



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

BIOAGRI AMBIENTAL LTDA
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CHEMICAL

Valid To: July 31, 2021

Certificate Number: 5362.02

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with the A2LA Food Testing Program Requirements, containing the 2018 "AOAC International Guidelines for Laboratories Performing Microbiological and Chemical Analyses of Food, Dietary Supplements, and Pharmaceuticals)," accreditation is granted to this laboratory to perform the following tests on food and feed:

Tests	Laboratory Test Method	Reference Method(s)
Acidity by Titration	ITFQ 100	ISO 660 Manual of Official Methods for Analysis of Foods of Animal Origin, MAPA: Item 2.2 and 2.3 ISO 11869 AOAC 947.05 AOAC 962.19 Brazilian Compendium of Animal Feeding 2017. Method N°27
Ash by Gravimetry And Conductimetry	ITFQ 117	ICUMSA G2/3-17 ICUMSA GS1/3/4/7/8-13
Ash by Ignition (Muffle Furnace)	ITFQ 06	ISO 936 AOAC 930.30 AOAC 945.46 Brazilian Compendium of Animal Feeding 2017. Method N° 5 NBR 15714-3 Manual of Official Methods for Analysis of Foods of Animal Origin, MAPA: Item 3.13
Ash Insoluble in Acid	ITMM 65	AOAC 941.12 AOAC 975.48
Calcium by Titration	ITFQ 26	Brazilian Compendium of Animal Feeding 2017. Method N° 4
Chlorides by Qualitative Method	ITFQ 175	Manual of Official Methods for Analysis of Foods of Animal Origin, MAPA: Item 2.10

Tests	Laboratory Test Method	Reference Method(s)
Color by UV Spectrophotometry	ITFQ 116	ICUMSA GS2/3-10 ICUMSA GS9/1/2/3-8 ICUMSA GS2/3-9 ICUMSA GS1/3-7
Cryoscopic Index Freezing Point Depression	ITFQ 179	ISO 5764
Density by Electronic Densimeter	ITFQ 229	Manual of Official Methods for Analysis of Foods of Animal Origin, MAPA: Item 2.12
Ethyl Alcohol by Qualitative Method	ITFQ 191	Manual of Official Methods for Analysis of Foods of Animal Origin, MAPA: Item 2.34
Fat by Butyrometer Method	ITFQ 187	NMKL 40 ISO 3433
Fat by Mojonnier Ether Extraction Hydrolysis with Hydrochloric Acid	ITFQ 186	ISO 1735
Fat by Mojonnier Ether Extraction with Ammonia	ITFQ 185	ISO 2450 ISO 1737 ISO 1736 ISO 1211 ISO 7328
Fat by Soxhlet Method	ITFQ 204	ISO 1443 Brazilian Compendium of Animal Feeding 2017. Method N° 14 and 15
Formaldehyde	ITFQ 178	AOAC 931.08
Hydroxyproline by UV Spectrophotometry	ITFQ 53	AOAC 990.26
Moisture/Dry Residue by Forced Air Oven (Gravimetric)	ITFQ 03	ISO 1442 ISO 3727-1 ISO 5534 ISO 6731 ISO 6734 ISO 2920 Brazilian Compendium of Animal Feeding 2017. Method N°53 ICUMSA GS2/1/3/9/-15, 2007 Institute Adolfo Lutz. 4. Ed. 2005, Method No 378/ IV
Nitrate	ITFQ 04	Internal Method
Nitrite	ITFQ 04	Internal Method
Peroxide Index by Titration	ITFQ 102	ISO 3960 Brazilian Compendium of Animal Feeding 2017. Method 33

Tests	Laboratory Test Method	Reference Method(s)
pH by Potentiometry	ITFQ 02	ISO 2917 Manual of Official Methods for Analysis of Foods of Animal Origin, MAPA: Item 2.32 ICUMSA GS1/2/3/4/7/8/9-23. Institute Adolfo Lutz. 4. Ed. 2005, Method No 017/ IV
Protein by Kjeldahl Method: Boric Acid Method	ITFQ 05	ISO 1871 ISO 8968-1 Brazilian Compendium of Animal Feeding 2017. Method N° 46
Reducing Sugar by Titrimetry	ITFQ 125	ICUMSA Method GS2/3/9-5 ICUMSA Method GS4/3-3 ICUMSA Method GS1/3-7-3
Salt (Chlorides) by Titration	ITFQ 20	ISO 1738 Brazilian Compendium of Animal Feeding 2017. Method N° 06
Sediments (Insoluble) by Gravimetry	ITFQ 111	ICUMSA GS2/3/9-19
Starch by Qualitative Method	ITFQ 173	Manual of Official Methods for Analysis of Foods of Animal Origin, Item 2.7
Starch by UV Spectrophotometry	ITFQ 118	ICUMSA GS1/16
Starch by UV Spectrophotometry Method (Anthrone Method)	ITFQ 217	Manual of Official Methods for Analysis of Foods of Animal Origin, MAPA: Item 1.5
Sucrose by Reflectometry	ITFQ 230	Manual of Official Methods for Analysis of Foods of Animal Origin, MAPA: Item 2.16
Sulphur Dioxide by UV Spectrophotometry	ITFQ 114	ICUMSA GS2/1/7/9-33
Turbidity by Nephelometry	ITFQ 115	ICUMSA GS2/3-18
Water Activity	ITFQ 171	ISO 21807

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on waste water, raw water, ground water, drinking water.

Test	Laboratory Test Method	Reference Method(s)
Alkalinity	PA 249	SM 2320B
Ammonia (as N)	PA 107	SM 4500-NH ₃ F
Chemical Oxygen Demand	PA 002	SM 5220D
Chloride	PA 250	SM 4500 Cl-B



Tests	Laboratory Test Method	Reference Method(s)
Chlorine	PA 010	SM 4500 Cl-G
Color	PA 012	SM 2120C
Conductivity	PA 014	SM 2510B
Determination of Oxygen Consumed – Potassium Permanganate Method	PA 251	ABNT – NBR 10739
Fixed and Volatile Solids 550°C	PA 009	SM 2540E
Fluoride	PA 162	SM 4500-F D
Hardness	PA 248	SM 2340 C
Nitrate (as N)	PA 124	Kit Nitrate Test Spectroquant®1.09713 Merck
Nitrite (as N)	PA 125	SM 4500B
pH	PA 011	SM 4500-H ⁺ B
Settleable Solids	PA 004	SM 2540 F
Sulfate	PA 119	SM 4500SO2 -E
Surfactants	PA 023	SM 5540C
Total Dissolved Solids 180°C	PA 009	SM 2540C
Total Solids 103–105 °C	PA 009	SM 2540B
Total Suspended Solids 103–105°C	PA 009	SM 2540D
Turbidity	PA 013	SM 2130B





Accredited Laboratory

A2LA has accredited

BIOAGRI AMBIENTAL LTDA

Maringá, BRAZIL

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 laboratory also meets the requirements of the A2LA R204 – *Specific Requirements – Food and Pharmaceutical Testing Laboratory Accreditation Program*. 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 20th day of June 2019.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5362.02
Valid to July 31, 2021

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