



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 ANALYSIS 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.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 31 January 2023
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 ANALYSIS OF FOOD, DIETARY
SUPPLEMENTS, AND PHARMACEUTICALS – REVISION AUGUST 2018**

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

13741 Lake City Way NE
Seattle, WA 98125

Fatemeh Samadpour 206-466-1758
fs@iehinc.com www.iehinc.com

TESTING

Valid to: **January 31, 2023**

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
Food Analytical Prep	MB001-MEI Sample Preparation for Microbial Analyses	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	IEH Method
<i>E. coli</i> O157 / STEC	MB038 (MB038.01); USDA Cultural Confirmation Only USDA MLG 5	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Spread Plate
<i>Salmonella</i> Cultural Confirmation (USDA MLG Procedure)	MB094 (MB094.01) USDA MLG 4	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Pathogenic <i>E. coli</i>	MB929 BAM Ch. 4a	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Real Time PCR
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
<i>E. coli</i> O157, EHEC, STEC	MB217 (MB217.01) AOAC-RI PTM 100701	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
<i>Salmonella sp.</i>	MB217 (MB217.01) AOAC-RI PTM 100701	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
<i>Salmonella sp.</i> Cultural Confirmation	MB315	Food, Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
<i>Shigella sp.</i>	MB222	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
<i>Listeria sp.</i> and <i>L. monocytogenes</i>	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
Meat Authentication (Beef, Pork, Lamb, Horse, Turkey and Chicken)	MB542	Meat	PCR System
<i>Bacillus cereus</i> Group Toxins	MB505	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	PCR System
Presence of <i>Staphylococcus aureus</i>	MB561 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Presence of <i>Salmonella sp.</i>	MB562 USP Method	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
Presence of <i>E. coli</i>	MB563 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Presence of <i>Clostridium sp.</i>	MB564 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
Presence of <i>Pseudomonas aeruginosa</i>	MB565 USP Method	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
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
Coliform / <i>E. coli</i> Count	MB569 (MB072.04) AOAC RI PTM 051702	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Microfilm™ TCEc
Yeast and Mold Count	MB570 AOAC RI PTM 051702	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Microfilm™ YMC
Aerobic Plate Count	MB571 (MB073.06) AOAC RI PTM 051702	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Microfilm™ APC
Bacterial Sub-typing by Pulsed Field Gel Electrophoresis	MB454-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pulsed Field Gel Electrophoresis

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Microscopic Analysis of Microorganisms	MB457-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Light Microscope
Phenotypic Analysis of Microorganisms	MB473-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	IEH Method VITEK Analyzer
Total Coliform / <i>E. coli</i> Count	MB072 AOAC 991.14; AOAC 998.08	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Aerobic Plate Count	MB078 AOAC 990.12	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Yeast and Mold Count	MB492-MEI AOAC 990.12	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
<i>Enterobacteriaceae</i> Plate Count	MB444 AOAC 2003.01; FDA BAM, 8 th Ed.	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples,	Petrifilm
Lactic Acid Bacteria	MB343-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples,	Petrifilm Anaerobic Incubation
<i>Staphylococcus aureus</i>	MB443 AOAC 2003.07; AOAC 2003.08; AOAC 2003.11	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Anaerobic Plate Count	MB073 AOAC 966.23; FDA BAM Ch. 3	Food, Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate Anaerobic Incubation
Lactic Acid Bacteria Count	MB231 CMMEF, 4 th 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
IEH – <i>E. coli</i> – MPN (12 hours)	MB081-MEI	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	MPN Method
IEH – APC – MPN (12 hours)	MB704	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	MPN Method
3-Tube MPN and 5-Tube MPN Total Coliform / FC / generic <i>E. coli</i>	MB923 FDA BAM, 8 th Ed.; SM 9060, 9221-B,-C,-D,-E,-F	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Multiple Tube Fermentation
Total Coliforms / <i>E. coli</i>	MB928 US EPA 1604	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Membrane Filtration
Yeast and Mold Count	MB084 FDA BAM Chapter 18	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate/Spread Plate
<i>Listeria monocytogenes</i>	MB098 USDA MLG Chapter 8.10	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
<i>Bacillus cereus</i>	MB206 FDA BAM chapter 14	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Spread Plate
<i>Staphylococcus aureus</i>	MB445 FDA BAM chapter 12	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Spread Plate
Aerobic Plate Count	MB533 CMMEF, 4 th Ed.	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate
<i>Salmonella sp.</i>	MB934 FDA BAM chapter 5	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
<i>Listeria monocytogenes</i>	MB935 FDA BAM chapter 10	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
<i>Salmonella sp.</i>	MB581 ISO 6579-1	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
<i>Staphylococcus sp.</i>	MB582 ISO 6888-1	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
<i>Enterobacteriaceae</i>	MB583 ISO 21528-2	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate Overlay
DNA Sequencing	MB485	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Oxford Nanopore Technology
Enterobacteriaceae Count	MB573	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Microfilm
Atlas <i>Listeria</i> LSP Detection Assay	MB240	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Atlas LE <i>Listeria</i> Environmental Detection Assay	MB241	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Atlas <i>Listeria monocytogenes</i> LmG2 Detection Assay	MB242	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Atlas <i>Salmonella</i> SEN Detection Assay	MB244	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Atlas STEC EG2 Combo Detection Assay	MB247	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Atlas <i>Campylobacter</i> Detection Assay	MB250	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Sample6 <i>Listeria</i> Detection Assay	MB710	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Roka Atlas
Recovery and Detection of <i>Cyclospora cayetanensis</i> from Agricultural Water	MB940	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Real Time-PCR
<i>Listeria</i> spp. and <i>L. monocytogenes</i> Cultural Confirmation	MB069	Food Products, Pharmaceuticals, Environmental	Plate/PCR System
Fecal <i>Streptococcus</i> and <i>Enterococcus</i>	MB 212 CMMEF Ch. 9, 4 th 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
Thermophilic Aerobic Spore Formers	MB236 CMMEF Chapter 25	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate
<i>Pseudomonas</i> sp./aeruginosa Count	MB391 FDA BAM Ch. 3	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Pour Plate
<i>E. coli</i> O157, EHEC, STEC, Salmonella	MB926 USDA MLG 4, 5	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Multiplex PCR

