

# Catalogue

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**March 3, 2021**  
**Version 1.3**

## Table of Contents

1.0	Introduction .....	1
2.0	References.....	1
3.0	2020 Shipping Schedule .....	1
4.0	Registration .....	2
5.0	Tests Offered in the PT Canada PT Program .....	2
5.1	Water Inorganics.....	2
5.2	Water Organics .....	8
5.3	Water Microbiology** .....	13
5.4	Soil.....	13
5.5	Oil .....	18
5.6	Air .....	19
5.7	Toxicology.....	19
5.8	Cannabis.....	20
6.0	Special Notes .....	22
7.0	History of Changes .....	23

## 1.0 Introduction

The Proficiency Testing Canada PT Program (formerly the CALA PT Program) is accredited to ISO/IEC 17043-*Conformity assessment—General requirements for proficiency testing* 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) and C05B (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 38 and 39, each test group consists of four samples of different concentration.

Proficiency Testing Canada offers a discount to Institutional members of the Canadian Association for Laboratory Accreditation (CALA).

## 2.0 References

The following CALA documents provide information about Proficiency Testing and other CALA programs:

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

## 3.0 2021 Shipping Schedule

The table below provides details on important dates for the PT Canada PT Program (2021).

Water Inorganic Chemistry/Toxicology/Cannabis			
Test Groups	Registration deadline	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	April 30	May 17	June 18
	October 4	October 18	November 19

Water Organics/Soil Inorganics/Soil Organics/Oil			
Test Groups	Registration deadline	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	December 24	January 25	February 26
	August 6	August 23	September 24

Asbestos			
Test Groups	Registration deadline	Shipping Date	Reporting Deadline
C20	December 24	January 11	February 5
	April 30	May 10	June 4
	August 6	August 16	September 10
	September 27	October 11	November 5

If there are any discrepancies between this schedule and the schedule posted on the PT Canada web site ([www.ptcanada.org](http://www.ptcanada.org)), the PTC web site will be deemed to be correct.

## 4.0 Registration

Laboratories wishing to participate in PT Canada Proficiency Testing must submit a completed Application (PAR04 - *Application*).

## 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 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: \$258
Magnesium	2 – 50 mg/L	Non-Member Fee: \$335
Fluoride	0.2 – 4.0 mg/L	
Hardness as CaCO <sub>3</sub>	10 – 800 mg/L	
Inorganic Carbon	2 – 50 mg/L	
Nitrate	0.20 – 20.0 mg/L	
Nitrate plus Nitrite	0.20 – 20.0 mg/L	
Potassium	1 – 40 mg/L	

## CO1A Major Ions in Water

Analyte	Concentration Range	Information
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 250 mL
Organic Carbon	2.0 – 20.0 mg/L	Preservative: None
Phosphate	0.1 – 3.0 mg/L	Member Fee: \$217
Bromide	1.0 – 10.0 mg/L	Non-Member Fee: \$284
Nitrite	0.1 – 1.0 mg/L	

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

## CO2A Metals (High Range) in Water

Analyte	Concentration Range	Information
Aluminum	0.001 – 1.60 mg/L	Mar/Oct 250 mL
Antimony	1.0 – 100 µg/L	Preservative: 0.2% HNO <sub>3</sub>
Arsenic	1.0 – 100 µg/L	Member Fee: \$217
Barium	0.001 – 1.60 mg/L	Non-Member Fee: \$284
Beryllium	0.001 – 0.10 mg/L	
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 – 0.100 mg/L	
Tin	0.001 – 0.100 mg/L	
Titanium	0.001 – 1.60 mg/L	
Uranium	0.001 – 0.1 mg/L	

### CO2A Metals (High Range) in Water

Analyte	Concentration Range	Information
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 ppb 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 the hydride metals.

