UV Spectrophotometer[5]	Abs: 0.09 to 1.4 Wavelength λ: 190 nm to 880 nm	0.0096 Abs 0.31 nm	Using Glass Filter Set- Direct Method

[1]The 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.

[2]When 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.

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

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

[5]Also applicable for site calibration.

Note:

NTU = Nephelometric Turbidity Unit