



CERTIFICATE OF ACCREDITATION

This is to attest that

ANALYTICAL LABORATORY E.I.R.L

OFFICE: PROLONGACION ZARUMILLA MZ D2 LOTE3 - BELLAVISTA-PROV. CONSTITUCIONAL DEL
CALLAO-LIMA, PERU

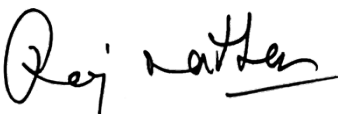
LABORATORY: AV. GUARDIA CHALACA NO 1877 BELLAVISTA - PROV. CONSTITUCIONAL DEL CALLAO,
LIMA, 07001, REPUBLIC OF PERU

Testing Laboratory TL-833

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 December 9, 2021





President

IAS is an ILAC MRA Signatory

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International Accreditation Service, Inc.

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ANALYTICAL LABORATORY E.I.R.L

www.alab.com.pe

Contact Name Lucio Capcha

Contact Phone + +51-949998382

Accredited to ISO/IEC 17025:2017

Effective Date December 9, 2021

FIELDS OF TESTING	MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing)	Soils, Sediment and Sludge	Total Metals Ag, Al, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Ti, V, Zn, B, Si and SiO ₂ (by calculation)	EPA METHOD 3050B, Rev. 2,1996 / EPA METHOD 200.7, Rev. 4.4,1994 Acid Digestion of Sediments, Sludges, and Solis Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry
		Total Metals Validated: As, Bi, Ce, Li, P, Se, Sn, Sr, Ti, U	EPA METHOD 3050B, Rev. 2,1996 / EPA METHOD 200.7, Rev. 4.4,1994. VALIDATED (Applied out of reach), 2018
		Metals: Ag, Al, As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, Sb, Se, Ti, V, Zn, Hg.	EPA METHOD 6020B, Rev.2, 2014 / EPA METHOD 3050B Rev. 2, 1996. Inductively coupled plasma—mass spectrometry / Acid Digestion of Sediments, Sludges, and Soils
		Metals: Validated: B, Ca, Ce, Fe, K, Li, Mg, Mo, Na, P, Si, Sn, Sr, Ti, Bi, U, Th	EPA METHOD 6020B, Rev.2, 2014 / EPA METHOD 3050B Rev. 2, 1996. VALIDATED (Applied out of reach), 2020.
		n-Hexane Extractable Material	EPA Method 9071B, Rev.2, 1998. n-Hexane extractable material (HEM) for sludge, sediment and solid samples

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)	Soils, Sediment and Sludge (cont'd.)	True Total Barium	Alberta Environment 2009 (ISBN No. 978-0-7785-7691-4) / EPA Method 200.7 Rev.4.4 - 1994 (VALIDATED) Soil Remediation Guidelines for Barite: Environmental Health and Human Health. Section 2.2.1. Soil (Fusion Methods), 9.1.3 True Total Barium EPA Method 200.7 Rev.4.4 - 1994 Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry
		Extractable Barium	Alberta Environment 2009 (ISBN No. 978-0-7785-7691-4) / EPA Method 200.7 Rev.4.4 - 1994 (VALIDATED) Soil Remediation Guidelines for Barite: Environmental Health and Human Health. Section 6.2.2 Analytical Method for Extractable Barium EPA Method 200.7 Rev.4.4 - 1994 Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry
		Total Cyanide	EPA 9013 A, Rev 2 - July 2014 /SMEWW-APHA-AWWA-WEF Part 4500-CN⁻ C, F, 23rd Ed. Cyanide Extraction Procedure for Solids and Oils. Total Cyanide after Distillation. Cyanide-Selective Electrode Method 2017
		Sulfides or Total Sulfides	EPA Method 9031, Rev. 0 1992 Extractable Sulfides in soils
		Sulfates and Total Sulfates	SMEWW-APHA-AWWA-WEF P 4500-SO42- E, 23rd Ed. 2017. Sulfates in soil - Turbidimetric Method.

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)	Soils - Agronomy	pH (1: 1; 1: 2.5; 1:10; EPS)	MVAL-AGR-01:2020 Determination of pH .
		Conductivity (1: 1; 1: 2.5; 1:10; EPS)	MVAL-AGR-02:2020 Determination of Conductivity.
		Limestone Active	MVAL-AGR-03:2020 Determination of Active Limestone. Active
		Organic Matter	Official Mexican NORMA NOM-021-RECNAT-2000 , which establishes the specifications of fertility, salinity, and soil classification, Studies, sampling and analysis. AS-07; item 7.1.7 Organic Matter Content by the Walkley and Black Method.
	Natural Water, Water for human use and consumption, Saline Water, Process Water and Waste Water	Dissolved Metals: Ag, Al, As, B, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, SiO ₂ , Sn, Sr, Tl, Ti, V, Zn, Hg	EPA METHOD 200.7 Rev.4.4., 1994 Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry
		Dissolved Metals: Validated: U, Bi	EPA Method 200.7, Rev. 4.4., 1994. VALIDATED (Applied out of reach), 2018
		Total Metals: Ag, Al, As, B, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, SiO ₂ , Sn, Sr, Tl, Ti, V, Zn, Hg, U, Bi.	EPA METHOD 200.7 Rev.4.4., 1994 Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry.
		Total Metals: Validated: U, Bi	EPA Method 200.7, Rev. 4.4., 1994. VALIDATED (Applied out of reach), 2018
		Un-ionized Hydrogen Sulfide	SMEWW-APHA-AWWA-WEF Part 4500-S2- D, H, 23rd Ed., 2017 Sulfide. Methylene Blue Method. Calculation of Un-ionized Hydrogen Sulfide
		Total Nitrogen	SMEWW-APHA-AWWA-WEF Part 4500-N C, 23rd Ed., 2017. Nitrogen. Persulfate Method

