

Catalogue

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Version 1.11

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1.0 Introduction

The Proficiency Testing Canada PT Program (formerly the CALA PT Program) conforms to ISO/IEC 17043 *Conformity assessment- General requirements for the competence of proficiency testing providers* and offers PT in support of inorganic, organic and microbiology test methods covering matrices such as water, soil/sediment, oil and air filters. Not all of the Test Groups in this catalogue are covered by the scope of accreditation. For a detailed list of what is covered by the A2LA accreditation please refer to certificate 2298.01 the A2LA website (<https://www.a2la.org>).

With the exception of C05A (microbiology), C05B (microbiology), C71 (Pesticides in Cannabis), C73 (Residual Solvents in Hemp Oil), C80 (microbiology), C81 (microbiology), C82 (microbiology), C83 (microbiology), and C84 (microbiology) samples are provided as whole samples and are ready to analyze. However, some samples may have to be diluted to bring the concentrations within the laboratory's calibration range, as is common practice for customer samples.

In general, each test group is shipped twice per year, one half being shipped in January and June and the other half shipping in March and October. With the exception of C38, C39, C70, C71, C72, C73 and C78, each test group consists of four samples of different concentration.

Proficiency Testing Canada offers a discount to Institutional voting members of the Canadian Association for Laboratory Accreditation (CALA). If you would like to become a CALA member please visit their website (www.cala.ca).

2.0 References

The following PTC documents located on the PTC website (<https://ptcanada.org/pt-resources/operations-docs/>) provide further information about Proficiency Testing:

- PAR03 – PT *Scheme*;
- PROC09 – PT *Evaluation Procedures*;
- PROC11 – PT *Regression Equations*; and,
- PAR05 – *List of PT Subcontractors*.

3.0 2024 Shipping Schedule

The table below provides details on important dates for the PT Canada PT Program (2024).

Test Groups	Shipping Date	Reporting Deadline
C01A, C01B, C02A, C02B, C02C, C03, C04A, C04B, C04C, C04D, C05A, C05B, C11, C12, C13, C14, C15, C19, C32, C33, C37, C42, C70, C71, C72, C73, C78, C80, C81, C82, C83, C84	March 25 (Micro samples – March 18)	April 26
	October 15 (Micro samples – October 21)	November 15

Test Groups	Shipping Date	Reporting Deadline
C06A, C06B, C07, C08, C09, C16, C17, C18, C22, C24, C25, C27, C29, C31A, C31B, C34, C35, C36, C38, C39, C40A, C40B, C41, C43, C44, C45, C46, C47, C74, C75, C76, C77	January 22	February 23
	June 17	July 19

Test Group	Shipping Date	Reporting Deadline
C20	January 15	February 9
	March 18	April 12
	June 17	July 12
	September 30	October 25

If there are any discrepancies between this schedule and the schedule posted on the PT Canada web site (www.ptcanada.org), the PTC web site will be deemed to be correct. If there are any changes to the posted schedule, all participants registered for the affected PT round will be notified.

4.0 Registration

Laboratories wishing to participate in PT Canada Proficiency Testing must submit a completed Application (PAR04 – Application) <https://ptcanada.org/wp-content/uploads/PAR04-Application.pdf>.

5.0 Tests Offered in the PT Canada PT Program

This section provides details on the test group names, analytes included in the test group, approximate concentration range, months that the studies occur, the approximate volume of material provided and the preservative used.

Note to international laboratories: Some samples may be subject to national import restrictions. Please consult with your national import authorities.

5.1 WATER INORGANICS

C01A Major Ions in Water		
Analyte	Concentration Range	Information
Alkalinity to pH 4.5	20 – 250 mg/L	Mar/Oct
Chloride	5 – 500 mg/L	500 mL
Conductivity at 25°C	20 – 2000 µS/cm	Preservative: None
Calcium	2 – 200 mg/L	Member Fee: \$285
Magnesium	2 – 50 mg/L	Non-Member Fee: \$360
Fluoride	0.2 – 4.0 mg/L	
Hardness as CaCO ₃	10 – 800 mg/L	
Inorganic Carbon	10 – 100 mg/L	

CO1A Major Ions in Water

Analyte	Concentration Range	Information
Nitrate	0.20 – 20.0 mg/L	
Nitrate plus Nitrite	0.20 – 20.0 mg/L	
Potassium	1 – 40 mg/L	
Reactive Silica	0.5 – 30 mg/L	
Sodium	2 – 150 mg/L	
Sulphate	5 – 200 mg/L	

This PT is obtained from naturally occurring surface waters. The only analytes added are Fluoride and Nitrate. Although participants may use their method of choice for participation, caution should be taken when using colorimetric procedures as some samples may have a natural colour.

CO1B Simple Nutrients in Water

Analyte	Concentration Range	Information
Ammonia	0.5 – 20.0 mg/L	Mar/Oct
Organic Carbon	2.0 – 20.0 mg/L	250 mL
Phosphate	0.1 – 3.0 mg/L	Preservative: None
Bromide	1.0 – 10.0 mg/L	Member Fee: \$235
Nitrite	0.1 – 1.0 mg/L	Non-Member Fee: \$305

The concentration ranges for this PT cover the range from clean waters to wastewaters.

