



# CERTIFICATE OF ACCREDITATION

*This is to attest that*

## **ECOGESTION AMBIENTAL LTDA.**

PROGRESO PASAJE 1 NO 1560, CHIGUAYANTE  
CONCEPCIÓN 4100000, REPUBLIC OF CHILE

**Inspection Agency AA-788 (Type A)**

has met the requirements of AC98, *IAS Accreditation Criteria for Inspection Agencies*, and has demonstrated compliance with ISO/IEC Standard 17020:2012, *Conformity assessment - Requirements for the operation of various types of bodies performing inspection*. This organization is accredited to provide the services specified in the scope of accreditation.

Expiry Date October 1, 2025  
Effective Date February 5, 2024



A handwritten signature in black ink, reading "Raj Nathan".

**President**

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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## ECOGESTION AMBIENTAL LTDA.

[www.ecogestionambiental.cl](http://www.ecogestionambiental.cl)

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**Contact Phone** +56 987530122

*Accredited to ISO/IEC 17020:2012*

*Effective Date February 5, 2024*

Field and Range of Inspection	Regulations, Inspection Methods, Standards and/or Specifications
Automatic measurement of wastewater flow	NCh 411/10-2005 Water Quality - Sampling - part 10: Sampling of waste water - Collection and handling of samples.
Manual measurement of wastewater flow	NCh 411/10-2005 Water Quality - Sampling - part 10: Sampling of waste water - Collection and handling of samples.
Measurement of temperature in line and in situ of wastewater	NCh 2313/2, Of 95, Supreme Decree No. 545 of 1995 of the Ministry of Public Works: Wastewater - Methods of analysis Part 2: Temperature Determination.
Measurement of dissolved oxygen in line and in situ of wastewater	NCh 411/10-2005 Water Quality - Sampling - part 10: Sampling of waste water - Collection and handling of samples.
Measurement of potential hydrogen pH determination in line and in situ of wastewater	NCh 2313/1:2021 Wastewater – Analysis methods – Part 1: Determination of pH Wastewater Test methods – Part 1: Determination of pH.
Manual sampling of spot samples in wastewater	NCh 411/10-2005 Water Quality - Sampling - part 10: Sampling of waste water - Collection and handling of samples.
Automatic collection of point samples of wastewater	NCh 411/ 10-2005 Water quality - Sampling - Part 10: Sampling of wastewater - Collection and handling of samples.
Manual sampling of composite samples in wastewater	NCh 411/ 10-2005 Water quality - Sampling - Part 10: Sampling of wastewater - Collection and handling of samples.
Measurements of free chlorine total in wastewaters	NCh 411/ 10-2005 Water quality - Sampling - Part 10: Sampling of wastewater - Collection and handling of samples.
Measurements of free chlorine residual in wastewaters	NCh 411/ 10-2005 Water quality - Sampling - Part 10: Sampling of wastewater - Collection and handling of samples.
Sampling of groundwater	NCh 411/ 11-Of 1998 Water quality - Sampling - Part 11: Guide for the sampling of groundwater

