

## TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

### Scope of Accreditation

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

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

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**To ensure compliance with the *Official Languages Act*, the Standards Council of Canada (SCC) translated proprietary content from English to French when it was not available in French. In case of discrepancies between the English and French versions, the original version prevails.**

<b>SCC File Number:</b>	15420
<b>Accreditation Standard(s):</b>	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
<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>	2023-01-22
<b>Most Recent Accreditation:</b>	2025-01-10
<b>Accreditation Valid to:</b>	2027-01-22

*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 document issued separately.*

## ANIMAL AND PLANTS (AGRICULTURE)

### Agricultural products (except food and chemicals):

#### **Tobacco (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-111B	Determination of Tobacco Specific Nitrosamines in Mainstream Tobacco Smoke by LC-MS/MS
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-209B	Determination of Tobacco Specific Nitrosamines in Sidestream Tobacco Smoke by LC-MS/MS
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-309B	Determination of Tobacco Specific Nitrosamines in Whole Tobacco by LC-MS/MS
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-402	Preparation of Cigarettes, Cigarette Tobacco, Cigars, Kreteks, Bidis, Packaged Leaf Tobacco, Pipe Tobacco and Smokeless Tobacco for Testing

#### **Tobacco (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

#### **Tobacco (Standard Methods)**

AOAC 963.05	Chlorides in Tobacco
AOAC 966.02	Moisture in Tobacco
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 20768	Vapour products — Routine analytical vaping machine — Definitions and standard conditions
ISO 20778	Routine Analytical Cigarette SM-Definitions, Standard Conditions with Intense Smoking Regime
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

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

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

TME-00001	Determination of Nicotine, Cotinine and Caffeine in Physiological Fluid Samples by GC
TME-00004	Ames Mutagenicity Assay using Salmonella typhimurium (YG1024)
TME-00005	Determination of Nicotine and its Major Metabolites in Urine by LC-MS/MS

**Tobacco (Internally Developed Methods – Biology)**

TBA-00505	Mouse Lymphoma Thymidine Kinase Gene Mutation Assay for Mainstream Tobacco Smoke
TBA-00511	Kinetic Chromogenic Endotoxin Assay for E-Liquids
TBA-00512	Microbial Enumeration Tests for E-Liquids, Extracts, and Edibles by qPCR
TBA-00513	ToxTracker Assay Using mES Cells for Tobacco, Tobacco Containing Products, Nicotine Containing Products, Cannabis, and Cannabis Containing Products by Flow Cytometry
TBA-00514	In Vitro Micronucleus Assay Using TK6 Cells for Tobacco, Tobacco Containing Products, Nicotine Containing Products, Cannabis, and Cannabis Containing Products by Flow Cytometry
TBA-00515	(1,3) Beta-D Glucan (BDG) Kinetic Assay
TBA-00516	ToxTracker AO Assay Using mES Cells for Tobacco, Tobacco Containing Products, Nicotine Containing Products, Cannabis, and Cannabis Containing Products by Flow Cytometry
TBA-00517	Neutral Red Uptake Assay for Mainstream Tobacco Smoke with BALB/c 3T3 Cell Line
TBA-00518	In Vitro Micronucleus Assay Using CHO-WBL Cells for Tobacco, Tobacco Containing Products, Nicotine Containing Products, Cannabis, and Cannabis Containing Products (OECD 487)
TBA-00519	Neutral Red Uptake Cytotoxicity Assay Using CHO-WBL Cells for Tobacco, Tobacco Containing Products, Nicotine Containing Products, Cannabis, and Cannabis Containing Products (Modified OECD 129)
TBA-00520	In Vitro Micronucleus Assay Using TK6 Cells