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)	Natural Water, Water for human use and consumption, Saline Water, Process Water and Waste Water (cont'd.)	Acidity	SMEWW-APHA-AWWA-WEF Part 2310 B, 23rd Ed., 2017. Acidity: Titration Method
		Total Hardness	SMEWW-APHA-AWWA-WEF Part 2340-C, 23rd Ed. EDTA Titrimetric Method. 2017
		Hexavalent chromium - dissolved	SMEWW-APHA-AWWA-WEF Part 3500-Cr-B, 23rd Ed. 2017. Chromium. Colorimetric Method
	Natural Water, Water for human use and consumption, Process Water and Waste Water	Anions Chloride, Fluoride, Nitrite, N-Nitrite, Nitrate, N-Nitrate, N-Nitrate + N-Nitrite, Sulfate, Phosphate-P, Bromide, Bromate, Fluor, Chlorite, Chlorate, Monochloroacetate, Dichloroacetate	EPA 300.0 Rev. 2.1, 1993, VALIDATED (Applied out of reach), 2019 Determination of inorganic anions by ion chromatography
	Natural Water, Water for human use and consumption, Saline Water and Waste Water	Silica (SiO ₂)	SMEWW-APHA-AWWA-WEF Part 4500-SiO₂ C. 23rd Ed. Silica. Molybdosilicate Method
		Silicates (Si-SiO ₃ ; SiO ₂ -SiO ₃)	SMEWW-APHA-AWWA-WEF Part 4500-SiO₂ C-4a, 23rd Ed., 2017. VALIDATED (Applied out of reach), 2019 Silica. Molybdosilicate Method
	Saline Water	Surfactants	SMEWW-APHA-AWWA-WEF Part 5540 C, 23rd Ed. 2017. Surfactants. Anionic Surfactants as MBAS

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)	Saline Water (cont'd.)	Nitrites / N-Nitrites (N-NO ₂)	SMEWW-APHA-AWWA-WEF Part 4500-NO₂- B, 23rd Ed. 2017. Nitrogen (Nitrite). Colorimetric Method
		Anions Chloride, Sulfate	EPA 300.0 Rev. 2.1, 1993, (VALIDATED - Applied out of reach, 2020). Determination of inorganic anions by ion chromatography
		Fluoride	SMEWW-APHA-AWWA-WEF Part 4500-F⁻ C, 23rd Ed. 2017 Fluoride. Ion-Selective Electrode Method
		Total Dissolved Solids	SMEWW-APHA-AWWA-WEF Part 2540 C, 23rd Ed. 2017. Solids. Total Dissolved Solids Dried at 180°C
		Settleable Solids	SMEWW-APHA-AWWA-WEF Part 2540 F, 23rd Ed. 2017. Solids. Settleable Solids
		Total Alkalinity, Carbonate Alkalinity and Bicarbonate Alkalinity	SMEWW-APHA-AWWA-WEF Part 2320 B, 23rd Ed. 2017 Alkalinity. Titration Method
		Color	SMEWW-APHA-AWWA-WEF Part 2120 C, 23rd Ed. 2017 Color. Spectrophotometric - Single - Wavelength Method
		Total Solids	SMEWW-APHA-AWWA-WEF Part 2540 B, 23rd Ed. 2017. Solids. Total Solids Dried at 103-105°C
		Total metals and Dissolved Metals Validated: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Ti, V, Zn, Hg, U, Th, Bi, B, Ca, Ce, Cs, Fe, Ga, Ge, Hf, K, La, Li, Lu, Mg, Nb, P, Rb, Sn, Sr, Ta, Te, Ti, W, Yb, Zr, In, Er, Y, Sm, Re, Na, Eu, Gd, Ho, Pr	EPA Method 200.8, Revision 5.4, 1994. (VALIDATED) Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma –Mass Spectrometry

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)	Water for human use and consumption, Natural Water, Wastewater	Total metals and Dissolved Metals Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Ti, V, Zn, Hg, U, Th Total metals and Dissolved Metals Validated: 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, In, Er, Y, Sm, Re, Nd, Eu, Gd, Ho, Pr	EPA Method 200.8, Revision 5.4, 1994. Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma –Mass Spectrometry EPA Method 200.8, Revision 5.4, 1994. VALIDATED (Applied out of reach), 2020 Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma –Mass Spectrometry
	Process Water	Total metals and Dissolved Metals Validated: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Ti, V, Zn, Hg, U, Th, 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, In, Er, Y, Sm, Re, Nd, Eu, Gd, Ho, Pr	EPA Method 200.8, Revision 5.4, 1994. (VALIDATED) Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma –Mass Spectrometry
	Saline water	COD in Saline water	SMEWW-APHA-AWWA-WEF Part 5220 A,2; D, 23 rd Ed. 2017 Chemical Oxygen Demand, Closed Reflux, Colorimetric Method. Modified (validated)
	Drinking Water	Determination of total alpha radioactivity concentration in Drinking water	EPA 900.0 Gross alpha and gross beta radioactivity in drinking water
	Drinking Water	Determination of total beta radioactivity concentration in Drinking water	EPA 900.0 Gross alpha and gross beta radioactivity in drinking water
	Air	High Volume Metals (PTS, PM10, PM2.5): Al, As, B, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, V, Zn, Hg	EPA COMPENDIUM METHOD IO-3.4, June 1999. Determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma (ICP) Spectroscopy

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)	Air (cont'd.)	High Volume Metals (PTS, PM10, PM2.5): Validated: SiO ₂	EPA COMPENDIUM METHOD IO-3.4 , June 1999. VALIDATED (Applied out of reach), 2018
		Low Volume Elements (PM10, PM2.5): Al, As, B, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Tl, Ti, V, Zn, Hg, SiO ₂ .	EPA COMPENDIUM METHOD IO-3.4 , June 1999. VALIDATED (Applied out of reach), 2018 Determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma (ICP) Spectroscopy
		Determination of weight in PM10 high volume filters in Air - Validated	NTP 900.030.2018 Reference method for determining respirable particulate matter such as PM10 in the atmosphere. 2 nd Edition
		Determination of weight in PM 2.5 low volume filters in Air - Validated	NTP 900.069.2017 Reference method for the determination of fine particulate matter such as PM2.5 in the atmosphere. 1st Edition
		PM10 (Particulate matter less than or equal to 10 µm) low and high vol	NTP 900.030:2018 Reference method for determining respirable particulate matter such as PM10 in the atmosphere. 2nd Edition.
		PM2.5 (Particulate matter less than or equal to 2.5 µm) low vol	NTP 900.069:2017 Reference method for the determination of fine particulate matter such as PM2.5 in the atmosphere. 1st Edition
		NO ₂ (Nitrogen dioxide)	NTP ISO 7996:2019 Determination of the mass concentration of nitrogen oxides. Chemiluminescence method. (Automatic method)
		NO (Nitric oxide / Nitrogen monoxide)	NTP ISO 7996:2019 Determination of the mass concentration of nitrogen oxides. Chemiluminescence method. (Automatic method)
		NO _x (Nitrogen oxides)	NTP ISO 7996:2019

