



CERTIFICATE OF ACCREDITATION

This is to attest that

ALS LIFE SCIENCE CHILE S.A. – GERENCIA DE OPERACIONES
AVDA. HERMANOS CARRERA PINTO # 159, COMPLEJO INDUSTRIAL, LOS LIBERTADORES, COLINA
SANTIAGO, 9340000, REPUBLIC OF CHILE

Inspection Agency AA-803 (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 July 1, 2025
Effective Date October 9, 2023



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

President

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

ALS LIFE SCIENCE CHILE S.A. – GERENCIA DE OPERACIONES

www.alsglobal.com

Contact Name Roberto Gutierrez

Contact Phone +56 2 2654 6100

Accredited to ISO/IEC 17020:2012

Effective Date October 9, 2023

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
Drinking water	
Sampling	QWI-MM/01 Issue A, mod.2 Based on: NCh409 / 2: 2004 Drinking water - Part 2: Sampling ISO 5667-1:2023 Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques NCh411 / 3. of 2014 Water quality - Samplin
Measurement - Free residual chlorine	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-CI-G
Measurement - Total chlorine	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-CI-G
Measurement - Conductivity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2510-B
Determination - Odor	ME-25-2013, Superintendence of Sanitary Services Manual of Test Methods for Drinking Water - Organoleptic method
Measurement - Dissolved oxygen	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-O G
Measurement - pH	ME-29-2007 Superintendence of Sanitary Services Manual of Test Methods for Drinking Water - Electrometric method
Measurement - pH	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500 H + B
Measurement - Redox Potential (ORP)	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2580 B
Measurement - Salinity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2520 B
Determination - Taste	ME-26-2013 Superintendence of Sanitary Services Manual of Test Methods for Drinking Water - Organoleptic method
Measurement - Temperature	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2550 B
Measurement - Total Dissolved Solids (TDS)	QWI-MM/09 Issue A, mod.1 Based on: Manufacturer's Manual - YSI / Hanna / HACH Multiparameter Equipment

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
Measurement - Turbidity	ME-03-2016 Superintendence of Sanitary Services Manual of Test Methods for Drinking Water - Nephelometric Method
Measurement - Turbidity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2130-B
Groundwater	
Sampling	QWI-MM/03 Issue A, mod.2 Based on: NCh411 / 11: 2022 Water quality - Sampling - Part 11: Groundwater sampling guide ISO 5667-1:2023 Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques NCh411 / 3.Of 2014 Water quality - Sampling - Part 3: Guidance on the preservation and handling of samples
Measurement - Conductivity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2510-B
Measurement - Phreatic Level measurement	ASTM D4750-2001 Standard Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well
Measurement - Dissolved oxygen	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-O G
Measurement - pH	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500 H + B
Measurement - Redox Potential (ORP)	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2580 B
Measurement - Salinity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2520 B
Measurement - Temperature	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2550 B
Measurement - Total Dissolved Solids (TDS)	QWI-MM/09 Issue A, mod.1 Based on: Manufacturer's Manual - YSI / Hanna / HACH Multiparameter Equipment
Measurement - Turbidity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2130-B
Aquatic Sediment (From rivers and estuarine areas)	
Sampling	QWI-MM/35 Issue A, mod.2 Based on:
Measurement – pH	ISO 5667-12:2017 Water quality -- Sampling-- Part 12: Guidance on sampling of bottom sediments from rivers, lakes and estuarine areas
Measurement – Redox Potential (ORP)	Standards Methods for the Examination of Water and Wastewater, 24 th Edition, 2023, 10500 B
Measurement - Temperature	R.E. 1917/2023 modifies resolution No. 3612 of 2009, which established the methodologies to prepare the CPS and the INFA, to be applied to small-scale aquaculture farmers, in accordance with article 21 of D.S. N°45 of

