SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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CHEMICAL

Valid To: February 28, 2026 Certificate Number: 3851.01

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 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 dietary supplements, crude plant matter, plant extracts, oils, raw materials, finished products, fungal, algal species, and cannabis:

Test/Technology	**Reference Methods**	**In-house Test Methods**
Dietary Supplement Testing[1]		
Dietary Supplement Identification and Qualitative Analysis by High Performance Thin-Layer Chromatography (HPTLC)[1]	European Pharmacopoeia, Ph.Eur. British Herbal Pharmacopoeia, BHP American Herbal Pharmacopoeia, AHP United States Pharmacopeia, USP Pharmacopoeia of the People's Republic of China, PPRC Official Methods of Analysis of AOAC International	IDT-SOP-54-07 IDT-SOP-55-11 IDT-SOP-55-13 IDT-SOP-55-14 IDT-SOP-55-27 IDT-SOP-55-28 IDT-SOP-57-01 IDT-SOP-72-01 IDT-SOP-72-03 IDT-SOP-510-06
Botanical Identification and Qualitative Analysis by Microscopy[1]	European Pharmacopoeia, Ph.Eur. British Herbal Pharmacopoeia, BHP American Herbal Pharmacopoeia, AHP United States Pharmacopeia, USP Pharmacopoeia of the People's Republic of China, PPRC Official Methods of Analysis of AOAC International	MIC-SOP-54-04 MIC-SOP-54-05 MIC-SOP-54-06 MIC-SOP-510-07

[1]*This portion of the scope meets the A2LA P112 Flexible Scope Policy.*

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Test/Technology	Reference Method(s)	In-house Test Method
Cannabis Testing		
Quantification of 12 Cannabinoids by HPLC (Cannabidivarin (CBDV), Cannabidivarinic Acid (CBDVA), Cannabidiol (CBD), Cannabigerol (CBG), Tetrahydrocannabivarin (THCV), Cannabidiolic Acid (CBDA), Cannabigerolic Acid (CBGA), Cannabinol (CBN), Δ^9-Tetrahydrocannabinol (Δ^9-THC), Δ^8-Tetrahydrocannabinol (Δ^8-THC), Cannabichromene (CBC), Δ^9-Tetrahydrocannabinolic Acid A (THCA-A))	In-house Method	ATM-815-0302
Determination of Δ^8-THC, Δ^9-THC, Δ^{10}-THC, 9R-HHC and 9S-HHC Content in Hemp Products by HPLC (Δ^8-Tetrahydrocannabinol, (Δ^8-THC), Δ^9-Tetrahydrocannabinol, (Δ^9-THC), Δ^{10}-Tetrahydrocannabinol, (Δ^{10}-THC), 9R-Hexahydrocannabinol (9R-HHC), 9S-Hexahydrocannabinol (9S-HHC))	In-house Method	ATM-815-0313
Terpenes Content by GC-FID in Hemp Crude Raw Materials ((+)-Fenchol, 2-Ethylfenchol, Camphene, Carene, Caryophyllene Oxide, Limonene, Linalool, Myrcene, Terpinolene, α -Humulene, α-Phellandrene, α-Pinene, α-Terpinene, α-Terpineol, β-Caryophyllene, β-Ocimene, β-Pinene, γ-Terpinene)	In-house Method	ATM-815-0301
Heavy Metals Testing		
Determination of Heavy Metals Content by ICP-MS (Arsenic, Cadmium, Lead, Mercury (Total))	USP-NF <561> USP-NF <233>	ATM-815-0307
Pesticide Testing		
Determination of Pesticide Content by LC-MS/MS and GC-MS/MS in Botanicals (Acephate, Alachlor, Aldrin and dieldrin (sum of), Azinphos-ethyl, Azinphos-methyl, Bromophos-ethyl, Bromophos-methyl, Bromopropylate, Chlordane (sum of cis-, trans-, and oxychlordane), Chlorfenvinphos, Chlorpyriphos-ethyl, Chlorpyriphos-methyl,	USP-NF <561> USP-NF <565>	ATM-815-0308

Test/Technology	Reference Method(s)	In-house Test Method
Determination of Pesticide Content by LC-MS/MS and GC-MS/MS in Botanicals (cont.) Chlorthal-dimethyl, Cyfluthrin (sum of mix of isomers), 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 (mix of isomers), 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-oxon sulfone, and fensulfothion sulfone), Fenthion (sum of fenthion, fenthion-oxon, fenthion-oxon sulfone, fenthion-oxon sulfoxide, fenthion sulfone, and fenthion-sulfoxide), Fenvalerate, Flucythrinate, τ-Fluvalinate, Fonophos, Heptachlor (sum of heptachlor, cis-heptachlorepoxide, and trans-heptachlorepoxide), Hexachlorbenzene, Hexachlorocyclohexane (sum of isomers α-, β-, δ-, and ε-), Lindan (γ-hexachlorocyclohexane), Malathion and Malaoxon (sum of), Mecarbam, Methacriphos (methacrifos), Methamidophos, Methidathion, Methoxychlor, Mirex, Monocrotophos, Parathion-ethyl and paraoxon-ethyl (sum of), Parathion-methyl and paraoxon-methyl (sum of), Pendimethalin, Pentachloranisole, Permethrin and isomers (sum of), Phosalone, Phosmet, Piperonyl butoxide, Pirimiphos-ethyl, 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,	USP-NF <561> USP-NF <565>	ATM-815-0308