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)	Air (cont'd.)		Determination of the mass concentration of nitrogen oxides. Chemiluminescence method. (Automatic method)
		O3 (Ozone)	NTP-ISO 13964: 2020 Determination of ozone in ambient air - Ultraviolet photometric method
		Hg (Total Gaseous Mercury)	NTP 900.068:2016/COR1:2017 ENVIRONMENTAL QUALITY MONITORING. Air quality Standard method for the determination of total gaseous mercury. CORRIGENDA 1. 1st Edition
		Nitrogen Dioxide (NO2)	ASTM D1607 – 91 (2018)e1 Standard Test Method for Nitrogen Dioxide Content of the Atmosphere (Griess-Saltzman Reaction)
		Ozone (O3)	"Methods of Air Sampling and Analysis"; 411: Determination of Oxidizing Substances in the Atmosphere. Intersociety Committee, James P. Lodge (Editor) Third edition
		Hydrogen Sulfide (H2S)	"Methods of Air Sampling and Analysis" 701: Determination of Hydrogen Sulfide Content of the Atmosphere. Intersociety Committee, James P. Lodge (Editor) Third edition
		Total suspended particulate matter (PTS)	EPA CFR 40 Part 50 Appendix B, 2018 Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High-Volume Method)
		PTS Filters (High Volume)	EPA CFR 40 Part 50 Appendix B, 2018. (Validado - Modificado) Determination of Suspended Particulate Matter in the Atmosphere (High-Volume Method) Determination of

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)			Weight.
		Total Gaseous Mercury	NIOSH Method 6009, Issue 2, 1994, VALIDATED (Applied out of reach), 2019 Mercury
	Emission / Stationary Sources	Nitrogen Oxides (NO _x as NO ₂)	EPA METHOD 7 / 2019 Determination of Nitrogen Oxide Emissions from Stationary Sources.
		Nitrogen Oxides (NO _x as NO ₂)	NTP 900.007, 2002(Revisada el 2018). ENVIRONMENTAL MANAGEMENT: Atmospheric emissions. Determination of nitrogen oxide emissions from stationary sources.
		Sulfur Oxides (SO _x) (including mists of H ₂ SO ₄ and SO ₃)	EPA METHOD 8, Rev. 2019. VALIDATED (Applied out of reach), 2019. Determination of Sulfuric Acid and Sulfur Dioxide Emission from Stationary Sources
		PM (Particulate Matter)	NTP 900.005:2001 Determination of emissions of particulate matter from stationary sources
		SO ₂ (Sulfur Dioxide)	NTP 900.006:2002 Determination of sulfur dioxide emissions from stationary sources.
		Metals in Atmospheric Emissions: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, P, Pb, Sb, Se, Tl, Zn, Hg	EPA METHOD 29, 2017 Determination of Metals Emissions from Stationary Sources Metals
	Air Ambient	Metals in PM 10 high volume Filters:	EPA IO [Inorganic] Compendium Method IO-3.5: Determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma/Mass Spectrometry (ICP-MS)
		Al, Sb, As, B, Ba, Be, Cd, Ca, Co, Cu, Cr, Sn, Sr, P, Fe, Li, Mg, Mn, Hg, Mo, Ni, Ag, Pb, K, Se, Si, Na, Tl, Ti, V, Zn	

