



ANNUAL REPORT 2010 - 2011

Innovation • Education • Quality Assessment • Continual Improvement

Clinical Microbiology Proficiency Testing

— Established in 1982—

ISO 9001:2008 Registration 2002

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ISO 9001:2008



ISO 9001

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CMPT STAFF

The CMPT staff is committed to the highest standards of quality and professionalism. This dedicated team of administrative and technical staff provides support through all phases of the program.

Michael A. Noble, MD FRCPC Chair and Managing Director
Esther Kwok, BSc, RT, CLQM Coordinator
Caleb Lee, MHA, BMLSc, CLQM Senior Technologist
Suhanya Bhuvanendran, BMLSc, CLQM Technologist and Web Manager
Veronica Restelli, MSc Editor

As a program in the Department of Pathology and Laboratory Medicine, University of British Columbia, CMPT acknowledges and greatly appreciates the on-going support of the following individuals:

Mike Allard, MD, FRCPC, Professor and Acting Department Head

Maureen Barfoot, Executive Director Administration

CMPT QUALITY POLICY AND MISSION STATEMENT

Innovation, Education, Quality Assessment, Continual Improvement

- We at CMPT are a university based, peer directed program, that provides Innovative External Quality Assessment for microbiology laboratories providing services for public and patient health.
- Our vision is to be recognized provincially, nationally, and internationally as a leader for EQA innovation, education and continued quality improvement for the benefit of healthcare, our participants and our program. CMPT is committed to its Quality Management System, and regular review for continual improvement of its effectiveness.
- The CMPT Quality Policy is the framework for the regular establishment and review of quality objectives.
- CMPT is committed to regular review of the Quality Policy to ensure its suitability to the program.



Michael A. Noble, Chair

August, 2011

CHAIRMAN'S ANNUAL REPORT 2010 - 2011

CMPT Program

UBC's Clinical Microbiology Proficiency Testing program, now with 27 years of experience and expertise, has a long tradition of continued growth and evolution. This last year, 2010-2011, has continued in that same tradition.

We were extremely busy again this last year; we have organized new programs, experimented with new services, and had major and significant changes in personnel and space.

CMPT Staff

As the chair and managing director of CMPT, my hat goes off to our hard working staff. CMPT exists because of them. As mentioned before, CMPT is a sum greater than its parts because of the energy and commitment to excellence of Esther Kwok, our coordinator, Caleb Lee, our senior technologist, Suhanya Bhuvanendran, technologist and web manager, and Veronica Restelli, our writer and editor.

CMPT Volunteers

CMPT is grateful for all the support we receive from our committee members and chairs. Without the committee members, it would be impossible for us to maintain our challenge selection process, our assessment system, and the high quality of our critiques and newsletter.

As always CMPT recognizes and appreciates the valuable role that our committee members play. We receive the benefit of their time, knowledge, and expertise.

Quality Management and ISO Certification

Once again, CMPT was successfully audited by SAI Global and we maintained our certification to ISO 9001:2008. Thus, we continue to be the only proficiency testing program in North America to seek certification to ISO 9001:2008.

For the first time since we started our ISO certification, we were found to have a non-conformity. During the audit process it became apparent that we had not completed our internal

audit process. This non-conformity was addressed and rectified as soon as it became apparent and the internal audit was performed.

The results were submitted to our accrediting body and the non-conformity was lifted.

CMPT still finds reasons to consider official recognition to ISO 17043:2010: "Conformity assessment - General requirements for proficiency testing" and will likely pursue it when financial issues are resolved. At this point we find it significant that CMPT participants see our ISO Certification to ISO 9001:2008 as providing value and competence.

In the meantime we must assure ourselves that our quality management system is active and vital, and ensure that our technical and quality control actions meet the requirements of ISO 17043:2010.

CMPT still deems it essential to measure the potential impacts of occasional or accumulated minor deviations in the production process and CMPT continues to measure it by the self-developed Reliability Calculator.

Opportunities for Improvement

The non-conformity identified during the audit was found to be consistent with our last evaluation of our self-reported opportunities for improvements, which demonstrated a series of slips. This suggested that CMPT was experiencing some issues around time management.

A time-management survey was performed which demonstrated that CMPT was indeed working at a very high level of activity. It was recognized that some adjustments needed to be made. Changes were made to reduce the amount of time being consumed by work that was not contributing to quality. We will continue to monitor the nature and frequency of our OFIs.

It is important that all our OFIs are amended with appropriate corrective actions.

CHAIRMAN'S ANNUAL REPORT

Management Review of our Quality System

As part of the annual process, our Strategic Quality Plan was reviewed. Four policies (SQP012 – Regular Challenges; SQP 013 – New Challenges; SQP021 – Financial Responsibilities; SQP023 Internal Communications) needed modification to be consistent with the previously stated changes to time management. A new policy (SQP024 – Reporting Results) was generated to address confidentiality issues. New Definitions were inserted to clarify rules for grading challenges. These changes will help improve the efficiency and effectiveness of our Quality System.

CMPT Mission and Vision statements (SQP:001 – CMPT Quality – Mission and Vision Statements) was revised to better align to current definitions.

We at CMPT are a university based, peer directed program that provides Innovative External Quality Assessment for microbiology laboratories providing services for public and patient health.

Our vision is to be recognized provincially, nationally, and internationally as a leader for EQA innovation, education, and continued quality improvement for the benefit of healthcare, our participants, and our program.

Management Review of Resources

CMPT relies on the revenues generated through cost recovery, personnel, and our site.

As mentioned, CMPT personnel have been under some time-pressures which need addressing.

With respect to finances, CMPT had, for the last year, found itself in a deficit position. This is in large part the result of accumulated laboratory constraints and consolidations across the country. The solutions to this have been implemented and we anticipate the deficit to be short lived. CMPT has developed a strategy for more stability in financial resources through

increased revenue by provision of new product lines, increased potential customers, and ensuring that program costs (including inflation, and research and development) are controlled. Redundant, non-effective procedural steps are being removed to help cut costs.

With respect to our physical site, CMPT office is likely to move soon as the Heather Pavilion building is due to be demolished. A plan is in place to ensure that alternate space will be available when needed.

Management Review of Product conformity

Within our Opportunities for improvement there were issues associated with slides and containers. Contamination was found in two samples and was linked to materials that had come from approved suppliers. These issues were resolved, in one case with a change of product and supplier. All product problems were corrected and remedial actions implemented.

Ungraded samples

Over the years, CMPT sample grading has become increasingly complex. Some challenges may be both verified by quality control and validated by reference, but will still have elements ungraded because of certain laboratories' practices. The CMPT committee is concerned when samples are found completely unacceptable for assessment. These ungraded samples are monitored every year. While it is the goal to have zero ungraded samples, our goal is to maintain the annual level at no greater than three. In 2010-2011 we had no samples that were completely unacceptable for assessment (Table 1).