TBA-00521	Ames Assay Using Salmonella typhimurium for Tobacco, Tobacco Containing Products, Nicotine Containing Products, Cannabis, and Cannabis Containing Products (OECD 471)
TBA-00526	Microbial Enumeration Tests in Cannabis Plant and Extract (Modified USP 2021/ 2022/ 62)
TBA-00526B	Microbial Enumeration Tests in E-Liquids, Tobacco free Nicotine pouches and Tobacco Products (USP<2021>)
TBA-00527	Microbial Enumeration Tests in Cannabis Plant and Extract (Modified EU 2.6.12/ 2.6.13)
TBA-00535	Neutral Red Uptake Assay for MS Tobacco Smoke with A549 Cells
TBA-00539	Foreign Matter Identification
TBA-00540	Microbial Enumeration Tests for Cannabis Flower / Plant by qPCR

## CHEMICALS AND CHEMICAL PRODUCTS

### Other:

#### Product Constituents and Emissions

TEL-00001	Determination of the Density of Homogenous Liquids by Pycnometer
TMS-00101	Determination of Ammonia in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by HPLC
TMS-00102	Determination of Aromatic Amines in Emissions from Cannabis and Tobacco by GC-MS: 1- and 2-aminonaphthalene and 3- and 4-aminobiphenyl)
TMS-00104	Determination of Carbonyls in E-Liquids and Emissions from E-Cigarettes, Cannabis and Tobacco by HPLC-UV: formaldehyde, acetaldehyde, acetone, acrolein, propionaldehyde, crotonaldehyde, methyl ethyl ketone, butyraldehyde
TMS-00105	Determination of Eugenol in Emissions from 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 E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by Cold Vapour Atomic Absorption
TMS-00109	Determination of Trace Metals (Cd, Cr, Ni, Pb, As, Se, Be, Co, Ti, Cu and Mo) in mainstream tobacco smoke by ICP-MS (Cd, Cr, Ni, Pb, As, Se, Be, Co, Ti, Cu, Mo, W, Sn, Al, Mn, Zn, Fe, Sr, Ag, Zr, Au and Sb) in E-Liquids and Emissions from E-Cigarettes and Heat-Not-Burn Products by ICP-MS (Cd, Cr, Ni, Pb, As, Se) in Emissions from Cannabis by ICP-MS

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-00112	Determination of Semi Volatiles in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by GC-MS pyridine, quinoline, styrene, acetamide, acrylamide, benzo(b)furan, nitrobenzene, 2-, 3- and 4-vinylpyridine
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: hydroquinone, resorcinol, catechol, phenol, p-cresol, m-cresol, o-cresol
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
TMS-00115b	Determination Carbon Monoxide and Carbon Dioxide in Emissions from Heat-not-Burn Products and Tobacco
TMS-00116	Determination of Volatiles in Emissions from Cannabis and Tobacco by GC-MS (1,3-butadiene, Isoprene, Acrylonitrile, Benzene, and Toluene)
TMS-00118	Determination of Glycidol in E-Liquids and Emissions from E-Cigarettes and Heat-not-Burn Products by GC-MS
TMS-00119	Determination of Ethanol in E-Liquids and Emissions from E-Cigarettes by GC
TMS-00120	Determination of Selected Polynuclear Aromatic Hydrocarbons Emissions from E-Cigarettes, Heat-not-Burn Products, Cannabis and Tobacco by GC-MS 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(c)phenanthrene, benzo(e)pyrene, benzo(g,h,i)perylene, benzo(j)aceanthrylene, benzo(j)fluoranthene, benzo(k)fluoranthene, chrysene, cyclopenta(c,d)pyrene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, perylene, phenanthrene, pyrene
TMS-00124	Determination of Volatiles in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by GC-MS 1,3-butadiene, isoprene, acrylonitrile, benzene, toluene, ethylbenzene, ethylene oxide, vinyl chloride, propylene oxide, furan, vinyl acetate, nitromethane, styrene, acetamide, chloromethane
TMS-00126	Determination of 2-Nitropropane in Emissions from Heat-not-Burn Products and Tobacco by GC-TES
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 5-methylchrysene, dibenzo(a,l)pyrene, dibenzo(a,e)pyrene, dibenzo(a,i)pyrene, dibenzo(a,h)pyrene
TMS-00128	Determination of Aromatic Amines in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products, and Tobacco by GC-MS