### CO2B Metals (High Range) in Water

Analyte	Concentration Range	Information
Aluminum	0.25 – 1.60 mg/L	Mar/Oct
Barium	0.25 – 1.60 mg/L	250 mL
Boron	0.25 – 1.60 mg/L	Preservative: 0.2% HNO <sub>3</sub>
Chromium	0.25 – 1.60 mg/L	Member Fee: \$217
Cobalt	0.25 – 1.60 mg/L	Non-Member Fee: \$284
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 (High Range) in Water

Analyte	Concentration Range	Information
Aluminum	0.25 – 1.60 mg/L	Mar/Oct
Antimony*	1.0 – 100 µg/L	250 mL
Arsenic*	1.0 – 100 µg/L	Preservative: 0.2% HNO <sub>3</sub>
Barium	0.25 – 1.60 mg/L	Member Fee: \$217
Beryllium*	0.001 – 0.10 mg/L	Non-Member Fee: \$284
Boron	0.25 – 1.60 mg/L	
Cadmium*	0.001 – 0.10 mg/L	
Chromium	0.25 – 1.60 mg/L	
Cobalt	0.25 – 1.60 mg/L	
Copper	0.25 – 1.60 mg/L	

### CO2C- Metals (High Range) in Water

Analyte	Concentration Range	Information
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 <sub>2</sub> SO <sub>4</sub> Member Fee: \$181 Non-Member Fee: \$237

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	10 – 1000 mg/L	Preservative: None
Volatile Suspended Solids	5 – 150 mg/L	Member Fee: \$170 Non-Member Fee: \$222

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: \$186 Non-Member Fee: \$243

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: \$165 Non-Member Fee: \$217

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 <sub>2</sub> SO <sub>4</sub> Member Fee: \$165 Non-Member Fee: \$217

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: \$186 Non-Member Fee: \$243

This PT is suitable for methods that require a strong acid treatment to dissociate complex cyanides.



<b>C15 pH in Water</b>		
Analyte	Concentration Range	Information
pH	3 – 10 pH units	Mar/Oct 125 mL Preservative: None Member Fee: \$140 Non-Member Fee: \$186

<b>C19 Mercury in Water</b>		
Analyte	Concentration Range	Information
Mercury	0.1 – 2 µg/L	Mar/Oct 125 mL Preservative: 0.5% Bromine Monochloride Member Fee: \$176 Non-Member Fee: \$232

<b>C32 Chlorine in Water</b>		
Analyte	Concentration Range	Information
Free Chlorine	0.5 – 3.0 mg/L	Mar/Oct 250 mL Preservative: None Member Fee: \$165 Non-Member Fee: \$217
Total Chlorine	0.5 – 3.0 mg/L	

<b>C33 4AAP Phenolics in Water</b>		
Analyte	Concentration Range	Information
Total Phenolics	0.005 – 0.5 mg/L	Mar/Oct 250 mL Preservative: pH < 2 H <sub>2</sub> SO <sub>4</sub> Member Fee: \$191 Non-Member Fee: \$253
This PT is restricted to laboratories that use the 4AAP colorimetric method.		

<b>C34 Oil and Grease in Water in Water</b>		
Analyte	Concentration Range	Information
Total Oil and Grease	10 – 500 mg/L	Jan/Jun 1000 mL Preservative: pH < 2 H <sub>2</sub> SO <sub>4</sub> Member Fee: \$260 Non-Member Fee: \$340
Mineral (non-polar) Oil and Grease	10 – 500 mg/L	
This PT is restricted to laboratories that use the hexane extractable/gravimetric procedure for oil and grease.		

<b>C37 Colour in Water</b>		
Analyte	Concentration Range	Information
True Colour	0 – 50 CU	Mar/Oct 125 mL Preservative: pH < 2 HCl Member Fee: \$134 Non-Member Fee: \$176
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.		

<b>C41 Hexavalent Chromium in Water</b>		
Analyte	Concentration Range	Information
Hexavalent Chromium	50 – 500 µg/L	Jan/Jun 125 mL Preservative: pH 9.3 – 9.7 Ammonium Chloride Member Fee: \$245 Non-Member Fee: \$320
These samples are <u>not</u> to be pH adjusted before analysis.		