CO2A Metals (Full Range) in Water

Analyte	Concentration Range	Information
Aluminum	0.001 – 1.60 mg/L	Mar/Oct
Antimony	1.0 – 100 µg/L	250 mL
Arsenic	1.0 – 100 µg/L	Preservative: 0.2% HNO ₃
Barium	0.001 – 1.60 mg/L	Member Fee: \$245
Beryllium	0.001 – 1.0 mg/L	Non-Member Fee: \$315
Boron	0.001 – 1.60 mg/L	
Cadmium	0.001 – 0.10 mg/L	
Chromium	0.001 – 1.60 mg/L	
Cobalt	0.001 – 1.60 mg/L	
Copper	0.001 – 1.60 mg/L	
Iron	0.001 – 1.60 mg/L	
Lead	0.001 – 1.60 mg/L	
Manganese	0.001 – 1.60 mg/L	
Molybdenum	0.001 – 1.60 mg/L	
Nickel	0.001 – 1.60 mg/L	
Selenium	1.0 – 100 µg/L	
Silver	0.001 – 0.100 mg/L	
Strontium	0.001 – 1.60 mg/L	
Thallium	0.001 – 1.60 mg/L	

CO2A Metals (Full Range) in Water

Analyte	Concentration Range	Information
Tin	0.001 – 0.10 mg/L	
Titanium	0.001 – 1.60 mg/L	
Uranium	0.001 – 0.10 mg/L	
Vanadium	0.001 – 1.60 mg/L	
Zinc	0.001 – 1.60 mg/L	

This PT test group is intended for analysis by ICP-MS or other technologies that can achieve low µg/L detection levels. Although sample digestion is not required, hydrides by hydride generation will require the digestion specified by the method. Please note different reporting units for three hydride metals.

CO2B Metals (High Range) in Water

Analyte	Concentration Range	Information
Aluminum	0.25 – 1.60 mg/L	Mar/Oct 250 mL Preservative: 0.2% HNO ₃ Member Fee: \$245 Non-Member Fee: \$315
Barium	0.25 – 1.60 mg/L	
Boron	0.25 – 1.60 mg/L	
Chromium	0.25 – 1.60 mg/L	
Cobalt	0.25 – 1.60 mg/L	
Copper	0.25 – 1.60 mg/L	
Iron	0.25 – 1.60 mg/L	
Lead	0.25 – 1.60 mg/L	
Manganese	0.25 – 1.60 mg/L	
Molybdenum	0.25 – 1.60 mg/L	
Nickel	0.25 – 1.60 mg/L	
Strontium	0.25 – 1.60 mg/L	
Thallium	0.25 – 1.60 mg/L	
Titanium	0.25 – 1.60 mg/L	
Vanadium	0.25 – 1.60 mg/L	
Zinc	0.25 – 1.60 mg/L	

This PT is intended for laboratories that use ICP-OES or other technologies that have higher detection levels than ICP-MS. Sample digestion is not required.

CO2C Metals (Total) in Water

Analyte	Concentration Range	Information
Aluminum	0.25 – 1.60 mg/L	Mar/Oct 250 mL Preservative: 0.2% HNO ₃ Member Fee: \$255 Non-Member Fee: \$325
Antimony	1.0 – 100 µg/L	
Arsenic	1.0 – 100 µg/L	
Barium	0.25 – 1.60 mg/L	
Beryllium	0.001 – 1.00 mg/L	
Boron	0.25 – 1.60 mg/L	
Cadmium	0.001 – 0.10 mg/L	

CO2C Metals (Total) in Water

Analyte	Concentration Range	Information
Chromium	0.25 – 1.60 mg/L	
Cobalt	0.25 – 1.60 mg/L	
Copper	0.25 – 1.60 mg/L	
Iron	0.25 – 1.60 mg/L	
Lead	0.25 – 1.60 mg/L	
Manganese	0.25 – 1.60 mg/L	
Molybdenum	0.25 – 1.60 mg/L	
Nickel	0.25 – 1.60 mg/L	
Selenium	1.0 – 100 µg/L	
Silver	0.001 – 0.100 mg/L	
Strontium	0.25 – 1.60 mg/L	
Thallium	0.25 – 1.60 mg/L	
Tin	0.001 – 0.100 mg/L	
Titanium	0.25 – 1.60 mg/L	
Uranium	0.001 – 0.1 mg/L	
Vanadium	0.25 – 1.60 mg/L	
Zinc	0.25 – 1.60 mg/L	

This PT is intended for metals analyses that require a preliminary acid digestion.

CO3 Complex Nutrients in Water

Analyte	Concentration Range	Information
Total Kjeldahl Nitrogen	2.0 – 20 mg/L	Mar/Oct 250 mL
Total Phosphorus	0.10 – 4.0 mg/L	Preservative: pH < 2 H ₂ SO ₄ Member Fee: \$210 Non-Member Fee: \$265

The concentration range covers both clean waters and wastewaters. An appropriate digestion is required prior to analysis. This PT is not intended for Total Nitrogen analysis involving a UV digestion unless nitrates are subtracted prior to reporting.

CO4A Solids in Water

Analyte	Concentration Range	Information
Total Suspended Solids	10 – 200 mg/L	Mar/Oct 500 mL
Total Dissolved Solids	100 – 1000 mg/L	Preservative: None
Volatile Suspended Solids	5 – 150 mg/L	Member Fee: \$190 Non-Member Fee: \$240

Solids concentrations are typical of those observed in wastewater treatment systems. Filters used should be Whatman™ 934-AH™ or equivalent

CO4B Biochemical Oxygen Demand in Water

Analyte	Concentration Range	Information
BOD	25 – 200 mg/L	Mar/Oct 1000 mL
CBOD	25 – 200 mg/L	Preservative: Freezing Member Fee: \$220 Non-Member Fee: \$275

BOD and CBOD concentrations are typical of those observed in wastewater treatment systems.

CO4C Turbidity in Water

Analyte	Concentration Range	Information
Turbidity	0.5 – 50 NTU	Mar/Oct 250 mL Preservative: None Member Fee: \$205 Non-Member Fee: \$255

The turbidity levels found in these samples are suitable for drinking water and for surface water.

CO4D Chemical Oxygen Demand in Water

Analyte	Concentration Range	Information
COD	30 – 500 mg/L	Mar/Oct 250 mL Preservative: pH < 2 H ₂ SO ₄ Member Fee: \$195 Non-Member Fee: \$245

The COD concentrations in these samples are typical of those found in wastewater treatment systems and is suitable for the HACH™ COD vials (or equivalent).

C14 Cyanide in Water

Analyte	Concentration Range	Information
Cyanide – Strong Acid Dissociable	0.2 – 5.0 mg/L	Mar/Oct 500 mL Preservative: pH > 12 NaOH Member Fee: \$225 Non-Member Fee: \$280
This PT is suitable for methods that require a strong acid treatment to dissociate complex cyanides.		

