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cmpt.ca

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ISO 17043:2023

Our ISO 17043 accreditation was performed by the American Association for Laboratory Accreditation (A2LA) in 2015. By its voluntary participation in this accreditation assessment, CMPT affirms its continued participation in the international community of proficiency testing providers.

Laboratories that work with CMPT can have continued confidence in the rigour of our commitment to our own quality and to the quality needs of our participants.



We are constantly reviewing and updating our offerings to better support laboratories. To get the latest updates on our programs, courses, and events, follow us on LinkedIn or sign up for our newsletter.

cmpt.ca/contact

Dear quality partner,

Thank you for your interest in the products and services offered by the Canadian Microbiology Proficiency Testing Program (CMPT). First created in 1982, CMPT is a not for profit proficiency testing service run from the Department of Pathology and Laboratory Medicine at the University of British Columbia in Vancouver, Canada.

CMPT offers several external quality assessment programs (EQA) and proficiency testing (PT) schemes in all the major disciplines of microbiology. Our customers include clinical, environmental and industry-focused testing laboratories and sites performing point of care testing for infectious diseases. CMPT also supplies PT samples to third party EQA providers and can work with distributors to design and implement customized samples and schemes.

We are a peer-driven program deeply rooted in our educational values and the quality standards to which our customers conform. Practically, this means our programs provide laboratories with lifelike simulated samples to work with such as clinical specimens (e.g. blood cultures), environmental samples (e.g. drinking water), and product samples (e.g. cannabis). Detailed critiques for each challenge are written by committee consensus and provided to our customers with an opportunity to view their own performance within the testing group though a secure web portal.

Our proficiency testing challenges are formulated in our laboratory and we pride ourselves on our attentive customer service. By providing our customers with the best products and services, we help them to ensure they are providing their best quality service for public and patient health and safety.

On behalf of the entire CMPT team, thank you for your interest in CMPT. We look forward to working with you.

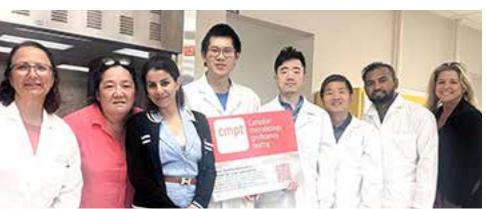
Sincerely,

Lucy A Perrone, MSPH, PhD

Donald B. Rix Professor of Laboratory Quality

Chair, Canadian Microbiology Proficiency Testing Program (CMPT)

Associate Professor, Department of Pathology and Laboratory Medicine



The University of British Columbia, Vancouver, Canada

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Did you know we have a newsletter?

We send monthly news about new programs and courses, as well as quarterly updates that include research publications by CMPT staff. You can read previous issues and subscribe on our website: cmpt.ca/publications-newsletter/

EQA Programs

What is Proficiency Testing?

and why should testing sites participate?

Proficiency Testing (PT) is one form of external assessment of laboratories to ensure their ability to perform to the level of competence and quality required.

PT programs evaluate the ability of a testing laboratory to process, analyze, and report a specific sample with a known target analyte but unknown to the testing laboratory. PT providers send real or simulated samples to participant laboratories, laboratories analyze the samples for a specific analyte, and send their results back to the PT provider. The PT provider then compares the results to the reference or expected result and returns individual reports with the laboratory performance and collates the results from all participants allowing them to compare their performance to other participants.

PT allows a laboratory's performance to be assessed in comparison to reference methods and to other peer laboratories and can provide external authorities with evidence about the quality and competence of laboratories/testing sites in performing their tasks.

All laboratory testing requires consistent and objective quality assurance oversight and evaluation to ensure test results are accurate, timely, and reliable and help prevent unnecessary harm to the population.

EQA providers have a unique and critical role to play in testing quality oversight and assurance. By working in collaboration and partnership with health authorities and key stakeholders, an EQA partner can help support public health.

