



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

LEGEND TECHNICAL SERVICES, INC.
 88 Empire Drive
 St Paul, MN 55103
 Tom Barrett Phone: 651-221-4060

CHEMICAL

Valid To: March 31, 2024

Certificate Number: 2950.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following methods on paint, surface coatings, children's metal products, children's non-metal products and materials including medical devices, Industrial Hygiene diffusive samplers and filters and for analyte categories applicable to the National Environmental Lead Laboratory Accreditation Program:

<u>Test/Technology:</u>	<u>Internal Test Method²:</u>	<u>External Test Method²:</u>
<u>Consumer Products:</u>		
Lead in Paints, Surface Coatings, Children's and other Consumer Metal/Non-Metal Products (ICP/OES)	LABIH-009; LABENV-081; LABIND-060, LABIND-062	CPSC-CH-E1001-08.3 CPSC-CH-E1002-08.3 CPSC-CH-E1003-09.1 EPA 6010D EPA 3050B (M)
Phthalates in Children's and Other Consumer Products* (GC/MS)	LABIND-061; LABENV-021	CPSC-CH-C1001-09.4 EPA 8270E
<u>Materials (including Medical Devices):</u>		
Additives in Polyolefins (HPLC and UPLC/UV)*	LABIND-031	ASTM D6953 ASTM D7210 ISO 10993: Part 18
Ash Content (Gravimetric)	LABIND-032	ASTM D5630-06
Extractables Preparation	LABIND-045 LABIND-088	ASTM G120 ASTM F2459 ASTM F619 ISO 10993: Part 18 ISO 10993: Part 12 USP <1663>
Fatty Acids (UPLC/MS)*	LABIND-071	ISO 10993: Part 18
Metals (ICP/OES)*	LABENV-081, LABENV-042, LABENV-043	EPA 6010D ISO 10993: Part 18
Metals (ICP/MS)*	LABENV-082, LABENV-065	EPA 6020B ISO 10993: Part 18

<u>Materials (including Medical Devices) (cont.):</u>		
<u>Test/Technology:</u>	<u>Internal Test Method(s)²:</u>	<u>External Test Method²:</u>
Semi-Volatiles (GC/MS)*	LABENV-021	EPA 8270E ISO 10993: Part 18
Thermal Gravimetric Analysis (TGA)	EQUIP-085	ASTM E1131
Thermal Transitions by Differential Scanning Calorimetry (DSC)	EQUIP-063	ASTM D3418 USP <661> USP <661.1>
Volatiles in Air (GC/MS)*	LABENV-067	EPA TO-15 ISO 18562: Part 3
Volatiles (GC/MS)*	LABENV-020	EPA 8260D ISO 10993: Part 18

<u>Emerging Contaminants:</u>		
Analysis of Perfluoroalkyl Substances (UPLC/MS/MS)*	LABENV-083 LABENV-084	EPA 537.1 (M) ASTM D7968 (M)

Industrial Hygiene Laboratory Accreditation Program		
<u>Test/Technology:</u>	<u>Internal Test Method(s)²:</u>	<u>External Test Method²:</u>
Ethylene Oxide in Diffusive Samplers (GC/ECD)	LABIH-013	NIOSH 1614
Metals in Filters* (ICP/OES)	LABIH-009, LABENV-081	NIOSH 7303
Volatiles in Air (GC/MS)*	LABENV-067	EPA TO-15

Environmental Lead Laboratory Accreditation Program		
<u>Test:</u>	<u>Internal Test Method(s)²:</u>	<u>External Test Method²:</u>
Airborne Dust (ICP/OES)	LABIH-009; LABENV-081	EPA SW-846 3050 EPA SW-846 6010D NIOSH 7303
Lead in Paint (ICP/OES)	LABIH-009; LABENV-081	EPA SW-846 3050 EPA SW-846 6010D
Lead in Soil (ICP/OES)	LABIH-009; LABENV-081	EPA SW-846 3050 EPA SW-846 6010D
Settled Dust by Wipe (ICP/OES)	LABIH-009; LABENV-081	EPA SW-846 3050 EPA SW-846 6010D