	aniline, o-toluidine, m-toluidine, p-toluidine, o-anisidine, 1-aminonaphthalene, 2-aminonaphthalene, 3-aminobiphenyl, 4-aminobiphenyl, benzidine, 2,6 and 2,5-dimethylaniline
TMS-00134	Determination of Selected Cannabinoids in Emissions from Cannabis by LC-MS/MS. cannabidiol (CBD), cannabigerol (CBG), cannabidiol (CBD), cannabidiolic acid (CBDA), tetrahydrocannabivarin (THCV), cannabigerolic acid (CBGA), cannabinol (CBN), $\Delta^9$ -tetrahydrocannabinol (THC), $\Delta^8$ -tetrahydrocannabinol ( $\Delta^8$ -THC), cannabichromene (CBC), and $\Delta^9$ -tetrahydro-2-cannabinolic acid (THCA)
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 N-nitrosornicotine (NNN), 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK), N-nitrosoanatabine (NAT) and N-nitrosoanabasine (NAB)
TMS-00139	Determination of Phenolic Compounds in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by HPLC hydroquinone, resorcinol, catechol, phenol, p-cresol, m-cresol, o-cresol
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 1-methyl-9H-pyrido [3,4-b] indole (Harman), 9H-pyrido[3,4-b] indole (Norharman), 2-amino-9H-pyrido [2,3-b] indole ( $A\alpha C$ ), 2-amino-3-methyl-9H-pyrido [2,3-b] indole ( $MeA\alpha C$ ), 2-amino-3-methyl-3H-imidazo [4,5-f] quinoline (IQ), 2-amino-3, 4-dimethyl-3H-imidazo [4,5-f] quinoline (MeIQ), 2-amino-3, 8-dimethylimidazo [4,5-f] quinoxaline (MeIQx), 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP), 2-amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole (Glu-P-1), 2-aminopyrido[1,2-A:3',2'-D]imidazole (Glu-P-2), 3-amino-1,4-dimethyl-5H-pyrido[4,3-b] indole (Trp-P-1), 3-amino-1-methyl-5H-pyrido[4,3-b] indole (Trp-P-2)
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 N-nitroso-dimethylamine (NDMA), N-nitrosopyrrolidine (NPYR), N-nitroso-N-methylethylamine (NEMA), N-nitrosodi-N-propylamine (NDPA), 1-nitrosopiperidine (NPIP), N-nitrosodibutylamine (NDBA), N-nitrosodiethylamine (NDEA), N-nitrosomorpholine (NMOR), N-nitrosodiisopropylamine (NDiPA) and N-nitrosodiethanolamine (NDELA)
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 formaldehyde, acetaldehyde, acetone, Propionaldehyde, acrolein, isobutyraldehyde, methylethyl ketone, 3-buten-2-one, butyraldehyde, crotonaldehyde, glycolaldehyde, acetol, acetoin, glyoxal, methylglyoxal, 2,3-butanedione, 2,3-pentanedione, 2,3-hexanedione, and 2,3-heptanedione, ethyl acetoacetate
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 and Emissions from E-Cigarettes by HPLC-UV: oxalic, glycolic, lactic, formic and acetic acid
TMS-00160	Determination of Metals in E-Liquids, Emissions from E-Cigarettes and Heat-not-Burn Products Collected on Quartz Filter Pads and Determination of Metals in Emissions from E-Cigarettes and Heath-not-Burn Products Collected on an Electrostatic Precipitator by ICP-MS
TMS-00170	Determination of Butyl Acetate, Hexanal, Isoamyl Acetate and Octanoic Acid in Emissions from Tobacco by GC-MS
TMS-00175	Determination of Aromatic Flavourants (Group E) in E-liquid and Emissions from E-Cig by GC-MS methyl acetate, ethyl acetate, 1-butanol, isobutyl acetate, isoamyl acetate, ethyl acetoacetate, benzyl acetate
TMS-00177	Determination of Propionic Acid in E-Liquids and Emissions from E-Cigarettes by GC-MS
TMS-00178	Determination of $\alpha$ -Tocopherol Acetate in E-Liquids by HPLC-DAD
TMS-00180	Determination of $\alpha$ -Tocopherol Acetate in E-Liquids, Cannabis Liquids and Emissions from Cannabis by LC-MS/MS
TMS-00183	Determination of Glycidol in E-Liquids and Emissions from E-Cigarettes through the analysis of 3-Bromo-1,2-Propanediol by GC-MS (SIM)
TMS-00185	Determination of 2-Monochloropropane-1,3-Diol (2-MCPD) and 3-Monochloropropane-1,2-Diol (3-MCPD) in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by GC-MS
TMS-00187	Determination of Furfural and 2-Furanmethanol in E-Liquids and Emissions from E-Cigarettes, Heat-not-Burn Products and Tobacco by GC-MS
TMV-00162	Determination of Peppermint Oil Components in E-Liquids and Emissions from E-Cigarettes by GC-MS limonene, L-menthone, menthyl acetate, neo-menthol, menthol, menthone
TMV-00165	Determination of pH in Mainstream E-Cigarette Aerosol by Electrode with Liquid Trap
TSS-00201	Determination of Ammonia in Sidestream Emissions from Heat-not-Burn Products and Tobacco by HPLC
TSS-00204	Determination of Carbonyls in Sidestream Emissions from Heat-not-Burn Products and Tobacco by HPLC