<b>C42 Sulphide in Water</b>		
Analyte	Concentration Range	Information
Sulphide	1 – 10 mg/L	Mar/Oct 125 mL Preservative: pH 10 with NaOH and ZnAc Member Fee: \$176 Non-Member Fee: \$232

<b>C46 Acidity in Water</b>		
Analyte	Concentration Range	Information
Acidity	50 – 2000 mg/L	Jan/Jun 250 mL Preservative: None Member Fee: \$245 Non-Member Fee: \$320

## 5.2 WATER ORGANICS

<b>C06A Organochlorine Pesticides in Water</b>		
Analyte	Concentration Range	Information
alpha-BHC	0.05 – 3.0 µg/L	Jan/Jun 1000 mL
Endosulfan I	0.05 – 3.0 µg/L	Preservative: None
Endosulfan II	0.05 – 3.0 µg/L	Member Fee: \$351
Endrin	0.05 – 3.0 µg/L	Non-Member Fee: \$459

## C06A Organochlorine Pesticides in Water

Analyte	Concentration Range	Information
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 - 3.0 µg/L	
Dieldrin	0.05 - 3.0 µg/L	
Heptachlor	0.05 - 3.0 µg/L	
a - Chlordane	0.05 - 3.0 µg/L	
g - Chlordane	0.05 - 3.0 µg/L	

## C06B PCBs in Water

Analyte	Concentration Range	Information
Total PCB	1.0 - 20.0 µg/L	Jan/Jun 1000 mL
Aroclor 1242	1.0 - 20.0 µg/L	Preservative: None
Aroclor 1248	1.0 - 20.0 µg/L	Member Fee: \$304
Aroclor 1254	1.0 - 20.0 µg/L	Non-Member Fee: \$397
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
Acenaphthylene	0.4 - 12 µg/L	Preservative: Sodium Bisulphate and Ascorbic Acid
Anthracene	0.4 - 12 µg/L	Member Fee: \$304
Benzo(a)anthracene	0.4 - 12 µg/L	Non-Member Fee: \$397
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	
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	

## C07 Polycyclic Aromatic Hydrocarbons (PAHs) in Water

Analyte	Concentration Range	Information
Pyrene	0.4 - 12 µg/L	

## C16 Volatile Organic Compounds (VOCs) in Water

Analyte	Concentration Range	Information
1,1,1-Trichloroethane	2.0 - 200 µg/L	Jan/Jun 2 x 40 mL vials Preservative: Sodium Bisulphate Member Fee: \$325 Non-Member Fee: \$425
1,1,2,2-Tetrachloroethane	2.0 - 200 µg/L	
1,1,2-Trichloroethane	2.0 - 200 µg/L	
1,1-Dichloroethane	2.0 - 200 µg/L	
1,1-Dichloroethylene	2.0 - 200 µg/L	
1,2-Dichlorobenzene	2.0 - 200 µg/L	
1,2-Ddichloroethane	2.0 - 200 µg/L	
1,2-Dichloropropane	2.0 - 200 µg/L	
1,3-Dichlorobenzene	2.0 - 200 µg/L	
1,4-Dichlorobenzene	2.0 - 200 µg/L	
Acetone (2-Propanone)	2.0 - 200 µg/L	
Benzene	2.0 - 200 µg/L	
Bromodichloromethane	2.0 - 200 µg/L	
Bromoform	2.0 - 200 µg/L	
Carbon Tetrachloride	2.0 - 200 µg/L	
Chlorobenzene	2.0 - 200 µg/L	
Chlorodibromomethane	2.0 - 200 µg/L	
Chloroform	2.0 - 200 µg/L	
cis-1,2-Dichloroethylene	2.0 - 200 µg/L	
cis-1,3-Dichloropropene	2.0 - 200 µg/L	
Dichloromethane	2.0 - 200 µg/L	
Ethylbenzene	2.0 - 200 µg/L	
Ethylene Dibromide	2.0 - 200 µg/L	
m/p-xylene	2.0 - 200 µg/L	
Methyl Ethyl Ketone	2.0 - 200 µg/L	
Methyl t-butyl ether (MTBE)	2.0 - 200 µg/L	
Methyl isobutyl Ketone (MIBK)	2.0 - 200 µg/L	
o-xylene	2.0 - 200 µg/L	
Styrene	2.0 - 200 µg/L	
Tetrachloroethylene	2.0 - 200 µg/L	
Toluene	2.0 - 200 µg/L	
trans-1,2-Dichloroethylene	2.0 - 200 µg/L	
trans-1,3-Dichloropropene	2.0 - 200 µg/L	
Trichloroethylene	2.0 - 200 µg/L	
Trichlorofluoromethane	2.0 - 200 µg/L	
Vinyl Chloride	2.0 - 200 µg/L	