Nicotine Products		
<u>Test/Technology:</u>	<u>Internal Test Method(s)²:</u>	<u>External Test Method²:</u>
Analysis of Glycidol, Ethylene Glycol, and Diethylene Glycol (GC-FID)	LABIND-111	-----
Nicotine Products, cont.		
<u>Test/Technology:</u>	<u>Internal Test Method(s)²:</u>	<u>External Test Method²:</u>
Analysis of Propylene Glycol and Glycerin (HPLC-RI)	LABIND-107	-----
Analysis of Select Carbonyls (Aldehydes) (UPLC-UV)*	LABIND-112	-----
Analysis of Select Nitrosamines and Nicotine Degradants (UPLC/MS/MS)*	LABIND-108	-----
Analysis of Water Activity	LABIND-113	-----
Determination of Bulk Density	LABIND-114	-----
Determination of Specific Gravity	LABIND-117	-----
Menthol Assay (HPLC-RI)	LABIND-106	-----
Nicotine Assay (UPLC-UV)	LABIND-099	-----
Percent Moisture Determination	LABIND-109	-----
pH Analysis	LABIND-101	-----

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with A2LA's R243 - *Specific Requirements - Cannabis Testing Laboratory Accreditation Program*, containing the ASA (Americans for Safe Access) Laboratory Requirements¹, accreditation is granted to this laboratory to perform the following tests on hemp and medical cannabis:

<u>Test/Technology:</u>	<u>Internal Test Method(s)²:</u>	<u>External Test Method²:</u>
<u>Medical Cannabis and Hemp:</u>		
Analysis of Aerobic Bacteria (3M™ Petrifilm™)	MICRO-001	AOAC 990.12
Analysis of Bile Tolerant Gram-Negative Bacteria (3M™ Petrifilm™)	MICRO-006	AOAC 2003.01
Analysis of <i>Salmonella</i> (3M™ Petrifilm™)	MICRO-005	AOAC 2014.01
Analysis of Total Coliforms/ <i>Escherichia Coli</i> (3M™ Petrifilm™)	MICRO-003	AOAC 991.14
Analysis of Yeast and Mold (3M™ Petrifilm™)	MICRO-002	AOAC 997.02
Cannabinoid Potency and Profile (UPLC-UV)*	LABIND-077	-----

<u>Medical Cannabis and Hemp, cont.:</u>		
<u>Test/Technology:</u>	<u>Internal Test Method(s)²:</u>	<u>External Test Method²:</u>
Heavy Metals (ICP/OES, ICP/MS)* Hotblock Digestion for ICP-OES Hotblock Digestion for ICP/MS	LABENV-081, LABENV-043, LABENV-082, LABENV-065	EPA 6010D EPA 3050B (M) EPA 6020B EPA 3050B (M)
Mycotoxins (Aflatoxins) (UPLC/MS/MS)*	LABIND-078	-----
Pesticide Residues and Plant Growth Regulators (UPLC/MS/MS) (QuEChERS)*	LABIND-105	-----
Terpenes (GC/MS)*	LABIND-079	EPA 8270E
Total Residual Solvents (GC/FID)	LABIND-081	-----
Analysis of Water Activity	LABIND-113	-----
Percent Moisture Determination	LABIND-077	-----

¹ The Consumer Product Safety Improvement Act (CPSIA) requires that every children's product subject to a federal consumer product safety requirement be tested by a Consumer Product Safety Commission (CPSC) accepted laboratory for compliance with the applicable federal children's product safety requirements. Accreditation by A2LA does not infer acceptance by the CPSC. Please verify this organization's acceptance status by using the CPSC's searchable database, located at <http://www.cpsc.gov/cgi-bin/labsearch/>.

² When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is required to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories.

(M)= Modified method

* Denotes noted specific analytes that the lab is accredited for. The specific analytes that the lab is accredited for are noted below:

Phthalates (Consumer Products): Butyl benzyl phthalate, Di(2-ethylhexyl)phthalate, Dicyclohexyl phthalate, Diethyl phthalate, Diisobutyl phthalate, Diisodecyl phthalate, Diisononyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-hexyl phthalate, Di-n-octyl phthalate, and Dipentyl phthalate.