Management Review of Customer Satisfaction

During the year, CMPT performed three reviews of satisfaction; the first review was related to the customer perception of our Quality, the second was related to Critiques, and the third was related to CMPT Connections. These

CHAIRMAN'S ANNUAL REPORT

Table 1. Ungraded samples 2000 - 2011

Year	Ungraded samples
2000-2001	0
2001-2002	3
2002-2003	3
2003-2004	3
2004-2005	3
2005-2006	3
2006-2007	4
2007-2008	3
2008-2009	1
2009-2010	2
2010-2011	0

satisfaction surveys were used as the basis of our CMPT Composite Score for Customer Satisfaction.

Our first survey asked participants about their perceptions of CMPT as a Quality focussed organization and the role that our voluntary participation in ISO certification plays.

As can be seen in the graph (figure 1), all participants strongly or generally perceive that

CMPT's value is enhanced and that their confidence in CMPT as an EQA provider is increased. This is an important observation because CMPT participates in the ISO process for organizational reasons and to provide the laboratories and accreditation bodies with evidence to enhance their confidence in our quality process.

In the second study we were interested in the value of our communication through our challenge critiques.

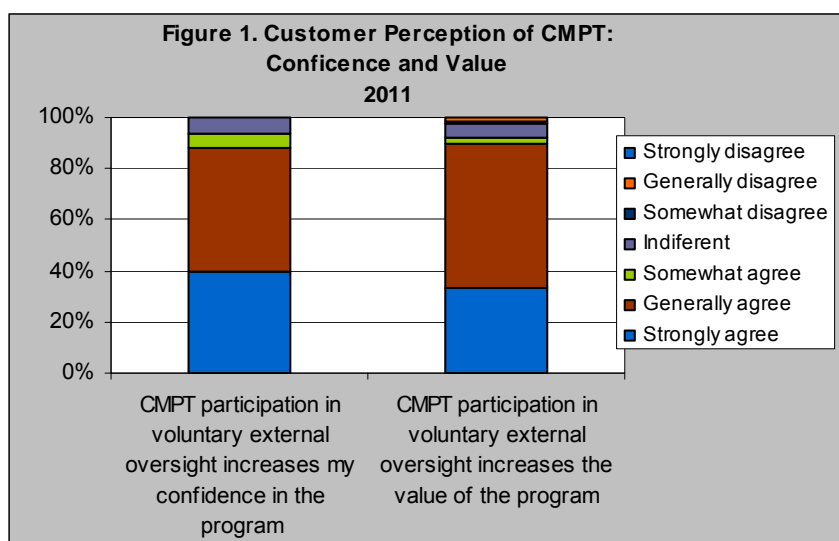
CMPT spends a lot of time, effort, and energy to get our critiques right, in order to make them interesting and of value. Responders appear to see the critiques in that same light. There is near complete agreement that the critiques are well written, interesting, informative, and educational (figure 2).

It appears that CMPT is accomplishing its task with respect to our critiques. There is strong support for the critiques (not shown on the graph) especially from those people that identify themselves as technologists working in category A and B laboratories. If there is a bit of a dark cloud it is that the critiques are less read by microbiologists and pathologists.

Several comments suggest that a lot of what is written in critiques may not meet the category C and C1 laboratories' needs. We find this as an important challenge for us to address and it will be a focus of attention over the next year.

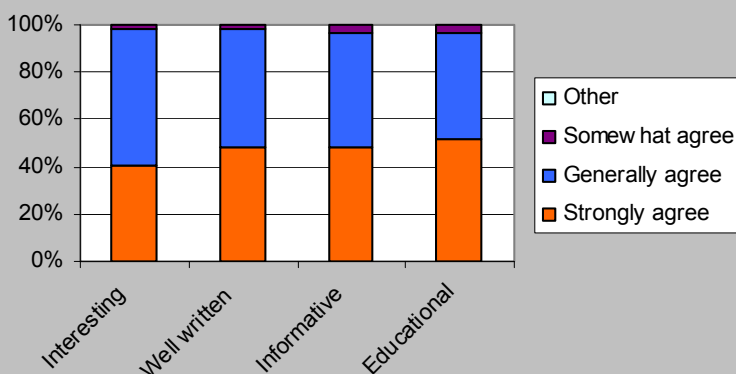
Our third survey asked about the participants' opinion of Connections, CMPT's newsletter.

This publication, now in its 15th year, is designed to be different from the critiques. Articles are intended to be both broader and longer views on topics that are relevant to laboratories. Some, but not all content should



CHAIRMAN'S ANNUAL REPORT

Figure 2. CMPT believes that informative critiques are an important part of the exercise of proficiency testing. We are interested if your thoughts about our critiques. I find that CMPT challenge related critiques are:



address technical issues. Others topics, such as patient safety, diagnosis, treatment, standards, benchmarks, and related topics are all considered as appropriate for CMPT Connections.

Connections is viewed more diversely than the critiques, but well over half of responders have a positive or very positive rating of the newsletter, while 8 percent were either negative or very negative (figure 2).

As part of the survey we asked if there were topics that participants thought would be appropriate for Connections over the next year. We got interesting feedback; Veronica, our CMPT Editor, will be addressing this list over the next issues of Connections.

We will repeat these surveys in a few years' time to see if we have addressed some of the shortcomings and participants' needs.

When the information from the surveys is combined with other factors (contacts,

complaints, consultations) we can derive our CMPT Composite score for Customer Satisfaction.

We have been monitoring this indicator for 10 years now (figure 4). In 2010 – 2011 CMPT did not create a lot of new contacts or consultations, both of which are factors that increase the score. However, we had few negative comments and no complaints, both of which would lower the score. Ultimately we recognize that this score is an indication of our

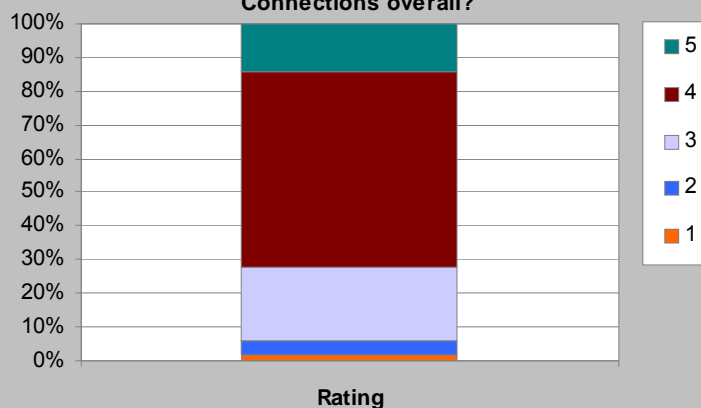
performance. In this graph, values below 84 would be considered a reason for concern. Values above 98 are considered as exemplary.