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field collection + Lab Testing) (cont'd.)	Air Ambient (cont'd.)	Metals in PM 2.5 low volume Filters: Al, Sb, As, B, Ba, Be, Cd, Ca, Co, Cu, Cr, Sn, Sr, P, Fe, Li, Mg, Mn, Hg, Mo, Ni, Ag, Pb, K, Se, Si, Na, Tl, Ti, V, Zn	EPA IO [Inorganic] Compendium Method IO-3.5: Determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma/Mass Spectrometry (ICP-MS)
	Air (Chemistry – Occupational Health & Safety)	Determination of Metals for SSO (metals fumes): Metals: Al, As, B, Be, Ca, Cd, Co, Cr, Cu, Fe, Mg, Mn, Mo, Ni, P, Se, Sr, Tl, Ti, V, Zn Metals: Validated: Ba, Pb, Sb, Sn	NIOSH 7303, Issue 1, 2003. Elements by ICP (Hot Block/HCl/HNO ₃ Digestion). NIOSH 7303, Issue 1, 2003. VALIDATED (Applied out of reach), 2018.
		Volatile Acids: Hydrogen Chloride, Hydrogen Bromide, Nitric Acid (HCl, HBr, HNO ₃)	NIOSH 7907, Issue 1, 2014. VOLATILE ACIDS by Ion Chromatography (Hydrogen Chloride, Hydrogen Bromide, Nitric Acid)
		Non-Volatile Acids Ácido Sulfúrico, Ácido Fosfórico (H ₂ SO ₄ , HPO ₄)	NIOSH 7908 / Rev.1 2014 Non-Volatile Acids (Sulfuric Acid and Phosphoric Acid)
		Asbestos and Other Fibers	NIOSH 7400, Issue 3, 2019. Asbestos and Other Fibers by PCM
	Biological Tissues - Animals, Vegetables, Tissues	Metals: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Sr, Tl, Th, U, V, Zn, Hg	EPA Method 200.3, Rev. 1, 1991 / EPA Method 200.7, Rev. 4.4, 1994 Sample Preparation Procedure for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues / Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Field Measurement)	Natural Water, Water for human use and consumption, Saline Water, Process Water and Waste Water	Floatable Materials	NMX-AA-006-SCFI-2010-Water analysis Determination of floating matter in wastewater and treated wastewater, Test method
		Flow	UNE-EN ISO 748:2009 Measurement of liquid flow in open channels using current-meters or floats FLOW
	Natural Water, Water for human use and consumption, Saline Water and Waste Water	Turbidity	SMEWW-APHA-AWWA-WEF Part 2130 B , 23rd Ed, 2017. Turbidity. Nephelometric Method
		Total Nitrogen Kjeldahl	SMEWW-APHA-AWWA-WEF Part 4500-Norg B / Part 4500-NH3 D , 23rd Ed. 2017 (Validado - Modificado) Macro-Kjeldahl Method / Ammonia Selective Electrode Method
		Cyanogen Chloride	SMEWW-APHA-AWWA-WEF Part 4500-CN-J,F 23rd Ed. 2017 (Validado - Modificado) Cyanogen Chloride. Cyanide-Selective Electrode Method
		Formaldehyde	ASTM D6303-98 (Validado - Modificado) Standard Test Method for Formaldehyde in Water
	Emission / Stationary Sources	NOx, NO, NO2, CO, O2	CTM-034 / 1999 ICAC Test Method for Periodic Monitoring. Test Method - Determination of Oxygen, Carbon Monoxide and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure)
		CO	USEPA METHOD 10 Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Lab Testing)	Toys, Toys parts and Desktop tools based on: -Glue Bar, Crystal, Ceramic, Metal Materials -Polymer Material and similar, Including Rolled or Reinforced Textiles or Not, -Compressed Paint Pad Materials, Materials intended to Leave a trace or Similar in Solid Form, -Flexible modeling materials, including modeling clays and plaster, -Other colored materials or not in the mass, -Paper and Cardboard -Liquid Paints including finger paints, Varnishes, Lacquers, Liquid Ink and Liquid materials, -Paint coatings, Varnishes, Lacquers, Printing inks, -Polymers and similar coatings, -Natural or Synthetic textiles	Metals: Al, As, Ba, B, Cd, Co, Cu, Mn, Ni, Pb, Sb, Se, Sn, Sr, Hg, Zn Metals: Al, As, Ba, B, Cd, Co, Cu, Mn, Ni, Pb, Sb, Se, Sn, Sr, Hg, Zn (cont'd.)	UNE-EN 71-3:2013+A3, 2018 Toy safety. Part 3: Migration of certain elements UNE-EN 71-3:2013+A3, 2018 Toy safety. Part 3: Migration of certain elements
	Emissions - Environmental Filters	Determination of Metals Emissions from Stationery Sources: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, P, Pb, Sb, Se, Tl, Zn, Fe, V.	EPA METHOD 29, 2017 VALIDATED (Modified), 2019. Determination of Metals Emissions from Stationery Sources
	Air – Environmental Filters	PTS, PM10 and PM2.5 High Volume filter metals:	EPA COMPENDIUM METHOD IO-3.4, June 1999.

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Lab Testing) (cont'd.)	Air – Environmental Filters (cont'd.)	Ag, Al, As, B, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, Ti, V, Zn, Hg, SiO ₂ .	VALIDATED (Modified), 2018. Determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma (ICP) Spectroscopy
		PM10 and PM2.5 Low Volume filter metals: Ag, Al, As, B, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, Ti, V, Zn, Hg, SiO ₂	EPA COMPENDIUM METHOD IO-3.4, June 1999. VALIDATED (Modified), 2018. Determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma (ICP) Spectroscopy
		Anions in PM10 and PM2.5 High volume: Chloride (Cl ⁻) Nitrite (NO ₂ ⁻) Nitrate (NO ₃ ⁻) Sulfate (SO ₄ ²⁻) Phosphate (PO ₄ ³⁻) Bromide (Br ⁻)	EPA Method Compendium Method IO-3.1, June 1999/NIOSH 7908, Issue 1, 2014/EPA 300.0 Rev. 2.1, 1993. (VALIDATED – Modified), 2020 EPA Method Compendium Method IO-3.1. Selection, Preparation and Extraction of Filter Material / Non-Volatile Acids (Sulfuric Acid and Phosphoric Acid) / Determination of inorganic anions by ion chromatography
		Anions in PM10 and PM2.5 Low volume: Chloride (Cl ⁻) Nitrite (NO ₂ ⁻) Nitrate (NO ₃ ⁻) Sulfate (SO ₄ ²⁻) Phosphate (PO ₄ ³⁻) Bromide (Br ⁻)	EPA Method Compendium Method IO-3.1, June 1999/NIOSH 7908, Issue 1, 2014/EPA 300.0 Rev. 2.1, 1993. (VALIDATED – Modified), 2020 EPA Method Compendium Method IO-3.1. Selection, Preparation and Extraction of Filter Material / Non-Volatile Acids (Sulfuric Acid and Phosphoric Acid) / Determination of inorganic anions by ion chromatography
		Cations in PM10 and PM2.5 High volume: Lithium (Li ⁺)	EPA Method Compendium Method IO-3.1, June 1999/NIOSH 7908, Issue 1, 2014/EPA 300.0 Rev. 2.1,

