



CERTIFICATE OF ACCREDITATION

This is to attest

AD LAB

AV. LOS ALISOS NRO. 515
LIMA, PERU

Testing Laboratory TL-1418

has met the requirements of AC89, *IAS Accreditation Criteria for Testing 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.

Effective Date March 26, 2026



International Accreditation Service
Issued under the authority of IAS management

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AD LAB

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Accredited to ISO/IEC 17025:2017

Effective Date March 26, 2026

FIELDS OF TESTING	MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Environmental Chemistry – Water	Drinking Water Natural Water Wastewater Saline Water	Cyanogen chloride (as CN)	SMEWW-APHA-AWWA-WEF Part 4500-CN J; 24th Ed. 2023 / Cyanide. Cyanogen Chloride.
	Drinking Water Natural Water Wastewater	Kjeldahl nitrogen	SMEWW-APHA-AWWA-WEF 4500-Norg B / SMEWW-APHA-AWWA-WEF Part 4500-NH3 D; 24th Ed. 2023 /Nitrogen (Organic). Macro-Kjeldahl Method / Nitrogen (ammonia). Titrimetric Method
	Drinking Water Natural Water Wastewater	Total nitrogen	MEWW-APHA-AWWA-WEF Part 4500-Norg B; 24th Ed 2023/ 4500-NH3 D / SMEWW-APHA-AWWA-WEF Part 4500-NO ₂ ⁻ B; 24th Ed. 2023 / SMEWW-APHA-AWWA-WEF Part 4500-NO ₃ ⁻ E; 24th Ed. 2023/Macro-Kjeldahl Method/ Ammonia-Selective Electrode Method/ NITROGEN (NITRITE) - Colorimetric Method/ Cadmium Reduction Method (4500-NO ₃ ⁻)
	Drinking Water (validated) Natural Water Saline Water Process Water	Oil and grease	EPA METHOD 1664. Revision B (Validated – out of scope). 2025 / Oil and Grease. Liquid-Liquid, Partition-Gravimetric Method.
	Drinking Water Natural Water	Monochloramine	EPA Method 127. 2021 / Determination of Monochloramine Concentration in Drinking Water
	Drinking Water Natural Water Wastewater Saline Water	Nitrate (NO ₃ -N) + nitrite (NO ₂ -N)	SMEWW-APHA-AWWA-WEF Part 4500-NO ₃ ⁻ E, 24th Ed / SMEWW-APHA-AWWA-WEF Part 4500-NO ₂ ⁻ B, 24th Ed. 2023/Cadmium Reduction Method (4500-NO ₃ ⁻) / NITROGEN (NITRITE) - Colorimetric Method

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Environmental Chemistry – Water (cont'd.)	Drinking Water Natural Water Process Water Saline Water	Silicates	SMEWW-APHA-AWWA-WEF Part 4500 SIO ₂ D, 24th Ed. 2023 / Silica. Heteropoly Blue Method
	Drinking Water Natural Water Process Water	Formaldehyde	ASTM D6303-98 (VALIDATED - Modified and Applied outside of scope). 2017 /Standard Test Method for Formaldehyde in Water
	Drinking Water Natural Water Saline Water	Acrylamide	EPA Method 8270E // EPA Method 3510C (Validated applied out of scope). 2023 / Semi volatile Organic Compounds by Gas Chromatography-Mass Spectrometry / Separatory Funnel Liquid-Liquid Extraction
	Drinking Water Natural Water Wastewater Saline Water	Aldicarb	EPA Method 8270E // EPA Method 3510C (Validated applied out of scope). 2023 / Semi volatile Organic Compounds by Gas Chromatography-Mass Spectrometry / Separatory Funnel Liquid-Liquid Extraction
	Drinking Water Natural Water Wastewater Saline Water	Epichlorohydrin	EPA Method 8260 D. 2023 /Semi volatile Organic Compounds by Gas Chromatography-Mass Spectrometry / Separatory Funnel Liquid-Liquid Extraction
	Drinking Water Natural Water	Organic Parameters (Edetic Acid (EDTA); Nitrilotriacetic Acid)	Nishikawa Y.; Okumura T.; 1995. Vol 690; pages 109-118. JOURNAL OF CHROMATOGRAPHY A; (validated). 2018 /Determination of nitrilotriacetic acid and ethylenediaminetetraacetic acid in environmental samples as their methyl ester derivatives by gas chromatography-mass spectrometry
	Drinking Water Natural Water Wastewater Saline Water	Organic Contaminants: 2,4-D; 2,4-DB; 2,4,5-T; Fenoprop; Dichlorprop; MCPA; Mecoprop	EPA Method 8270E // EPA Method 3510C (Validated applied outside of scope). 2023 / Semivolatile Organic Compounds by Gas Chromatography-Mass Spectrometry / Separatory Funnel Liquid-Liquid Extraction

