SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

MARTIN BAUER INC – US LABORATORY
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CHEMICAL

Valid To: September 30, 2024 Certificate Number: 5004.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on raw and processed plant materials, plant extracts, and nutritional supplements:

Test Type	Internal Method	Technologies	Official Method Reference(s)
Heavy Metals (Quantitative)			
Arsenic	QC-0120	ICP-MS, Microwave Digestor	EPA Method 200.8 and 6020 USP/NF general chapter <233>, "Elemental Impurities Procedures", USP/NF general chapter <231>, "Heavy Metals", USP/NF general chapter <232>, Elemental Impurities Limits" Internal method QC-0160 "Operations and Maintenance of Discover SP-D 80 Microwave Digester"
Cadmium	QC-0120	ICP-MS, Microwave Digestor	EPA Method 200.8 and 6020 USP/NF general chapter <233>, "Elemental Impurities Procedures", USP/NF general chapter <231>, "Heavy Metals", USP/NF general chapter <232>, Elemental Impurities Limits" Internal method QC-0160 "Operations and Maintenance of Discover SP-D 80 Microwave Digester"
Lead	QC-0120	ICP-MS, Microwave Digestor	EPA Method 200.8 and 6020 USP/NF general chapter <233>, "Elemental Impurities Procedures", USP/NF general chapter <231>, "Heavy Metals", USP/NF general chapter <232>, Elemental Impurities Limits" Internal method QC-0160 "Operations and Maintenance of Discover SP-D 80 Microwave Digester"
Mercury	QC-0120	ICP-MS, Microwave Digestor	EPA Method 200.8 and 6020 USP/NF general chapter <233>, "Elemental Impurities Procedures", USP/NF general chapter <231>, "Heavy Metals", USP/NF general chapter <232>, Elemental Impurities Limits" Internal method QC-0160 "Operations and Maintenance of Discover SP-D 80 Microwave Digester"

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Test Type	Internal Method	Technologies	Official Method Reference(s)
Elements (Quantitative)			
Bromide	QC-0166	ICP-MS, Microwave Digestor	EPA Method 200.8 and 6020 USP/NF general chapter <233>, "Elemental Impurities Procedures", USP/NF general chapter <231>, "Heavy Metals", USP/NF general chapter <232>, Elemental Impurities Limits" Internal method QC-0160 "Operations and Maintenance of Discover SP-D 80 Microwave Digester"; USP/NF General Chapter <561>, "Articles of Botanical Origin"
Iodine	QC-1066	ICP-MS, Microwave Digestor	EPA Method 200.8 and 6020 USP/NF general chapter <233>, "Elemental Impurities Procedures", USP/NF general chapter <231>, "Heavy Metals", USP/NF general chapter <232>, Elemental Impurities Limits" Internal method QC-0160 "Operations and Maintenance of Discover SP-D 80 Microwave Digester"
Pesticides			
Dithiocarbamates	GC-0022	GC-MS	Pesticide Analytical Manual (PAM) for multi-residue methods, 3rd Ed. EPA 8270B, EPA 8081b; Trends in Analytical Chemistry, Vol. 28, No. 1, 2009; USP/NF General Chapter <561>, "Articles of Botanical Origin"
Organochlorine Pesticides*	QC-0125	GC-MS	Pesticide Analytical Manual (PAM) for multi-residue methods, 3rd Ed. EPA 8270B, EPA 8081b; EPA 3540 for extraction; EPA 3620B for Florisil cleanup; USP/NF General Chapter <561>, "Articles of Botanical Origin"
Organophosphorus Pesticides*	QC-0125	GC-MS	Pesticide Analytical Manual (PAM) for multi-residue methods, 3rd Ed. EPA 8270B, EPA 8081b; EPA 3540 for extraction; EPA 3620B for florisil cleanup; USP/NF General Chapter <561>, "Articles of Botanical Origin"
Pyrethroid Pesticides*	QC-0125	GC-MS	Pesticide Analytical Manual (PAM) for multi-residue methods, 3rd Ed. EPA 8270B, EPA 8081b; EPA 3540 for extraction; EPA 3620B for florisil cleanup; USP/NF General Chapter <561>, "Articles of Botanical Origin"
Residual Solvents			
Residual Solvents Class 1, 2A, 2B, 2C, 3A	GC-0016	GC-MS	USP/NF General Chapter <467>, "residual Solvents"