## C22 Organophosphorus Pesticides in Water in Water

Analyte	Concentration Range	Information
Atrazine	2 - 5 µg/L	Jan/Jun 1000 mL Preservative: None Member Fee: \$485 Non-Member Fee: \$635
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 <sub>2</sub> SO <sub>4</sub> Member Fee: \$320 Non-Member Fee: \$420
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 <sub>2</sub> SO <sub>4</sub> Member Fee: \$310 Non-Member Fee: \$405
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: \$270 Non-Member Fee: \$355

### C29 Aldicarb in Water

Analyte	Concentration Range	Information
Aldicarb	1 - 9 µg/L	Jan/Jun 250 mL Preservative: 0.001% Thiosulphate Member Fee: \$330 Non-Member Fee: \$430

### 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: \$299 Non-Member Fee: \$392
Ethylbenzene	1 - 100 µg/L	
F1: C6-C10	20 - 1000 µg/L	
m/p-Xylene	1 - 100 µg/L	
o-Xylene	1 - 100 µg/L	
Toluene	1 - 100 µg/L	
VH (C6-C10)* (NEW)	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: \$299 Non-Member Fee: \$392
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: \$270 Non-Member Fee: \$355
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\*\*

<b>C05A Water Microbiology</b>		
Analyte	Concentration Range	Information
Escherichia coli (E. coli)	20 - 100 CFU/100 mL	Mar/Oct 2 - 5 mL
Faecal (Thermotolerant) Coliforms	20 - 100 CFU/100 mL	Preservative: Stabilized
Heterotrophic Plate Count	200 - 1000 CFU/mL	Member Fee: \$243
Total Coliforms	20 - 100 CFU/100 mL	Non-Member Fee: \$320
This PT is not intended for Multi-Tube fermentation methods		

<b>C05B Water Microbiology (Presence/Absence)</b>		
Analyte	Concentration Range	Information
Escherichia coli (E. coli)	NA	Mar/Oct 2 - 5 mL
Total Coliforms	NA	Preservative: Stabilized Member Fee: \$258 Non-Member Fee: \$335

### 5.4 SOIL

<b>C17 Metals in Soil</b>		
Analyte	Concentration Range	Information
Aluminum	1000 - 100000 µg/g	Jan/Jun 5 - 7 g
Antimony	0.4 - 4.0 µg/g	Preservative: None
Arsenic	5.0 - 35 µg/g	Member Fee: \$176
Barium	50 - 500 µg/g	Non-Member Fee: \$232
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 - 50000 µg/g	
Manganese	100 - 2000 µg/g	
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	

### C17 Metals in Soil

Analyte	Concentration Range	Information
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: \$237 Non-Member Fee: \$309
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: \$284 Non-Member Fee: \$371
Benzene	10 - 200 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 30 g Preservative: Freezing
F3: C16-C34	250 - 12500 mg/kg	
F4: C34-C50	1000 - 12500 mg/kg	



### C31B Petroleum Hydrocarbons in Soil

Analyte	Concentration Range	Information
F4: Gravimetric	1000 - 12500 mg/kg	Member Fee: \$284 Non-Member Fee: \$371

Samples are intended for use by the CCME PHC method.

### C35 PCBs in Soil

Analyte	Concentration Range	Information
Aroclor 1242	2 - 150 µg/g	Jan/Jun
Aroclor 1248	2 - 150 µg/g	30 g
Aroclor 1254	2 - 150 µg/g	Preservative: None
Aroclor 1260	2 - 150 µg/g	Member Fee: \$258
Total PCB	2 - 150 µg/g	Non-Member Fee: \$335