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ENVIRONMENTAL CHEMISTRY - INORGANIC (Lab Testing) (cont'd.)	Air – Environmental Filters (cont'd.)	Sodio (Na ⁺) Potasio (K ⁺) Calcio (Ca ²⁺) Magnesio (Mg ²⁺) Amonio (NH ₄ ⁺)	1993. (VALIDATED – Modified), 2020 EPA Method Compendium Method IO-3.1. Selection, Preparation and Extraction of Filter Material / Non-Volatile Acids (Sulfuric Acid and Phosphoric Acid) / Determination of inorganic anions by ion chromatography
		Cations in PM10 and PM2.5 Low volume: Litio (Li ⁺) Sodio (Na ⁺) Potasio (K ⁺) Calcio (Ca ²⁺) Magnesio (Mg ²⁺) Amonio (NH ₄ ⁺)	EPA Method Compendium Method IO-3.1, June 1999/NIOSH 7908, Issue 1, 2014/EPA 300.0 Rev. 2.1, 1993. (VALIDATED – Modified), 2020 EPA Method Compendium Method IO-3.1. Selection, Preparation and Extraction of Filter Material / Non-Volatile Acids (Sulfuric Acid and Phosphoric Acid) / Determination of inorganic anions by ion chromatography
	Cellulose Filter Membrane (Chemistry - Occupational Health & Safety)	Determination of Metals for SSO (metals fumes - In Cellulose Filter Membrane): Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Mg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	NIOSH 7303, Issue 1, 2003. VALIDATED (Modified), 2018. Elements by ICP (Hot Block/HCl/HNO ₃ Digestion).
ENVIRONMENTAL CLIMATOLOGY (Field Measurement)	Atmosphere	Meteorological Parameters: Environmental Temperature, Relative Humidity, Environmental Pressure, Wind Speed, Wind Direction (Wind Rose)	ASTM D5741-96 (2017) Standard Practice for Characterizing Surface Wind Using a Wind Vane and Rotating Anemometer
ENVIRONMENTAL MICROBIOLOGY	Natural Water, Water for human	Total Coliform (NMP)	SMEWW-APHA-AWWA-WEF Part 9221 B, 23rd Ed. 2017.

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(Field collection + Lab Testing)	use and consumption, Saline Water and Waste Water		Multiple-Tube Fermentation Technique for Members of the Coliform Group. Standard Total Coliform Fermentation Technique
		Fecal Coliform (Thermotolerant) (NMP)	SMEWW-APHA-AWWA-WEF Part 9221 F.2, 23rd Ed. 2017. Multiple-Tube Fermentation Technique for Members of the Coliform Group. Escherichia coli Procedure Using Fluorogenic Substrate. Simultaneous Determination of Termotolerant Coliforms and E. Coli
		Escherichia Coli (NMP)	SMEWW-APHA-AWWA-WEF Part 9221 F.2, 23rd Ed. 2017 Multiple-Tube Fermentation Technique for Members of the Coliform Group. Escherichia coli Procedure Using Fluorogenic Substrate. Simultaneous Determination of Termotolerant Coliforms and E.coli.
		Heterotrophic (UFC/mL)	SMEWW-APHA-AWWA-WEF Part 9215 B, 23rd Ed. 017 Heterotrophic Plate Count. Pour Plate Count Method
		Virus (Somatic Coliphages)	SMEWW-APHA-AWWA-WEF Part 9224 B, 23rd Ed. 2017 Detection of Coliphages. Somatic Coliphages Assay
		Fecal Enterococcus or Intestinal Enterococcus (NMP)	SMEWW-APHA-AWWA-WEF Part 9230 B, 23rd Ed. 2017 Fecal Enterococcus/Streptococcus Groups. Multiple-Tube Technique.
		Vibrio cholerae (Detection)	SMEWW-APHA-AWWA-WEF Part 9260 H, Item 1, 2, 3.d.1

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ENVIRONMENTAL MICROBIOLOGY (Field collection + Lab Testing) (cont'd.)	Natural Water, Water for human use and consumption, Saline Water and Waste Water (cont'd.)		(exception test toxin and serogroup O139), 6a, 23rd Ed. 2017 Detection of Pathogenic Bacteria. Vibrio
		Salmonella spp (Detection)	ISO 19250, 1st Ed 2010 Water Quality. Detection of Salmonella spp.
	Natural Water, Water for human use and consumption	Total Coliform (UFC/100mL)	SMEWW-APHA-AWWA-WEF Part 9222 B, 23rd Ed. 2017. Membrane Filter Technique for Members of the Coliform Group. Standard Total Coliform Membrane Filter Procedure using Endo Media
		Fecal (Thermotolerant) Coliform (UFC/100mL)	SMEWW-APHA-AWWA-WEF Part 9222 D, 23rd Ed. 2017. Membrane Filter Technique for Members of the Coliform Group. Thermotolerant (Fecal) Coliform Membrane Filter Procedure
		Escherichia Coli (UFC/100mL)	SMEWW-APHA-AWWA-WEF Part 9222 H, 23rd Ed. 2017 Membrane Filter Technique for Members of the Coliform Group. Partitioning E. coli from MF Total Coliform using EC-MUG Broth
	Natural Water, Water for human use and consumption, and Waste Water	Helminth eggs	MVAL-LAB-24, VALIDATED, 2018 Quantification and Identification of Helminth Eggs in Water
		Pathogenic Protozoal Cysts / Oocysts	MVAL-LAB-31, VALIDATED, 2019 Quantification and Identification of Cysts and Oocysts of Pathogenic Protozoa in Water
		Larvae (Nematodes)	MVAL-LAB-32, VALIDATED, 2019

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ENVIRONMENTAL MICROBIOLOGY (Field collection + Lab Testing) (cont'd.)	Natural Water, Water for human use and consumption, and Waste Water (cont'd.)		Quantification and Identification of Helminth Larvae (Nematodes) in Water.
		Giardia sp / Cryptosporidium sp	MVAL-LAB-33, VALIDATED, 2019 Identification of Giardia sp and Cryptosporidium sp in Water.
		Parasitic Forms	MVAL-LAB-34, VALIDATED, 2019 Quantification and Identification of Parasitic Forms in Water.
	Saline Water / Natural Water	Macrophytes in water	SMEWW Part 10400 D. 2 a, 3 e 23 rd Ed 2017, Macrophytes
	Saline water	Helminth Eggs in water	MVAL-LAB-48, 2021 (VALIDATED) Quantification and Identification of helminth eggs in saline water
	Air – Atmosphere/ Environment	Aerobic mesophilic	APHA. Ch 3, Part 3.101. 5th Ed. 2015 / ICMSF Method 1, p. 117-124, 2nd Ed. Reprint 2000. Microbiological monitoring of the food processing environment. Air sampling methods. Sedimentation methods / Enumeración de microorganismos aerobios mesófilos. Métodos de recuento en placa. Método 1 (Recuento estándar en placa, recuento en placa por siembra en todo el medio o recuento) en placa de microorganismos aerobios.
		Yeast	APHA. Ch 3, Part 3.101. 5th Ed. 2015 / ICMSF. p. 165-167, 2nd Ed. Reprint 2000 Microbiological monitoring of the food processing environment. Air sampling methods. Sedimentation methods / Recuentos de mohos y levaduras. Método de recuento de mohos y levaduras por siembra en placa por todo el medio
		Mold	APHA. Ch 3, Part 3.101. 5th

