



## TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

### Scope of Accreditation

Accredited Laboratory No. 368

**Legal Name of Accredited Laboratory:** Labstat International Inc.

Location Name or Operating as (if applicable): Labstat International

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<b>SCC File Number:</b>	15420
<b>Accreditation Standard(s):</b>	ISO/IEC 17025:2005
<b>Fields of Testing:</b>	Biological Chemical/Physical
<b>Program Specialty Area:</b>	Agriculture Inputs, Food, Animal Health and Plant Protection (AFAP)
<b>Initial Accreditation:</b>	2001-01-22
<b>Most Recent Accreditation:</b>	2020-01-19
<b>Accreditation Valid to:</b>	2021-01-22

*Remarque: La présente portée d'accréditation existe également en français, sous la forme d'un document distinct.*

*Note: This scope of accreditation is also available in French as a separately issued document.*



**ANIMAL AND PLANTS (AGRICULTURE)**

Agricultural products (except food and chemicals):

**Tobacco**

**(1. Health Canada Tobacco Reporting Regulations Official Methods - Chemistry)**

T-101	Determination of Ammonia in Mainstream Tobacco Smoke
T-102	Determination of 1- and 2- Aminonaphthalene and 3- and 4- Aminobiphenyl in Mainstream Tobacco Smoke
T-103	Determination of Benzo[a]pyrene in Mainstream Tobacco Smoke
T-104	Determination of Selected Carbonyls in Mainstream Tobacco Smoke
T-105	Determination of Eugenol in Mainstream Tobacco Smoke
T-106	Determination of Filter Efficiency in Mainstream Tobacco Smoke
T-107	Determination of Hydrogen Cyanide in Mainstream Tobacco Smoke
T-108	Determination of Mercury in Mainstream Tobacco Smoke
T-109	Determination of Ni, Pb, Cd, Cr, As and Se in Mainstream Tobacco Smoke
T-110	Determination of Oxides of Nitrogen in Mainstream Tobacco Smoke
T-111	Determination of Nitrosamines in Mainstream Tobacco Smoke
T-112	Determination of Pyridine, Quinoline and Styrene in Mainstream Tobacco Smoke
T-113	Determination of Mainstream Tobacco Smoke pH
T-114	Determination of Phenolic Compounds in Mainstream Tobacco Smoke
T-115	Determination of "Tar", Nicotine and Carbon Monoxide in Mainstream Tobacco Smoke
T-116	Determination of 1,3- Butadiene, Isoprene, Acrylonitrile, Benzene and Toluene in Mainstream Tobacco Smoke
T-201	Determination of Ammonia in Sidestream Tobacco Smoke
T-202	Determination of 1- and 2- Aminonaphthalene and 3- and 4- Aminobiphenyl in Sidestream Tobacco Smoke



T-203A	Determination of Benzo[a]pyrene in Sidestream Tobacco Smoke
T-203B	Determination of Benzo[a]pyrene in Sidestream Tobacco Smoke (GC/MS)
T-204	Determination of Selected Carbonyls in Sidestream Tobacco Smoke
T-205	Determination of Hydrogen Cyanide in Sidestream Tobacco Smoke
T-206	Determination of Mercury in Sidestream Tobacco Smoke
T-207	Determination of Toxic Trace Metals in Sidestream Smoke
T-208	Determination of Oxides of Nitrogen in Sidestream Tobacco Smoke
T-209	Determination of Nitrosamines in Sidestream Tobacco Smoke
T-210	Determination of Pyridine and Quinoline in Sidestream Tobacco Smoke
T-211	Determination of Phenolic Compounds in Sidestream Tobacco Smoke
T-212	Determination of "Tar" and Nicotine in Sidestream Tobacco Smoke
T-213	Determination of 1,3-Butadiene, Isoprene, Acrylonitrile, Benzene, Toluene and Styrene in Sidestream Tobacco Smoke
T-214	Determination of Carbon Monoxide (CO) in Sidestream Tobacco Smoke
T-301	Determination of Alkaloids in Whole Tobacco
T-302	Determination of Ammonia in Whole Tobacco
T-304	Determination of Humectants in Whole Tobacco
T-306	Determination of Ni, Pb, Cd, Cr, As, Se and Hg in Whole Tobacco
T-307	Determination of Benzo[a]pyrene in Whole Tobacco
T-308	Determination of Nitrate from Whole Tobacco
T-309	Determination of Nitrosamines in Whole Tobacco
T-310	Determination of Whole Tobacco pH
T-311	Determination of Triacetin in Whole Tobacco
T-312	Determination of Sodium Propionate in Whole Tobacco
T-313	Determination of Sorbic Acid in Whole Tobacco
T-314	Determination of Eugenol in Whole Tobacco