TSS-00205	Determination of Hydrogen Cyanide in Sidestream Emissions from Heat-not-Burn Products and Tobacco by Continuous Flow Analysis
TSS-00206	Determination of Mercury in Sidestream Emissions from Heat-not-Burn Products and Tobacco by Cold Vapor Atomic Absorption Spectroscopy
TSS-00207	Determination of Toxic Trace Metals in Sidestream Emissions from Heat-not-Burn Products and Tobacco by ICP-MS Chromium (Cr), Nickel (Ni), Arsenic (As), Selenium (Se), Cadmium (Cd), Lead (Pb),
TSS-00208	Determination of Oxides of Nitrogen in Sidestream Emissions from Heat-not-Burn Products and Tobacco by NOx Analyzer
TSS-00210	Determination of Semi-Volatile Compounds in Sidestream Emissions from Heat-not-Burn Products and Tobacco by GC-MS
TSS-00211	Determination of Phenols in Sidestream Emissions from Heat-not-Burn Products and Tobacco by HPLC
TSS-00214	Determination of Carbon Monoxide in Sidestream Emissions from Heat-not-Burn Products and Tobacco by CO Analyzer
TSS-00219	Determination of Selected Polynuclear Aromatic Hydrocarbons (PAHs) in Sidestream Particulate and Vapour Phase Emissions by GC-MS naphthalene, 1-methyl naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, benzo(e)pyrene, perylene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene
TSS-00223	Determination of Tobacco Specific Nitrosamines in Sidestream Particulate and Vapour Phase Emissions by LC-MS/MS N-nitrosornicotine (NNN), 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK), N-nitrosoanatabine (NAT) and N-nitrosoanabasine (NAB)
TSS-00225	Determination of Phenolic Compounds in Sidestream Particulate and Vapour Phase Emissions by HPLC hydroquinone, resorcinol, catechol, phenol, p-cresol, m-cresol, o-cresol
TSS-00228	Determination of Menthol in Sidestream Emissions from Heat-not-Burn Products and Tobacco by GC-FID
TWT-00300a	Determination of Moisture in Cannabis and Tobacco Products by Oven Drying
TWT-00301	Determination of Alkaloids in E-Liquids, Liquid Extracts, Tobacco free Nicotine pouches and Tobacco Products by GC nicotine, nornicotine, anabasine, myosmine, anatabine
TWT-00303	Determination of Carbonyls in Tobacco Products by HPLC-UV formaldehyde, acetaldehyde, acetone, acrolein, propionaldehyde, crotonaldehyde, methyl ethyl ketone, butyraldehyde
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, Tobacco free Nicotine pouches 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, Tobacco free Nicotine pouches and Tobacco Products by pH Meter (using Combination Electrode)
TWT-00319	Determination of Nicotine in Tobacco free Nicotine pouches by GC-FID
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 Auto Analyzer (Continuous Flow Analyzer) Reducing Sugars and Total Sugars
TWT-00324	Determination of Nicotine in Tobacco free Nicotine pouches and Tobacco Products (CDC method) by GC
TWT-00330	Determination of Selected Cannabinoids in Cannabis Liquids and Cannabis Plant Extract by LC-MS cannabidiol (CBD), cannabigerol (CBG), cannabidiol (CBD), cannabidiolic acid (CBDA), tetrahydrocannabinol (THC), cannabigerolic acid (CBGA), cannabinol (CBN), $\Delta^9$ -tetrahydrocannabinol (THC), $\Delta^8$ -tetrahydrocannabinol ( $\Delta^8$ -THC), cannabichromene (CBC), and $\Delta^9$ -tetrahydro-2-cannabinolic acid (THCA)
TWT-00333	Determination of Tobacco Specific Nitrosamines in Liquid Extracts, Tobacco, Tobacco Containing Products and Nicotine Containing Products by LC-MS/MS N-nitrosornicotine (NNN), 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK), N-nitrosoanatabine (NAT) and N-nitrosoanabasine (NAB)