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
	2021, from the Ministry of Economy, Development and Tourism Manufacturers Manual of Multiparameter
Marine Sediment	
Sampling	QWI-MM/35 Issue A, mod.2 Based on:
Measurement - pH	NCh411 / 19: 2017 Water quality - Sampling - Part 19: Guide for sampling marine sediments
Measurement - Redox Potential (ORP)	Standard Methods for the Examination of Water and Wastewater, 24 th Edition, 2023, 10500 B
Measurement - Temperature	R.E 1917/2023 modifies resolution No. 3612 of 2009, which established the methodologies to prepare the CPS and the INFA, to be applied to small-scale aquaculture farmers, in accordance with article 21 of D.S. N°45 of 2021, from the Ministry of Economy, Development and Tourism Manufacturers Manual of Multiparameter
Lacustrine Sediments (From lakes, natural land manmade)	
Sampling	QWI-MM/35 Issue A, mod.2 Based on:
Measurement - pH	ISO 5667-12:2017 Water quality -- Sampling-- Part 12: Guidance on sampling of bottom sediments from rivers, lakes and estuarine areas
Measurement - Redox Potential (ORP)	Standard Methods for the Examination of Water and Wastewater, 24 th Edition, 2023, 10500 B
Measurement - Temperature	R.E.1917/2023 modifies resolution No. 3612 of 2009, which established the methodologies to prepare the CPS and the INFA, to be applied to small-scale aquaculture farmers, in accordance with article 21 of D.S. N°45 of 2021, from the Ministry of Economy, Development and Tourism Manufacturers Manual of Multiparameter
Sea water	
Sampling	QWI-MM/04 Issue A, mod.3 Based on: ISO 5667-9:1992 Water quality -- Sampling-- Part 9: Guidance on sampling from marine waters ISO 5667-1:2023 Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques NCh411 / 3.Of 2014 Water quality - Sampling - Part 3: Guidance on the preservation and handling of samples
Measurement - Conductivity	Standards Methods for the Examination of Water and Wastewater, 24 th Edition, 2023 2510-B
Measurement - Dissolved oxygen	Standards Methods for the Examination of Water and Wastewater, 24 th Edition, 2023 4500-O G
Measurement - pH	Standards Methods for the Examination of Water and Wastewater, 24 th Edition, 2023 4500 H + B

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
Measurement - Redox Potential (ORP)	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2580 B
Measurement - Salinity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2520 B
Measurement - Temperature	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2550 B
Measurement - Total Dissolved Solids (TDS)	QWI-MM/09 Issue A, mod.1 Based on: Manufacturer's Manual - YSI / Hanna / HACH Multiparameter Equipment
Measurement - Transparency	QWI-MM/36 Issue A Mod.2 Based on: DGA-LGOCL20 / 2009: DGA-Transparency Internal Analysis Method
Measurement - Turbidity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2130-B
Sources of uptake	
Sampling	QWI-MM/01 Issue A, mod.2 Based on: NCh409 / 2: 2004 Drinking water - Part 2: Sampling ISO 5667-1:2023 Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques NCh411 / 3.Of 2014 Water quality - Sampling - Part 3: Guidance on the preservation and handling of samples
Measurement - Free residual chlorine	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-CI-G
Measurement - Total chlorine	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-CI-G
Measurement - Conductivity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2510-B
Measurement - Phreatic Level measurement	ASTM D4750-2001 Standard Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well
Determination - Odor	ME-25-2013 Superintendence of Sanitary Services Manual of Test Methods for Drinking Water - Organoleptic method
Measurement - Dissolved oxygen	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-O G
Measurement - pH	ME-29-2007 Superintendence of Sanitary Services Manual of Test Methods for Drinking Water - Electrometric method
Measurement - pH	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500 H + B
Measurement - Redox Potential (ORP)	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2580 B
Measurement - Salinity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2520 B

