



CERTIFICATE OF ACCREDITATION

This is to attest

METRICA ANALITICA

AVENIDA NACIONES UNIDAS 1557–1559, INTERIOR. 201 URB. CHACRA RIOS NORTE - CERCADO
DE LIMA
LIMA 07001, PERU

Calibration Laboratory CL-247

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 December 23, 2025



International Accreditation Service
Issued under the authority of IAS management

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SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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Accredited to ISO/IEC 17025:2017

Effective Date December 23, 2025

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
<i>Mechanical</i>			
Particle Samplers: Mini Low Volume Low Volume (Low-Vol) Occupational Health Pump Rotameters ³	0.10 L/min to 22 L/min	0.35 %+0.0022 L/min	PLV-004 Procedure for the calibration of low volume particulate matter sampling equipment and rotameters, version 01 of 2022
High volume particulate matter samplers (HI-Vol) ³	0.9 m ³ /min to 1.8 m ³ /min	0.017 m ³ /min	PLV-002 Procedure for the calibration of high volume particulate matter sampling equipment, version 01 of 2023
Absolute Pressure Meters ³	540 hPa to 1100 hPa	0.29 hPa	PC-024 Procedure for the calibration of Absolute pressure measuring instruments (Barometer), DM-INACAL
<i>Thermal</i>			
Thermometer Sensor/Probe ³	0°C to 70.0 °C	0.043 °C	PC-017 Procedure for the Calibration of Digital Thermometers, 2nd Edition, Indecopi 2012.
Relative humidity meters and Ambient thermometers ³	30 %RH to 90 %RH @ 23 °C 10°C to 40 °C	1.6 %RH 0.7 °C	PC-026 Procedure for the calibration of Environmental Hygrometers and Thermometers DM-INACAL
<i>Chemical/Gas</i>			
Potentiometric pH Meters	4 pH 7 pH 10 pH	0.012 pH 0.012 pH 0.012 pH	PC-020 Procedure for the calibration of pH meters, DM-INACAL 2nd edition, 2017

* 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.

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Conductivity Meters	1 uS/cm 5 uS/cm 100 uS/cm 147 uS/cm 1413 uS/cm 10 mS/cm 12.8 mS/cm 100 mS/cm 200 mS/cm	0.63 uS/cm 0.63 uS/cm 2.1 uS/cm 2.0 uS/cm 4.8 uS/cm 0.041 mS/cm 0.18 mS/cm 0.38 mS/cm 0.55 mS/cm	PC-022 Procedure for the calibration of conductivity meters, 2nd edition, DM – INACAL 2023
Turbidity Meter	1 NTU 10 NTU 20 NTU 100 NTU 500 NTU 1000 NTU	0.05 NTU 0.34 NTU 0.21 NTU 0.9 NTU 2.7 NTU 8.1 NTU	PLV-008 Procedure for the Calibration of Turbidimeters, version 02 of 2025
Colorimeter - Chlorine ³	0.20 mg/L to 2 mg/L 2.1 mg/L to 8 mg/L	0.061 mg/L 0.020 mg/L	PLV-007 Colorimeter calibration procedure, version 01 of 2022
Dissolved oxygen Meter	0 mg/L 8.3 mg/L	0.34 mg/L 0.02 mg/L	PLV-003 Procedure for the calibration of oximeters, version 02 of 2024
Redox Potential meters (ORP)	200 mV 229 mV 400 mV 476 mV	3.1 mV 1.9 mV 3.2 mV 4.4 mV	Direct method using Standard ORP Solutions (CRM)
Gas Analyzer Equipment			PLV-001 Procedure for the calibration of gas analyzers, version 02 of 2023 (Dynamic dilution)
CO	(0.15 to 50) parts in 10 ⁶	0.62 %	
NO	(0.050 to 50) parts in 10 ⁶	1.8 %	
SO ₂	(0.050 to 50) parts in 10 ⁶	1 %	
NO ₂	(0.05 to 12) parts in 10 ⁶	2.8 %	
H ₂ S	(0.08 to 12) parts in 10 ⁶	2.8 %	
C ₃ H ₈	(0.05 to 50) parts in 10 ⁶	1.4 %	
Gas Analyzer Equipment			PLV-001 Procedure for the calibration of gas analyzers, version 02 of 2023 (Direct method)
CO	1000 parts in 10 ⁶ 500 parts in 10 ⁶	6.7 parts in 10 ⁶ 4.4 parts in 10 ⁶	

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
O ₂	21 % 3 %	0.48 % 0.08 %	
H ₂ S	300 parts in 10 ⁶	3.4 parts in 10 ⁶	
NO	1000 parts in 10 ⁶	8 parts in 10 ⁶	
SO ₂	1000 parts in 10 ⁶ 500 parts in 10 ⁶	8 parts in 10 ⁶ 5 parts in 10 ⁶	
NO ₂	200 parts in 10 ⁶	3.7 parts in 10 ⁶	
C ₃ H ₈	100 parts in 10 ⁶ 1000 parts in 10 ⁶	0.84 parts in 10 ⁶ 7.7 parts in 10 ⁶	
Ozone Analyzer Equipment	(8 to 400) parts in 10 ⁹	(0.75%+1.4) parts in 10 ⁹	PLV-006 Procedure for the calibration of ozone analyzers, version 01 of 2022
Electrical			
Magnetic Field meters ³ 10 Hz to 10000 Hz	10 µT to 25 µT 25 µT to 1500 µT	1.8 µT 3 µT	Direct method by Magnetic field generator and HelmHoltz Coils
Electric Field Meters ³ 10 Hz to 400000 Hz	10 V/m to 800 V/m	6.5 %	Direct method by Electric field generator and parallel conducting plates

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.

NTU = Nephelometric Turbidity Unit

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