Additives (HPLC): BHEB, BHT, Erucamide (Slip Agent), Irgafos 168, Irganox 1010, Irganox 1076, Irganox 1330FF, Irganox 3114FF, Irganox 3790, Isonox 129, and Tinuvin 328.

Fatty Acids (UPLC/MS): Hexanoic acid, Heptanoic acid, Octanoic acid, Nonanoic acid, Decanoic acid, 10-Hendecenoic acid, Undecanoic acid, Dodecanoic acid, Tetradecanoic acid, Hexadecanoic acid, Oleic acid, and Octadecanoic acid.

Metals (ICP/OES): Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, and Zinc.

Metals (ICP/MS): Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdeum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, and Zinc.

Semi-Volatiles (GC/MS): 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,2-Diphenylhydrazine, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2,2'-oxybis(1-chloropropane), 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dichlorophenol, 2,6-Dinitrotoluene, 2-Chloronaphthalene, 2-Chlorophenol, 2-Methylnaphthalene, 2-Methylphenol, 2-Nitroaniline, 2-Nitrophenol, 3&4-Methylphenol, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4,6-Dinitro-2-methylphenol, 4-Bromophenyl phenyl ether, 4-Chloro-3-methylphenol, 4-Chloroaniline, 4-Chlorophenyl phenyl ether, 4-Nitroaniline, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Aniline, Anthracene, Benzidine, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Benzoic acid, Benzyl alcohol, Bis(2-chloroethoxy)methane, Bis(2-chloroethyl)ether, Butyl benzyl phthalate, Carbazole, Chrysene, Di(2-ethylhexyl)phthalate, Dibenz(a,h)anthracene, Dibenzofuran, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Hexachloroethane, Indeno (1,2,3-cd) pyrene, Isophorone, Naphthalene, Nitrobenzene, N-Nitrosodimethylamine, N-Nitrosodi-n-propylamine, N-Nitrosodiphenylamine, Pentachlorophenol, Phenanthrene, Phenol, and Pyrene.

Volatiles (GC/MS): 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichlorotrifluoroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,1-Dichloropropene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,3-Dichloropropane, 1,4-Dichlorobenzene, 2,2-Dichloropropane, 2-Butanone, 2-Chlorotoluene, 4-Chlorotoluene, Acetone, Allyl chloride, Benzene, Bromobenzene, Bromochloromethane, Bromodichloromethane, Bromoform, Bromomethane, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, Dibromochloromethane, Dibromomethane, Dichlorodifluoromethane, Dichlorofluoromethane, Ethyl ether, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, m,p-Xylene, Methyl isobutyl ketone, Methyl tert-butyl ether, Methylene chloride, Naphthalene, n-Butylbenzene, n-Propylbenzene, o-Xylene, p-Isopropyltoluene, sec-Butylbenzene, Styrene, tert-Butylbenzene, Tetrachloroethene, Tetrahydrofuran, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, and Vinyl chloride.

Cannabinoids (UPLC-UV): Cannabichromene (CBC), Cannabidiol (CBD), Cannabidiolic Acid (CBDA), Cannabigerol (CBG), Cannabigerolic Acid (CBGA) Cannabinol (CBN), Delta-8-Tetrahydrocannabinol (d8-THC), Delta-9-Tetrahydrocannabinol (d9-THC), and (-)-trans-Delta9-Tetrahydrocannabinol Acid A (THCA-A).

Mycotoxins/Aflatoxins (UPLC/MS/MS): Aflatoxin B1, Aflatoxin B2, Aflatoxin G1, Aflatoxin G2, and Ochratoxin A.