Accurate sample testing is critical for effective decision making and testing data significantly influences public health as we have observed across the world during the COVID-19 pandemic and the rapid scale up of diagnostic testing and screening.

Our experience as an ISO 17043- accredited EQA provider, supporting the quality assurance during rapid scale up of COVID-19 testing and screening in Canada demonstrates this enormous value, especially when a myriad of testing methods and testing site types are employed.

Why should my lab participate in an PT program?

Regardless of industry regulation, enrolment in a PT program has invaluable benefits for the participant laboratories/testing sites:

- Provides value as a quality indicator
- Instills confidence in the quality of a laboratory's performance
- Provides educational opportunities
- Serves as a tool for evaluation of staff competency
- Allows peer group comparisons of test results within a particular method and between different analytical methods

While PT reveals weaknesses in the testing process, it also allows laboratories to implement corrective actions that help strengthen their quality system and thus, improve the quality of their results and services.

Ultimately, EQA is a valuable tool for Quality Improvement ONLY if it is applied for change.



CMPT's Proficiency Testing Process

Sample preparation

PT samples are prepared in our lab by our expert technical staff. Samples go through a rigorous stability and homogeneity testing before they are sent to our participants.

Shipping

Samples are shipped to our customers. All shipments include processing and reporting instructions in addition to any other relevant information regarding the samples (case histories, worksheets, etc.). Testing

Participants analyze the samples using their own methods and protocols.

Results submission

Results are reported within a specified deadline through CMPT's members only easy to use data entry portal.

Results analysis

Submitted results are compared with reference and/or consensus results. Scoring/grading of results is performed based on a published grading scheme for each program.

Reports Issued

Individual result letters demonstrating the laboratory performance are posted on CMPT's member portal so they can be accessed at any time. In addition, an aggregate report is issued for all programs participants with inter laboratory comparison of results; educational comments on results are included and for Clinical Bacteriology, Mycology, and Parasitology programs, extensive educational critiques with comments by discipline expert committees are generated.

Sample quality certification

We close every PT study by documenting the stability and homogeneity of every sample to make sure the sample was performing as intended when your lab analyzed it.

PT Samples

CMPT's Proficiency testing (PT) samples are carefully designed to simulate clinical specimens and/or environmental samples. Samples are specially formulated to accommodate for a variety of in vitro diagnostic testing methods that may be employed in laboratory or point of care (POC) testing settings. PT samples are realistic in appearance, incorporate complex clinically relevant flora, and to the extent possible, appear and behave like primary samples, and should be handled and processed for analysis accordingly.

Paper/Video challenges

External quality assessment (EQA) is an important educational exercise intended to help laboratories detect sources of error in the total testing process. The majority of diagnostic errors occur in the pre and post analytical phases of the otal testing process and as such, EQA measures for these extra analytical phases should also be employed by the diagnostic community.

CMPT introduced the Paper Challenge (PC) and Video Challenge (VC) as EQA tools to assist participants to further evaluate possible sources of error in extra-analytical phases. These challenges are created through the committees a process that involves the selection of a topic, the description of a scenario, the design of possible answers, and the selection of the best response and unac-ceptable ones. Group analytics is applied and an informative critique with results and inter-laboratory compari-son is written.

These challenges query participants knowledge and experience with quality related scenarios such as: how to manage issues with inappropriate specimen containers, unfavorable conditions during specimen transport, compromised samples, mislabeled samples, and correct use of language on a susceptibility report. Are the negative samples or contaminated reported as such? Are complex samples referred? Are the reports reaching the right patient or physician?

CMPT's paper and video challenges are included at no extra cost to participants in the clinical bacteriology scheme and are an added educational value for practicing microbiologists.

CMPT Technical Committees

The Canadian Microbiology Proficiency Testing (CMPT) is a university based, peer- directed educational program driven by a dedicated team of University faculty and staff and a diverse group of medical and environmental microbiologists practicing across Canada and globally.