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
Determination - Taste	ME-26-2013 Superintendence of Sanitary Services Manual of Test Methods for Drinking Water - Organoleptic method
Measurement - Temperature	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2550 B
Measurement - Total Dissolved Solids (TDS)	QWI-MM/09 Issue A, mod.1 Based on: Manufacturer's Manual - YSI / Hanna / HACH Multiparameter Equipment
Measurement - Turbidity	ME-04-2016 Superintendence of Sanitary Services Manual of Test Methods for Drinking Water - Nephelometric Method
Measurement - Turbidity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2130-B
Surface water from lakes	
Sampling	QWI-MM/04 Issue A, mod.3 Based on: ISO 5667-1:2023 Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques NCh-ISO5667/6: 2015 Water quality - Sampling - Part 6: Guide for sampling rivers and waterways
Surface water from rivers and streams	
Sampling	QWI-MM/04 Issue A, mod.3 Based on: ISO 5667-1:2023 Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques NCh-ISO5667/6: 2015 Water quality - Sampling - Part 6: Guide for sampling rivers and waterways
Surface water (Rivers and Streams, Lakes)	
Measurement - Flow	QWI-MM / 16 Issue A, mod.1 Based on: NCh411 / 10 Of.2005 Water quality - Sampling - Part 10: Wastewater sampling - Collection and handling of samples Superintendence of Sanitary Services Operational Manual -2010 NCh3205: 2011 Wastewater Flowmeters - Requirements
Measurement - Water Level	ASTM D5413 - 93(2013) Standard Test Methods for Measurement of Water Levels in Open-Water Bodies
Measurement - Conductivity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2510-B
Measurement - Dissolved oxygen	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-O G
Measurement - pH	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500 H + B

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
Measurement - Redox Potential (ORP)	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2580 B
Measurement - Salinity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2520 B
Measurement - Temperature	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2550 B
Measurement - Total Dissolved Solids (TDS)	QWI-MM/09 Issue A, mod.1 Based on: Manufacturer's Manual - YSI / Hanna / HACH Multiparameter Equipment
Measurement - Transparency	QWI-MM/36 Issue A Mod.0 Based on: DGA-LGO TR1 / 2009: DGA-Transparency Internal Analysis Method
Measurement - Turbidity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2130-B
Wastewater	
Automatic and manual Sampling	QWI-MM/02 Issue A, mod.4 Based on: ISO 5667-1:2023 Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques NCh411 / 3.Of 2014 Water quality - Sampling - Part 3: Guidance on the preservation and handling of samples NCh411 / 10.Of2005 Water quality - Sampling - Part 10: Wastewater sampling - Collection and handling of samples Superintendence of Sanitary Services Operational Manual-2010
Measurement - Free residual chlorine	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-CI-G
Measurement - Total chlorine	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-CI-G
Measurement - Conductivity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2510-B
Measurement - Flow measurement	QWI-MM / 16 Issue A, mod.1 Based on: NCh411 / 10 Of.2005 Water quality - Sampling - Part 10: Wastewater sampling - Collection and handling of samples Superintendence of Sanitary Services Operational Manual -2010 NCh3205: 2011 Wastewater Flowmeters - Requirements
Measurement - Dissolved oxygen	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-O G
Measurement - pH	NCh2313/1:2021 Wastewater - Methods of Analysis - Part 1: Determination of pH
Measurement - pH	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500 H + B