C15 pH in Water

Analyte	Concentration Range	Information
pH	3 – 10 pH units	Mar/Oct 125 mL Preservative: None Member Fee: \$165 Non-Member Fee: \$215

C19 Mercury in Water

Analyte	Concentration Range	Information
Mercury	0.1 – 5.0 µg/L	Mar/Oct 125 mL Preservative: 0.5% Bromine Monochloride Member Fee: \$210 Non-Member Fee: \$265

C32 Chlorine in Water

Analyte	Concentration Range	Information
Free Chlorine	0.5 – 3.0 mg/L	Mar/Oct 250 mL Preservative: None Member Fee: \$200 Non-Member Fee: \$250
Total Chlorine	0.5 – 3.0 mg/L	

C33 4AAP Phenolics in Water

Analyte	Concentration Range	Information
Total Phenolics	0.005 – 0.5 mg/L	Mar/Oct 250 mL Preservative: pH < 2 H ₂ SO ₄ Member Fee: \$230 Non-Member Fee: \$290
This PT is restricted to laboratories that use the 4AAP colorimetric method.		

C34 Oil and Grease in Water

Analyte	Concentration Range	Information
Total Oil and Grease	10 – 500 mg/L	Jan/Jun 1000 mL
Mineral (non-polar) Oil and Grease	10 – 500 mg/L	Preservative: pH < 2 H ₂ SO ₄ Member Fee: \$275 Non-Member Fee: \$355
This PT is restricted to laboratories that use the hexane extractable/gravimetric procedure for oil and grease.		

C37 Colour in Water

Analyte	Concentration Range	Information
True Colour	2 – 50 TCU	Mar/Oct 125 mL Preservative: pH < 2 HCl Member Fee: \$160 Non-Member Fee: \$205
Although the reference method for colour instructs laboratories to pH adjust samples for Colour analysis, these samples are not to be pH adjusted prior to analysis.		

C41 Hexavalent Chromium in Water

Analyte	Concentration Range	Information
Hexavalent Chromium	50 – 500 µg/L	Jan/Jun 125 mL Preservative: pH 9.3 – 9.7 Ammonium Chloride Member Fee: \$260 Non-Member Fee: \$335
These samples are <u>not</u> to be pH adjusted before analysis.		

C42 Sulphide in Water

Analyte	Concentration Range	Information
Sulphide	1 – 10 mg/L	Mar/Oct 125 mL Preservative: pH 10 with NaOH and ZnAc Member Fee: \$205 Non-Member Fee: \$260

C46 Acidity in Water

Analyte	Concentration Range	Information
Acidity	50 – 2000 mg/L	Jan/Jun 250 mL Preservative: None Member Fee: \$260 Non-Member Fee: \$335

5.2 WATER ORGANICS

C06A Organochlorine Pesticides in Water		
Analyte	Concentration Range	Information
alpha-BHC	0.05 – 3.0 µg/L	Jan/Jun 1000 mL Preservative: None Member Fee: \$415 Non-Member Fee: \$525
Endosulfan I	0.05 – 3.0 µg/L	
Endosulfan II	0.05 – 3.0 µg/L	
Endrin	0.05 – 3.0 µg/L	
Heptachlor Epoxide	0.05 – 3.0 µg/L	
Lindane (gamma-BHC)	0.05 – 3.0 µg/L	
Mirex	0.05 – 3.0 µg/L	
o,p' – DDT	0.05 – 3.0 µg/L	
p,p' – DDT	0.05 – 3.0 µg/L	
p,p' Methoxychlor	0.05 – 3.0 µg/L	
Aldrin	0.05 – 5.0 µg/L	
Dieldrin	0.05 – 5.0 µg/L	
Heptachlor	0.05 – 5.0 µg/L	
α – Chlordane	0.05 – 5.0 µg/L	
γ – Chlordane	0.05 – 5.0 µg/L	

C06B PCBs in Water		
Analyte	Concentration Range	Information
Total PCB	1.0 – 20.0 µg/L	Jan/Jun 1000 mL Preservative: None Member Fee: \$355 Non-Member Fee: \$450
Aroclor 1242	1.0 – 20.0 µg/L	
Aroclor 1248	1.0 – 20.0 µg/L	
Aroclor 1254	1.0 – 20.0 µg/L	
Aroclor 1260	1.0 – 20.0 µg/L	
Total PCBs in each sample will contain one of the aroclors listed above.		

C07 Polycyclic Aromatic Hydrocarbons (PAHs) in Water		
Analyte	Concentration Range	Information
Acenaphthene	0.4 – 12 µg/L	Jan/Jun 1000 mL Preservative: Sodium Bisulphate and Ascorbic Acid Member Fee: \$360 Non-Member Fee: \$455
Acenaphthylene	0.4 – 12 µg/L	
Anthracene	0.4 – 12 µg/L	
Benzo(a)anthracene	0.4 – 12 µg/L	
Benzo(a)pyrene	0.4 – 12 µg/L	
Benzo(b)fluoranthene	0.4 – 12 µg/L	
Benzo(b+j)fluoranthene	0.4 – 12 µg/L	
Benzo(g,h,i)perylene	0.4 – 12 µg/L	
Benzo(k)fluoranthene	0.4 – 12 µg/L	
Chrysene	0.4 – 12 µg/L	

C07 Polycyclic Aromatic Hydrocarbons (PAHs) in Water

Analyte	Concentration Range	Information
Dibenzo(a,h)anthracene	0.4 - 12 µg/L	
Fluoranthene	0.4 - 12 µg/L	
Fluorene	0.4 - 12 µg/L	
Indeno(1,2,3-cd)pyrene	0.4 - 12 µg/L	
Naphthalene	0.4 - 12 µg/L	
Phenanthrene	0.4 - 12 µg/L	
Pyrene	0.4 - 12 µg/L	