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Field and Range of Inspection	Regulations, Inspection Methods, Standards and/or Specifications
Sampling of seawater and surface water for bioassays and other physicochemical, biological and environmental DNA (eDNA) testing	S-MU-02 (Version 02), based on Standard Methods for the Examination of Water and Wastewater 1060 By 10200 B, 23rd Edition, 2017
Measurements of conductivity / salinity in seawater and surface water	Exempt Resolution No. 3612 SUBPESCA, Numeral 29, modification Exempt Resolution No.905-2020
Measurements of temperature in seawater and surface water	Exempt Resolution No. 3612 SUBPESCA, Numeral 29, modification Exempt Resolution No. 905-2020
Measurements of dissolved oxygen in seawater and surface water	Exempt Resolution No. 3612 SUBPESCA, Numeral 29, modification Exempt Resolution No. 905-2020
Measurements of hydrogen potential in marine sediments (intertidal and subtidal), aquatic sediments (estuarine and fluvial) and lacustrine sediments	S-ME-01 (Version 04), based on Exempt Resolution No. 3612 SUBPESCA
Measurements of reduction oxide potential in marine sediments (intertidal and subtidal), aquatic sediments (estuarine and fluvial), and lacustrine sediments	S-ME-01 (Version 04), based on Exempt Resolution No. 3612 SUBPESCA
Measurements of temperature in marine sediments (intertidal and subtidal), aquatic sediments (estuarine and fluvial) and lacustrine sediments	S-ME-01 (Version 04), based on Exempt Resolution No. 3612 SUBPESCA
Measurements of hydrogen potential in seawater and surface water	Standard Methods for the Examination of Water and Wastewater 4500-H B, 24th Edition, 2023.
Measurements of temperature in seawater and surface water	Standard Methods for the Examination of Water and Wastewater 4500-H B, 24th Edition, 2023
Measurements of free chlorine (total and residual) in drinking waters	NCH 409/1 2005 Drinking Water Quality.
Measurements of free chlorine (total and residual) in raw waters (surface water)	NCh 411- 10 Water quality - Sampling - Part 10: Sampling of wastewater.
Sediment sampling for bioassays and other physicochemical, biological and environmental DNA (eDNA) testing in marine sediments (intertidal and subtidal), aquatic sediments (estuarine and fluvial) and lake sediments	S-MU-01 (Version 05), based on Exempt Resolution No.3612 SUBPESCA and clauses 25, 26 and 27 and Standard Methods for the examination of water and wastewater 1060 B, C 23 <sup>rd</sup> Edition, 2017
Sampling of Soil	NCh 3400/2:2016 Soil quality – Sampling - Part 2: Guidelines of sampling techniques. 2016. INN
Measurement of Temperature in Seawater and Surface Water.	A-ME-01 (Version 01), based on Seabird 19 plus-v2, SAIV A/S model SD 208, RBR model XR-620 and maestro <sup>3</sup> equipment manuals.
Measurement of Salinity in Seawater and Surface Water.	A-ME-02 (Version 01), based on Seabird 19 plus-v2, SAIV A/S model SD 208, RBR model XR-620 and maestro <sup>3</sup> equipment manuals.

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Field and Range of Inspection	Regulations, Inspection Methods, Standards and/or Specifications
Measurement of Conductivity in Seawater and Surface Water.	A-ME-03 (Version 01), based on Seabird 19 plus-v2, SAIV A/S model SD 208, RBR model XR-620 and maestro <sup>3</sup> equipment manuals.
Measurement of Dissolved oxygen in Seawater and Surface Water.	A-ME-04 (Version 01), based on Seabird 19 plus-v2, SAIV A/S model SD 208, RBR model XR-620 and maestro <sup>3</sup> equipment manuals.
Measurement of Oxygen saturation in Seawater and Surface Water.	A-ME-05 (Version 01), based on Seabird 19 plus-v2, SAIV A/S model SD 208, RBR model XR-620 and maestro <sup>3</sup> equipment manuals.
Measurement of Fluorescence in Seawater and Surface Water.	A-ME-06 (Version 01), based on Seabird 19 plus-v2, SAIV A/S model SD 208, RBR model XR-620 and maestro <sup>3</sup> equipment manuals.
Measurement of Density in Seawater and Surface Water.	A-ME-07 (Version 01), based on Seabird 19 plus-v2, SAIV A/S model SD 208, RBR model XR-620 and maestro <sup>3</sup> equipment manuals.
Measurement of Hydrogen potential (pH) in Seawater and Surface Water.	A-ME-08 (Version 01), based on Seabird 19 plus-v2, SAIV A/S model SD 208, RBR model XR-620 and maestro <sup>3</sup> equipment manuals.
Measurement of Turbidity in Seawater and Surface Water.	A-ME-09 (Version 01), based on Hanna HI 9829, Aquareed model AP-2000 and multiparameter type CTD-O equipment manuals.
Measurement of Temperature in Seawater and Surface Water.	A-ME-10 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130, HI98190, HI98191 and HI98194 equipment manual.
Measurement of Salinity in Seawater and Surface Water.	A-ME-11 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829 and HI98194 equipment manual.
Measurement of Conductivity in Seawater and Surface Water.	A-ME-12 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130 and HI98194 equipment manual.
Measurement of Dissolved oxygen in Seawater and Surface Water.	A-ME-13 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829 and HI98194 equipment manual.
Measurement of Oxygen saturation in Seawater and Surface Water.	A-ME-14 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d, Hanna model HI9829 and HI98194 equipment manual.
Measurement of Oxide Reduction Potential (ORP) in Seawater and Surface Water.	A-ME-15 (Version 01), based on Aquareed model AP-2000, WTW model ph3110 and Hanna model HI9829, HI98190, HI98191 y HI98194 equipment manual.