We consider 2010-2011 results as acceptable.

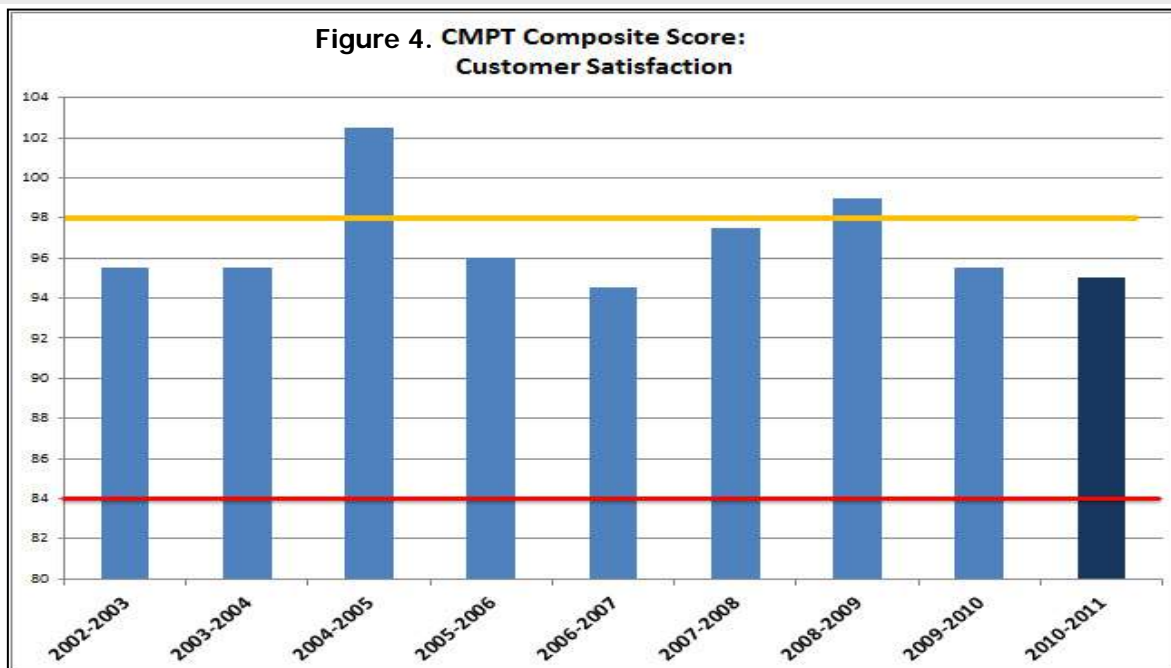
CMPT Outreach Education

CMPT continued with its international training program through the on-site training provided to two technologists, Stephen Munene and Martin Matu, from the African Medical Research Foundation (AMREF) laboratory in Nairobi,

Figure 3. Thinking about CMPT Connections with respect to style, readability, commentary, and availability all combined, on a scale of one to five where one(1) is POOR and five (5) is EXCELLENT, how would you rate CMPT Connections overall?



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Kenya. They were sponsored by AMREF Canada, an international office for AMREF in Toronto.

CMPT Presentations and Publications

Accreditation and the Medical Laboratory. International Training and Education Center for Health (I-TECH). Seattle WA July 2010

Microbiology and Laboratory Safety. International Training and Education Center for Health (I-TECH). Seattle WA July 2010

Customer Service, Customer Satisfaction and the Medical Laboratory. International Training and Education Center for Health (I-TECH). Seattle WA. July 2010

M. Noble. Creating a Culture of Quality in the Medical Laboratory. BCSLS Congress. Sydney BC. September 2010.

Applying Quality Management to the Medical Laboratory. Marcus Evans Conference – Advanced Laboratory Workshop. Melbourne Australia. September 2010

Maximizing Quality Value in Quality Control and Quality Assessment. Marcus Evans Conference – Advanced Laboratory Workshop. Melbourne Australia. September 2010

Examining factors which affect measurement

quality. Marcus Evans Conference – Advanced Laboratory Workshop. Melbourne Australia. September 2010

Lean and the Medical Laboratory. Marcus Evans Conference – Advanced Laboratory Workshop. Melbourne Australia. September 2010

Cost of Poor Quality in the Medical Laboratory. Marcus Evans Conference – Advanced Laboratory Workshop. Melbourne Australia. September 2010

Building a Culture of Quality. Marcus Evans Conference – Advanced Laboratory Workshop. Melbourne Australia. September 2010

Quality Case Discussion: Bad Things in Small Packages. Marcus Evans Conference – Advanced Laboratory Workshop. Melbourne Australia. September 2010

M. Noble Don't Forget the Examination Phase. Quality Confab. San Antonio Texas. October 2010.

M.A. Noble Communicating Quality. April 2011. AMMI-CACMID Annual Meeting . Montreal QC. April 2011.

M. Noble, V. Restelli, B. Westerberg, R. Rennie*, L. Turnbull, and CMPT staff. Biofilm

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Susceptibility of *P.aeruginosa* Isolated From Patients with Otitis Media to Ciprodex®, Ciprofloxacin and N-Acetylcysteine. AMMI-CACMID Annual Meeting. Montreal QC. April 2011.

M. Noble. Clinical Microbiology Proficiency Testing: A Canadian Success in PT/EQA. W.H.O. Conference on Proficiency Testing. Ankara Turkey. May 2011.

V. Restelli, M.Noble, AM Taylor, and D.D. Cochrane. Analysis of laboratory patient safety event reporting in British Columbia to identify opportunities to enhance data collection, support learning, and promote quality improvement. POLQM Quality Weekend Workshop. Vancouver BC June 2011.

M.Noble. Education Opportunities for Medical Laboratory Quality. POLQM Quality Weekend Workshop. Vancouver BC. June 2011.

Veronica Restelli, Robin Barteluk, Esther Kwok, Robert Rennie, CMPT Advisory Committee, Michael A. Noble. Progress and Improvement for Identification of Extended Spectrum Beta Lactamases (ESBLs) through External Quality Assessment. EQAnews (1) 2-8. 2010.

Noble M.A. 2011. Chapter 10 Prevention and Control of Laboratory-Acquired Infections, *Manual of Clinical Microbiology*, 10th Edition. Edited by P.R. Murray, E.J. Barron, J.H.Jorgensen, M.A. Pfaller. American Society for Microbiology. Washington DC. American Society for Microbiology

Noble M.A. 2010. The ISO 15189:2007 Essential. A practical handbook for implementing the ISO 15189:2007 Standard for medical laboratories. Canadian Standards Association. 2010.