C16 Volatile Organic Compounds (VOCs) in Water

Analyte	Concentration Range	Information
1,1,1-Trichloroethane	6.0 - 200 µg/L	Jan/Jun 2 x 40 mL vials Preservative: Sodium Bisulphate Member Fee: \$360 Non-Member Fee: \$455
1,1,2,2-Tetrachloroethane	6.0 - 200 µg/L	
1,1,2-Trichloroethane	6.0 - 200 µg/L	
1,1-Dichloroethane	6.0 - 200 µg/L	
1,1-Dichloroethylene	6.0 - 200 µg/L	
1,2-Dichlorobenzene	6.0 - 200 µg/L	
1,2-Dichloroethane	6.0 - 200 µg/L	
1,2-Dichloropropane	6.0 - 200 µg/L	
1,3-Dichlorobenzene	6.0 - 200 µg/L	
1,4-Dichlorobenzene	6.0 - 200 µg/L	
Acetone (2-Propanone)	6.0 - 200 µg/L	
Benzene	2.0 - 200 µg/L	
Bromodichloromethane	20 - 500 µg/L	
Bromoform	20 - 500 µg/L	
Carbon Tetrachloride	6.0 - 200 µg/L	
Chlorobenzene	6.0 - 200 µg/L	
Chlorodibromomethane	20 - 500 µg/L	
Chloroform	20 - 500 µg/L	
cis-1,2-Dichloroethylene	6.0 - 200 µg/L	
cis-1,3-Dichloropropene	6.0 - 200 µg/L	
Dichloromethane	6.0 - 200 µg/L	
Ethylbenzene	2.0 - 200 µg/L	
Ethylene Dibromide	6.0 - 200 µg/L	
m/p-xylene	6.0 - 200 µg/L	
Methyl Ethyl Ketone	6.0 - 200 µg/L	
Methyl t-butyl ether (MTBE)	6.0 - 200 µg/L	
Methyl isobutyl Ketone (MIBK)	6.0 - 200 µg/L	
o-xylene	6.0 - 200 µg/L	
Styrene	6.0 - 200 µg/L	
Tetrachloroethylene	6.0 - 200 µg/L	
Toluene	6.0 - 200 µg/L	
trans-1,2-Dichloroethylene	6.0 - 200 µg/L	

C16 Volatile Organic Compounds (VOCs) in Water

Analyte	Concentration Range	Information
trans-1,3-Dichloropropene	6.0 – 200 µg/L	
Trichloroethylene	6.0 – 200 µg/L	
Trichlorofluoromethane	6.0 – 200 µg/L	
Vinyl Chloride	6.0 – 200 µg/L	

C22 Organophosphorus Pesticides in Water

Analyte	Concentration Range	Information
Atrazine	2 – 5 µg/L	Jan/Jun 1000 mL Preservative: None Member Fee: \$515 Non-Member Fee: \$665
Azinphos-methyl	10 – 40 µg/L	
Bendiocarb	1 – 40 µg/L	
Carbaryl	0.2 – 90 µg/L	
Carbofuran	0.2 – 90 µg/L	
Chlorpyrifos (ethyl)	2 – 10 µg/L	
Cyanazine	2 – 10 µg/L	
Diazinon	0.5 – 20 µg/L	
Dimethoate	2 – 20 µg/L	
Diuron	20 – 50 µg/L	
Malathion	2 – 10 µg/L	
Metolachlor	2 – 10 µg/L	
Metribuzin	2 – 10 µg/L	
Parathion (ethyl)	0.5 – 20 µg/L	
Phorate	0.5 – 5 µg/L	
Simazine	1 – 10 µg/L	
Terbufos	0.5 – 5 µg/L	
Trifluralin	1 – 10 µg/L	

C24 Aryloxy Acid Pesticides in Water

Analyte	Concentration Range	Information
2,4-Dichlorophenoxyacetic Acid	0.1 – 10 µg/L	Jan/Jun 1000 mL Preservative: pH < 2 H ₂ SO ₄ Member Fee: \$345 Non-Member Fee: \$445
2,4,5-Trichlorophenoxyacetic Acid	0.1 – 10 µg/L	
Bromoxynil	1 – 5 µg/L	
Dicamba	1 – 10 µg/L	
Diclofop-methyl (as free acid)	0.5 – 5 µg/L	
Dinoseb	1 – 10 µg/L	
Picloram	0.1 – 10 µg/L	

C25 Phenolic Compounds in Water

Analyte	Concentration Range	Information
2,4,6-Trichlorophenol	2 – 20 µg/L	Jan/Jun 1000 mL Preservative: pH < 2 H ₂ SO ₄ Member Fee: \$335 Non-Member Fee: \$430
2,3,4,6-Tetrachlorophenol	2 – 20 µg/L	
2,4-Dichlorophenol	2 – 20 µg/L	
Pentachlorophenol	2 – 20 µg/L	

C27 Glyphosate in Water

Analyte	Concentration Range	Information
Glyphosate	25 – 80 µg/L	Jan/Jun 250 mL Preservative: 0.01% Thiosulphate Member Fee: \$285 Non-Member Fee: \$370

C29 Aldicarb in Water

Analyte	Concentration Range	Information
Aldicarb	1 – 9 µg/L	Jan/Jun 250 mL Preservative: 0.001% Thiosulphate Member Fee: \$350 Non-Member Fee: \$450

C40A Petroleum Hydrocarbons in Water

Analyte	Concentration Range	Information
Benzene	1 – 100 µg/L	Jan/Jun 2 x 40 mL vials Preservative: Sodium Bisulphate Member Fee: \$340 Non-Member Fee: \$435
Ethylbenzene	1 – 200 µg/L	
F1: C6-C10	20 – 1000 µg/L	
m/p-Xylene	1 – 200 µg/L	
o-Xylene	1 – 200 µg/L	
Toluene	1 – 200 µg/L	
VH (C6-C10)*	20 – 1000 µg/L	

C40B Petroleum Hydrocarbons in Water

Analyte	Concentration Range	Information
F2: C10-C16	200 – 50,000 µg/L	Jan/Jun 1000 mL Preservative: None Member Fee: \$330 Non-Member Fee: \$425
F3: C16-C34	200 – 50,000 µg/L	
F4: C34-C50	200 – 50,000 µg/L	