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	5 - 200 µg/g	Jan/Jun
1,1,2,2-Tetrachloroethane	5 - 200 µg/g	8 g
1,1,2-Trichloroethane	5 - 200 µg/g	Preservative: Methanol
1,1-Dichloroethane	5 - 200 µg/g	Member Fee: \$346
1,1-Dichloroethylene	5 - 200 µg/g	Non-Member Fee: \$454
1,2-Dichlorobenzene	5 - 200 µg/g	
1,2-Dichloroethane	5 - 200 µg/g	
1,2-Dichloropropane	5 - 200 µg/g	
1,3-Dichlorobenzene	5 - 200 µg/g	
1,4-Dichlorobenzene	5 - 200 µg/g	
Acetone (2-Propanone)	5 - 200 µg/g	
Benzene	5 - 200 µg/g	
Bromodichloromethane	5 - 200 µg/g	
Bromoform	5 - 200 µg/g	
Carbon Tetrachloride	5 - 200 µg/g	
Chlorobenzene	5 - 200 µg/g	
Chlorodibromomethane	5 - 200 µg/g	
Chloroform	5 - 200 µg/g	
cis-1,2-Dichloroethylene	5 - 200 µg/g	
cis-1,3-Dichloropropene	5 - 200 µg/g	
Dichloromethane	5 - 200 µg/g	
Ethylbenzene	5 - 200 µg/g	
Ethylene Dibromide	5 - 200 µg/g	

### C36 – Volatile Organic Compounds (VOCs) in Soil

Analyte	Concentration Range	Information
m/p-xylene	5 – 200 µg/g	
Methyl Ethyl Ketone	5 – 200 µg/g	
Methyl t-butyl ether (MTBE)	5 – 200 µg/g	
Methyl isobutyl Ketone (MIBK)	5 – 200 µg/g	
o-xylene	5 – 200 µg/g	
Styrene	5 – 200 µg/g	
Tetrachloroethylene	5 – 200 µg/g	
Toluene	5 – 200 µg/g	
trans-1,2-Dichloroethylene	5 – 200 µg/g	
trans-1,3-Dichloropropene	5 – 200 µg/g	
Trichloroethylene	5 – 200 µg/g	
Trichlorofluoromethane	5 – 200 µg/g	

### C38 Volatile Organic Compounds in Soil (TCLP)

Analyte	Concentration Range	Information
1,2-Dichlorobenzene	0.025 – 5 mg/L	Jan/Jun
1,2-Dichloroethane	0.025 – 5 mg/L	100 g
1,4-Dichlorobenzene	0.025 – 5 mg/L	Preservative: Freezing
Benzene	0.025 – 5 mg/L	Member Fee: \$320
Carbon tetrachloride	0.025 – 5 mg/L	Non-Member Fee: \$418
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
Arsenic	0.10 – 5.0 mg/L	200 g
Boron	0.50 – 10.0 mg/L	Preservative: None
Barium	0.10 – 2.0 mg/L	Member Fee: \$335
Cadmium	0.0010 – 0.050 mg/L	Non-Member Fee: \$438
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	

### C39 Inorganics in Soil (TCLP)

Analyte	Concentration Range	Information
Fluoride	10 - 100 mg/L	
Nitrate-N	2 - 50 mg/L	
Nitrate and Nitrite as N	2.8 - 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
Percent Moisture	1 - 30%	Preservative: None
Total Solids	70 - 100%	Member Fee: \$176
Volatile Solids*	1 - 20%	Non-Member Fee: \$232

### 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: \$176
Organic Carbon *	1000 - 15000 µg/g	Non-Member Fee: \$232

### 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: \$176
Nitrate-N	25 - 500 µg/g	Non-Member Fee: \$232
Phosphate-P*	25 - 500 µg/g	
Sulphate	25 - 2000 µg/g	
% Saturation		

### C74 Hexavalent Chromium in Soil\* (NEW)

Analyte	Concentration Range	Information
Hexavalent Chromium	40 - 300 µg/g	Jan/Jun 40 g Preservative: None Member Fee: \$240 Non-Member Fee: \$320

<b>C75 Particle Size in Soil* (NEW)</b>		
Analyte	Concentration Range	Information
Percent Sand		Jan/Jun 40 g
Percent Silt		Preservative: None
Percent Clay		Member Fee: \$240 Non-Member Fee: \$320

<b>C76 Oil and Grease in Soil* (NEW)</b>		
Analyte	Concentration Range	Information
Total Oil and Grease	300 - 3000 µg/g	Jan/Jun 40 g Preservative: None Member Fee: \$290 Non-Member Fee: \$375

