



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

WORLD SURVEY SERVICES S.A.
Junge #142,
Concepción, CHILE 4030000
Miguel Arroyo Phone: +56 412590791
Email: marroyo@wss.cl

CHEMICAL

Valid To: September 30, 2027

Certificate Number: 5166.02

On recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on fishmeal, fish oil, fish feed, hydrobiological products, and dried animal feed:

Test/Technology	Test Method(s)	Reference Method(s)
Determination of Antioxidants: BHA, BHT, TBHQ – HPLC	INS-LAQ-052	AOAC 983.15 (modified)
Determination of Arsenic – Flame AA Spectrometry-Hydride Generation	INS-LAQ-043	NCh3140.Of 2008
	INS-LAQ-043 (Fish Oil)	NCh3140.Of 2008 (modified)
Determination of Cadmium – Flame AA Spectrometry	INS-LAQ-044	NCh2638.Of 2001
	INS-LAQ-044 (Fish Oil)	NCh2638.Of 2001 (modified)
Determination of Chlorides – Volhard Method	INS-LAQ-029	NCh2739/1.Of 2002
Determination of Chrome – Flame AA Spectrometry	INS-LAQ-045	NCh2751.Of 2003 (modified)
Determination of Crude Protein – Kjeldahl Method	INS-LAQ-015	ISO 5983-2:2009
Determination of Ethoxyquin – HPLC	INS-LAQ-041	AOAC 996.13 (modified)
Determination of Free Fatty Acids – Titrimetric Method	INS-LAQ-018	NCh2759.Of 2002
	INS-LAQ-018 (Fishmeal)	NCh2759.Of2002 (modified)
Determination of Fluoride - ISE	INS-LAQ-069	GB/T 13083-2018
Determination of Histamine – HPLC	INS-LAQ-039	NCh2637.Of 2001 (modified)
Determination of Humidity and Impurities on Dried Seaweed – Gravimetric Method	INS-LAQ-056	NCh765:2018
Determination of Lead – Flame AA Spectrometry	INS-LAQ-046	NCh2751.Of 2003
	INS-LAQ-046 (Fish Oil)	NCh2751.Of 2003 (modified)
Analysis of Lipids – Gravimetric	INS-LAQ-013	I.A.F.M.M Technical Bulletin N°3, 1980 (modified)

<u>Test/Technology</u>	<u>Test Method(s)</u>	<u>Reference Method(s)</u>
Determination of Malondialdehyde - HPLC	INS-LAQ-065	GBT 28717-2012 (modified)
Determination of Mercury – AA Spectrometry	INS-LAQ-047	NCh2667.Of 2001
	INS-LAQ-047 (Fish Oil)	NCh2667.Of 2001 (modified)
Determination of Moisture and Volatile Material – Gravimetric Method	INS-LAQ-035 (Fish oil)	AOCS CA 2C25
Determination of Moisture – Gravimetric Method	INS-LAQ-001	NCh2670.Of 2001, Method A
Determination of Nitrites – UV-Vis Spectrometry	INS-LAQ-064	NCh1370/6.Of 79 (modified) GB/T13085-2018 (modified)
Determination of pH	INS-LAQ-051	NCh2738.Of2002
Peroxide Index – Titrimetric Method	INS-LAQ-026	NCh2758.Of2002
	INS-LAQ-026 (Fishmeal)	NCh2758.Of 2002 (modified)
Determination of Total Ash and Insoluble Residue in Sand – Gravimetric Method	INS-LAQ-023	NCh515.Of1980
Determination of Total Fat – Soxhlet Method	INS-LAQ-033	NCh1790.Of1980 NCh514.Of1980
Determination of Total Volatile Basic Nitrogen – Steam Distillation	INS-LAQ-036	NCh2668:2018
Tocopherols (α , γ and δ) – HPLC	INS-LAQ-040	AOCS Ce 8-89 (modified)
<u>Sampling</u>		
Fishmeal Fish Oil Hydrobiological Products	PRO-IYM-008 PRO-IYM-009 PRO-IYM-003	Manual de Inocuidad y Certificación, Parte II, Sección IV, Capítulo II, on line SERNAPESCA; NCh 43.Of 1961



Accredited Laboratory

A2LA has accredited

WORLD SURVEY SERVICES S.A.

Concepción, CHILE

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 3rd day of November 2025.

A blue ink signature of Mr. Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5166.02
Valid to September 30, 2027

For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.