TWT-00335	Determination of Selected Polycyclic Aromatic Hydrocarbons (PAHs) in Tobacco Products by GC-MS naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(j)fluoranthene, benzo(a)pyrene, benzo(e)pyrene, perylene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene
TWT-00336	Determination of Acrylamide in Tobacco Products by LC-MS/MS
TWT-00337	Determination of volatile organics in Tobacco Products by GC-MS 1,3-butadiene, Isoprene, Acrylonitrile, Benzene, Toluene and Styrene
TWT-00338	Determination of Nitrite in E-Liquids and Tobacco Products by Spectrophotometry
TWT-00339	Determination of Water in E-Liquids, Cannabis, Tobacco free Nicotine pouches and Tobacco Products by Karl Fischer Titration
TWT-00340	Determination of Phenolic Compounds in Tobacco Products by HPLC-FL hydroquinone, resorcinol, catechol, phenol, p-cresol, m-cresol, o-cresol
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 Chlorogenic acid, scopoletin, rutin, caffeic acid
TWT-00344	Determination of Ethyl Carbamate (Urethane) in Tobacco Products by GC-MS
TWT-00346	Determination of N-nitrososarcosine in Tobacco Products by LC-MS/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 Aflatoxin 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 reducing sugars, total sugars, total alkaloids
TWT-00355	Determination of Selected Carbonyls in Tobacco Products by Gas Chromatography - Mass Spectrometry formaldehyde, acetaldehyde, acetone, propionaldehyde, acrolein, MEK, butyraldehyde, crotonaldehyde, isobutyraldehyde, 2,3-Butanedione, 2,3-Pentanedione, acetoin
TWT-00356	Determination of Volatile Nitrosamines in Tobacco Products by LC-MS/MS N-nitroso-dimethylamine (NDMA), N-nitrosopyrrolidine (NPYR), N-nitroso-N-methylethylamine (NEMA), N-nitrosodi-N-propylamine (NDPA), 1-nitrosopiperidine (NPIP), N-nitrosodibutylamine (NDBA), N-nitrosodiethylamine (NDEA), N-nitrosomorpholine (NMOR), N-nitrosodiisopropylamine (NDiPA), N-nitrosodiethanolamine (NDELA) and N-nitrosodiisopropanolamine (NDiPLA))
TWT-00357	Determination of Benzo[a]pyrene in Tobacco free Nicotine pouches and Tobacco Products by GC-MS
TWT-00359	Determination of Ammonia in Aqueous Tobacco Extracts and Tobacco Products by AA
TWT-00361	Determination of Percent Expanded Cut Tobacco by Hexane Flotation
TWT-00363	Evaluation of Flavourants in E-Liquids, Processed Tobacco and Emissions from E-Cigarettes by GC-MS $\alpha$ -Pinene, Limonene, Isoamyl isovalerate, Methyl salicylate, $\beta$ -Ionone, Linalool, Menthol, 1-hexanol, 2,3,5-trimethylpyrazine, Piparonal, Hexanal, $\gamma$ -Decalactone, Vanillin
TWT-00364	Determination of Water in Processed Tobacco by GC
TWT-00365	Determination of Salicylates in Tobacco Products by GC-MS methyl salicylate ethyl salicylate
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, Tobacco free Nicotine pouches Tobacco Products, Cannabis Flower and Cannabis Liquids by Water Activity Meter
TWT-00379	Determination of Flavourants (BR1) in Tobacco Products by GC-MS (E)-hexen-2-al, Furfural, Eucalyptol, Benzaldehyde, 2,4-Heptadienal, Nonanal, Benzyl alcohol, Phenylacetaldehyde, Acetophenone, Guaiacol, Methyl phenylacetate, Carvone, 3-methoxybenzaldehyde (m-anisaldehyde), Ethyl salicylate, 2-methoxybenzaldehyde (o-anisaldehyde), Anisaldehyde (4-