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
Measurement - Redox Potential (ORP)	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2580 B
Measurement - Salinity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2520 B
Measurement - Settling Solids	NCh2313 / 4.Of95 Waste water - Methods of analysis - Part 4: Determination of settleable solids - Volumetric method
Measurement - Settling Solids	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2540 F
Measurement - Temperature	NCh2313 / 2.Of95 Wastewater - Analysis Methods - Part 2: Temperature Determination
Measurement - Temperature	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2550 B
Measurement - Total Dissolved Solids (TDS)	QWI-MM/09 Issue A, mod.1 Based on: Manufacturer's Manual - YSI / Hanna / HACH Multiparameter Equipment
Measurement - Turbidity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2130-B
Water for industrial purposes	
Automatic and manual Sampling	QWI-MM/02 Issue A, mod.4 Based on: ISO 5667-1:2023 Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques NCh411 / 3.Of 2014 Water quality - Sampling - Part 3: Guidance on the preservation and handling of samples NCh411 / 10.Of2005 Water quality - Sampling - Part 10: Wastewater sampling - Collection and handling of samples Superintendence of Sanitary Services Operational Manual -2010
Measurement - Free residual chlorine	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-CI-G
Measurement - Total chlorine	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-CI-G
Measurement - Conductivity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2510-B
Measurement - Flow	QWI-MM / 16 Issue A, mod.1 Based on: NCh411 / 10 Of.2005 Water quality - Sampling - Part 10: Wastewater sampling - Collection and handling of samples Superintendence of Sanitary Services Operational Manual -2010 NCh3205: 2011 Wastewater Flowmeters - Requirements
Measurement - Phreatic Level	ASTM D4750-2001 Standard Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
Measurement - Dissolved oxygen	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500-O G
Measurement - pH	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 4500 H + B
Measurement - Redox Potential (ORP)	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2580 B
Measurement - Salinity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023, 2520 B
Measurement - Temperature	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2550 B
Total Dissolved Solids (TDS)	QWI-MM/09 Issue A, mod.1 Based on: Manufacturer's Manual - YSI / Hanna / HACH Multiparameter Equipment
Measurement - Turbidity	Standards Methods for the Examination of Water and Wastewater, 24th Edition, 2023 2130-B
Sludge	
Sampling	QWI-MM / 05 Issue A Mod.5 QWI-MM / 13 Issue A Mod.3 Based on: ISO 5667-13:2011 Water quality -- Sampling-- Part 13: Guidance on sampling of sludges
Soils	
Sampling	QWI-MM / 05 Issue A Mod.5 QWI-MM / 13 Issue A Mod.3 Based on: NCh3400 / 1: 2016 Soil quality - Sampling - Part 1: Guidelines for the design of sampling programs NCh3400 / 2: 2016 Soil quality - Sampling - Part 2: Guidelines on sampling techniques
Solid Waste, Dangerous Solid Waste and Industrial Solid Waste	
Sampling	QWI-MM/05 Issue A Mod.5 QWI-MM/13 Issue A Mod.3 QWI-MM/33 Issue A Mod.2 Based on: Technical guide for sampling of hazardous waste, MINSAL DS N ° 148/2004 MINSAL Health Regulations on Hazardous Waste Management EPA SW-846 Hazardous Waste Test Methods Compendium (On-line) ASTM D6009-2018 Standard Guide for Sampling Waste Piles EPA 530-D-02-002 RCRA Waste Sampling Draft Technical Guidance
Breatheable Particulate Matter (PM10) on environmental and personal filters	

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

Fields and Range of Inspections	Regulations, Inspection Methods, Standards and/or Specifications)
Sampling (continuous and discrete)	QWI-MM/24 Issue A, mod.1 Based on: EPA/625/R-96/010a IO-2.1 Sampling of ambient air for total suspended Particulate matter (SPM) and PM10 using High volume (HV) sampler EPA/625/R-96/010a IO-2.3 Sampling of ambient air for PM10 concentration using the Rupprecht and Patashnick (R&P) low volume Partisol® sampler
Breatheable Particulate Matter (PM2.5) on environmental and personal filters	
Sampling (continuous and discrete)	QWI-MM/23 Issue A, mod.1 Based on: EPA/625/R-96/010a IO-2.1 Sampling of ambient air for total suspended Particulate matter (SPM) and PM10 using High volume (HV) sampler EPA/625/R-96/010a IO-2.3 Sampling of ambient air for PM10 concentration using the Rupprecht and Patashnick (R&P) low volume Partisol® sampler
Settleable Particulate Matter on environmental filters	
Sampling (continuous and discrete)	QWI-MM/25 Issue A, mod.1 Based on: ASTM D1739 - 98(2017) Standard Test Method for Collection and Measurement of Dustfall (Settleable Particulate Matter)