T-401	Preparation of Cigarettes from Packaged Leaf Tobacco for Testing
T-402	Preparation of Cigarettes, Cigarette Tobacco, Cigars, Kreteks, Bidis, Packaged Leaf Tobacco, Pipe Tobacco and Smokeless Tobacco for Testing

**(2. Health Canada Tobacco Reporting Regulations Official Methods - Toxicology)**

T-501	Bacterial Reverse Mutation Assay for Mainstream Tobacco Smoke
T-502	Neutral Red Uptake Assay for Mainstream Tobacco Smoke
T-503	In Vitro Micronucleus Assay for Mainstream Tobacco Smoke

**3. Standard Methods**

AOAC 963.05	Chlorides in Tobacco
AOAC 966.02	Moisture in Tobacco
ASTM E2187	Standard Test Method for Measuring the Ignition Strength of Cigarettes
ISO 10315	Cigarettes - Determination of nicotine in smoke condensates gas-chromatographic method
ISO 10362-1	Cigarettes - Determination of water in smoke condensates - Part 1: Gas-chromatographic method
ISO 15592-2	Fine-cut tobacco and smoking articles made from it - Methods of sampling, conditioning and analysis-Part 2: Atmosphere for conditioning and testing
ISO 15592-3	Fine-cut tobacco and smoking articles made from it - Methods of sampling, conditioning and analysis-Part 3: Determination of total particulate matter of smoking articles using a routine analytical smoking machine, preparation for the determination of water and nicotine, and calculation of nicotine-free dry particulate matter
ISO 3308	Routine analytical cigarette-smoking machine - Definitions and standard conditions
ISO 3402	Tobacco and tobacco products - Atmosphere for conditioning and testing
ISO 4387	Cigarettes - Determination of total and nicotine-free dry particulate matter using a routine analytical smoking machine



ISO 6488	Tobacco and tobacco products - Determination of water content - Karl Fischer method
ISO 6565	Tobacco and tobacco products - Draw resistance of cigarettes and pressure drop of filter rods - Standard conditions and measurement
ISO 8454	Cigarettes - Determination of carbon monoxide in the vapour phase of cigarette smoke - NDIR method
ISO 9512	Cigarettes-Determination of ventilation-Definitions and measurement principles

**(4. Internally Developed Methods – Tobacco and Tobacco Related)**

TMG-00605	Determination of air permeability (ISO 2965)
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**(5. Internally Developed Methods – Measures of Exposure)**

TME-00001	Determination of Nicotine, Cotinine and Caffeine in Physiological Fluid Samples by GC
TME-00002	Determination of Creatinine in Urine using Vitros DT II Chemistry System
TME-00003	Determination of 3-Hydroxycotinine in Physiological Fluid Samples by GC-MS or GC-TSD
TME-00005	Determination of Nicotine and its Major Metabolites in Urine by LC-MS/MS
TME-00016	Determination of Nicotine and Nine Major Metabolites in Urine by UPLC-MS/MS

**(6. Internally Developed Methods – Toxicology)**

TBA-00504	<i>In vitro</i> Sister Chromatid Exchange (SCE) Assay for Mainstream Particulate and Vapour Phase Emissions
TBA-00505	Mouse Lymphoma Thymidine Kinase Gene Mutation Assay for Mainstream Tobacco Smoke
TME-00004	<i>Salmonella Typhimurium</i> Reverse Mutation Assay: Microsuspension Method For Testing Urine Mutagenicity

**CHEMICALS AND CHEMICAL PRODUCTS**

Other (Product Constituents and Emissions):