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ENVIRONMENTAL MICROBIOLOGY (Field collection + Lab Testing) (cont'd.)	Air – Atmosphere/ Environment (cont'd.)		Ed. 2015 / ICMSF. p. 165-167, 2nd Ed. Reprint 2000 Microbiological monitoring of the food processing environment. Air sampling methods. Sedimentation methods / Recuentos de mohos y levaduras. Método de recuento de mohos y levaduras por siembra en placa por todo el medio
ENVIRONMENTAL BIOLOGY (Field collection + Lab Testing)	Biological Tissue	Boron and Tin	EPA Method 200.3 “Sample Preparation Procedure for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues (VALIDADO-Aplicado fuera del Alcance) / EPA Method 200.7 “Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry”
	Wastewater	Quantitative Phytoplankton	SMEWW-APHA-AWWA-WEF Part 10200 Fitems: F.2.a, F.2.c.1, 23rd Ed. 2017. Plankton. Phytoplankton Counting Techniques
		Quantitative Zooplankton	SMEWW-APHA-AWWA-WEF Part 10200 G, 23rd Ed. 2017. Plankton. Zooplankton Counting Techniques
		Free living organisms (Algae, protozoa, copepods, rotifers and nematodes)	SMEWW-APHA-AWWA-WEF Part 10200 B. 2. a, C.1, F. 2. a, c, 23rd Edition / SMEWW-APHA-AWWA-WEF Part 10200 B. 2. b, C.1, G. 23rd Edition 2017 Plankton. Sample collection. Concentration Techniques. Phytoplankton Counting Techniques / Plankton. Sample collection. Concentration Techniques. Zooplankton Counting Techniques

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ENVIRONMENTAL BIOLOGY (Field collection + Lab Testing) (cont'd.)	Saline water	Quantitative phytoplankton	UNE-EN 15204 / SMEWW-APHA-AWWA-WEF Part 10200 B. 2. a, C. 1, F. 2. a, c. 23rd Ed Water quality. Guide for counting phytoplankton by inverted microscopy (Utermöhl technique) / Plankton. Sample collection. Concentration Techniques. Phytoplankton Counting Techniques.
		Qualitative phytoplankton	EPA Method 670/4-73-001 Biological field and laboratory methods for measuring the quality of surface waters and effluents. PLANKTON. 2.2 Phytoplankton and 4.1.1 Qualitative Analysis of phytoplankton.
		Quantitative zooplankton	SMEWW-APHA-AWWA-WEF. Part 10200 B. 2. b. C. 1, G. 23rd Ed. Plankton. Sample collection. Concentration Techniques. Zooplankton Counting Techniques.
		Qualitative zooplankton	EPA Method 670/4-73-001 Biological field and laboratory methods for measuring the quality of surface waters and effluents. PLANKTON. 2.3 Zooplankton. 4.2.1 Qualitative Analysis of Zooplankton.
	Natural water and Saline water	Nekton	SMEWW-APHA-AWWA-WEF Part 10600 B.3, C y D. 23rd Ed. 2017. Fishes, collection and observation Method, sample preservation and Analysis of collections
ENVIRONMENTAL SENSORY (Field collection + Lab Testing)	Water for human use and consumption	Odor	ISO 4121:2003 Sensory analysis - Guidelines for the use of quantitative response scales
		Flavor	SMEWW-APHA-AWWA-WEF Part 2160 C, 23rd Ed. 2017. Flavor Rating Assessment (FRA)

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing)	Sediments, Sludges and Soils	Polychlorinated Biphenyls PCBs (As congeners)	EPA Method 8082 A, Rev.01, 2007 Polychlorinated Biphenyls (PCBs) by Gas Chromatography
		PCB 28 PCB 52 PCB 101 PCB 118 PCB 138 PCB 153 PCB 180 Reference in ECA Soil (DS N°011-2017-MINAM): Bifenilos Policlorados – PCB (Sum of seven PCBs indicators: PCB 28, PCB 52, PCB 101, PCB 118, PCB 138, PCB 153, PCB 180)	
		Polycyclic Aromatic Hydrocarbons (PAHs): Acenaphthene Acenaphthylene Benz(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Chrysene Dibenz(a,h)anthracene Phenanthrene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Pyrene Anthracene Benzo(a)pyrene Fluoranthene	EPA Method 8270 E, Rev.06, 2018 Semivolatile Organic Compounds by Gas Chromatography/ Mass Spectrometry
		Organochlorine Pesticides Aldrin 4,4'-DDT Endrin Heptachlor	EPA Method 8270 E, Rev. 06, 2018 Semivolatile Organic Compounds by Gas Chromatography/ Mass Spectrometry

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing) (cont'd.)	Sediments, Sludges and Soils (cont'd.)	Volatile Organic Compounds (VOCs)	EPA Method 8260 D, Rev.04, 2017 Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
		Trichloroethene Tetrachloroethene Benzene Ethylbenzene m,p-Xylene o-Xylene Toluene Naphthalene	
		Total Petroleum Hydrocarbons (C5-C10)	EPA Method 8015 C, Rev. 3, 2007/EPA 5021 A, Rev. 2, 2014. VALIDATED (Applied out of reach), 2020. Nonhalogenated Organics by Gas Chromatography
		Total Petroleum Hydrocarbons (C6-C40)	EPA Method 8015C, Rev.3, 2007. Nonhalogenated Organics by Gas Chromatography
		Pristane	EPA Method 8015 C, Rev. 3 Nonhalogenated Organics by Gas Chromatography (Validated-applied out of scope)
		Phytane	EPA Method 8015 C, Rev. 3 Nonhalogenated Organics by Gas Chromatography (Validated-applied out of scope)
	Emission / Stationary Sources	Volatile Organic Compounds (VOCs) Ethylbenzene, Styrene, Cis-1,3-Dichloropropene, Trans-1,3-Dichloropropene, (m + p) Xylene, 1,2-Dichloroethane, Vinyl Acetate, Toluene, Chlorobenzene, Chlorodibromomethane, Tetrachloroethane, Cis-1,2-Dichloroethane, Benzene,	EPA Method 18, 2019 Measurement of Gaseous Organic Compound Emissions by Gas Chromatography