Test Type	Internal Method	Technologies	Official Method Reference(s)
Gluten			
Gluten G12 Antibody	QC-0168	Immunoassay	AgraStrip® Gluten G12® test kit
Identification of Botanicals[1] (Qualitative)			
High Performance Thin Layer Chromatography[1]	HPTLC-0014 HPTLC-0015 HPTLC-0016 HPTLC-0017 HPTLC-0018 HPTLC-0019 HPTLC-0020 HPTLC-0021 ** ID-0001	Automatic Developing Chamber, HPTLC Sampler, HPTLC Visualizer	Plant Drug Analysis 1996; Herbs of Commerce 2nd Edition. US 2000; HPTLC Association Methods; High-Performance Thin-Layer Chromatography for the Analysis of Medicinal Plants, 2007.
Macroscopic Analysis[1]	BOT-0010 ** ID-0001	Microscope	Plant Identification Terminology: An illustrated Glossary, 1994; Herbal Drugs and Phytopharmaceuticals, 2004; USP Dietary Supplements Compendium. 2015. Volume 2; USP 40. Identification of Articles of Botanical Origin.
Microscopic Analysis[1]	BOT-0011 **ID-0001	Microscope	Herbal Drugs and Phytopharmaceuticals, 2004; USP Dietary Supplements Compendium. 2015. Volume 2; Microscopic Characterization of Botanical Medicine (American Herbal Pharmacopoeia), 2011; Atlas of Microscopy of Medicinal Plants, Culinary Herbs, and Spices, 2005; USP 40. Identification of Articles of Botanical Origin; Pollen Analysis. Blackwell Scientific Publications, 1991.USA

[1] There are circumstances in which this laboratory must perform testing activities not covered on their fixed scope of accreditation, such as for additional matrices (flexibility concerning sample type) or additional parameters (flexibility concerning analytes). The following activities are covered under A2LA P112 Flexible Scope policy for analysis in raw and processed plant materials, plant extracts, and nutritional supplements.

** The 'Identilok™ Testing Program' that forms the basis of laboratory standard operating procedure ID-0001, requires application of three different accredited technologies- HPTLC, Macroscopic taxonomy, and microscopic taxonomy. Supplemental testing components of the Identilok™ testing program such Organoleptic analysis, HPLC, and FTIR are not currently accredited.

* The following pesticides are tested by the pesticide methods above.

- Acephate
- Alachlor
- Aldrin and Dieldrin (sum of)
- Azinphos-ethyl
- Azinphos-methyl
- Bromophos-ethyl
- Bromophos-methyl
- Brompropylate
- Chlordane (sum of *cis*-, *trans*-, and oxychlordane)

- Chlorfenvinphos
- Chlorpyriphos-ethyl
- Chlorpyriphos-methyl
- Chlorthal-dimethyl
- Cyfluthrin (sum of)
- Λ-Cyhalothrin
- Cypermethrin and isomers (sum of)
- DDT (sum of *o,p¢*-DDE, *p,p¢*-DDE, *o,p¢*-DDT, *p,p¢*-DDT, *o,p¢*-TDE, and *p,p¢*-TDE)
- Deltamethrin
- Diazinon
- Dichlofluanid
- Dichlorvos
- Dicofol
- Dimethoate and omethoate (sum of)
- Endosulfan (sum of isomers and endosulfan sulphate)
- Endrin
- Ethion
- Etrimphos
- Fenchlorophos (sum of fenchlorophos and fenchlorophos-oxon)
- Fenitrothion
- Fenpropathrin
- Fensulfothion (sum of fensulfothion, fensulfothion-oxon, fensulfothion oxonsulfon, and fensulfothion-sulfon)
- Fenthion (sum of fenthion, fenthion-oxon, fenthion-oxo-sulfon, fenthion oxon-sulfoxid, fenthion-sulfon, and fenthion-sulfoxid)
- Fenvalerate
- Flucytrinate
- τ-Fluvalinate
- Fonophos
- Heptachlor (sum of heptachlor, *cis*-heptachlorepoxide, and *trans*-heptachlorepoxide)
- Hexachlorobenzene
- Hexachlorocyclohexane (sum of isomers α-, β-, ς-, and ε-)
- Lindan (γ-hexachlorocyclohexane)
- Malathion and Malaoxon (sum of)
- Mecarbam
- Methacriphos
- Methamidophos
- Methidathion
- Methoxychlor
- Mirex
- Monocrotophos
- Parathion-ethyl and Paraoxon-ethyl (sum of)
- Parathion-methyl and Paraoxon-methyl (sum of)
- Pendimethalin
- Pentachloroanisole
- Permethin and isomers (sum of)
- Phosalone
- Phosmet
- Piperonyl Butoxide
- Pirimiphos-ehtyl
- Pirimiphos-methyl (sum of pirimiphos-methyl and *N*-desethyl-pirimiphos methyl)
- Procymidone
- Profenophos
- Prothiophos
- Pyrethrum (sum of cinerin I, cinerin II, jasmolin I, jasmolin II, pyrethrin I, and pyrethrin II)
- Quinalphos
- Quintozene (sum of quintozene, pentachloraniline, and methyl pentachlorphenyl sulfide)

- S-421
- Tecnazene
- Tetradifon
- Vinclozolin

Accredited Laboratory

A2LA has accredited

MARTIN BAUER INC – US Laboratory

Sparks, NV

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*).

American Association for Laboratory Accreditation
CORPORATE SEAL 1978
DISTRICT OF COLUMBIA
A2LA

Presented this 30th day of September 2022.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5004.02
Valid to September 30, 2024

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