



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

LABORATORIES ADMINISTRATION, MDH
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CHEMICAL

Valid to: May 31, 2022

Certificate Number: 3525.02

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 FDA regulated foods:

<u>Test</u>	<u>Internal Method</u>	<u>Reference Method(s)</u>
Food		
Determination of Solids in Syrup (°Brix) by Means of Refractometer	CHEM-SOP-AOAC 932.12	AOAC 932.12
Determination of Trace Elements in Foods and Consumer Products Ag, Al, As, B, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sr, Tl, V, and Zn	CHEM-SOP-FCP-M	FDA Method T039, EPA Method 200.8, EPA Method 200.7, EPA Method 245.1
Determination of Water Activity in Food Products	In-House Method	Aqua Lab Manual Oregon State Univ.
Fat (Crude) in Meat and Meat Products	CHEM-SOP-AOAC 991.36	AOAC 991.36
Loss of Drying (Moisture) in Meat and Poultry Products	CHEM-SOP-AOAC 985.14	AOAC 985.14
Measurement of Percent Salt in Cheese and Meat Products	CHEM-SOP-AOAC 935.43	Modified AOAC Method 935.43
Patulin in Clear and Cloudy Apple Juices, Modified	CHEM-SOP-AOAC 2000.02	AOAC 2000.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on bottled water:

<u>Test</u>	<u>Internal Method</u>	<u>Reference Method(s)</u>
Inorganics		
Determination of Ammonia Nitrogen by Semi-Automated Colorimetry (High Level Ammonia)	CHEM-SOP-EPA 350.1	EPA Method 350.1 Revision 2.0
Determination of Chloride by Flow Injection Analysis	CHEM-SOP-SM 4500 Cl ⁻ E	SM 4500 Cl ⁻ E Rev. 21
Determination of Corrosivity by pH Measurement	CHEM-SOP-EPA SW 846 9040 C	EPA SW 846 9040 C
Determination of Free Cyanide by Potentiometric Method	CHEM-SOP-SM 4500 FC	SM 4500 CN F Rev. 21
Determination of Nitrate-Nitrite Nitrogen by Automated Colorimetry (High Level Nitrite)	CHEM-SOP-EPA 353.2	EPA Method 353.2 Rev. 2.0
Determination of Nitrate-Nitrite Nitrogen by Automated Colorimetry	CHEM-SOP-EPA 353.2	EPA Method 353.2 Rev. 2.0
Determination of Sulfate by Flow Injection Analysis	CHEM-SOP-EPA 375.2	EPA Method 375.2 Rev. 2.0
Electrometric Determination of pH	CHEM-SOP-EPA 150.1	EPA Method 150.1 Rev. 2.0
Fluoride by Ion Selective Electrode	CHEM-SOP-SM 4500 F	SM 4500F C Rev. 21
Particulate Matter 2.5 (PM _{2.5}) in Ambient Air	CHEM-SOP EPA454-R-98-005/ R5.0-16	EPA Method 454/R-98-005
Organics		
2-Dibromomethane (EDB), 1,2-Dibromo-3-Chloropropane (DBCP), and 1,2,3-Trichloropropane (123TCP) in Water by Micro Extraction and Gas Chromatography	CHEM-SOP-EPA 504.1	EPA Method 504.1 Rev. 1.1

<u>Test</u>	<u>Internal Method</u>	<u>Reference Method(s)</u>
Organics (cont.)		
Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Extraction, Derivatization and Gas Chromatography with Electron Capture Detection	CHEM-SOP-EPA 515.3	EPA Method 515.3 Rev. 1.0
Determination of Chlorinated Pesticides in Water by Gas Chromatography with an Electron Capture Detector Toxaphene and Aroclors (1016, 1221, 1232, 1242, 1248, 1254, and 1260)	CHEM-SOP-EPA 508	EPA Method 508 Rev. 3.1
Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid- Liquid Extraction, Derivatization, and Gas Chromatography with Dual Electron Capture Detection	CHEM-SOP-EPA 552.2	EPA Method 552.2 Rev. 1.0
Determination of Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary Column Gas Chromatography/Mass Spectrometry ¹	CHEM-SOP-EPA 525.2	EPA Method 525.2 Rev. 2.0
Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)	CHEM-SOP-EPA 537.1	EPA Method 537.1
Gas Chromatography with Flame Ionization Detector (GC-FID) Determination of Alcohols in Hand Sanitizer using Modified FDA: SOP-000573	CHEM-SOP-Modified FDA-000573	Modified FDA 000573
Measurement of N Methylcarbamoyloximes and N-Methyl-Carbamates in Water by Direct Aqueous Injection HPLC with Post Column Derivatization	CHEM-SOP-EPA 531.2	EPA Method 531.2 Rev. 1.0