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Measurement of Total dissolved solids in Seawater and Surface Water.	A-ME-16 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130 and HI98194 equipment manual.
Measurement of Rhodamine in Seawater and Surface Water.	A-ME-17 (Version 01), based on Aquareed model AP-2000 and Turner Designs aquafluor model 8000-010 equipment manual.
Measurement of Transparency in Seawater and Surface Water.	A-ME-18 (Version 01), based on EPA 440/4-91-002 standard.
Measurement of Flow in Surface water.	A-ME-19 (Version 01), based on NCh 3205-2011 standard.
Sampling of Seawater and Surface Water.	A-MU-01 (Version 01), based on Standard Methods for the Examination of Water and Wastewater 1060 B and 10200 B. 23rd Edition, 2017 and NCh 411/3:2014 standard.
Sampling of Groundwater.	AS-MU-01 (Version 01), based on NCh-ISO 5667/1:2017 and NCh411/11 Of98 standards.
Sampling of Drinking water.	AP-MU-01 (Version 01), based on NCh 409/1 Of.2005, NCh409/2. Of2004, NCh411/5-1996 standards and Manual of Test Methods for Drinking Water of the Superintendency of Sanitary Services, SISS 2007.
Measurement of Temperature in Groundwater.	AS-ME-01 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130, HI98190, HI98191 and HI98194 equipment manual.
Measurement of Hydrogen potential (pH) in Groundwater.	AS-ME-02 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130, HI98190, HI98191 and HI98194 equipment manual.
Measurement of Conductivity in Groundwater.	AS-ME-03 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130 and HI98194 equipment manual.
Measurement of Dissolved oxygen in Groundwater.	AS-ME-04 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829 and HI98194 equipment manual.
Measurement of Turbidity in Groundwater.	AS-ME-05 (Version 01), based on Hanna model HI9829 and Aquareed model AP-2000 equipment manual.
Measurement of Total dissolved solids in Groundwater.	AS-ME-06 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130 and HI98194 equipment manual.

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Field and Range of Inspection	Regulations, Inspection Methods, Standards and/or Specifications
Measurement of Water table (Groundwater phreatic level) in Groundwater.	AS-ME-07 (Version 01), based on the user manual Pozometer N0005001 - N0005028 - N0005044 - N0005060 - N0005087 - N0005109 and NCh411 / 11 Of98 standard.
Measurement of Free chlorine (residual free chlorine) in Groundwater.	AS-ME-08 (Version 01), based on HANNA model HI 96711 and HI 97711 equipment manual.
Measurement of Total chlorine (residual chlorine) in Groundwater.	AS-ME-09 (Version 01), based on HANNA model HI 96711 and HI 97711 equipment manual.
Measurement of Oxide Reduction Potential (ORP) in Groundwater.	AS-ME-10 (Version 01), based on Aquareed Model AP-2000, WTW model ph3110 and Hanna model HI9829, HI98190, HI98191 and HI98194 equipment manual.
Measurement of Conductivity in Wastewater.	AR-ME-03 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130 y HI98194 equipment manual.
Measurement of Dissolved oxygen in Wastewater.	AR-ME-04 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829 and HI98194 equipment manual.
Measurement of Turbidity in Wastewater.	AR-ME-05 (Version 01), based on Hanna model HI9829 and Aquareed model AP-2000 equipment manual.
Measurement of Total dissolved solids in Wastewater.	AR-ME-06 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130 and HI98194 equipment manual.
Measurement of Free chlorine (residual free chlorine) in Wastewater.	AR-ME-08 (Version 01), based on HANNA model HI96711 and HI97711 equipment manual.
Measurement of Total chlorine (residual chlorine) in Wastewater.	AR-ME-09 (Version 01), based on HANNA model HI96711 and HI97711 equipment manual.
Measurement of Oxide Reduction Potential (ORP) in Wastewater.	AR-ME-10 (Version 01), based on Aquareed model AP-2000, WTW model ph3110 and Hanna model HI9829, HI98190, HI98191 and HI98194 equipment manual.
Measurement of Temperature in Drinking water.	AP-ME-01 (Version 01), based on the Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130, HI98190, HI98191 and HI98194 equipment manual.
Measurement of Hydrogen potential (pH) in Drinking water.	AP-ME-02 (Version 01), based on the Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130, HI98190, HI98191 and HI98194.