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Environmental Chemistry – Water (cont'd.)	Drinking Water Natural Water Wastewater Saline Water	Pesticides: Alachlor; Atrazine; Cyanazine; Molinate; Pendimethalin; Simazine; Terbuthylazine; Trifluralin; Hexachlorobenzene; Carbofuran; Chlorotoluron; Dimethoate -Dimetate; Isoproturon; Metolachlor; Chloropyrifos; Pyriproxyfen	EPA Method 8270E // EPA Method 3510C (Validated applied out of scope). 2023 /Semivolatile Organic Compounds by Gas Chromatography-Mass Spectrometry / Separatory Funnel Liquid-Liquid Extraction
	Drinking Water Natural Water	Haloacetonitriles: Chloral hydrate (trichloroacetaldehyde); Dibromoacetonitrile; Dichloroacetonitrile	Internal procedure AD-I-070 (Validated) Based on: EPA Method 551.1 Rev. 1.0 1995 /Determination of Chlorination Disinfection Byproducts; Chlorinated Solvents; and Halogenated Pesticides/Herbicides in Drinking Water by Liquid-Liquid Extraction and Gas Chromatography With Electron-Capture Detection
	Drinking Water Natural Water	Haloacetics: Dichloroacetate (Dichloroacetic Acid); Monochloroacetate (Monochloroacetic Acid); Trichloroacetate (Trichloroacetic Acid)	EPA Method 552.3 Rev. 1.0 2003 /Determination of Haloacetic Acids and Dalapon in Drinking Water By Liquid-Liquid Microextraction, Derivatization, and Gas Chromatography With Electron Capture Detection
	Drinking Water Natural Water Wastewater Saline Water	Total petroleum hydrocarbons fraction 1 (C6-C10)	EPA Method 8015 C, Rev. 3 2007 / Nonhalogenated Organics by Gas Chromatography
	Drinking Water Natural Water Wastewater Saline Water	Total petroleum hydrocarbons fraction 2 (C10-C28)	EPA Method 8015 C, Rev. 3 2007 / Nonhalogenated Organics by Gas Chromatography
	Drinking Water Natural Water Wastewater Saline Water	Total petroleum hydrocarbons fraction 3 (C28-C40)	EPA Method 8015 C, Rev. 3 2007 / Nonhalogenated Organics by Gas Chromatography
	Drinking Water Natural Water Wastewater Saline Water	Dissolved or emulsified hydrocarbon; mineral oil	EPA Method 8015 C, Rev. 3 2007 /Nonhalogenated Organics by Gas Chromatography