CMPT and Strategic Planning

CMPT continues to function consistent to its Mission and Vision statements. Our long term objective continues as iterated in our Vision statement (see above). In order to continue to

meet our expectations, four issues have been identified that need to be addressed over the shorter term: workload, financial resources, space, and partnerships.

Workload

Workload issues were identified through the OFI review (see above). Our first approach was to do an abbreviated value map. We have determined that some of our materials can be made in larger volume because their shelf life has improved over time with improved stabilization. This will allow us to restructure the production times with a number of samples. In addition, we have made modifications in the grading process making the process less intensive.

Financial resources

A decrease in water laboratory participation has a negative impact on our year-over-year finances. We have rectified some of this through changes in sample fee structure and the creation of new EQA products.

Space

It is likely that CMPT will need to move from its current location in the next 12 months. Plans have been implemented to prepare for this.

Partnerships

Partnerships with other EQA and Quality programs can increase opportunities for activities and presence. CMPT currently benefits from its partnership with the Canadian Immunohistochemistry Quality Control program, and the Program Office for Laboratory Quality Management. CMPT has developed new partner relationships with Canadian EQA Laboratories (CEQAL) and HealthMetrx Inc., and with the Department of Global Health, University of Washington.

Customer Satisfaction

There is a need to increase the microbiology content of CMPT Connections in a way that meets more of the needs of smaller laboratories.

CHAIRMAN'S ANNUAL REPORT

GOALS and OBJECTIVES 2011-2012

CMPT Goals and Objectives are classified as P (program) or Q (quality). CMPT continues to maintain its long term goals to be a consistent, reliable, innovative provider of external quality assessment services and education.

Consistent with that Goal, last year CMPT proposed the following objectives:

P10_1	Continued work on Enteric Parasitology sample sources	Ongoing
P10_2	Prepare Manuscript for Publication	Completed
P10_3	Continue to extend program menus for Clinical Bacteriology	Completed
P10_4	Continue to extend program menus for Water Bacteriology	Completed
P10_5	Continue to extend program menus for Mycology Plus	Completed, to be implemented
P10_6	Work with external agencies to promote international EQA education program within the next 2 years.	Completed
P10_7	To seek external funding for research opportunities.	Ongoing. Grants and contracts proposals submitted.
Q10_1	To make the decision about ISO 17043:2010	Interim decision to delay
Q10_2	To seek renewal of ISO 9001:2008	Completed
Q10_3	To perform Satisfaction Survey on CMPT Critiques and Newsletter	Completed

Goals and objective 2011 -2012

P11_1	Continued work on Enteric Parasitology sample sources
P11_2	Develop and introduce effective time efficiencies in production and assessment of challenges
P11_3	Remove current financial deficit in 2 years.
P11_4	Increase Microbiology content in CMPT Connections.
P11_5	Work within the Department of Pathology and Laboratory Medicine (PaLM) to ensure appropriate space.
P11_6	Define and operationalize opportunities with new partners.
Q11_1	Meet ISO 9001:2008 certification without non-conformances.



Michael A Noble MD FRCPC
Chair

CMPT COMMUNICATIONS

CMPT recognizes that good communication with the program's participants and general public interest in quality assessment are essential for the success of a program like ours.

CONTACT CMPT

By mail:

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Vancouver, BC, V5Z 1M9, Canada

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- Telephone: 604-875-4685 or
(toll free) 1-866-579-CMPT (2678)
- Facsimile: 604-875-4100 or
(toll free) 1-866-580-CMPT (2678)

By e-mail:

CMPT Coordinator: info@cmpt.ca

Esther will be pleased to answer any questions you may have about any of the CMPT programs.

FEEDBACK

CMPT welcomes and encourages all CMPT participants to forward their e-mail addresses to Esther Kwok for inclusion in the e-mail list.

CMPT values feedback from its participants and client satisfaction is very important to us.

Through our Client Satisfaction Surveys we can assess our performance, recognize the weaknesses, and focus on improvement.

CMPT is now able to perform client satisfaction surveys electronically, which allows the client to complete the survey in a few minutes and CMPT to collect and analyze the data easily.

The results of this year's surveys are commented on the Chairman's Annual Report.

The CMPT web site plays a major role in communicating with our participants. The web site is used by Water Microbiology, Enteric Parasitology, and Clinical Bacteriology participants to access on-line data entry of survey results.

CMPT'S WEBSITE

www.cmpt.ca

Our website provides access to preliminary and final results and challenge critiques for all programs. The critiques, current and past, can be accessed at any time together with photographs and articles of interest to provide the best information and education resources.

The history of CMPT, program information, contact information, and announcements are also available on our web site.

CMPT NEWSLETTER

CMPT's quarterly newsletter, "Connections", is now in its 15th year. Originally in paper-format, it became an "on-line only" newsletter in 2004.

"Connections" continues to supplement program educational material and provides a forum for participant's letters to CMPT. It is also used for announcements including new standards, seminars, workshops, and news within CMPT.

As in the previous 14 years, articles covering diverse topics were published during 2010-2011. We thank those who contributed their time and stories, submitted articles and helped with the newsletter edition; we appreciate their support of our newsletter.

COMMITTEE MEMBERS 2010 - 2011

Committee members volunteer their time and are essential for selecting challenges, assessing results, and producing the critiques. The efforts contributed by each committee member are critical to the function of CMPT and are very much appreciated.

Microbiology Advisory Committee Members

Clinical Bacteriology Program

Robert Rennie, PhD FCCM, D (ABMM)	University of Alberta Hospital, Edmonton, AB
Michelle Alfa, PhD FCCM	St. Boniface General Hospital, Winnipeg, MB
Beverley Borgford, ART	Yorkton Regional Hospital, Yorkton, SK
Deirdre Church, MD PhD FRCPC	Calgary Laboratory Services, Calgary, AB
John Galbraith, MD FRCPC	Royal Jubilee Hospital, Victoria, BC
David J. M. Haldane, MD FRCPC	Queen Elizabeth II Hospital, Halifax, NS
Vicki Krell, ART (CM)	Abbotsford Regional Hospital, Abbotsford, BC
Paul Levett PhD (D)ABMM FAAM	Saskatchewan Disease Control Laboratory, Regina, SK
Judy Reid, ART (CM)	Vancouver General Hospital, Vancouver, BC
Diane Roscoe, MD FRCPC	Vancouver General Hospital, Vancouver, BC
Denise Sitter, ART	Cadham Provincial Laboratory, Winnipeg, MB
Beverley Miller, MLT	Calgary Laboratory Services, Calgary, AB
Tammie Wilcox-Carrier, ART	Moncton Hospital, Moncton, NB

Water Microbiology Program

Chris Enick, BSc	Exova, Surrey, BC
Joe Fung, BSc MPH	BCCDC Environmental Microbiology, Vancouver, BC

