



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

**Molecular Epidemiology, Inc. (MEI)
dba IEH Laboratories and Consulting Group**

**13741 Lake City Way NE
Seattle, WA 98125
(and satellite location as listed on scope)**

Fulfills the requirements of

ISO/IEC 17025:2017

and

**AOAC International – Guidelines for Laboratories Performing
Microbiological and Chemical Analyses of Food, Dietary Supplements,
and Pharmaceuticals – Revision August 2018**

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

Jason Stine, Vice President

Expiry Date: 31 January 2025

Certificate Number: AT-1516



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
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).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

AOAC INTERNATIONAL – GUIDELINES FOR LABORATORIES PERFORMING MICROBIOLOGICAL AND CHEMICAL ANALYSES OF FOOD, DIETARY SUPPLEMENTS, AND PHARMACEUTICALS – REVISION AUGUST 2018

Molecular Epidemiology, Inc. (MEI) dba IEH Laboratories and Consulting Group

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Seattle, WA 98125

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TESTING

Valid to: **January 31, 2025**

Certificate Number: **AT-1516**

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Aerobic Plate Count	MB566 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Combined Yeast and Mold Count	MB567 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Enterobacterial Count	MB568 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Listeria monocytogenes	MB098 USDA MLG Chapter 8.10	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Listeria monocytogenes	MB935 FDA BAM chapter 10	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Listeria monocytogenes, Listeria sp.	MB588 ISO 11290-1	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Presence of Clostridium sp.	MB564 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Presence of E. coli	MB563 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Presence of Pseudomonas aeruginosa	MB565 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Presence of Salmonella sp.	MB562 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Presence of Staphylococcus aureus	MB561 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Salmonella Cultural Confirmation (USDA MLG Procedure)	MB094 (MB094.01) USDA MLG 4	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Salmonella sp.	MB934 FDA BAM chapter 5	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Salmonella sp.	MB581 ISO 6579-1	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Staphylococcus sp.	MB582 ISO 6888-1	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Nucleic Acid Extraction	MB541	Plant / Food Material, Animal Tissue, Bacterial Cells	Enzymatic Digestion

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Food Analytical Prep	MB001-MEI Sample Preparation for Microbial Analyses	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	IEH Method
Microscopic Analysis of Microorganisms	MB457-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Light Microscope
Detection of Trichinella spiralis-Magnetic Stirrer Method	MB205	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Magnetic Stirrer Method
Total Coliforms / E. coli	MB928 US EPA 1604	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Membrane Filtration
Aerobic Plate Count	MB927 CMMEF Chap. 7	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Membrane Filtration-SMA
Aerobic Plate Count	MB571 (MB073.06) AOAC RI PTM 051702	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Microfilm
Coliform / E. coli Count	MB569 (MB072.04) AOAC RI PTM 051702	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Microfilm
Enterobacteriaceae Count	MB573	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Microfilm
Yeast and Mold Count	MB570 AOAC RI PTM 051702	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Microfilm
IEH – APC – MPN (12 hours)	MB704	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	MPN Method

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
IEH – E. coli – MPN (12 hours)	MB081-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	MPN Method
3-Tube MPN and 5-Tube MPN Total Coliform / FC / generic E. coli	MB923 FDA BAM 8th Ed.; SM 9060, 9221-B,-C,-D,-E,-F	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Multiple Tube Fermentation
E. coli O157, EHEC, STEC, Salmonella	MB926 USDA MLG 4, 5	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Multiplex PCR
DNA Sequencing	MB485	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Oxford Nanopore Technology
Campylobacter	MB216	Food Products and Environmental Samples	PCR System
Cronobacter sp. / Cronobacter sakazakii/ Salmonella sp.	MB708 FDA BAM, Ch. 29, Modified	Food Products and Environmental Samples	PCR System
E. coli O157, EHEC, STEC	MB217 (MB217.01) AOAC-RI PTM 100701	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
Listeria sp. and L. monocytogenes	MB316 AOAC-RI PTM 021201	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
Process Control Index	MB491	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
Salmonella sp.	MB217 (MB217.01) AOAC-RI PTM 100701	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
Salmonella sp. Cultural Confirmation	MB315	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Shigella sp.	MB222	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
Aerobic Plate Count	MB078 AOAC 990.12	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Enterobacteriaceae Plate Count	MB444 AOAC 2003.01: FDA BAM, 8th Ed.	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Staphylococcus aureus	MB443 AOAC 2003.07; AOAC 2003.08: AOAC 2003.11	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Thermotolerant (Fecal) Coliform Count	MB341	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Total Coliform / E. coli Count	MB072 AOAC 991.14; AOAC 998.08	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Yeast and Mold Count	MB492-MEI AOAC 990.12	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Lactic Acid Bacteria	MB343-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm Anaerobic Incubation
Sample6 Listeria Detection Assay	MB710	Environmental Samples	Phage Based Detection
Listeria spp. and L. monocytogenes Cultural Confirmation	MB069	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Plate / PCR System
Aerobic Plate Count	MB533 CMMEF, 4th Ed.	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Fecal Streptococcus and Enterococcus	MB 212 CMMEF Ch. 9, 4th Ed.	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate
Lactic Acid Bacteria Count	MB231 CMMEF, 4th Ed.	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate
Mesophilic Aerobic Spore Formers	MB235 CMMEF Chapter 22.51	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate
Pseudomonas sp./aeruginosa Count	MB391 FDA BAM Ch. 3	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate
Thermophilic Aerobic Spore Formers	MB236 CMMEF Chapter 25	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate
Anaerobic Plate Count	MB073 AOAC 966.23; FDA BAM, Ch. 3	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate Anaerobic Incubation
Enterobacteriaceae	MB583 ISO 21528-2	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate Overlay
Yeast and Mold Count	MB084 FDA BAM Chapter 18	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate / Spread Plate
Bacterial Sub-typing by Pulsed Field Gel Electrophoresis	MB454-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pulsed Field Gel Electrophoresis
Listeria monocytogenes, Listeria sp.	MB587	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Real Time PCR