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Environmental Chemistry – Water (cont'd.)	Drinking Water Natural Water Wastewater Saline Water	Organochlorine Pesticides (POCL): Aldrin, Dieldrin, Endrin, Endrin Aldehyde, Endrin Ketone, cis-Chlordane, trans-Chlordane, 4,4'-DDD, 4,4-DDE, Gamma BCH (lindane), Methoxychlor, Heptachlor Epoxide, Heptachlor, 4,4-DDT, Endosulfan I, Endosulfan II, Endosulfan Sulfate, DDT (Sum of 4,4'-DDD and 4,4-DDE), Heptachlor + heptachloroepoxide, Endosulfan (total isomers), Chlordane (Cis-Chlordane+trans-Chlordane), Aldrin and dieldrin, Endosulfan (Total Isomers)	EPA Method 8081 B, Rev. 2 /EPA METHOD 3510C Rev. 3. 2007 / ORGANOCHLORINE PESTICIDES BY GAS CHROMATOGRAPHY/ SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION
	Drinking Water Natural Water Wastewater Saline Water	Trihalomethans: Bromodichloromethane, Chlorodibromomethane, Chloroform, Bromoform, Trihalomethanes (Total Trihalomethanes)	EPA METHOD 8260D Rev. 4 /EPA METHOD 5021 A Rev. 2. 2018 /VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY // VOLATILE ORGANIC COMPOUNDS IN VARIOUS SAMPLE MATRICES USING EQUILIBRIUM HEADSPACE ANALYSIS
	Process water (validated) Sea water Natural water Drinking water Wastewater	TOTAL AND DISSOLVED METALS Aluminum (Al) Antimony (Sb) Arsenic (As) Barium (Ba) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Copper (Cu) Mercury (Hg) Lead (Pb) Manganese (Mn) Molybdenum (Mo)	METHOD 200.8 Revision 5.4 1994. Validated (Applied out of scope): Bi, B, Ca, Ce, Cs, Fe, Ga, Ge, Hf, K, La, Li, Lu, Mg, Na, Nb, P, Rb, Si, Sn, Sr, Ta, Te, Ti, W, Yb, Zr. 2025 / DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLASMA - MASS SPECTROMETRY

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Environmental Chemistry – Water (cont'd.)	Process water (validated) Sea water Natural water Drinking water Wastewater (cont'd.)	Nickel (Ni) Selenium (Se) Silver (Ag) Thallium (Tl) Thorium (Th) Uranium (U) Vanadium (V) Zinc (Zn) Bismuth (Bi) validated Boron (B) validated Calcium (Ca) validated Cerium (Ce) validated Cesium (Cs) validated Iron (Fe) validated Gallium (Ga) validated Germanium (Ge) validated Hafnium (Hf) validated Potassium (K) validated Lanthanum (La) validated Lithium (Li) validated Lutetium (Lu) validated Magnesium (Mg) validated Sodium (Na) validated Niobium (Nb) validated Phosphorus (P) validated Rubidium (Rb) validated Silicon (Si) validated Tin (Sn) validated Strontium (Sr) validated Tantalum (Ta) validated Tellurium (Te) validated Titanium (Ti) validated Wolfram or Tungsten (W) validated Ytterbium (Yb) validated Zirconium (Zr) validated	METHOD 200.8 Revision 5.4 1994. Validated (Applied out of scope): Bi, B, Ca, Ce, Cs, Fe, Ga, Ge, Hf, K, La, Li, Lu, Mg, Na, Nb, P, Rb, Si, Sn, Sr, Ta, Te, Ti, W, Yb, Zr. 2025 / DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLASMA - MASS SPECTROMETRY (cont'd.)
Sensory tests – Water	Drinking water (potable water, table water, bottled water)	Flavor	SMEWW-APHA-AWWA-WEF Part 2160 C, 24th Ed. 2023 / Flavor Rating Assessment (FRA)
	Drinking water (potable water, table water, bottled water) Natural water	Odor	SMEWW-APHA-AWWA-WEF Part 2150 B, 24th Ed. 2023 / Odor. Threshold Odor Test