	methoxybenzaldehyde or p-anisaldehyde), Eugenol, $\alpha$ -Ionone, $\gamma$ -Nonalactone, Piperonal, Coumarin, Methyl vanillin, 6-Methylcoumarin
TWT-00380	Determination of Flavourants (BR2) in Tobacco Products by GC-MS Hexanol, 2,5-Dimethylpyrazine, (s)-Limonene, 2,3,5-Trimethylpyrazine, $\gamma$ -Valerolactone, 2-Ethyl-3,5(6)-dimethylpyrazine, $\gamma$ -Hexalactone, Phenethyl alcohol, (-)- $\beta$ -Citronellol, 2-Methoxy-4-methylphenol, Ethyl phenylacetate, $\gamma$ -Octalactone, 4-Vinyl guaiacol, $\delta$ -Octalactone, 6,10-Dimethyl-5,9-undecadien-2-one, Methyl cinnamate, <i>trans</i> - $\beta$ -Ionone, Isoamyl phenylacetate, $\gamma$ -Decalactone, $\delta$ -Decalactone, $\gamma$ -Undecalactone, Methyl dihydrojasmonate, $\gamma$ -Dodecalactone, Benzyl benzoate, Phenethyl phenylacetate, Sclareolide
TWT-00381	Determination of Flavourants (BR3) in Tobacco Products by GC-MS <i>trans</i> -3-Hexen-1-ol, Linalool, Acetylpyrazine, 2,3,5,6-Tetramethylpyrazine, 6-Methyl-3,5-heptadien-2-one, L-Menthone, Isophorone, Menthone, Methyl salicylate, 4-Methyl acetophenone, <i>l</i> -Carvone, Thymol, <i>trans</i> -Anethole, $\beta$ -Damasconone, $\beta$ -Damascone, Acetanisole, $\beta$ -Ionone, Propenyl guaethol
TWT-00382	Determination of Flavourants (BR4) in Tobacco Products by GC-MS Isobutyl alcohol, 2-Heptanone, d-Limonene, cis-3-Hexen-1-ol, 2,3,5-Trimethylpyrazine-d10, 2-Ethyl-3-methylpyrazine, 2,3-Diethylpyrazine, Salicylaldehyde, 1,4-dibromobenzene, Geraniol, Methyl-cyclopentenolone, $\gamma$ -Heptalactone, Ethyl maltol, <i>trans</i> -2-Methyl-3-phenyl-2-propen-1-ol, Cinnamyl alcohol, Methyl linoleate, Ethyl vanillin, Methyl linolenate, Vanillin-d3, Vanillin
TWT-00387	Determination of Flavourants (BR6) in Tobacco Products by GC-MS 3-methyl-butyraldehyde, ethyl propionate, isoamyl formate, ethyl butyrate, ethyl isovalerate, isoamyl acetate, hexenyl formate cis-3, furfuryl acetate, ethyl hexanoate, <i>trans</i> -3-hexenyl acetate, hexyl acetate, benzyl formate, methyl benzoate, ethyl heptanoate, isoamyl isovalerate, benzyl acetate, para-tolyl acetate, alpha-terpineol, gamma-terpineol, d,l-citronellol, isoamyl hexanoate, phenethyl acetate, (1S)-(+)-neomenthyl acetate, bornyl acetate, (1R)-(-)-neomenthyl acetate, ethyl nonanoate, geranyl formate, methyl anthranilate, geranyl acetate, methyl <i>trans</i> -cinnamate, citronellyl propionate, geranyl propionate, geranyl butyrate
TWT-00389	Determination of Flavourants (BR5) in Tobacco Products by GC-MS ethyl lactate, acetic acid, isobutyric acid, butyric acid, isovaleric acid, 2-methylbutyric acid, hexanoic acid, octanoic acid, cinnamaldehyde, decanoic acid, farnesol, lauric acid
TWT-00390	Determination of Flavourants (BR7) in E-Liquids and Tobacco Products by LCMS/MS Caffeine, 5-ethyl-3-hydroxy-4-methyl-2(5h)-furanone, p-Anisyl alcohol, Glycyrrhizinic acid, Triethyl citrate, Raspberry ketone (4-(4-hydroxyphenyl)-2-butanone), Maltol
TWT-00391	Determination of Flavourants (BR8) in Tobacco Products by LC-MS/MS Citric acid, lactic acid, levulinic acid, phenylacetic acid
TWT-00392	Determination of Ethyl Acetate (BR10) in Tobacco Products by GC-MS
TWT-00394	Determination of Nicotine and its Degradation Products in Tobacco, Tobacco free Nicotine pouches and Tobacco Products by LC-MS/MS