Mycology Program

Pamela Kibsey, MD FRCPC	Royal Jubilee Hospital, Victoria, BC
Robert Rennie, PhD FCCM, D(ABMM)	University of Alberta Hospital, Edmonton, AB
Romina Reyes MD FRCPC	LifeLabs, Burnaby, BC
Jeff Fuller FCCM, (D)	University of Alberta Hospital, Edmonton, AB

Enteric Parasitology Program

Tara Bonham RT	BC Biomedical Laboratories, Surrey, BC
Sylvie Champagne, MD FRCPC	St. Paul's Hospital, Vancouver, BC
Joan Tomblin, MD FRCPC	BC Biomedical Laboratories, Surrey, BC
Quantine Wong, BSc	BCCDC Laboratory, Vancouver, BC

CLINICAL BACTERIOLOGY PROGRAM

CMPT acknowledges with appreciation the valuable and essential advisory and technical support of:

Dr. Robert Rennie, Dr. Michelle Alfa, Ms. Beverley Borgford, Dr. Deirdre Church, Dr. John Galbraith, Dr. David J. M. Haldane, Ms. Vicki Krell, Ms. Judy Reid, Dr. Diane Roscoe, Ms. Denise Sitter, Ms. Beverley Miller, Ms. Tammie Wilcox-Carrier, and Dr. Paul Levett.

CMPT's EQA Programs are designed to fit the needs of a variety of laboratory sizes and capabilities. In 1996, four categories were defined. In 2002 it was agreed that it was up to the laboratory to choose the category to which they belong, which was ratified by their accreditation bodies.

Laboratory categories

A: Large laboratories that perform critical specimens (blood cultures, cerebrospinal fluid, etc.).

B: Intermediate laboratories that have substantial volume, but may not perform all critical specimen types, including blood cultures.

C: Small laboratories that test urine and throat cultures, and refer the rest.

C1: Set-up facilities only; may perform Gram staining; they address pre-analytic issues.

Program Overview

Clinical bacteriology surveys are shipped 4 times per year. Each survey can consist up to seven different types of samples depending on the category of the lab and the challenges they require:

Gram Smear: evaluates gram staining, analysis, and interpretation.

Simulated clinical samples: these samples simulate a wide variety of samples of different complexity of analysis. Depending on the sample and the microorganisms isolated, the challenge could require - apart from isolation and identification - susceptibility testing and notification to public health or infection control.

Clostridium difficile toxin samples: optional program that includes simulated stool sample for the investigation of *C. difficile* toxin.

Paper challenge: directed towards pre- and post- examination phases of microbiology laboratory sampling.

Gram Smear Supplementary: optional program introduced in August 2009, to be used in addition to the Gram Smear challenge currently in the program.

Gram smear and simulated clinical samples are sent in every survey; paper challenges and *C. difficile* toxin samples alternate, and gram smear supplementary samples are sent twice a year.

CLINICAL BACTERIOLOGY PROGRAM

Only category A laboratories receive all samples, category B, C, and C1 laboratories receive samples according to their capabilities.

Clinical Bacteriology Numeric Grading Scheme

Table 2. Clinical bacteriology numeric grading scheme guideline.

Grade	Interpretation	Definition and examples
4	Full value	Accepted by the committee as the correct answer either in terms of current nomenclature or in terms of appropriate clinical relevancy, including listing pathogen-specific negative results, correct Antimicrobial Profile Reporting and/or descriptive reporting, e.g. MRSA, ESBL producer, VRE, Notification of Public Health.
3	Essentially correct or acceptable	A nomenclature or susceptibility error, generally at the species level, not technically correct but would have little or no clinical impact. A deviation from what is considered the most clinically relevant result, but one which would pose little difficulty in interpretation of the sample's report. For example: <i>Staphylococcus hominis</i> vs. <i>Staphylococcus epidermidis</i> , <i>Enterobacter aerogenes</i> vs. <i>Enterobacter cloacae</i> , Susceptible vs. intermediate. Excessive over-reporting of susceptibility testing results (calculated as minus-1 from the full value).
2	Separator	To augment the difference between the two grading groups. A grade of 2 is not awarded.
1	Incorrect or unacceptable	A nomenclature error that would be wrong at the species level, but by reporting may have an impact on clinical interpretation and potentially a treatment error. A major susceptibility error. A clinical relevancy result that could lead to a diagnosis or treatment error. For example: <i>Corynebacterium jeikeium</i> vs. diphtheroids; <i>Staphylococcus aureus</i> vs. <i>Staphylococcus epidermidis</i> , Identify VSE as VRE. Reporting the presence of <i>Neisseria meningitidis</i> from a throat swab.
0	Very incorrect or very unacceptable	A nomenclature error that would be wrong at either the genus and species level or a very major susceptibility error that could result in a significant interpretation or treatment error. A clinical relevancy result that could lead to a major diagnosis or treatment error. For example: <i>Salmonella</i> species vs. <i>Citrobacter</i> species; <i>Escherichia coli</i> vs. <i>Shigella dysenteriae</i> ; <i>Burkholderia cenocepacia</i> vs. <i>Pseudomonas aeruginosa</i> . Identify <i>Neisseria meningitidis</i> in a blood culture as a contaminant. Identify VRE as VSE. Reporting <i>S. aureus</i> and <i>Escherichia coli</i> in a mixed blood culture as 'probable contaminants'.
Ungraded		Challenges can be ungraded because acceptability for assessment was not achieved; this means no consensus was achieved amongst the reference laboratories with respect to the results for a specific sample.

SCORE TABLES AND HISTOGRAMS 2010-2011

About the histograms

All histograms have been converted to a single format which is the percent achievable score. For each laboratory, the sum of all challenges performed and graded was calculated, either as a total for all challenges, or within a specific category, such as "bacterial identification". The total achievable score, that is the score the laboratory would have obtained if they received a grade of 4/4, for each graded challenge was calculated. Challenges that were ungraded were excluded. The percent achievable score was calculated as (total achieved score/total achievable score) X100.

How to read the histograms

The companion histogram graph shows the Score Table information and Cumulative Scoring. The number of laboratories getting a specific grade is indicated by the height of the columns over the Percent Achievable Score, and is read on the LEFT side scale of the chart.

The Cumulative Scoring is indicated by the connected box-line that starts low on the left and rises to the right, and is read on the RIGHT side scale of the chart. The cumulative column indicates that percentage of laboratories that received an acceptable grade on the challenge.