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Environmental Chemistry – Dielectric oils	Dielectric oil	PCBs	ASTM D4059 - 00 (Reapproved 2018). 2000 / Standard Test Method for Analysis of Polychlorinated Biphenyls in Insulating Liquids by Gas Chromatography
Environmental Chemistry – Air	Air	Crystalline silica	NIOSH 7601. 2003 / SILICA, CRYSTALLINE, by VIS (Validated)
	Air	Passive benzene	UNE-EN 14662-5. 2005 / Ambient air. Measurement of benzene concentrations. Part 5: Diffusive sampling, solvent desorption and gas chromatography (includes sampling)
	Filter	Metals In High Volume Filters (PTS, PM10, PM 2.5) Al, Na, Sb, As, Ba, Be, Bi, Cd, Cr, Co, Cu, Pb, Mg, Mn, Mo, Ni, Se, Ag, Tl, Th, U, V, Zn, B, Ca, Ce, Fe, K, Hg, Li, P, Sn, Sr, Ti, SiO2	EPA/625/R-96/010 ^a Compendium Method IO3.5 June 1999 Compendium Method IO3.1 June 1999 - Validated (Modified and applied out of scope). 2025 /DETERMINATION OF METALS IN AMBIENT PARTICULATE MATTER USING INDUCTIVELY COUPLED PLASMA/ MASS SPECTROMETRY (ICP/MS)/ SELECTION, PREPARATION AND EXTRACTION OF FILTER MATERIAL
	Air	Metals In High Volume Air (PTS, PM10, PM 2.5) Al, Na, Sb, As, Ba, Be, Bi, Cd, Cr, Co, Cu, Pb, Mg, Mn, Mo, Ni, Se, Ag, Tl, Th, U, V, Zn, B, Ca, Ce, Fe, K, Hg, Li, P, Sn, Sr, Ti, SiO2	EPA/625/R-96/010 ^a Compendium Method IO3.5 June 1999 Compendium Method IO3.1 June 1999 - Validated (Modified and applied out of scope). 2025 /DETERMINATION OF METALS IN AMBIENT PARTICULATE MATTER USING INDUCTIVELY COUPLED PLASMA/ MASS SPECTROMETRY (ICP/MS)/ SELECTION, PREPARATION AND EXTRACTION OF FILTER MATERIAL

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Environmental Chemistry – Air (cont'd.)	Filter	Metals In Low Volume Filters (PTS, PM10, PM 2.5): Al, Na, Sb, As, Ba, Be, Bi, Cd, Cr, Co, Cu, Pb, Mg, Mn, Mo, Ni, Se, Ag, Tl, Th, U, V, Zn, B, Ca, Ce, Fe, K, Hg, Li, P, Sn, Sr, Ti, SiO2	EPA/625/R-96/010 ^a Compendium Method IO3.5 June 1999 Compendium Method IO3.1 June 1999 - Validated (Modified and applied out of scope). 2025 /DETERMINATION OF METALS IN AMBIENT PARTICULATE MATTER USING INDUCTIVELY COUPLED PLASMA/ MASS SPECTROMETRY (ICP/MS)/ SELECTION, PREPARATION AND EXTRACTION OF FILTER MATERIAL
	Air	Metals In Low Volume Air (PTS, PM10, PM 2.5): Al, Na, Sb, As, Ba, Be, Bi, Cd, Cr, Co, Cu, Pb, Mg, Mn, Mo, Ni, Se, Ag, Tl, Th, U, V, Zn, B, Ca, Ce, Fe, K, Hg, Li, P, Sn, Sr, Ti, SiO2	EPA/625/R-96/010 ^a Compendium Method IO3.5 June 1999 Compendium Method IO3.1 June 1999 - Validated (Modified and applied out of scope). 2025 /DETERMINATION OF METALS IN AMBIENT PARTICULATE MATTER USING INDUCTIVELY COUPLED PLASMA/ MASS SPECTROMETRY (ICP/MS)/ SELECTION, PREPARATION AND EXTRACTION OF FILTER MATERIAL
	Filter	Metals: Al, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Mo, Ni, P, K, Se, Na, Sr, Tl, Ti, U, Sb, Bi, Pb, Sn, Hg	NIOSH 7303, Issue 1, 2003. (VALIDATED - Modified/Applied outside scope). Does not include sampling. 2025 /Elements by ICP (Hot Block/HCl/HNO3 Digestion).
	Air	Metals: Al, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Mo, Ni, P, K, Se, Na, Sr, Tl, Ti, U, Sb, Bi, Pb, Sn, Hg	NIOSH 7303, Issue 1, 2003. (VALIDATED - Modified/Applied outside scope). Does not include sampling. 2025 /Elements by ICP (Hot Block/HCl/HNO3 Digestion).
	Air	Meteorological parameters (Temperature, Atmospheric Pressure, Relative Humidity, Precipitation, Solar Radiation)	EPA-454/B-08-002 March 2008 (VALIDATED). 2022 /Quality Assurance Handbook for Air Pollution Measurement Systems. Volume IV: Meteorological Measurements Version 2.0 (Final)