TMS-00101	Determination of Ammonia in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by HPLC
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TMS-00102	Determination of Aromatic Amines in Emissions from Cannabis and Tobacco by GC-MS
TMS-00104	Determination of Carbonyls in E-Liquids and Emissions from E-Cigarettes, Cannabis and Tobacco by HPLC-UV
TMS-00107	Determination of Hydrogen Cyanide in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by AA
TMS-00108	Determination of Mercury in Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by AAS
TMS-00109	Determination of 21 Elements (Ag, Al, As, Au, Be, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Se, Sn, Sr, Ti, W, Zn and Zr) in E-Liquids and Emissions from E-Cigarettes and Heat-not-Burn Products; Determination of As, Be, Cd, Co, Cr, Cu, Mo, Ni, Pb, Se and Ti in Emissions from Cannabis and Tobacco by AAS, ICP-AES or ICP-MS  Appendix I - Determination of Mercury in E-Liquids by AAS
TMS-00110	Determination of Oxides of Nitrogen in Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by Dual Channel Chemiluminescence Nitrogen Oxides Analyzer
TMS-00111	Determination of Nitrosamines in Emissions from Cannabis and Tobacco by GC-TEA
TMS-00112	Determination of Pyridine, Quinoline, Styrene, Acetamide, Acrylamide, Benzo(b)furan and Nitrobenzene in E-Liquids and Emissions from E-Cigarettes and Heat-not-Burn Products; Determination of Pyridine, Quinoline and Styrene in Emissions from Cannabis; Determination of Pyridine, Quinoline, Styrene, 2-, 3- and 4-vinylpyridine, Benzo(b)furan, Nitrobenzene Acetamide and Acrylamide in Emissions from Tobacco by GC-MS
TMS-00113	Determination of pH in Emissions from E-Cigarettes, Cannabis and Tobacco by pH Meter (using Combination Electrode)
TMS-00114	Determination of Phenolic Compounds in Emissions from Cannabis and Tobacco by HPLC
TMS-00115a	Determination of Tar, Nicotine, CO, Water and Humectants (Additives) in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by GC  Appendix F - Determination of Benzoic Acid in Emissions from E-Cigarettes by HPLC-UV



	<p>Appendix H - Determination of Organic Acids in Emissions from E-Cigarettes by HPLC-UV</p> <p>Appendix I - Determination of Glycidol in E-Liquids and Emissions from E-Cigarettes by GC-MS</p> <p>Appendix J - Determination of Ethanol in E-liquids and Emissions from E-Cigarettes by GC</p> <p>Appendix K - Determination of Water, Nicotine, Tar and CO in Emissions from Cannabis by GC</p>
TMS-00116	Determination of 1,3-butadiene, Isoprene, Acrylonitrile, Benzene and Toluene in Emissions from Cannabis and Tobacco by GC-MS
TMS-00120	Determination of Selected Polynuclear Aromatic Hydrocarbons in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by GC-MS
TMS-00124	Determination of 1,3-butadiene, Isoprene, Acrylonitrile, Benzene, Toluene, Ethylbenzene, Ethylene Oxide, Vinyl Chloride, Propylene Oxide, Furan, Vinyl Acetate, and Nitromethane in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco; Tobacco; Determination of Chloromethane in Emissions from Heat-not-Burn Products and Tobacco by GC-MS
TMS-00126	Determination of 2-Nitropropane in Emissions from Heat-not-Burn Products and Tobacco by GC-TEA
TMS-00127	Determination of Selected Polynuclear Aromatic Hydrocarbons and Aza-arenes in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by GC-MS
TMS-00128	Determination of 1-aminonaphthalene, 2-aminonaphthalene, 3-aminobiphenyl, 4-aminobiphenyl, Benzidine and o-toluidine in E-Liquids and Emissions from E-Cigarettes and Heat-not-Burn Products by NCI GC-MS; Determination of Aniline, o-toluidine, m-toluidine, p-toluidine, o-anisidine, 1- and 2-aminonaphthalene and 3- and 4-aminobiphenyl, 2,6 and 2,5-dimethylaniline, Benzidine in Emissions from E-cigarettes, Heat-not-Burn Products and Tobacco by GC-MS
TMS-00134	Determination of Selected Cannabinoids in Emissions from Cannabis by LC-MS/MS
TMS-00135	Determination of Tobacco Specific Nitrosamines in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by LC-MS/MS