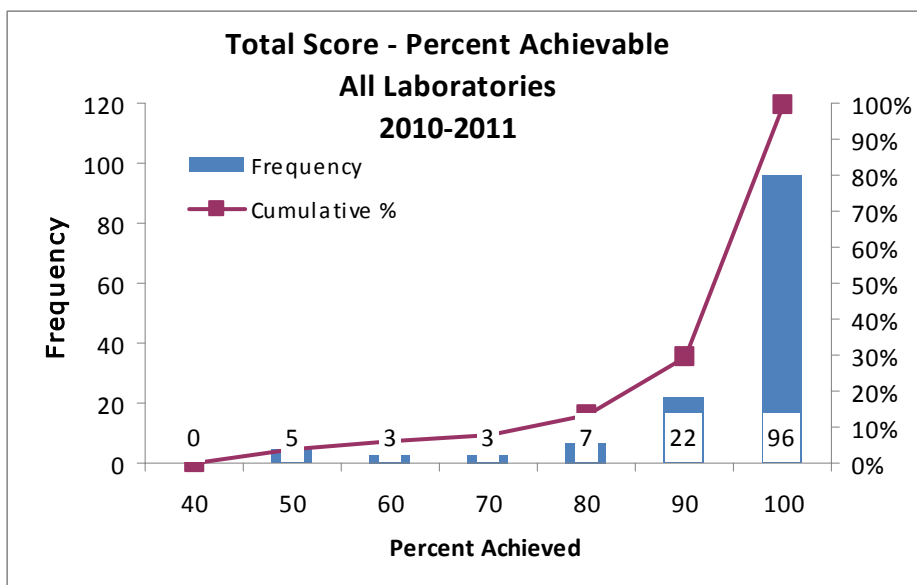
SCORE TABLE & HISTOGRAM INDEX 2010-2011

Clinical Bacteriology

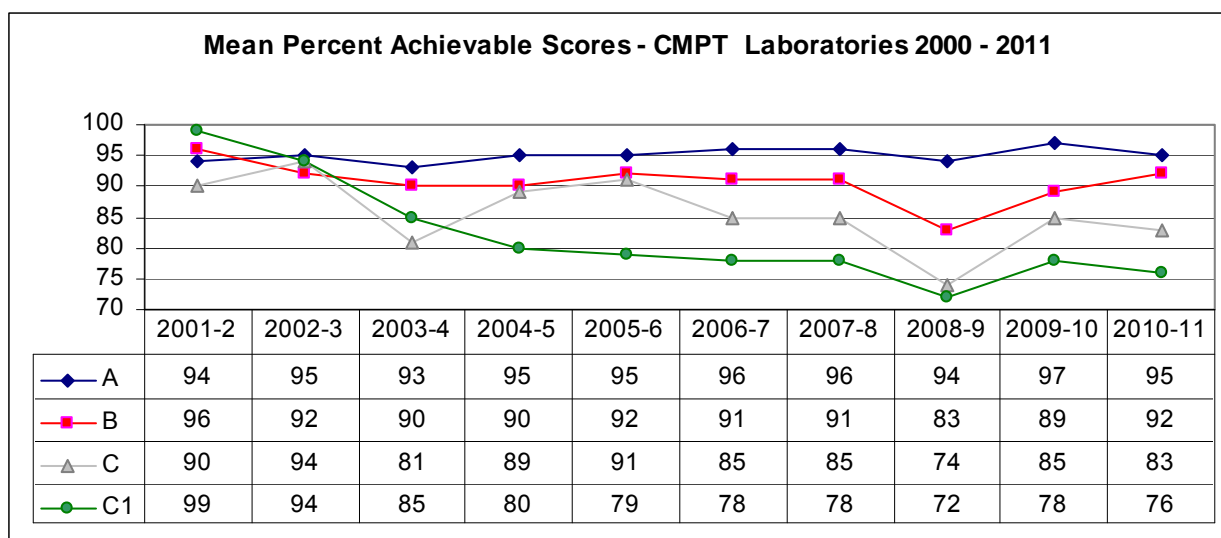
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Clinical Bacteriology - All Challenges - All Laboratories

Score Table: 2010 – 2011 Percent of all laboratories with acceptable grades		
% acceptable grade	Laboratories (n=136)	Cumulative
40	0	0.00%
50	5	3.65%
60	3	5.84%
70	3	8.03%
80	7	13.14%
90	22	29.20%
100	96	99.27%



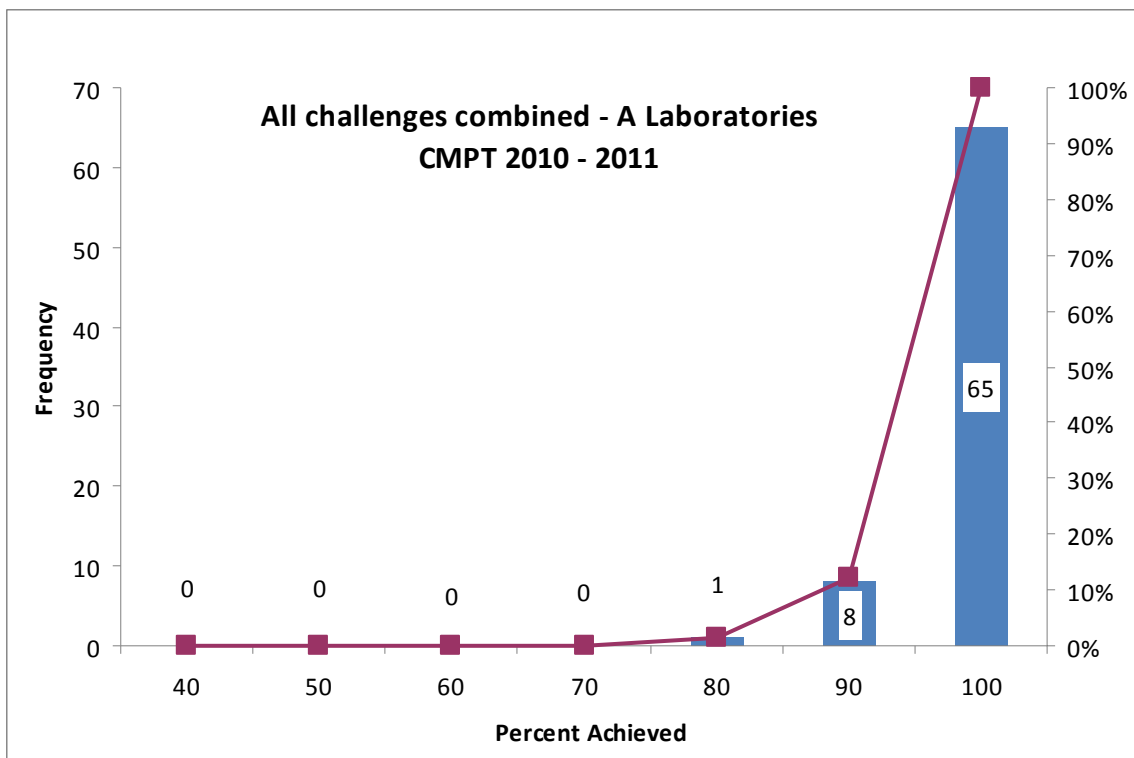
Out of all 136 laboratories, 96 (71%) received a perfect score; overall, 125 (92%) received a score of 80% or greater.