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Environmental Chemistry – Air (cont'd.)	Air	Volatile Organic Compounds (VOCs, O ₂ , CO, H ₂ S, SO ₂ , LEL, Formaldehyde (HCHO), CO ₂ , Ammonia (NH ₃))	RAE Systems by Honeywell. MultiRAE User Manual, February 2023. /Method 200130 – Electrochemical Technique with Photoionization Detector (PID)
Environmental Chemistry – Emissions	Emissions	Sulfur dioxide (SO ₂)	EPA CFR Title 40, Appendix A-4 to Part 60. Method 6C (VALIDATED). 2024 /Determination of Sulfur Dioxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)
	Emissions	Hydrogen Sulfide, Total Hydrocarbons, Carbon Dioxide	CTM 022 (VALIDATED - applied out of scope). 2025 /Determination of Nitric Oxide, Nitrogen Dioxide and NO _x Emissions from Stationary Combustion Sources by Electrochemical Analyzer
	Emissions	Hydrogen Sulfide, Total Hydrocarbons, Carbon Dioxide	CTM 030 (VALIDATED - applied out of scope). 2025 / Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers
	Emissions	Hydrogen Sulfide, Total Hydrocarbons, Carbon Dioxide	CTM 034 (VALIDATED - applied out of scope). 2025 /Determination of Oxygen, Carbon Monoxide and Oxides of Nitrogen from Stationary Sources for Monitoring (Portabel Electrochemical Analyzer Procedure
Environmental Chemistry - Soils	Muds Sediments Soils	Total Metals: Ag, Al, As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn, Hg, B, Ca, Ce, Fe, K, Li, Mg, Mo, Na, P, Si, Sn, Sr, Ti, Cs, Bi, U, Th.	EPA METHOD 6020B, Rev. 2, 2014/ EPA METHOD 3050B Rev. 2, 1996. (VALIDATED - Applied out of scope). 2025 /Inductively coupled plasma—mass spectrometry / Acid Digestion of Sediments, Sludges, and Soils
Environmental Chemistry – Soils	Muds Sediments Soils	Extractable Barium	ALBERTA ENVIRONMENT, page 33 item 6.2.2:2009 / EPA Method 200.8 (VALIDATED-modified). 2025 /Soil Remediation Guidelines for Barite: Environmental Health and Human Health/

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Environmental Chemistry – Soils (cont'd.)	Muds Sediments Soils (cont'd.)	Extractable Barium (cont'd.)	INDUCTIVELY COUPLED PLASMA - MASS SPECTROMETRY
Environmental Chemistry - Soils	Muds Sediments Soils	Real Total Barium	ALBERTA ENVIRONMENT, pág.33 item 6.2.2:2009 / EPA Method 200.8 (Validated - modified). 2025 /Soil Remediation Guidelines for Barite: Environmental Health and Human Health/ INDUCTIVELY COUPLED PLASMA - MASS SPECTROMETRY
Occupational health	Occupational Health	Illuminance	NOM-025. 2008 – Workplace lighting conditions
Environmental - Physical tests	Environmental Field Testing	Vibration environmental	DIN 4150-3:2016 – Vibrations in buildings, Part 3: Effects on structures
Environmental - Physical tests	vibrations in frequency (1 Hz to 150 Hz): fixed structures	Mechanical vibrations	NTP-ISO 4866:2013 (revised 2019)/Mechanical vibrations and shocks. Vibration of fixed structures. Guidelines for the measurement of vibrations and the evaluation of their effects on structures.