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Measurement of Conductivity in Drinking water.	AP-ME-03 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130 and HI98194 equipment manual.
Measurement of Dissolved oxygen in Drinking water.	AP-ME-04 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829 and HI98194 equipment manual.
Measurement of Turbidity in Drinking water.	AP-ME-05 (Version 01), based on Hanna model HI 9829 and Aquareed model AP-2000 equipment manual.
Measurement of Total dissolved solids in Drinking water.	AP-ME-06 (Version 01), based on Aquareed model AP-2000, Hach model HQ 40d and Hanna model HI9829, HI98130 and HI98194 equipment manual.
Measurement of Free chlorine (residual free chlorine) in Drinking water.	AP-ME-08 (Version 01), based on Hanna model HI 96711 y HI97711 equipment instruction manual.
Measurement of Total chlorine (residual chlorine) in Drinking water.	AP-ME-09 (Version 01), based on Hanna model HI 96711 and HI 97711 equipment instruction manual.
Measurement of Oxide Reduction Potential (ORP) in Drinking water.	AP-ME-10 (Version 01), based on Aquareed Model AP-2000, WTW model ph3110 and Hanna model HI9829, HI98190, HI98191 and HI98194 equipment manual.
Sampling of Sludge	LC-MU-01 (Version 01), based on NOM-004-SEMARNAT-2002 Official Mexican Standard, Environmental Protection. - Sludge and Biosolids - Specifications and Maximum Permissible Limits of Contaminants for their Use and Final Disposal, August 15, 2003.
Measurements of currents with acoustic doppler current profiler (ADCP) (in seawater and surface water).	A-ME-20 (Version 01), based on Exempt Resolution No. 3612 of 2009 and the modifications indicated in Exempt Resolution No. 660 of 2018, numeral 22 of Exempt Resolution No. 3002 of 2018 and Exempt Resolution 1933 of 2021 of the Undersecretariat of Fisheries and Aquaculture and Publication 3201 Oceanographic Instructive No. 1 Technical Specifications for Oceanographic Measurements and Analysis 3rd Edition 2005 of the Hydrographic and Oceanographic Service of the Chilean Navy (SHOA).
Measurements of currents with acoustic doppler current profiler (ADCP) in seawater and surface water	Exempt Resolution No. 3612 of 2009 and the modifications indicated in Exempt Resolution No. 660 of 2018, numeral 22 of Exempt Resolution No. 3002 of 2018 and Exempt Resolution No. 1933 of 2021 of the Undersecretariat of Fisheries and Aquaculture.
Measurements of currents with rhodamine in seawater and surface water.	A-ME-21 (Version 01), based on Exempt Resolution No. 3612 of 2009 and the modifications indicated in Exempt Resolution No. 660 of 2018, numeral 22 of

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Field and Range of Inspection	Regulations, Inspection Methods, Standards and/or Specifications
	Exempt Resolution No. 3002 of 2018 and Exempt Resolution No. 1933 of 2021 of the Undersecretariat of Fisheries and Aquaculture and Publication 3201 Oceanographic Instructive No. 1 Technical Specifications for Oceanographic Measurements and Analysis 3rd Edition 2005 of the Hydrographic and Oceanographic Service of the Chilean Navy (SHOA).
Measurements of currents with derivators in seawater and surface water.	A-ME-22 (Version 01), based on Exempt Resolution No. 3612 of 2009 and the modifications indicated in Exempt Resolution No. 660 of 2018, numeral 22 of Exempt Resolution No. 3002 of 2018 and Exempt Resolution No. 1933 of 2021 of the Undersecretariat of Fisheries and Aquaculture and Publication 3201 Oceanographic Instructions N°1 Technical Specifications for Oceanographic Measurements and Analysis 3rd Edition 2005 for Hydrographic and Oceanographic Service of the Chilean Navy (SHOA).
Underwater filming in seawater and surface water.	Exempt Resolution No. 3612 of 2009 and the modifications indicated in Exempt Resolution No. 660 of 2018, numeral 24 of Exempt Resolution N°3002 of 2018 and Exempt Resolution 1933 of 2021 of the Undersecretariat of Fisheries and Aquaculture.
Measurement of hydrogen potential (pH) in soil.	SU-ME-01 (Version 01), based on the Hanna equipment manuals models HI98190, HI98191, HI99121 and WTW model pH 3110.
Measurement of temperature in soil.	SU-ME-02 (Version 01), based on Hanna equipment manuals models HI98190, HI98191, HI99121 and WTW model pH 3110.