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Pathogenic E. coli	MB929 BAM Ch. 4a	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Real Time PCR
Recovery and Detection of Cyclospora cayetanensis from Agricultural Water	MB940	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Real Time PCR
Atlas Campylobacter Detection Assay	MB250	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Atlas LE Listeria Environmental Detection Assay	MB241	Environmental Samples	Roka Atlas
Atlas Listeria LSP Detection Assay	MB240	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Atlas Listeria monocytogenes LmG2 Detection Assay	MB242	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Atlas Salmonella SEN Detection Assay	MB244	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Atlas STEC EG2 Combo Detection Assay	MB247	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Bacillus cereus	MB206 FDA BAM Chapter 14	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Spread Plate
E. coli O157 / STEC	MB038 (MB038.01); USDA Cultural Confirmation Only USDA MLG 5	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Spread Plate

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Staphylococcus aureus	MB445 FDA BAM Chapter 12	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Spread Plate
Phenotypic Analysis of Microorganisms	MB473-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Standard Biochemical Method

Chemical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Gluten	MB 538 Detection of Gliadin (Gluten) by ELISA Food Products	Food Products	ELISA System
Various Allergens	MB 539 Detection of Allergen Residue by ELISA	Food Products	ELISA System
Allergen Residue	MB 546 Detection of Allergen Residue by Lateral Flow Device	Food Products	Lateral Flow Device
Gluten	MB 548 Detection of Gluten / Gliadin by Lateral Flow Device	Food Products	Lateral Flow Device
Detection and Identification of Allergens	MB 457	Food Products	PCR System
pH	MB 183	Food Products	pH meter
Determination of Water Activity	MB 559 The Determination of Water Activity	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Water Activity Meter

Satellite Location

15300 Bothell Way NE
Lake Forest Park, WA 98155
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Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Campylobacter ¹	MB216	Food Products and Environmental Samples	PCR System
Cronobacter sp. / Cronobacter sakazakii/ Salmonella sp. ^{#1}	MB708 FDA BAM, Ch. 29, Modified	Food Products and Environmental Samples	PCR System
Salmonella sp. Cultural Confirmation ¹	MB315	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
Listeria spp. and L. monocytogenes Cultural Confirmation ¹	MB069	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Plate / PCR System
Quantification of Cotton species	MB 585	Plant	Real Time PCR
Identification of Microorganisms by DNA Sequencing	MB450	Food Products, Pharmaceuticals, Environmental Samples	Sanger Sequencing
E. coli O157 / STEC ¹	MB038 (MB038.01); USDA Cultural Confirmation Only USDA MLG 5	Food Products, Pharmaceuticals, Environmental Samples	Spread Plate
Nextera XT Library Preparation for Sequencing on a Miseq	MB575	Food Products, Pharmaceuticals, Environmental Samples	Whole Genome Sequencing
Sequencing Run on a Miseq	MB576	Food Products, Pharmaceuticals, Environmental Samples	Whole Genome Sequencing

Chemical

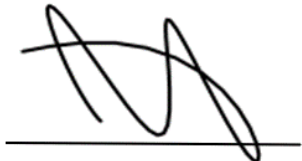
Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Nucleic Acid Extraction	MB541	Plant / Food Material, Animal Tissue, Bacterial Cells	Enzymatic Digestion
<p>GMO Detection Screening elements: P35S, NOS, FMV; Alfa Alfa: J101xJ163 Canola: GT73 (RT73), MS8xRF3 Corn: Bt11, MON810, MON89034, NK603, DAS-59122-7, MON88017, TC1507, MIR604, T25, GA21, MIR162 Cotton: LLCotton25, Mon1445, MON88913, MON531, MON15985, GHB614, 281-24-236 x 3006-210-23 Papaya: 55-1/63-1 Potatoe: 1210amk, EH92-527-1 Soybean: GTS-40-3-2, MON89788, A5547-127, A2704-12 Sugar beet: H7-1 Yellow summer squash, zucchini: CZW-3, ZW20</p>	<p>MB 544 Detection and Identification of GM Crops by Multiplex PCR</p>	<p>Plant, Food Material</p>	<p>PCR System</p>
Meat Authentication (Beef, Pork, Lamb, Horse, Turkey and Chicken)	MB542	Meat	PCR System

Chemical

<p>Detection and Quantification of GM crops</p> <p>Screening elements: P35S, NOS, FMV;</p> <p>Alfa Alfa: J101xJ163</p> <p>Canola: GT73 (RT73), MS8xRF3 MON88302</p> <p>Corn: Bt11, MON810, MON89034, NK603, DAS-59122-7, MON88017, TC1507, MIR604, T25, GA21, MIR162</p> <p>Cotton: LLCotton25, Mon1445, MON88913, MON531, MON15985, GHB614, 281- 24-236 x 3006-210-23</p> <p>Papaya: 55-1/63-1</p> <p>Soybean: GTS-40-3-2, MON89788, A5547-127, A2704-12, DAS- 44406</p> <p>Sugar beet: H7-1</p> <p>Yellow summer squash, zucchini: CZW-3, ZW20</p>	<p>MB 545</p>	<p>Plant, Food Material</p>	<p>Real Time PCR</p>
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Note:

1. Confirmatory testing initiated at the Lake City Way facility are completed at the Lake Forest Park facility.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1516.



Jason Stine, Vice President