Pesticides (UPLC/MS/MS): Acetamiprid, Aldicarb, Azoxystrobin, Bifenazate, Bifenthrin, Boscalid, Carbaryl, Carbofuran (Furadan), Chlorantraniliprole, Clofentezine, Cypermethrin, Diazinon, Dichlorvos, Dimethoate, Dursban, Ethoprophos, Etofenprox, Etoxazole, Fenoxycarb, Fenpyroximate, Flonicamid, Imazalil, Imidacloprid, Kresoxim methyl, Malathion, Metalaxyl, Methiocarb, Methomyl, Myclobutanil, Naled, Oxamyl, Permethrin, Phosmet, Piperonyl butoxide, Prallethrin, Propiconazole, Propoxur, Pyrethrin I, Pyrethrin II, Pyridaben, Spinosad, Spiromesifen, Spirotetramat, Spiroxamine, Thiacloprid, Thiamethoxam.

Terpenes (GC/MS): (-)-Alpha-Bisabolol, (-)-beta-Pinene, (-)-Guaiol, (-)-Isopulegol, (R)-(+)-Limonene, alpha-Humulene, alpha-Pinene, alpha-Terpinene, beta-Myrcene, Camphene, delta-3-carene, gamma-Terpinene, Geraniol, Linalool, Nerolidol, Ocimene, p-Isopropyltoluene (p-Cymene), Terpinolene, and trans-Caryophyllene.

Total Residual Solvents (GC/FID): Ethanol, n-Hexane, and n-Pentane.

PFAS Compounds (UPLC/MS/MS): 6:2 Fluorotelomersulfonate (6:2 FTS), 8:2 Fluorotelomersulfonate (8:2 FTS), Hexafluoropropyleneoxide dimer acid HFPO-DA (Gen X), N-Ethylperfluorooctanesulfonamidoacetic acid (N-EtFOSAA), N-Methylperfluorooctanesulfonamidoacetic acid (N-MeFOSAA), Perfluoro-1-butanefluorobutanesulfonate (PFBS), Perfluoro-1-decanesulfonate (PFDS), Perfluoro-1-hexanesulfonate (PFHxS), Perfluoro-1-octanesulfonamide (FOSA-I), Perfluoro-1-octanesulfonate (PFOS), Perfluoro-n-butyric Acid (PFBA), Perfluoro-n-decanoic Acid (PFDA), Perfluoro-n-dodecanoic Acid (PFDOA), Perfluoro-n-heptanoic Acid (PFHpA), Perfluoro-n-hexanoic Acid (PFHxA), Perfluoro-n-nonanoic Acid (PFNA), Perfluoro-n-octanoic Acid (PFOA), Perfluoro-n-pentanoic Acid (PFPeA), Perfluoro-n-tetradecanoic Acid (PFTDA), Perfluoro-n-tridecanoic Acid (PFTrDA), and Perfluoro-n-undecanoic Acid (PFUDA).

Metals in Filters (ICP/OES): Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Cobalt, Copper, Chromium, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, and Zinc.

Volatiles in Air (TO-15): 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,3-Butadiene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Butanone, 4-Ethyltoluene, Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, Cyclohexane, Dibromochloromethane, Dichlorodifluoromethane, Dichlorotetrafluoroethane, Ethanol, Ethyl acetate, Ethylbenzene, Hexachlorobutadiene, Isopropyl alcohol, m,p-Xylene, Methyl butyl ketone, Methyl isobutyl ketone, Methyl tert-butyl ether, Methylene chloride, Naphthalene, n-Heptane, n-Hexane, o-Xylene, Propylene, Styrene, Tetrachloroethene, Tetrahydrofuran, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, Trichlorotrifluoroethane, Vinyl acetate, and Vinyl chloride.

Select Carbonyls (Aldehydes) (UPLC-UV): 2,3-Pentanedione, Acetaldehyde, Acetoin, Acetone, Acrolein, Butyraldehyde, Crotonaldehyde, Diacetyl, Formaldehyde, and Furfural.

Select Nitrosamines and Nicotine Degradants (UPLC/MS/MS): (2'S)-Nicotine 1-Oxide, Anabasine, (Beta)-Nicotyrine, Cotinine, NNK, NNN, and Normicotine.



Accredited Laboratory

A2LA has accredited

LEGEND TECHNICAL SERVICES, INC.

St. Paul, MN

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 19th day of July 2022.

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

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2950.01
Valid to March 31, 2024
Revised February 16, 2024

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