TMS-00137	Determination of Acetamide and Acrylamide in Emissions from Heat-not-Burn Products and Tobacco by GC-MS
TMS-00138	Determination of Free-Base Nicotine in Emissions from Tobacco by GC-MS
TMS-00139	Determination of Phenolic Compounds in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by HPLC
TMS-00140	Determination of Yield In Use (YIU): Part Filter Analysis Methodology by GC-UV
TMS-00143	Determination of Caffeic Acid in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by HPLC-UV
TMS-00145	Determination of Ethyl Carbamate in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by GC-MS
TMS-00146	Determination of Heterocyclic Aromatic Amines in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by LC-MS/MS
TMS-00147	Determination of Hydrazine in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by LC-MS/MS
TMS-00148	Determination of Volatile Nitrosamines and N-nitrosodiethanolamine in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by LC-MS/MS
TMS-00149	Determination of Solanesol in Emissions from Tobacco by HPLC-UV
TMS-00150	Determination of Terpene and Sesquiterpene Hydrocarbons in Emissions from Tobacco, Carboxamides in Emissions from E-Cigarettes, Heat-not-Burn, and Tobacco by GC-MS
TMS-00153	Determination of Nicotine and Nicotine Related Impurities in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by LC-MS/MS
TMS-00155	Determination of Selected Carbonyls (using PFBHA Derivatization) in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by GC-MS
TMS-00156	Determination of Allyl Alcohol in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by GC-MS
TMS-00158	Determination of Organic Acids and Benzoic Acid in E-Liquids by HPLC-UV
TMS-00160	Determination of Metals in Emissions from E-Cigarettes and Heat-not-Burn Products Collected on Quartz Filter Pads by ICP-MS
TMV-00162	Determination of Peppermint Oil Components in E-Liquids and Emissions from E-Cigarettes by GC-MS





TMS-00164	Determination of Potassium Sorbate in Emissions from Tobacco by HPLC-UV
TMS-00167	Determination of Select Flavours in Emissions from Tobacco by GC-MS
TMS-00170	Determination of Butyl Acetate, Hexanal, Isoamyl Acetate and Octanoic Acid in Emissions from Tobacco by GC-MS
TMV-00165	Determination of pH in Mainstream E-Cigarette Aerosol by Electrode with Liquid Trap
TSS-00219	Determination of Selected Polynuclear Aromatic Hydrocarbons (PAHs) in Sidestream Particulate and Vapour Phase Emissions by GC-MS
TSS-00222	Determination of Sidestream Particulate and Vapour Phase Emissions pH by pH Meter (using Combination Electrode)
TSS-00223	Determination of Tobacco Specific Nitrosamines in Sidestream Particulate and Vapour Phase Emissions by LC-MS/MS
TSS-00225	Determination of Phenolic Compounds in Sidestream Particulate and Vapour Phase Emissions by HPLC
TWT-00300a	Moisture in Tobacco Products-110 Degrees Celsius by Gravimetric Method
TWT-00301	Determination of Alkaloids in E-Liquids, Liquid Extracts and Tobacco Products by GC
TWT-00303	Determination of Carbonyls in Tobacco Products by HPLC-UV
TWT-00304	Determination of Nicotine, Humectants and Menthol in E-Liquids and Tobacco Products by GC
TWT-00306	Determination of Ni, Pb, Cd, Cr, As, Se, Hg, Co, Be and Sn in Tobacco and Smokeless Tobacco Products by ICP-AES or ICP-MS
TWT-00308	Determination of Nitrate in E-Liquids and Tobacco Products by AA
TWT-00310	Determination of pH in E-Liquids and Tobacco Products by pH Meter (using Combination Electrode)
TWT-00320	Determination of 1- and 2-aminonaphthalene and 3- and 4-aminobiphenyl in Tobacco Products by GC-MS
TWT-00321	Determination of Nicotine Alkaloids And Reducing Sugars in Tobacco Products by AA
TWT-00324	Determination of Nicotine in Tobacco Products (CDC method) by GC
TWT-00330	Determination of Selected Cannabinoids in Cannabis Plant Extracts by LC-MS/MS
TWT-00333	Determination of Tobacco Specific Nitrosamines in Liquid Extracts and Tobacco Products by LC-MS/MS
TWT-00335	Determination of Selected Polycyclic Aromatic Hydrocarbons (PAHs) in Tobacco Products by GC-MS