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	MB927 CMMEF Chap. 7	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Membrane Filtration-SMA
Themotolerant (Fecal) Coliform Count	MB341	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Petrifilm
Detection of <i>Trichinella spiralis</i> -Magnetic Stirrer Method	MB205	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Magnetic Stirrer Method
<i>Listeria monocytogenes</i> , <i>Listeria sp.</i>	MB588 ISO 11290-1	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Agar Plate
<i>Listeria monocytogenes</i> , <i>Listeria sp.</i>	MB587	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	RT-PCR

Chemical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Determination of Water Activity	MB559 The Determination of Water Activity	Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples	Water Activity Meter
Gluten	MB538 Detection of Gliadin (Gluten) by ELISA	Food Products	ELISA System
Various Allergens	MB539 Detection of Allergen Residue by ELISA	Food Products	ELISA System
Gluten	MB548 Detection of Gluten / Gliadin by Lateral Flow Device	Food Products	Lateral Flow Device

Chemical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Allergen Residue	MB546 Detection of Allergen Residue by Lateral Flow Device	Food Products	Lateral Flow Device
Detection and Identification of Allergens	MB547	Food Products	PCR System
Detection and Quantification of GM crops Screening elements: P35S, NOS, FMV; Alfa Alfa: J101xJ163 Canola: GT73 (RT73), MS8xRF3, MON88302 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 Soybean: GTS-40-3-2, MON89788, A5547-127, A2704-12, DAS-44406 Sugar beet: H7-1 Yellow summer squash, zucchini: CZW-3, ZW20	MB545 Plant, Food Material	Real Time PCR	
Quantification of Cotton species	MB585	Plant	Real Time PCR

Chemical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
<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 Potato: 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>MB544 Detection and Identification of GM crops by Multiplex PCR</p>	<p>Plant / Food Material</p>	<p>PCR System</p>
<p>pH</p>	<p>MB183</p>	<p>Food Products, Nutraceuticals, Pharmaceuticals, Environmental Samples</p>	<p>pH meter</p>

Satellite Location

15300 Bothell Way NE
Lake Forest Park, WA 98155
Fatemeh Samadpour 206-522-5432
fs@iehinc.com www.iehinc.com

Microbiological

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
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
IEH SARS-COV2 RT-PCR Test	MB741	Environmental Samples	Real Time PCR
Identification of Microorganisms by DNA Sequencing	MB450-MEI	Food Products, Pharmaceuticals, Environmental Samples	Sanger Sequencing

Note:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1516.



R. Douglas Leonard Jr., VP, PILR SBU