



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

GALBRAITH LABORATORIES, INC.
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CHEMICAL

Valid To: July 31, 2025

Certificate Number: 2777.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests:

Metals Analysis:

Test Name	Test Number
Atomic Absorption Spectrometry Li, Be, B, Na, Mg, Al, Si, P, S, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Ni, Co, Cu, Zn, Ga, Ge, As, Se, Rb, Sr, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, I, Te, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Ac, Th, U	ME-71
Elemental Impurities	USP <233>
Inductively Coupled Plasma – Atomic Emission Spectrometry Li, Be, B, Na, Mg, Al, Si, P, S, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Ni, Co, Cu, Zn, Ga, Ge, As, Se, Rb, Sr, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, I, Te, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Ac, Th, U	EPA SW-846 Method 6010B
Inductively Coupled Plasma – Atomic Emission Spectrometry Li, Be, B, Na, Mg, Al, Si, P, S, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Ni, Co, Cu, Zn, Ga, Ge, As, Se, Rb, Sr, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, I, Te, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Ac, Th, U	ME-70
Inductively Coupled Plasma – Mass Spectrometry Li, Be, B, Na, Mg, Al, Si, P, S, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Ni, Co, Cu, Zn, Ga, Ge, As, Se, Rb, Sr, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, I, Te, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Ac, Th, U	EPA SW-846 Method 6020
Mercury by Automated Cold Vapor Atomic Absorption	E80-3

Test Name	Test Number
Semi-Quantitative Metals Screen by Mass Spectrometry Li, Be, B, Na, Mg, Al, P, K, Ca, Sc, Ti, V, Cr, Mn, Ni, Co, Cu, Zn, Ga, As, Se, Rb, Sr, Y, Zr, Nb, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, I, Te, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Hg, Tl, Pb, Bi, Th, U	ME-31
Standard Test Method for Elements in Digestates by Inductively Coupled Plasma Mass Spectroscopy Li, Be, B, Na, Mg, Al, Si, P, S, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Ni, Co, Cu, Zn, Ga, Ge, As, Se, Rb, Sr, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, I, Te, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Ac, Th, U	ME-30

Chromatographic Analysis:

Test Name	Test Number
High Performance Liquid Chromatography (HPLC) Acetic Acid, Benzocaine, Butylated Hydroxytoluene, Citric Acid, Dicyclohexylurea, Formaldehyde, Hydroxybenzotriazole, Phenol, Phenoxyethanol, Salicylate	LC-100
Residual Solvents by Gas Chromatography Using Direct Injection and Flame Ionization Detection 1,4-Dioxane, Acetone, Acetonitrile, Benzene, Carbon, Chloroform, Dimethylformamide, Dimethylsulfoxide, Ethanol, Ethyl Acetate, Ethyl Ether, Hexanes, Isopropyl Alcohol, Methanol, Methylene Chloride, Pyridine, Tetrachloride, Tetrahydrofuran, Toluene, Xylenes	GC-100D
Residual Solvents by Headspace Gas Chromatography 1,4-Dioxane, Acetaldehyde, Acetone, Acetonitrile, Acrolein, Benzene, Carbon, Chloroform, Ethanol, Ethyl Acetate, Ethyl Ether, Ethylene Oxide, Hexanes, Isopropyl Alcohol, Isopropyl Ether, Methanol, Methyl Tert-Butyl Ether, Methylene Chloride, Pyridine, Tetrachloride, Tetrahydrofuran, Toluene, Xylenes	GC-100H

Chemical Analysis:

Test Name	Test Number
Anions and Organic Acids by Suppressed Ion Chromatography Acetate, Chloride, Dichloroacetate, Fluoride, Formate, Glycolate, Propionate, Trifluoroacetate	ME-4C
Anions by Suppressed Ion Chromatography Acetate, Bromate, Bromide, Chlorate, Chloride, Chlorite, Fluoride, Nitrate, Nitrite, Oxalate, Phosphate, Sulfate, Trifluoroacetate	ME-4A
Fluoride Ion by Ion-Selective Electrode	E9-1

Test Name	Test Number
Fourier Transform Infrared Spectroscopy	USP <197> FTIR-100
Iodine by Ion-Selective Electrode	E53-4
Loss on Drying	S-200
Nitrogen by Ion-Selective Electrode	E7-6
Nitrogen by the Kjeldahl Method	E7-1
Thermogravimetric Analysis/Differential Scanning Calorimetry	TGA-100
Total Ash Content by Muffle Furnace	G-45A
Total Fluorine by Oxygen Flask Combustion and Ion-Selective Electrode	E9-3
Total Halides by Potentiometric Titration	E17-1
Water by Coulometric Titration (Karl Fischer)	S-300
Water by Volumetric Titration (Karl Fischer)	S-301
Water by Volumetric Titration (Karl Fischer) or Coulometric Titration (Karl Fischer)	USP <921>

Combustion Analysis:

Test Name	Test Number
Carbon, Hydrogen and Nitrogen Determination Using the LECO CHN 628	ME-15
Carbon, Hydrogen, and Nitrogen Determination Using the PerkinElmer2400 Series II CHNS/O Analyzer	ME-14
Inorganic Carbon Using Coulometrics, Inc. CM5014 CO ₂ Coulometer	E6-5
Oxygen Content Using Thermo Finnigan Flash 2000 CHNS-O Analyzer	E8-4
Sulfur LECO SC-632 Carbon/Sulfur Determinator	E16-3
Total Halogens or Total Halides by Microcoulometry	ME-13
Total Organic Carbon Using the TOC analyzer	EPA Method 415.1
Total Organic Carbon Using the TOC analyzer	USP <643>
Total Organic Carbon Using the TOC analyzer	E6-8



Accredited Laboratory

A2LA has accredited

GALBRAITH LABORATORIES, INC.

Knoxville, TN

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 28th day of September 2023.

A blue ink signature of Mr. Trace McInturff.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2777.01
Valid to July 31, 2025

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