<b>C77 Pesticides in Soil* (NEW)</b>		
Analyte	Concentration Range	Information
p,p'-DDT	50 - 500 µg/kg	Jan/Jun
Aldrin	50 - 500 µg/kg	30 g ampoule
Alpha-BHC	50 - 500 µg/kg	Preservative: None
Alpha-Chlordane	50 - 500 µg/kg	Member Fee: \$480
Beta-BHC	50 - 500 µg/kg	Non-Member Fee: \$624
Dieldrin	50 - 500 µg/kg	
Endosulfan I	50 - 500 µg/kg	
Endosulfan II	50 - 500 µg/kg	
Endrin	50 - 500 µg/kg	
Lindane	50 - 500 µg/kg	
Gamma-Chlordane	50 - 500 µg/kg	
Heptachlor	50 - 500 µg/kg	
Heptachlor Epoxide	50 - 500 µg/kg	
Methoxychlor	50 - 500 µg/kg	

## 5.5 OIL

<b>C08 PCBs in Oil</b>		
Analyte	Concentration Range	Information
Aroclor 1242	5.0 - 150.0 µg/g	Jan/Jun
Aroclor 1248	5.0 - 150.0 µg/g	3 mL vial
Aroclor 1254	5.0 - 150.0 µg/g	Preservative: None
Aroclor 1260	5.0 - 150.0 µg/g	Member Fee: \$248
Total PCB	5.0 - 150.0 µg/g	Non-Member Fee: \$325

Total PCBs in each sample will contain one of the aroclors listed above.

## 5.6 AIR

<b>C09 Metals on Filters</b>		
Analyte	Concentration Range	Information
Cadmium	4.0 – 30 µg/HVF	Jan/Jun 47 mm quartz filter Preservative: None Member Fee: \$230 Non-Member Fee: \$300
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.		

<b>C20 Asbestos*</b>		
Analyte	Concentration Range	Information
Asbestos		Jan/Mar/Jun/Oct Slide/Wedge Preservative: None Member Fee: \$291 Non-Member Fee: \$383

## 5.7 TOXICOLOGY

<b>C11 Rainbow Trout LC50</b>		
Analyte	Concentration Range	Information
Trout 96 Hour LC50	2 – 10 mL/L	Mar/Oct 1000 mL Preservative: None Member Fee: \$273 Non-Member Fee: \$356

<b>C12 <i>Daphnia</i> LC50</b>		
Analyte	Concentration Range	Information
<i>Daphnia</i> 48 Hour LC50	2 – 40 mL/L	Mar/Oct 500 mL Preservative: None Member Fee: \$273 Non-Member Fee: \$356

<b>C13 Microtox™</b>		
Analyte	Concentration Range	Information
Microtox™ 15 Minute IC50	4 – 10 mL/L	Mar/Oct 500 mL Preservative: None Member Fee: \$273 Non-Member Fee: \$356

## 5.8 CANNABIS

<b>C70 Potency in Cannabis* Ψ</b>		
Analyte	Concentration Range	Information
Tetrahydrocannabinol (THC)	0.1 - 25%	Mar/Oct 2 x 1 g vials Preservative: None Member Fee: \$420 Non-Member Fee: \$550
Tetrahydrocannabinolic Acid (THCA)	0.1 - 25%	
Cannabidiol (CBD)	0.1 - 25%	
Cannabidiolic Acid (CBDA)	0.1 - 25%	

<b>C71 Pesticides in Cannabis* Ψ</b>		
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: \$620 Non-Member Fee: \$750
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	
Metalaxyl	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	

<b>C72 Metals in Hemp* Ψ</b>		
Analyte	Concentration Range	Information
Arsenic	0.1 - 10 µg/g	Mar/Oct 2 x 2 g vials
Cadmium	0.1 - 50 µg/g	

**C72 Metals in Hemp\* Ψ**

Analyte	Concentration Range	Information
Chromium	0.1 - 10 µg/g	Preservative: None Member Fee: \$350 Non-Member Fee: \$455
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 2 x 1 g vials blank hemp oil 2 x spiking solutions Preservative: None Member Fee: \$490 Non-Member Fee: \$640
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 (NEW)**

Analyte	Concentration Range	Information
Percent Moisture	1 - 60 %	Mar/Oct 2 x 6 g vials Preservative: None Member Fee: 200 Non-Member Fee: \$260
Water Activity	0.1 - 10 aw	

## 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.

**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.