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing) (cont'd.)	Emission / Stationary Sources (cont'd.)	Trans-1,2-Dichloroethane, Carbon tetrachloride, Acetone, Chloroform, 1,1,1-Trichloroethane, Toluene, Bromochloromethane, Vinyl Chloride, Carbon Disulfide, Bromoform, Bromodichloromethane, 1,1-Dichloroethane, 1,1,2 Trichlorotrifluoroethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, Trichloroethane, 1,1,2,2-Tetrachloroethane, o-Xylene, Trimethylamine, Acrylonitrile, Methyl isobutyl ketone (MIBK), Methyl butyl ketone (2-Hexanone), Methyl ethyl ketone (2-Butanone), Total Xylenes	EPA Method 18, 2019 Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (cont'd.)
	Ambient air	Benzene (C ₆ H ₆)	NTP 712.107:2020 Environmental Quality Monitoring. Benzene concentration measurement method in ambient air. Part 2: Aspiration sampling followed by solvent desorption and gas chromatography
		Benzene (C ₆ H ₆)	NTP 712.107:2020 (VALIDATED - modified) Environmental Quality Monitoring. Benzene concentration measurement method in ambient air. Part 2: Aspiration sampling followed by solvent desorption and gas chromatography
	Natural Water, Water for human use and consumption, Saline	Polychlorinated Biphenyls PCBs (As Aroclor) Aroclor 1016	EPA Method 8082 A, Rev.01, 2007

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing) (cont'd.)	Water and Waste Water	Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	Polychlorinated Biphenyls (PCBs) by Gas Chromatography
		Aldicarb	EPA Method 8270 E, Rev.6 2018. VALIDATED (Applied out of reach), 2018. Semivolatile Organic Compounds by Gas Chromatography/ Mass Spectrometry
		Organochlorine Pesticides α-BHC (alpha BHC) β-BHC (beta BHC) δ-BHC (delta BHC) γ-BHC (Lindane) cis-Chlordane trans- Chlordane Endosulfan I Endosulfan II Endosulfan Sulfate 4,4'-DDT 4,4'-DDD 4,4'-DDE Endrin Endrin aldehyde Endrin ketone Methoxychlor Heptachlor Heptachlor epoxide Aldrin Dieldrin DS N° 004-2017-MINAM, DDT (Sum) = 4,4'-DDD + 4,4'-DDE; Aldrin + Dieldrin; Heptachlor + Heptachlor epoxide; Chlordane (Sum)= cis-Chlordane+ trans-Chlordane	EPA Method 8081B, Rev. 02, 2007 Organochlorine Pesticides by Gas Chromatography
		Volatile Organic Compounds (VOCs)	EPA Method 8260D, Rev.04, 2017

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing) (cont'd.)	Natural Water, Water for human use and consumption, Saline Water and Waste Water (cont'd.)	1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethylene 1,1-Dichloropropene 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,4-Trimethylbenzene 1,2-Dibromo-3-Chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane (1,2-DCP) 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene 1,3-Dichloropropane 1,4-Dichlorobenzene 2,2-Dichloropropane 2-Chlorotoluene 4-Chlorotoluene Benzene Bromobenzene Bromochloromethane Carbon Tetrachloride Chlorobenzene cis-1,2-Dichloroethene Dibromomethane Ethylbenzene Hexachlorobutadiene m,p-Xylene n-Butylbenzene n-Propylbenzene Naphthalene o-Xylene sec-Butylbenzene Styrene tert-Butylbenzene Tetrachloroethene Toluene trans-1,2-Dichloroethylene Trichloroethene 1,1,2-Trichloroethene p-Isopropyltoluene Bromodichloromethane	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing) (cont'd.)	Natural Water, Water for human use and consumption, Saline Water and Waste Water (cont'd.)	Bromoform Dibromochloromethane Chloroform Cumene (Isopropylbenzene) cis-1,3-Dichloropropene trans-1,3-Dichloropropene Dichloromethane Vinyl chloride Trihalomethane: Reference in ECA Water (DS N°004-2017-MINAM) y DS N° 031-2010-SA: Total Trihalomethane: Bromodichloromethane, Bromoform, Dibromochloromethane, Chloroform and Total Xylene.	EPA Method 8260D, Rev.04, 2017 Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
		Polycyclic Aromatic Hydrocarbons (PAHs): 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Benz(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Chrysene Dibenz(a,h)anthracene Phenanthrene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Pyrene Anthracene Benzo(a)pyrene Fluoranthene Reference in ECA Water (DS N°004-2017-MINAM): Total Oil Hydrocarbons (Fraction Aromatic)	EPA Method 8270E, Rev. 06, 2018 Semi-volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
		Organophosphorus and Organochlorine Pesticides	EPA 8270E, Rev 06,2018 Semivolatile Organic Compounds by Gas

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing) (cont'd.)	Natural Water, Water for human use and consumption, Saline Water and Waste Water (cont'd.)	• ALPHA-BCH (alpha-HCH) • Beta-BHC (beta-HCH) • Gamma-BHC (Lindane) • Delta-BHC (delta-HCH) • Heptachlor • Aldrin • Heptachlor epoxide (isomer B) • Trans-Chlordane • Cis-Chlordane • Endosulfan I • 4,4'-DDE • Dieldrin • Endrin • 4,4'-DDD • Endosulfan II • Endrin aldehyde • 4,4'-DDT • Endosulfan sulfate • Methoxychlor • Endrin ketone • Malathion • DDT (Sum) = (4,4' DDD + 4,4'-DDE) • Aldrin + Dieldrin • Heptachlor + Heptachlor • Epoxide Chlordane (Sum) = cis-Chlordane + trans-Chlordane	Chromatography/ Mass Spectrometry (GC/MS)
		Organophosphorus Pesticides Malathion Parathion	EPA Method 8270E, Rev. 06, 2018 Semi-volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
	Natural Water, Water for human use and consumption	Organophosphorus and Organochlorine Pesticides II	EPA 8270E Rev.6, 2018. VALIDATED (Applied out of reach), 2019.