CMPT's PT schemes and samples are designed in collaboration between CMPT leadership, staff and expert committee members. CMPT maintains expert committees for Clinical Bacteriology, Mycology, Enteric Parasitology, and Virology, and receives technical input on he Drinking and Recreational Water programs from a dedicated Chair. Clinically oriented programs are also monitored by CMPT's Medical Advisory Board.

Committee members volunteer their time and their input is essential for shaping the program, informing the scheme design, developing case histories, informing PT sample formulations, evaluating survey results, and creating educational critiques which provide valuable context to a participants performance for each survey. Committees members serve in an important role in informing CMPT of new technologies, guidelines, changing policies and the evolving diagnostic landscape so CMPT can adjust samples and schemes to satisfy those needs. The time and expertise of the committee members are critical to the program and all efforts are highly appreciated.

If you are interested in joining a CMPT committee, please contact us today.



Our expert committee members work in labs and hospitals across Canada.

Ordering PT

You can order PT programs conveniently and securely through our online order form at https://member.cmpt.ca/pt-order-form/, or by contacting us directly using the contact information below.

For sample volumes and more detailed information about each program, please visit our website at cmpt.ca/eqa-programs.

Shipping dates: https://cmpt.ca/eqa-programs-old/eqa-programs-shipping-schedule/

Didn't find what you are looking for?

CMPT can accommodate a wide range of requests and welcomes custom order inquiries. If your laboratory needs a product that is not listed in the current catalogue, CMPT would be happy to discuss your needs and propose a solution that works for you. CMPT has capability to produce validation panels as well as other reference materials to support your quality assurance needs. Please contact us so we can assist you further.

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What is New in 2026

Point of Care Group A Streptococcus page 9

Sexually Transmitted Infections Panel page 11

Blood Culture Screen page 11

Clinical Microbiology

Acid Fast Bacilli (AFB)

This program is suitable for laboratories performing Acid Fast stains to detect Acid Fast Bacilli in clinical samples. **Microscopy only.**

- 5 slides for AFB staining per shipment
- 2 shipments per year

Clinical Bacteriology (CB)

This program covers a wide variety of samples normally received by laboratories for bacteriology culture, identification, susceptibility testing, and Gram staining as well as a paper (PC) challenge that targets extra analytical issues in the laboratory.

Ships: July and October

Ships: May, August, November

Ships: May, August, November

- 1 smear for Gram staining, 7 samples for culture and antibiotic susceptibility testing
- 3 shipments per year

The program is adaptable to different laboratory complexities:

Clinical Bacteriology - Gram only (C1)

This program is available to laboratories that only perfom Gram stains but not cultures

- 1 smear for Gram staining
- 3 shipments per year

Supplementary Gram Program (GS)

The samples included in this program simulate sterile fluids such as cerebrospinal fluid (CSF) and joint fluid samples. This program is particularly beneficial to small laboratories that receive sterile fluids for Gram staining and want to keep personnel proficient in interpreting results. Only available to laboratories subscribed to Clinical Bacteriology or Clinical Bacteriology Gram only programs

- 2 additional smears for Gram staining per shipment
- 2 shipments per year Ships: August, November

Clostridioides difficile

This program provides proficiency testing to laboratories investigating *C. difficile*. Samples are simulated stools that can be used to determine *C. difficile* common antigen, toxins, and toxin genes **by any available method**.

- 2 simulated stool samples per shipment
- 2 shipments per year

CRE - Carbapenemase Producing Enterobacterales Screen

This program provides proficiency testing to laboratories screening for the presence of carbapenem resistant Enterobacterales (CRE) by **culture and/or molecular methods**.

- 4 swabs per shipment
- 2 shipments per year

Enteric Panel

This program provides proficiency testing to laboratories investigating Salmonella, Shigella, Yersinia, Campylo-bacter species, Vibrio species, and Aeromonas species in stools by culture or molecular methods.