C47 Haloacetic Acids in Water		
Analyte	Concentration Range	Information
Bromochloroacetic acid	5 - 50 µg /L	Jan/Jun 2 x 40 mL Preservative: Ammonium Chloride Member Fee: \$285 Non-Member Fee: \$370
Dibromoacetic acid	5 - 50 µg /L	
Dichloroacetic acid	5 - 50 µg /L	
Monobromoacetic acid	5 - 50 µg /L	
Monochloroacetic acid	5 - 50 µg /L	
Trichloroacetic acid	5 - 50 µg /L	

5.3 WATER MICROBIOLOGY**

C05A Water Microbiology		
Analyte	Concentration Range	Information
Escherichia coli (E. coli)	20 - 100 CFU/100 mL	Mar/Oct 5 - 20 mL Preservative: Stabilized Member Fee: \$320 Non-Member Fee: \$395
Faecal (Thermotolerant) Coliforms	20 - 100 CFU/100 mL	
Heterotrophic Plate Count	200 - 1000 CFU/mL	
Total Coliforms	20 - 100 CFU/100 mL	
This PT is not intended for Multi-Tube fermentation methods		

C05B Water Microbiology (Presence/Absence)		
Analyte	Concentration Range	Information
Escherichia coli (E. coli)	200 - 1000 CFU/mL	Mar/Oct 5 - 20 mL
Total Coliforms	200 - 1000 CFU/mL	
		Preservative: Stabilized Member Fee: \$335 Non-Member Fee: \$410

5.4 SOIL

C17 Metals in Soil		
Analyte	Concentration Range	Information
Aluminum	1000 - 100,000 µg/g	Jan/Jun 5 - 7 g Preservative: None Member Fee: \$210 Non-Member Fee: \$265
Antimony	0.4 - 4.0 µg/g	
Arsenic	5.0 - 35 µg/g	
Barium	50 - 500 µg/g	
Beryllium	1.0 - 3.0 µg/g	
Boron	20 - 200 µg/g	
Cadmium	0.2 - 6.0 µg/g	
Chromium	50 - 150 µg/g	
Cobalt	10 - 20 µg/g	
Copper	30 - 600 µg/g	
Iron	1000 - 50,000 µg/g	
Manganese	100 - 2000 µg/g	

C17 Metals in Soil

Analyte	Concentration Range	Information
Mercury	50 – 2000 ng/g	
Nickel	25 – 1000 µg/g	
Lead	5 – 400 µg/g	
Strontium	100 – 500 µg/g	
Tin	10 – 100 µg/g	
Titanium	500 – 5000 µg/g	
Uranium	1 – 5 µg/g	
Vanadium	25 – 200 µg/g	
Zinc	40 – 1600 µg/g	
This PT is intended for use by laboratories that utilize a strong acid digestion (e.g., aqua-regia) but is not intended for use with HF. Please note the different reporting units for mercury.		

C18 Polycyclic Aromatic Hydrocarbons (PAHs) in Soil

Analyte	Concentration Range	Information
Acenaphthene	0.2 – 50 µg/g	Jan/Jun 25 – 40 g Preservative: None Member Fee: \$285 Non-Member Fee: \$355
Acenaphthylene	0.2 – 50 µg/g	
Anthracene	0.2 – 50 µg/g	
Benzo(a)anthracene	0.2 – 50 µg/g	
Benzo(a)pyrene	0.2 – 50 µg/g	
Benzo(b)fluoranthene	0.2 – 50 µg/g	
Benzo(b+j)fluoranthene	0.2 – 50 µg/g	
Benzo(g,h,i)perylene	0.2 – 50 µg/g	
Benzo(k)fluoranthene	0.2 – 50 µg/g	
Chrysene	0.2 – 50 µg/g	
Dibenzo(a,h)anthracene	0.2 – 50 µg/g	
Fluoranthene	0.2 – 50 µg/g	
Fluorene	0.2 – 50 µg/g	
Indeno(1,2,3-cd)pyrene	0.2 – 50 µg/g	
Naphthalene	0.2 – 50 µg/g	
Phenanthrene	0.2 – 50 µg/g	
Pyrene	0.2 – 50 µg/g	

C31A Petroleum Hydrocarbons in Soil

Analyte	Concentration Range	Information
F1: (C6-C10)	30 – 3500 mg/kg	Jan/Jun 8 g Preservative: Methanol Member Fee: \$310 Non-Member Fee: \$400
Benzene	0.1 – 10 mg/kg	
Ethylbenzene	10 – 200 mg/kg	
m/p- Xylene	100 – 500 mg/kg	
o-Xylene	100 – 500 mg/kg	
Toluene	10 – 200 mg/kg	
VH (C6-C10)	30 – 3500 mg/kg	
Samples are intended for use by the CCME PHC method.		

C31B Petroleum Hydrocarbons in Soil

Analyte	Concentration Range	Information
F2: C10-C16	150 – 6500 mg/kg	Jan/Jun 40 g Preservative: Freezing Member Fee: \$315 Non-Member Fee: \$405
F3: C16-C34	250 – 12500 mg/kg	
F4: C34-C50	1000 – 12500 mg/kg	
F4: Gravimetric	1000 – 12500 mg/kg	
Samples are intended for use by the CCME PHC method.		

C35 PCBs in Soil

Analyte	Concentration Range	Information
Aroclor 1242	5 - 500 µg/g	Jan/Jun 30 g Preservative: None Member Fee: \$305 Non-Member Fee: \$380
Aroclor 1248	5 - 500 µg/g	
Aroclor 1254	5 - 500 µg/g	
Aroclor 1260	5 - 500 µg/g	
Total PCB	5 - 500 µg/g	
Total PCBs in each sample will contain one of the aroclors listed above.		