<u>Test</u>	<u>Internal Method</u>	<u>Reference Method(s)</u>
Organics (cont.)		
Measurement of Purgeable Organic Compounds by Capillary Column Gas Chromatography/Mass Spectrometry ²	CHEM-SOP-EPA 524.2	EPA Method 524.2 Rev. 4.1
Trace Metals		
Determination of Mercury in Water by Cold Vapor Atomic Absorption Spectrometry	CHEM-SOP-EPA 245.1	EPA Method 245.1 Rev. 3.0
Trace Metals cont.		
Determination of Metals and Trace Elements in Waters and Wastes by Inductively Coupled Plasma- Atomic Emission Spectrometry Ag, Al, As, B, Ba, Be, Ca, Cd, Ce, Cr, Co, Cu, Fe, Hg, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, SiO ₂ , Sn, Sr, Ti, Tl, V, and Zn	CHEM-SOP-EPA 200.7	EPA Method 200.7 Rev. 4.4
Determination of Trace Elements in Waters and Wastes by Inductive Coupled Plasma - Mass Spectrometry Ag, Al, As, Ba, Be, Cd, Cr, Co, Cu, Hg, Mn, Mo, Ni, Pb, Sb, Se, Tl, Th, U, V, and Zn	CHEM-SOP-EPA 200.8	EPA Method 200.8 Rev. 5.4
Radiation		
Gross Alpha and Gross Beta Radioactivity in Drinking Water	CHEM-SOP-EPA 900.0	EPA 900.0
Gross Alpha in Drinking Water: Coprecipitation Method	CHEM-SOP-SM7110C	Standard Method 7110C, 21 st edition, GPC, 2005
Radium-226 Emanation Technique	CHEM-SOP-EPA 903.1	EPA 903.1
Radium-228	CHEM-SOP-EPA 904.0	EPA 904.0
Tritium	CHEM-SOP-EPA 906.0	EPA 906.0

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on blood and urine:

<u>Test</u>	<u>Internal Method</u>	<u>Reference Method(s)</u>
Organics		
Analysis of OPNA Metabolites in Urine by High Performance Liquid Chromatography/Isotope Dilution Mass Spectrometry	CHEM-SOP-CDC-CTL-NAM 3.01	CDC Method CTL-NAM 3.01
Determination of Cyanide in Blood by Headspace Gas Chromatography with Mass Selective Detection	CHEM-SOP-CDC-CTL-CN-1.02	CDC Method CTL-CN 1.02
Determination of Ricin and Abrin Biomarkers by Solid Phase Extraction and High Performance/Liquid Chromatography Isotope Dilution Tandem Mass Spectrometry	CHEM-SOP-CDC-CTL-ABRC 2.0	CDC Method CTL-ABRC 2
Determination of Tetramethylene disulfotetramine (Tetramine) in Urine by Solid Phase Extraction/Gas Chromatography/Isotope Dilution Mass Spectrometry	CHEM-SOP-CDC-CTL-TETRA 1.2	CDC Method CTL-TETRA 1.2
Determination of Volatile Organic Compounds in Whole Blood by Gas Chromatography/Mass Spectrometry ³	CHEM-SOP-CDC-VOC-13 OD	CDC Method No 13-OD
Trace Metals		
Determination of Mercury, Lead, Cadmium, Manganese & Selenium in Whole Blood by Inductively Coupled Plasma/Mass Spectrometry	CHEM-SOP-CDC-MEWB-3016	CDC Method, Multi-Elements in Whole Blood, No. 3016.8
Determination of Multi Elements in Urine by Inductively Coupled Plasma/DRC-Mass Spectrometry As, Ba, Be, Cd, Pb, Tl, and U	CHEM-SOP-CDC-MEU-3018	CDC Method, Multi-Elements in Urine, No. 3018.4 and 3018A.3

¹Please find the list of organic compounds below for the “Determination of Organic Compounds in Drinking water by Liquid-Solid Extraction and Capillary Column Gas Chromatography/Mass Spectrometry”:

- Alachlor
- Aldrin
- Atrazine
- Benzopyrene
- Butachlor
- Chlordane, alpha
- Chlordane, gamma
- Chlordane, trans-Nonachlor
- Di(2-ethylhexyl)adipate
- Di(2-ethylhexyl)phthalate
- Dieldrin
- Endrin
- Heptachlor
- Heptachlorepoxyde
- Hexachlorobenzene
- Hexachlorocyclopentadiene
- Lindane (HCH,gamma)
- Methoxychlor
- Metolachlor
- Metribuzin
- Propachlor
- Simazine

²Please find the list of purgeable organic compounds below for the “Measurement of Purgeable Organic Compounds by Capillary Column Gas Chromatography/Mass Spectrometry”:

- 1,1,1,2 – tetrachloroethane
- 1,1,1-trichloroethane
- 1,1,2,2 – tetrachloroethane
- 1,1,2-trichloroethane
- 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
- 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-Chlorotoluene
- 4 (p)- isopropyltoluene
- 4-Chlorotoluene
- Benzene
- Bromobenzene
- Bromochloromethane
- Bromodichloromethane
- Bromoform
- Bromomethane
- Carbontetrachloride
- Chlorobenzene
- Chloroethane
- Chloroform
- Chloromethane
- cis-1,2-Dichloroethene
- cis-1,3-Dichloropropene
- Dibromochloromethane
- Dibromomethane
- Dichlorodifluoromethane
- Ethylbenzene
- Hexachlorobutadiene
- Isopropylbenzene
- Methyl t-butyl ether
- Methylene chloride
- m-Xylene
- Naphthalene
- n-propylbenzene
- o-Xylene
- p- Xylene
- Sec-Butylbenzene
- Styrene
- tert-Amyl Methyl Ether
- Tert-Butylbenzene
- Tetrachloroethene
- Toluene
- Total THMs



- Total Xylenes
- trans-1,2-Dichloroethene
- trans-1,3-Dichloropropene
- Trichloroethene
- Trichlorofluoromethane
- Vinyl chloride

³Please find the list of volatile organic compounds below for the “Determination of Volatile Organic Compounds in Whole Blood by Gas Chromatography/Mass Spectrometry”:

- 1,2-Dichloroethane
- Benzene
- Carbon tetrachloride
- Chloroform
- Ethylbenzene
- m & p- Xylene
- o-Xylene
- Styrene
- Tetrachloroethylene
- Toluene





Accredited Laboratory

A2LA has accredited

LABORATORIES ADMINISTRATION, MDH

Baltimore, MD

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 22nd day of May 2020.

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

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3525.02
Valid to May 31, 2022

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