- 4 simulated samples per shipment
- 2 shipments per year

Enteric Parasitology

This program is intended for laboratories performing enteric parasitology tests by conventional microscopic analysis. Samples are actual clinical samples fixed in formalin solution.

The amount of sample provided (5mL) is enough for laboratories to perform **concentration techniques** and to prepare **permanent stained slides**

- 4 samples per shipment
- 2 shipments per year

Ships: June and September

Ships: June and September

Ships: April and September

Ships: June and September

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GIP - Gastrointestinal Panel

This program provides proficiency testing for labs performing testing for the presence of intestinal pathogens using molecular methods.

- 8 samples per shipment
- 2 shipments per year Ships: June and September

Pathogens targeted by the panel are:

Adenovirus 40/41	Shigella spp.
Norovirus GI/GII	Yersina enterocolitica
Rotavirus	Vibrio spp.
Campylobacter spp.	Cyclospora cayetanensis
Clostridioides difficile	Cryptosporidium spp.
Shiga toxin-producing <i>E. coli</i> (STEC)	Entamoeba histolytica
Salmonella spp.	Giardia spp.

GAS - Group A Streptococcus

This program provides proficiency testing to laboratories screening for the presence of Group A Streptococcus by **culture and/or molecular methods**.

- 4 swabs per shipment
- 2 shipments per year

GAS - Group A Streptococcus - POCT

- NEW-

Ships: April and September

Ships: April and September

This program provides proficiency testing to laboratories screening for the presence of Group A Streptococcus by rapid antigen or molecular methods.

- 4 swabs per shipment inactivated organisms
- 2 shipments per year

GBS - Group B Streptococcus Screen

This program provides proficiency testing to laboratories screening for the presence of Group B Streptococcus by **culture or molecular methods**.

- 4 swabs per shipment
- 2 shipments per year Ships: April and September

MRSA - Methicillin-resistant Staphylococcus aureus Screen

This program provides proficiency testing to laboratories screening for the presence of methicillin-resistant *Staphylococcus aureus* by **culture and/or molecular methods**.

- 4 swabs per shipment
- 2 shipments per year

Ships: April and September

Mycology

This program is intended for laboratories processing a variety of clinical samples, performing culture, and identification of molds, dermatophytes, and yeasts. It covers a wide variety of samples normally received by laboratories for culture, identification, susceptibility testing, and direct examination. The program is adaptable to different laboratory complexities.

- 4 simulated fungal slides for direct examinationper shipment
- 5 simulated samples for culture, susceptibility testing and identification per shipment
- 2 shipments per year

Ships: April and November

Fungal Slides

This program is for laboratories that only process slides for direct examination by KOH or Calcofluor White using microscopy only.

- 4 simulated fungal slides for direct examination per shipment
- 2 shipments per year

Ships: April and November

Trichomonas vaginalis

This program provides proficiency testing to laboratories detecting the presence of *Trichomonas vaginalis* in clinical samples. Simulated samples are suitable to detect *Trichomonas vaginalis* by **rapid antigen or molecular methods.**

- 6 samples per shipment
- 2 shipments per year

Shiga Toxin

This program provides proficiency testing to laboratories detecting the presence of Shiga Toxin-producing organisms. Samples are simulated stools that can be used to determine the presence of Shiga Toxin by any available method.

Samples can contain O157 H:7 and non-O157 H:7 Shiga Toxin producing Escherichia coli

These samples are shipped as Category A, UN2814 INFECTIOUS SUBSTANCE, AFFECTING HUMANS

- 3 samples per shipment
- 2 shipments per year

VRE - Vancomycin resistant Enterococcus Screen

This program provides proficiency testing to laboratories screening for the presence of vancomycin-resistant *Enterococcus* by **culture and/or molecular methods**.