TWT-00336	Determination of Acrylamide in Tobacco Products by LC-MS/MS
TWT-00337	Determination of 1,3-butadiene, Isoprene, Acrylonitrile, Benzene, Toluene and Styrene in Tobacco Products by GC-MS
TWT-00338	Determination of Nitrite in E-Liquids and Tobacco Products by Spectrophotometry
TWT-00339	Determination of Water in E-Liquids and Tobacco Products by Karl Fisher Titration
TWT-00340	Determination of Phenolic Compounds in Tobacco Products by HPLC-FL
TWT-00341	Determination of Total Sugars in Tobacco Products by AA
TWT-00342	Determination of Polyphenols in Liquid Extracts and Tobacco Products by HPLC-UV
TWT-00343	Determination of N-nitrosodibenzylamine (NDBzA) in Tobacco Products by LC-MS/MS
TWT-00344	Determination of Ethyl Carbamate (Urethane) in Tobacco Products by GC-MS
TWT-00348	Determination of Glycyrrhizic Acid in Tobacco Products by HPLC-UV
TWT-00349	Determination of Theobromine in Tobacco Products by HPLC-UV
TWT-00350	Determination of Aflatoxins in Tobacco Products by LC-MS/MS
TWT-00351	Determination of Coumarin in Tobacco Products by LC-MS/MS
TWT-00352	Determination of Sugars and Total Alkaloids in E-Liquids, Tobacco Extracts and Tobacco Products by AA
TWT-00353	Determination of Volatile N-nitrosoalkanolamines (Hydroxynitrosamines) in Tobacco Products by LC-MS/MS
TWT-00355	Determination of Selected Carbonyls in Tobacco Products by Gas Chromatography - Mass Spectrometry by GC-MS
TWT-00356	Determination of Volatile Nitrosamines in Tobacco Products by LC-MS/MS
TWT-00357	Determination of Benzo[a]pyrene in Tobacco Products by GC-MS
TWT-00359	Determination of Ammonia in Aqueous Tobacco Extracts and Tobacco Products by AA
TWT-00360	Determination of Terpenoids and Sesquiterpenoids in Capsule Products by GC-MS
TWT-00361	Determination of Percent Expanded Cut Tobacco by Hexane Flotation
TWT-00363	Evaluation of Flavorants in E-Liquids, Processed Tobacco and Emissions from E-Cigarettes by GC-MS
TWT-00364	Determination of Water in Processed Tobacco by GC



TWT-00365	Determination of Salicylates in Tobacco Products by GC-MS
TWT-00370	Determination of Butyl Acetate, Hexanal, Isoamyl Acetate and Octanoic Acid in Capsules by GC-MS
TWT-00372	Determination of Limonene in Tobacco Products and Whole Consumables by GC-MS
TWT-00376	Determination of Select Flavours, Group C, in Tobacco Products by GC-MS
TWT-00377	Determination of Osmolarity by Freezing Point Depression Osmometers
TWT-00378	Determination of Water Activity in E-Liquids and Tobacco Products by Water Activity Meter
TWT-00379	Determination of Flavourants (BR1) in Tobacco Products by GC-MS
TWT-00380	Determination of Flavourants (BR2) in Tobacco Products by GC-MS
TWT-00381	Determination of Flavourants (BR3) in Tobacco Products by GC-MS

Number of Scope Listing: 161

**Notes:**

**ISO/IEC 17025:2017:** General Requirements for the Competence of Testing and Calibration Laboratories

**AOAC:** Association of Official Analytical Chemists

**ASTM:** American Society for Testing and Materials

**CDC:** Centers for Disease Control and Prevention

**ISO:** International Organization for Standardization

**T:** Health Canada Tobacco Reporting Regulations Standard Methods

**TBA:** Internally Developed Test Method, Biological Activity

**TME:** Internally Developed Test Method, Measures of Exposure

**TMS:** Internally Developed Test Method, Mainstream Smoke Emissions

**TMV:** Internally Developed Test Method, Vapour Emissions

**TSS:** Internally Developed Test Method, Sidestream Smoke Emissions

**TWT:** Internally Developed Test Method, Tobacco Extract

**Other Laboratory Locations:**

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 Kitchener, ON N2C 1L3

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 300 Manitou Drive  
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**Standards Council of Canada**  
**Conseil canadien des normes**

This document forms part of the Certificate of Accreditation issued by the Standards Council of Canada (SCC). The original version is available in the Directory of Accredited Laboratories on the SCC website at [www.scc.ca](http://www.scc.ca).

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Elias Rafoul  
Vice President, Accreditation Services  
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