C36 Volatile Organic Compounds (VOCs) in Soil

Analyte	Concentration Range	Information
1,1,1-Trichloroethane	6 – 200 µg/g	Jan/Jun 8 g Preservative: Methanol Member Fee: \$380 Non-Member Fee: \$490
1,1,2,2-Tetrachloroethane	6 – 200 µg/g	
1,1,2-Trichloroethane	6 – 200 µg/g	
1,1-Dichloroethane	6 – 200 µg/g	
1,1-Dichloroethylene	6 – 200 µg/g	
1,2-Dichlorobenzene	6 – 200 µg/g	
1,2-Dichloroethane	6 – 200 µg/g	
1,2-Dichloropropane	6 – 200 µg/g	

C36 Volatile Organic Compounds (VOCs) in Soil		
Analyte	Concentration Range	Information
1,3-Dichlorobenzene	6 – 200 µg/g	
1,4-Dichlorobenzene	6 – 200 µg/g	
Acetone (2-Propanone)	6 – 200 µg/g	
Benzene	2 – 200 µg/g	
Bromodichloromethane	20 – 500 µg/g	
Bromoform	20 – 500 µg/g	
Carbon Tetrachloride	6 – 200 µg/g	
Chlorobenzene	6 – 200 µg/g	
Chlorodibromomethane	20 – 500 µg/g	
Chloroform	20 – 500 µg/g	
cis-1,2-Dichloroethylene	6 – 200 µg/g	
cis-1,3-Dichloropropene	6 – 200 µg/g	
Dichloromethane	6 – 200 µg/g	
Ethylbenzene	2 – 200 µg/g	
Ethylene Dibromide	6 – 200 µg/g	
m/p-xylene	6 – 200 µg/g	
Methyl Ethyl Ketone	6 – 200 µg/g	
Methyl t-butyl ether (MTBE)	6 – 200 µg/g	
Methyl isobutyl Ketone (MIBK)	6 – 200 µg/g	
o-xylene	6 – 200 µg/g	
Styrene	6 – 200 µg/g	
Tetrachloroethylene	6 – 200 µg/g	
Toluene	6 – 200 µg/g	
trans-1,2-Dichloroethylene	6 – 200 µg/g	
trans-1,3-Dichloropropene	6 – 200 µg/g	
Trichloroethylene	6 – 200 µg/g	
Trichlorofluoromethane	6 – 200 µg/g	

C38 Volatile Organic Compounds in Soil (TCLP)

Analyte	Concentration Range	Information
1,2-Dichlorobenzene	0.025 – 5 mg/L	Jan/Jun 100 g Preservative: Freezing Member Fee: \$375 Non-Member Fee: \$470
1,2-Dichloroethane	0.025 – 5 mg/L	
1,4-Dichlorobenzene	0.025 – 5 mg/L	
Benzene	0.025 – 5 mg/L	
Carbon tetrachloride	0.025 – 5 mg/L	
Chlorobenzene	0.025 – 5 mg/L	
Chloroform	0.025 – 5 mg/L	
Dichloromethane	0.025 – 5 mg/L	
Methyl Ethyl Ketone	1.0 – 5 mg/L	
Tetrachloroethylene	0.025 – 5 mg/L	
Trichloroethylene	0.025 – 5 mg/L	

This PT is restricted to participants that use the EPA 1311 *Toxicity Characteristic Leaching Procedure for volatiles*.

C39 Inorganics in Soil (TCLP)

Analyte	Concentration Range	Information
Silver	0.0010 – 0.050 mg/L	Jan/Jun 200 g Preservative: None Member Fee: \$375 Non-Member Fee: \$475
Arsenic	0.10 – 5.0 mg/L	
Boron	0.50 – 10.0 mg/L	
Barium	0.10 – 2.0 mg/L	
Cadmium	0.0010 – 0.050 mg/L	
Chromium	0.010 – 0.50 mg/L	
Lead	0.010 – 0.50 mg/L	
Selenium	0.050 – 1.0 mg/L	
Uranium	0.050 – 1.0 mg/L	
Mercury	0.0001 – 0.050 mg/L	
Fluoride	10 – 100 mg/L	
Nitrate-N	2 – 50 mg/L	
Nitrate and Nitrite as N	2 – 70 mg/L	
Cyanide (Weak Acid Dissociable)	0.1 – 5 mg/L	

This PT is restricted to participants that use the EPA 1311 *Toxicity Characteristic Leaching Procedure for volatiles*.

C43 Solids in Soil

Analyte	Concentration Range	Information
Fixed Solids*	80 – 100 %	Jan/Jun 100 g Preservative: None Member Fee: \$205 Non-Member Fee: \$260
Percent Moisture	1 – 30 %	
Total Solids	70 – 100 %	
Volatile Solids*	1 – 20 %	

C44 Nutrients in Soil

Analyte	Concentration Range	Information
Ammonia - N	300 - 3000 µg/g	Jan/Jun 250 g
Kjeldahl Nitrogen	400 - 4000 µg/g	Preservative: None
Phosphorus	300 - 3000 µg/g	Member Fee: \$215
Organic Carbon	1000 - 15000 µg/g	Non-Member Fee: \$270

C45 Anions in Soil

Analyte	Concentration Range	Information
Bromide	10 - 100 µg/g	Jan/Jun 250 g
Chloride	200 - 1000 µg/g	Preservative: None
Fluoride	25 - 500 µg/g	Member Fee: \$215
Nitrate-N	25 - 500 µg/g	Non-Member Fee: \$270
Phosphate-P*	25 - 500 µg/g	
Sulphate	25 - 2000 µg/g	
% Saturation		

C74 Hexavalent Chromium in Soil

Analyte	Concentration Range	Information
Hexavalent Chromium	40 - 300 µg/g	Jan/Jun 40 g Preservative: None Member Fee: \$255 Non-Member Fee: \$335

C75 Particle Size in Soil

Analyte	Concentration Range	Information
Percent Sand		Jan/Jun 100 g
Percent Silt		Preservative: None
Percent Clay		Member Fee: \$255 Non-Member Fee: \$335

C76 Oil and Grease in Soil

Analyte	Concentration Range	Information
Total Oil and Grease	300 - 3000 µg/g	Jan/Jun 40 g Preservative: None Member Fee: \$310 Non-Member Fee: \$390