- 4 simulated swab samples per shipment
- 2 shipments per year

Sexually Transmitted Infection (STI) Panel

- NEW-

Ships: April and November

Ships: April and September

Ships: April and October

Ships: May and November

This program provides proficiency testing to laboratories screening for the presence of *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, and *Trichomonas vaginalis* by moleculare methods.

- 4 samples per shipment
- 2 shipments per year

Blood Culture Screen

- NEW-

This program provides proficiency testing to laboratories screening blood culture samples. This program is geared to laboratories that screen blood culture samples and refer when the sample is flagged positive by the instrument.

- 2 samples per shipment
- 2 shipments per year

SARS-CoV-2 (Covid-19)

This program is suitable for laboratories testing nasopharyngeal samples for the detection of SARS-CoV2. Samples contain inactivated virus and are suitable for rapid antigen and molecular testing methods.

- 1 set of 3 simulated nasopharyngeal samples per shipment
- 2 shipments per year

Ships: June and November

Point-of-Care Testing: This program is suitable for point of care accreditation, validation, and training.

This program can be purchased alone or as part of a full Respiratory virus Panel

SARS-CoV-2 (Covid-19) Verification Panel

A 15-sample verification panel is available for laboratories that need to comply with accreditation bodies requirements.

If you need more information about the Verification Panel, please contact CMPT.

Influenza A & Influenza B

This program is suitable for laboratories testing nasopharyngeal samples for the detection of Influenza A and B. Samples contain inactivated virus and are suitable for **rapid antigen and molecular testing methods.**.

- 1 set of 3 simulated nasopharyngeal samples **each** for Influenza A and B per shipment
- 2 shipments per year Ships: June and November

Point-of-Care Testing: This program is suitable for point of care accreditation, validation, and training.

This program can be purchased alone or as part of a full Respiratory virus Panel

RSV - Respiratory Syncytial Virus

This program is suitable for laboratories testing nasopharyngeal samples for the detection of RSV. Samples contain inactivated virus and are suitable for **molecular testing methods**.

- 1 set of 3 simulated nasopharyngeal samples per shipment
- 2 shipments per year Ships: June and November

Respiratory Panel (Influenza A, Influenza B, RSV, SARS-CoV-2)

This program is suitable for laboratories testing nasopharyngeal samples for the detection of RSV. Samples contain inactivated virus and are suitable for **rapid antigen and molecular testing methods**. RSV samples are suitable for nucleic acid testing only.

- 4 sets of 3 simulated nasopharyngeal samples each per shipment
- 2 shipments per year Ships: June and November

Point-of-Care Testing: This program is suitable for point of care accreditation, validation, and training.

Environmental Microbiology

Challenges are directed towards detection, enumeration and identification of water/soil safety indicator organisms.

Drinking Water

This program provides proficiency testing to laboratories testing drinking water for the presence of fecal coliforms and *Escherichia coli*. Samples are simulated, stabilized water that can be assessed by **membrane filtration, most probable number (MPN), enzyme substrate,** or other methods for the detection of indicator organisms.

- 1 set of 4 samples per shipment
- 3 shipments per year

Ships: April, July, and November

Ships: April, July, and November

Ships: May and August

Additional Drinking Water sets are available per shipment for laboratories. These extra sets cannot be purchased without subscribing to the full year program.

Drinking Water for HPC

This program provides proficiency testing to laboratories performing detection of heterotrophic count (HPC) of organisms in drinking water samples.

- 1 set of 4 samples per shipment
- 3 shipments per year

Recreational Water

This program provides proficiency testing to laboratories testing recreational (beach and pool) waters for the presence of potential pathogens (*Pseudomonas aeruginosa*, *Enterococcus*, *Escherichia coli*)

- 1 set of 3 samples per shipment
- 2 shipments per year

Additional Recreational Water sets are available per shipment for laboratories. These extra sets cannot be purchased without subscribing to the full year program.