Clinical Bacteriology - Category A Laboratories

Score Table: 2010 – 2011 Percentage of category A laboratories with acceptable grades		
% acceptable grade	Laboratories (n=74)	Cumulative
40	0	0.00%
50	0	0.00%
60	0	0.00%
70	0	0.00%
80	1	1.35%
90	8	12.16%
100	65	100.00%

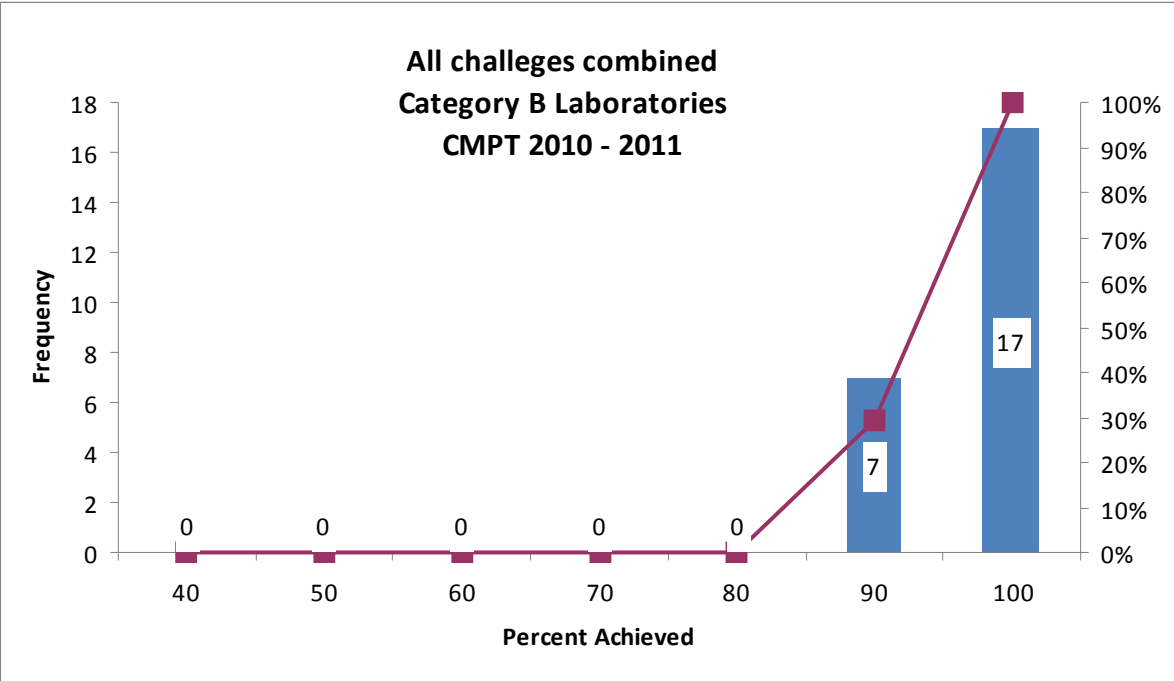
Out of 74 category A laboratories, 65 (88%) received a perfect score; no category A laboratory received a score lower than 80%.



Clinical Bacteriology - Category B Laboratories

Score Table: 2010 – 2011 Percentage of category B laboratories with acceptable grades		
% acceptable grade	Laboratories (n=24)	Cumulative
40	0	0.00%
50	0	0.00%
60	0	0.00%
70	0	0.00%
80	0	0.00%
90	7	29.17%
100	17	100.00%

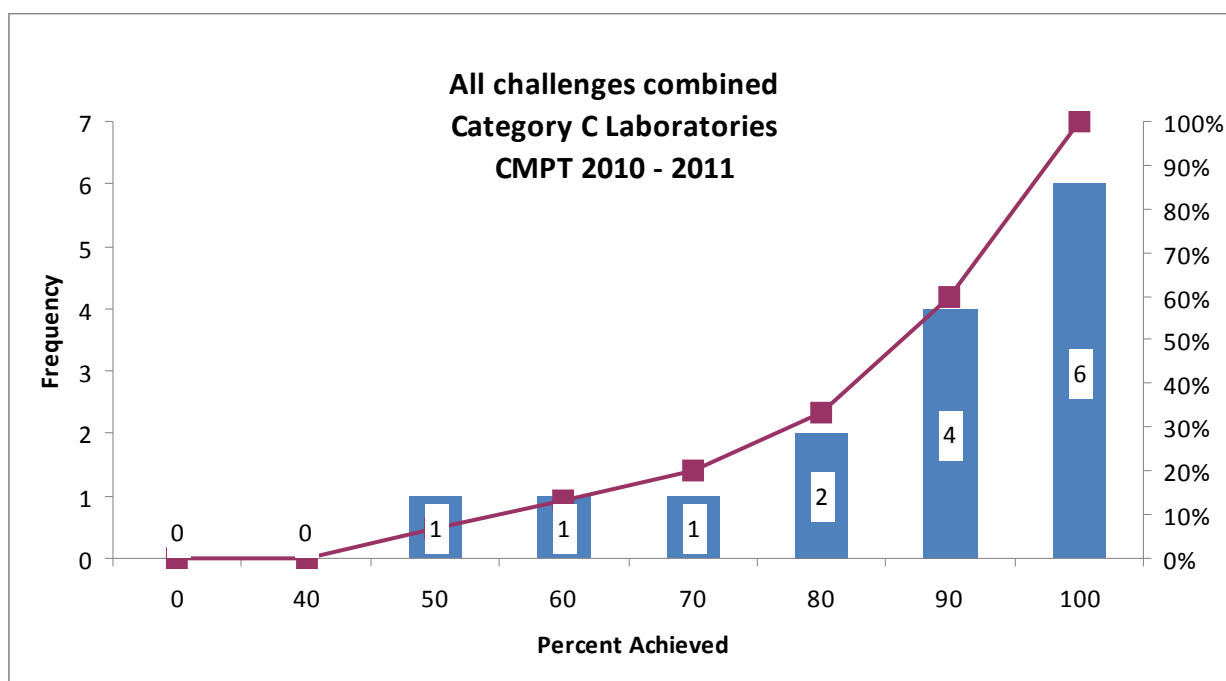
Out of 24 category B laboratories, 17 (71%) received a perfect score, all laboratories received scores of 80% or higher.