C77 Pesticides in Soil

Analyte	Concentration Range	Information
p,p'-DDT	50 - 500 µg/g	Jan/Jun 30 g ampoule Preservative: None Member Fee: \$510 Non-Member Fee: \$650
Aldrin	50 - 500 µg/g	
Alpha-BHC	50 - 500 µg/g	
Alpha-Chlordane	50 - 500 µg/g	
Beta-BHC	50 - 500 µg/g	
Dieldrin	50 - 500 µg/g	
Endosulfan I	50 - 500 µg/g	
Endosulfan II	50 - 500 µg/g	
Endrin	50 - 500 µg/g	
Lindane	50 - 500 µg/g	
Gamma-Chlordane	50 - 500 µg/g	
Heptachlor	50 - 500 µg/g	
Heptachlor Epoxide	50 - 500 µg/g	
Methoxychlor	50 - 500 µg/g	

5.5 OIL

C08 PCBs in Oil

Analyte	Concentration Range	Information
Aroclor 1242	5.0 – 150 µg/g	Jan/Jun 3 -5 mL vial Preservative: None Member Fee: \$295 Non-Member Fee: \$370
Aroclor 1248	5.0 – 150 µg/g	
Aroclor 1254	5.0 – 150 µg/g	
Aroclor 1260	5.0 – 150 µg/g	
Total PCB	5.0 – 150 µg/g	
Total PCBs in each sample will contain one of the aroclors listed above.		

5.6 AIR

C09 Metals on Filters

Analyte	Concentration Range	Information
Cadmium	4.0 – 30 µg/HVF	Jan/Jun 47 mm quartz filter Preservative: None Member Fee: \$245 Non-Member Fee: \$315
Copper	4.0 – 60 µg/HVF	
Lead	4.0 – 80 µg/HVF	
Zinc	4.0 – 60 µg/HVF	
PT samples are provided as high-volume quartz filters.		

C20 Asbestos*		
Analyte	Concentration Range	Information
Asbestos		Jan/Mar/Jun/Oct Slide/Wedge Preservative: None Member Fee: \$325 Non-Member Fee: \$415

5.7 TOXICOLOGY

C11 Rainbow Trout LC50		
Analyte	Concentration Range	Information
Trout 96 Hour LC50	2 – 10 mL/L	Mar/Oct 1000 mL Preservative: None Member Fee: \$310 Non-Member Fee: \$390

C12 <i>Daphnia</i> LC50		
Analyte	Concentration Range	Information
Daphnia 48 Hour LC50	2 – 40 mL/L	Mar/Oct 500 mL Preservative: None Member Fee: \$335 Non-Member Fee: \$415

C13 Microtox™		
Analyte	Concentration Range	Information
Microtox™ 15 Minute IC50	4 – 10 mL/L	Mar/Oct 100 mL Preservative: None Member Fee: \$320 Non-Member Fee: \$400

5.8 CANNABIS-CHEMISTRY

C70 Potency in Cannabis Ψ		
Analyte	Concentration Range	Information
Tetrahydrocannabinol (THC)	0.1 – 25%	Mar/Oct
Tetrahydrocannabinolic Acid (THCA)	0.1 – 25%	2 x 1 g vials
Cannabidiol (CBD)	0.1 – 25%	Preservative: None
Cannabidiolic Acid (CBDA)	0.1 – 25%	Member Fee: \$450 Non-Member Fee: \$580

C71 Pesticides in Cannabis Ψ		
Analyte	Concentration Range	Information
Acephate	0.1 – 1 µg/g	Mar/Oct 6 x 1 g vials blank cannabis 2 x spiking solutions Preservative: None Member Fee: \$665 Non-Member Fee: \$790
Aldicarb	5.0 – 20 µg/g	
Azoxystrobin	0.1 – 1 µg/g	
Bifenazate	0.1 – 1 µg/g	
Boscalid	0.1 – 1 µg/g	
Carbaryl	0.25 – 5 µg/g	
Carbofuran	0.1 – 1 µg/g	
Diazinon	0.1 – 1 µg/g	
Dichlorvos (DDVP)	0.5 – 10 µg/g	
Dimethoate	0.1 – 1 µg/g	
Ethoprophos	0.1 – 1 µg/g	
Etoxazole	0.1 – 1 µg/g	
Fipronil	0.3 – 1.2 µg/g	
Fludioxonil	0.1 – 1 µg/g	
Imidacloprid	0.1 – 1 µg/g	
Malathion	0.1 – 1 µg/g	
Metaxyl	0.1 – 1 µg/g	
Methiocarb	0.1 – 1 µg/g	
Methomyl	0.25 – 1 µg/g	
Myclobutanil	0.1 – 1 µg/g	
Oxamyl	15 – 60 µg/g	
Paclobutrazol	0.1 – 1 µg/g	
Propoxur (Baygon)	0.1 – 1 µg/g	
Spiromesifen	15 – 60 µg/g	
Spirotetramat	0.1 – 1 µg/g	
Thiamethoxam	0.1 – 1 µg/g	
Trifloxystrobin	0.1 – 1 µg/g	

C72 Metals in Hemp Ψ		
Analyte	Concentration Range	Information
Arsenic	0.1 – 10 µg/g	Mar/Oct 2 x 2 g vials Preservative: None Member Fee: \$375 Non-Member Fee: \$480
Cadmium	0.1 – 50 µg/g	
Chromium	0.1 – 10 µg/g	
Lead	0.1 – 10 µg/g	
Mercury	0.05 – 2 µg/g	