Recreational Water - Enterococcus only

This program provides proficiency testing to laboratories testing recreational (beach) waters for the presence of *Enterococcus* species

- 1 set of 4 samples per shipment
- 2 shipments per year

Recreational Water - Pseudomonas only

This program provides proficiency testing to laboratories testing recreational (pool/spa) waters for the presence of *Pseudomonas aeruginosa*

- 1 set of 4 samples per shipment
- 2 shipments per year

Drinking Water and Recreational Water

Receive a discount of 5% by purchasing the Drinking Water and Recreational Water programs together.

Sediment

This program provides simulated proficiency testing samples to laboratories testing marine beach sediment for the presence of *Enterococcus* species.

- 1 set of 5 samples per shipment
- 2 shipments per year

Soil

This program provides simulated proficiency testing to laboratories testing soil for the presence of *Salmonella* species.

- 1 set of 2 samples per shipment
- 2 shipments per year

Ships: April and August

Ships: April and August

Ships: May and August

Ships: May and August

Industry Microbiology

Cannabis Microbiology

This program provides proficiency testing samples for laboratories testing for the presence of microorganisms in Cannabis oil, plant, and edibles.

Our samples are suitable for different methods such as spread plate method and membrane filtration. Samples are stable at room temperature and easy to process.

Ships: TBD

- 2 simulated Cannabis oil samples
- 3 simulated Cannabis flower samples
- 3 simulated Cannabis edible (assorted candy) samples
- 2 shipments per year

Note: To order this program, please contact us.

Continuing Education

CMPT is a university-based educational program. in addition to providing support to the diagnostic community for their accreditation and regulatory compliance, CMPT supports microbiology professionals through continuing education programs and quality assurance oriented research offered by CMPT and the UBC affiliated Program Office for Laboratory Quality Management (POLQM).

Professional Development Course in Clinical Microbiology

Through this self paced, online course laboratory scientists can learn relevant and practical information about different clinical microbiology scenarios through the reading of the challenge critiques and completing online quizzes.

More info: https://cmpt.ca/professional-development-course/

Certificate in Antibiotic susceptibility testing (AST) and interpretation

Completely online, 12 week, asynchronous, mentored, discussion based UBC Certificate course, to provide students with an understanding of the core principles of AST and its interpretation. Geared to practicing laboratory technologists and microbiologists.

More info: <u>Antimicrobial Susceptibility Testing and Interpretation | Program Office for Laboratory Quality Management (ubc.ca)</u>

Certificate in Laboratory Quality Management

The Laboratory Quality Management certificate course is a completely on-line 22-week course designed to provide knowledge, discussion, and expertise for those interested in quality management for clinical and research laboratories.

The course is highly valuable for those who are or intend to be laboratory quality managers, and for those that work with quality management issues.

It is appropriate for technologists, physicians, administrators, and other laboratory professionals. Our course has attracted students from across Canada and around the world.

More info: Course Description | Program Office for Laboratory Quality Management (ubc.ca)

Continuing Education Credits

All our courses have been assigned PEP (Professional Enhancement Program) hours and CPS (Continual Professional Studies) Credits by the Canadian Society for Medical Laboratory Science (CSMLS).

AMERICAN SOCIETY FOR CLINICAL PATHOLOGY (ASCP)

Courses meet the criteria for ASCP CMP (Credential Maintenance Program) points.

International EQA Training Program

The International EQA Training Program is an immersive two week long training experience at the CMPT facility in Vancouver Canada designed for laboratory professionals that are interested in developing and implementing EQA programs in their communities. The training teaches the administrative and technical requirements of becoming a PT provider in microbiology and the format of the training is individually tailored for interested groups.

CMPT has provided this training to visiting delegations from Thailand, Zimbabwe, South Africa, Kenya, Belgium, Oman, Saudi Arabia, Turkey, and China.

Please contact CMPT for more information.



Delegates from the Oman Central Public Health Laboratory and Dr Perrone on the UBC campus.

International EQA Training Program 2024