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing) (cont'd.)		Hexachlorobenzene, Trifluralin, Chloropyrifos	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
	Water for human use and consumption, Natural water, Waste water, Saline water, Process water	Total Petroleum Hydrocarbons (C10-C40) Diesel DRO Range (C10-C28) Referenced in DS N ° 031-2010-SA: Dissolved or emulsified hydrocarbon; mineral oil	EPA Method 8015 C, Rev. 3, 2007 Nonhalogenated Organics by Gas Chromatography
		Total Petroleum Hydrocarbons (TPH) Ranges: (C8-C40), (C8-C28), (C28-C40), (C6-C40)	EPA Method 8015C / Rev.3 2007 Nonhalogenated Organics by Gas Chromatography
		BTEX: • Benzene • Toluene • Ethylbenzene • m,p- Xylene • o-Xylene • Total Xylenes	EPA Method 8015C Rev. 3, 2007 / EPA Method 5021 A Rev. 2, 2014 Nonhalogenated Organics by Gas Chromatography / Volatile Organic Compounds in Various Sample Matrices using Equilibrium Headspace Analysis.
		Gasoline Benzene, Isooctane, Heptane, Toluene, Ethylbenzene, m-Xylene, p-Xylene, o-Xylene, 1,2,4-trimethylbenzene	EPA Method 8260D, Rev.4 2018 Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
		Steres Ftalatos Dimethyl Phthalate, Diethyl Phthalate, Di-n-Butyl Phthalate, Butyl Benzyl Phthalate, Di (2-Ethylhexyl) phthalate, Di-n-Octyl Phthalate	EPA Method 8270E / Rev.6 2018 Semivolatile Organic Compounds by Gas Chromatography /Mass Spectrometry
		Phenolics 2,3,4,6-Tetrachloro Phenol;	EPA Method 8270E / Rev.6 2018

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ENVIRONMENTAL CHEMISTRY - ORGANICS (Field collection + Lab Testing) (cont'd.)	Water for human use and consumption, Natural water, Waste water, Saline water, Process water (cont'd.)	2,4,5-Trichlorophenol; 2,4,6-Trichlorophenol; 2,4-Dichlorophenol; 2,4-Dimethylphenol; 2,6-Dichlorophenol; 2-Chlorophenol; 2-Methylphenol (o-cresol); 2-Nitrophenol; 4-Chloro-3-Methylphenol; 4-Methylphenol; Benzoic acid; 4 Nitrophenol; Pentachlorophenol (PCP); Phenol.	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
	Water for human use and consumption, natural water, process water	Volatile Organic Pollutants Vinyl Chloride, Epichlorohydrin	EPA Method 8260D / Rev.4 2018 Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
	Fishes Biological Tissues	Total Petroleum Hydrocarbons (C10-C40)	EPA Method 8015 C, Rev. 3, 2007. (VALIDATED – Modified), 2020 Nonhalogenated Organics by Gas Chromatography
		Polycyclic Aromatic Hydrocarbons (PAHs): Acenaphthene Acenaphthylene Benzo (a) anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Anthracene Chrysene Phenanthrene Fluoranthene Fluorene Pyrene	EPA Method 8270 E, 2018. (VALIDATED – Modified), 2020 Semivolatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS)
ENVIRONMENTAL CHEMISTRY - ORGANICS (Field Testing)	Sediments, Sludges and Soils	Recoverable Petroleum Hydrocarbon	EPA METHOD 9074, Rev.0, 2007. Turbidimetric Screening Method for Total Recoverable Petroleum Hydrocarbons in Soil. (PetroFLAG analyzer)
ACOUSTICS (Field Measurement)	Environmental Noise	Noise	NTP-ISO 1996-1, 2007 /NTP-ISO 1996-2, 2008

SCOPE OF ACCREDITATION

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FIELDS OF TESTING	MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
ACOUSTICS (Field Measurement) (cont'd.)	Environmental Noise (cont'd.)	Noise (cont'd.)	ACOUSTICS. Description. measurement and assessment of environmental noise. Part1: Basic quantities and assessment procedures / ACOUSTICS. Description, measurement and assessment of environmental noise. Part 2: Determination of environmental noise levels.
OCCUPATOINAL HEALTH & SAFETY – ACOUSTICS (Field Measurement)	Occupational Noise	Occupational noise - Dosimetry	DS 024-2016-EM modified as per D.S. N° 023-2017-EM
		Occupational noise - Sonometry	DS 024-2016-EM modified as per D.S. N° 023-2017-EM
ENVIRONMENTAL – ELECTROMAGNETIC RADIATION – AIR (Field Measurement)	Non-ionizing radiation Fixed site radiation	Magnetic flux density Electrical field strength Magnetic field strength power density	R.M. N° 613-2004-MTC-03
AGRONOMY CHEMISTRY - INORGANIC (Field collection + Lab Testing)	Foliar (Vegetation)	Moisture content	Official Mexican NORMA NOM-021-RECNAT-2000 , which establishes the specifications of fertility, salinity, and soil classification, Studies, sampling and analysis. AS-05; item 7.1.5 Moisture content by gravimetry
		Dry Matter	Official Mexican NORMA NOM-021-RECNAT-2000 , which establishes the specifications of fertility, salinity, and soil classification, Studies, sampling and analysis. AS-05; item 7.1.5 (Validated - Out of Scope) Moisture Content by Gravimetry.
		Total Metals: B, Ca, Cu, Fe, K, Mg, Mn, Na, P, S, Zn.	MVAL-AGR-04 Foliar Metals by ICP-OES Spectrophotometry.
		Chlorides	MVAL-AGR-05 Chlorides in Foliar by Volumetry.