C73 Residual Solvents in Hemp Seed Oil Ψ		
Analyte	Concentration Range	Information
1-Butanol (n-Butanol)	500 - 7000 µg/g	Mar/Oct 5 g vial blank hemp oil 4 x spiking solutions Preservative: None Member Fee: \$525 Non-Member Fee: \$675
1-Pentanol	500 - 7000 µg/g	
1-Propanol (Propanol)	500 - 7000 µg/g	
2-Butanol	500 - 7000 µg/g	
2-Butanone (Methyl ethyl ketone, MEK)	500 - 7000 µg/g	
2-Propanol (Isopropyl alcohol)	500 - 7000 µg/g	
3-Methyl-1-butanol	500 - 7000 µg/g	
Acetone (2-Propanone)	500 - 7000 µg/g	
Anisole	500 - 7000 µg/g	
Butane	500 - 7000 µg/g	
Butyl acetate	500 - 7000 µg/g	
Dimethyl sulfoxide	500 - 7000 µg/g	
Ethanol	500 - 7000 µg/g	
Ethyl acetate	500 - 7000 µg/g	
Ethyl ether	500 - 7000 µg/g	
Heptane	500 - 7000 µg/g	
Isobutanol (2-Methyl-1-propanol)	500 - 7000 µg/g	
Isobutyl acetate	500 - 7000 µg/g	
Isopropyl acetate	500 - 7000 µg/g	
Methyl acetate	500 - 7000 µg/g	
Pentane	500 - 7000 µg/g	
Propane	500 - 7000 µg/g	
Propyl acetate	500 - 7000 µg/g	
Triethylamine	500 - 7000 µg/g	

C78 Water Activity/% Moisture in Hemp Ψ		
Analyte	Concentration Range	Information
Percent Moisture	1 - 60 %	Mar/Oct 2 x 6 g vials Preservative: None Member Fee: \$215 Non-Member Fee: \$275
Water Activity*	0.1 - 10 wa	

5.9 CANNABIS-MICROBIOLOGY**

Although these are intended to support cannabis testing laboratories, the same samples can be used to support laboratories that conduct microbiology testing on food products for human consumption.

C80 Microbiology in Cannabis Surrogate - Edibles - Quantitative *		
Analyte	Concentration Range	Information
<i>E. coli</i>	500-500,000 CFU/g	Mar/Oct 4x10 mL Spiking Solutions and 4x1 bag candy Preservative: Stabilized Member Fee: \$265 Non-Member Fee: \$305
Total Coliforms	500-500,000 CFU/g	
Total Aerobic Count	500-500,000 CFU/g	
Bile Tolerant Gram Negative Count	500-500,000 CFU/g	

C81 Microbiology in Cannabis Surrogate - Quantitative *		
Analyte	Concentration Range	Information
<i>E. coli</i>	500-500,000 CFU/g	Mar/Oct 4x10 mL Spiking Solutions and 4x15 mL vial with cannabis surrogate Preservative: Stabilized Member Fee: \$265 Non-Member Fee: \$305
Total Coliforms	500-500,000 CFU/g	
Total Aerobic Count	500-500,000 CFU/g	
Bile Tolerant Gram Negative Count	500-500,000 CFU/g	

C82 Microbiology in Cannabis Surrogate - Oil - Qualitative *		
Analyte	Concentration Range	Information
<i>E. coli</i>	0 or >100 CFU/g	Mar/Oct 4x10 mL Spiking materials and 4x5 mL oil matrix Preservative: Stabilized Member Fee: \$275 Non-Member Fee: \$315
Total Coliforms	0 or >100 CFU/g	
Salmonella spp.	0 or >100 CFU/g	

C83 Microbiology in Cannabis Surrogate - Edibles - Qualitative *		
Analyte	Concentration Range	Information
<i>E. coli</i>	0 or >100 CFU/g	Mar/Oct 4x10 mL Spiking Solutions and 4x5 g candy Preservative: Stabilized Member Fee: \$265 Non-Member Fee: \$305
Total Coliforms	0 or >100 CFU/g	
Salmonella spp.	0 or >100 CFU/g	

C84 Microbiology in Cannabis Surrogate – Flower - Qualitative *		
Analyte	Concentration Range	Information
<i>E. coli</i>	0 or >100 CFU/g	4x10 mL Spiking Solutions and 4x5 g flower Preservative: Stabilized Member Fee: \$265 Non-Member Fee: \$305
Total Coliforms	0 or >100 CFU/g	
Salmonella spp.	0 or >100 CFU/g	

6.0 Special Notes

Ψ Cannabis PT samples will only be shipped to laboratories that hold a valid Health Canada licence for cannabis testing.

* These test groups are not currently included in PT Canada's A2LA scope of accreditation. Please refer to the A2LA web-site for the most current coverage.

** Microbiology samples within Canada will not be shipped without the appropriate Public Health Agency of Canada license or a claim that the participant is exempt from licencing.

Fees: With the exception of government laboratories that have provided a valid purchase order, all fees must be paid in advance. Failure to make payment will result in samples not being shipped. All fees are in Canadian dollars.

Shipping Fees: Shipments to countries other than Canada shall pay a shipping cost equal to 25% of the sample fees.

All Test Groups: The indicated concentration ranges are approximate values only. Actual concentrations may be higher or lower than those indicated.

General Organics: Because the assigned values used for the calculation of z-scores are based on consensus data, laboratories that are using isotope dilution procedures may observe a bias relative to the assigned values

7.0 History of Changes

Date	Rev. No.	Sections	Changes
12/18/2019	1.0		Initial publication
01/22/2020	1.1	5.1	Corrected concentration ranges for C02B and C02C
12/23/2020	1.2	1.0	Added A2LA certificate number and removed some accreditation flags.
03/03/2021	1.3	3.0 5.2	Modified schedule for COVID changes Added a preservative for C07.
11/08/2021	1.4	3.0 5.0 6.0	Updated schedule. Updated for current A2LA accreditation status. Updated shipping fees.
03/22/2022	1.5	5.1	Corrected test group name for C02A and C02C.
4/1/2022	1.6		Updated indications where analytes are not on the PTC scope of accreditation.
11/14/2022	1.7	3.0 5.0	Updated schedule. Updated testing fees.
3/08/2023	1.8		Updated concentration ranges as per subcontractor contracts.
05/23/2023	1.9	1.0	Updated 17043 title to match the new 17043 Standard released May 2023.
07/21/2023	1.10	5.9	Added test groups for microbiology in cannabis.
11/14/2023	1.11	1.0 3.0 5.0	Updated with new micro test groups Updated schedule Updated testing fees