Test/Technology	Reference Method(s)	In-house Test Method
Determination of Pesticide Content by LC-MS/MS and GC-MS/MS in Botanicals (cont.) Quintozene (sum of quintozene, pentachloraniline, and methyl pentachlorphenyl sulfide), S-421, Tecnazene, Tetradifon, Vinclozolin, Bromide, inorganic (calculated as bromide ion), Dithiocarbamates (expressed as CS_2))	USP-NF <561> USP-NF <565>	ATM-815-0308
Psychedelic Testing		
Determination of Psychedelics by LC-MS/MS in Botanicals (Psilocybin, Psilocin, Baeocystin, Norbaeocystin, Norpsilocin, Aeruginascin (N,N,N-trimethyl-4-phosphoryloxytryptamine), Dimethyltryptamine (DMT), Harmine, Harmaline, Tetrahydroharmine (THH), Harmol, Harmalol, 5-Methoxy-N,N-dimethyltryptamine (5-MeO-DMT), 2-Methyl-1,2,3,4-tetrahydro-beta-carboline, N,N-Dimethyltryptamine Oxide (DMT-N-Oxide), N-Methyltryptamine, Tryptamine, Bufotenin (5-Hydroxy-dimethyltryptamine (5-OH-DMT)), Mescaline (3,4,5-trimethoxyphenethylamine), Ibogaine, Mitragynine, 7-Hydroxymitragynine, Lysergic acid diethylamide (LSD), Ketamine, d-Methamphetamine, MDMA (3,4-methylenedioxymethamphetamine), Cocaine, Codeine)	In-house Method	ATM-815-0242
Residual Solvents Testing		
Determination of Residual Solvent Content by Headspace GC-MS and GC-MS Class 1 Residual Solvents: (Benzene, Carbon tetrachloride, 1,2-Dichloroethane, 1,1-Dichloroethene, 1,1,1-Trichloroethane) Class 2 Residual Solvents: (Acetonitrile, Chlorobenzene, Chloroform, Cumene, Cyclohexane, 1,2-Dichloroethene, 1,2-Dimethoxyethane,	USP-NF <467>	ATM-815-0310

Test/Technology	Reference Method(s)	In-house Test Method
Determination of Residual Solvent Content by Headspace GC-MS and GC-MS (cont.) N,N-Dimethylacetamide, N,N-Dimethylformamide, 1,4-Dioxane, 2-Ethoxyethanol, Ethylene glycol, Formamide, Hexane, Methanol, 2-Methoxyethanol, Methylbutylketone, Methylcyclohexane, Methylene chloride, Methylisobutylketone, N-Methylpyrrolidone, Nitromethane, Pyridine, Sulfolane, Tetrahydrofuran, Tetralin, Toluene, Trichloroethylene, Xylene[a] ([a] Usually 60% m-xylene, 14% p-xylene, and 9% o-xylene with 17% ethyl benzene)) Class 3 Residual Solvents: (Acetic acid, Acetone, Anisole, 1-Butanol, 2-Butanol, Butyl acetate, tert-Butylmethyl ether, Dimethyl sulfoxide, Ethanol, Ethyl acetate, Ethyl ether, Ethyl formate, Formic acid, Heptane, Isobutyl acetate, Isopropyl acetate, Methyl acetate, 3-Methyl-1-butanol, Methylethylketone, 2-Methyl-1-propanol, Pentane, 1-Pentanol, 1-Propanol, 2-Propanol, Propyl acetate, Triethylamine)	USP-NF <467>	ATM-815-0310

BIOLOGICAL

Test/Technology	Reference Methods	In-house Test Method
Determination of *Salmonella* spp. Presence in Botanicals by 3M Molecular Detection System	USP-NF <2022> USP-NF <2023>	ATM-815-0315
Enterobacteria Count by Petrifilm in Botanicals	USP-NF <2021> USP-NF <2023>	ATM-815-0318
Escherichia coli by Petrifilm in Botanicals	USP-NF <2022> USP-NF <2023>	ATM-815-0319
Total Aerobic Counts by Petrifilm in Botanicals	USP-NF <2021> USP-NF <2023>	ATM-815-0316
Total Combined Yeast & Molds by Petrifilm in Botanicals	USP-NF <2021> USP-NF <2023>	ATM-815-0317

Accredited Laboratory

A2LA has accredited

ALKEMIST LABS

Garden Grove, CA

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 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 15th day of January 2024

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3851.01
Valid to February 28, 2026

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