TWT-00402	Determination of Health Canada Pesticides and Mycotoxins in Cannabis Flower by LC-MS/MS
TWT-00405	Determination of Cannabinoids Acids and Cannabinoids in Raw Cannabis and Extracts by HPLC-UV cannabidivarin (CBDV), cannabidiolic acid (CBDA), cannabigerolic acid (CBGA), cannabigerol (CBG), cannabidiol (CBD), tetrahydrocannabivarin (THCV), cannabinol (CBN), $\Delta^9$ -tetrahydrocannabinol ( $\Delta^9$ -THC), $\Delta^8$ -tetrahydrocannabinol ( $\Delta^8$ -THC), $\Delta^9$ -tetrahydro-2-cannabinolic acid (THCA), and cannabichromene (CBC)
TWT-00406	Determination of Health Canada Pesticides and Mycotoxins in Cannabis Flower by GC-MS/MS
TWT-00408	Determination of Metals in Cannabis Flower, Extract and Oral Formulation by ICP-MS arsenic (As), cadmium (Cd), antimony (Sb), mercury (Hg), lead (Pb)
TWT-00409	Determination of Nicotine in Tobacco free Nicotine pouches by LC-UV

Number of Scope Listings: 203

**Notes:**

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

**AOAC:** Association of Official Analytical Chemists

**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:**

This laboratory has 6 locations, the other 5 locations are listed below:

270 Manitou Drive, Kitchener, ON N2C 1L3

280 Manitou Drive, Kitchener, ON N2C 1L3

300 Manitou Drive, Kitchener, ON N2C 1L3

50 Groff Place, Kitchener ON N2E 2L6

685 Wabanaki Dr., Kitchener ON N2E 2G3



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