Clinical Bacteriology - Category C Laboratories

Score Table: 2010 – 2011 Percentage of category C laboratories with acceptable grades		
% acceptable grade	Laboratories (n=15)	Cumulative
0	0	0.00%
40	0	0.00%
50	1	6.67%
60	1	13.33%
70	1	20.00%
80	2	33.33%
90	4	60.00%
100	6	100.00%

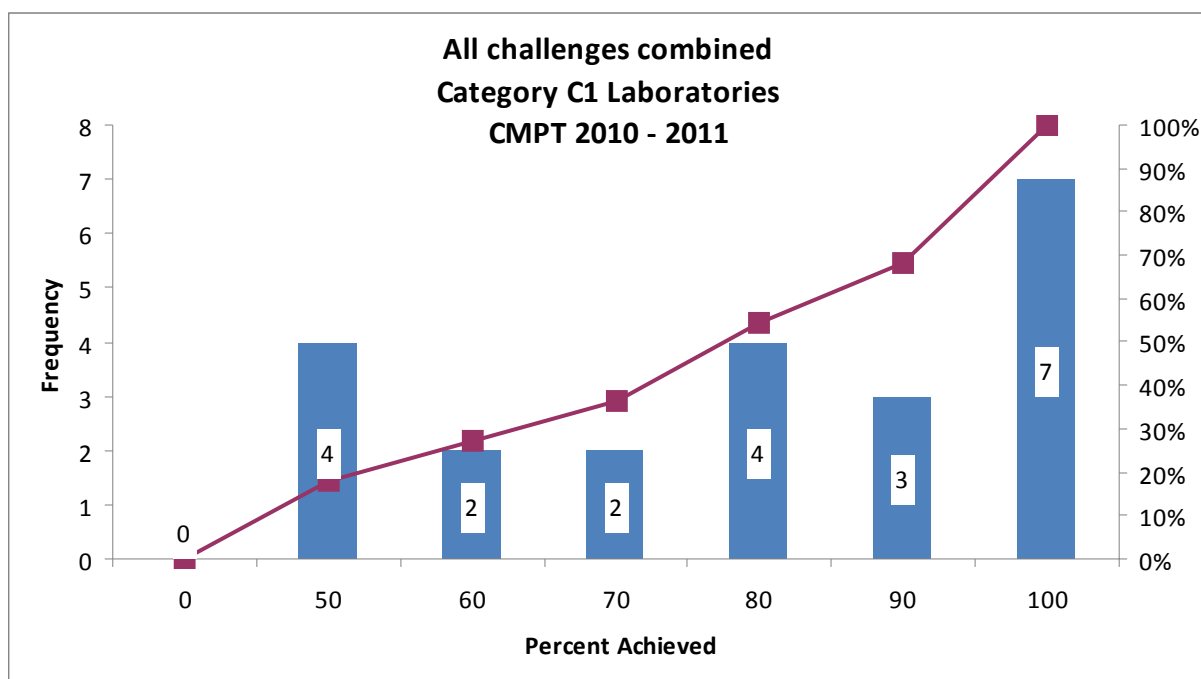
Out of 15 category C laboratories, 6 (40%) received a perfect score, 12 (80%) received scores of 80% or higher.



Clinical Bacteriology - Category C1 Laboratories

Score Table: 2010 – 2011 Percentage of category C1 laboratories with acceptable grades		
% acceptable grade	Laboratories (n=22)	Cumulative
0	0	0.00%
50	4	18.18%
60	2	27.27%
70	2	36.36%
80	4	54.55%
90	3	68.18%
100	7	100.00%

Out of 22 category C1 laboratories, 7 (32%) received a perfect scores; 14 (64%) received scores of 80% or higher.

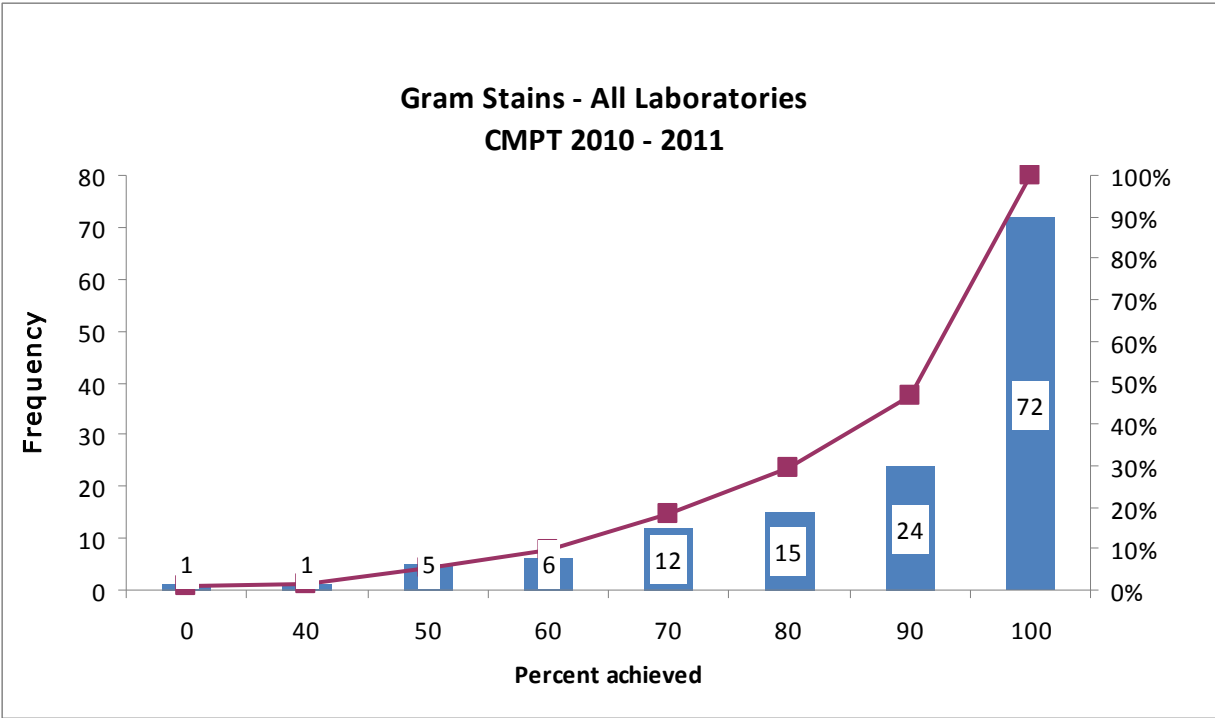


Gram Stain Challenges - All Laboratories

Score Table: 2010 – 2011 Percent of all laboratories with acceptable grades		
% acceptable grades	Laboratories (n=136)	Cumulative
0	1	0.74%
40	1	1.47%
50	5	5.15%
60	6	9.56%
70	12	18.38%
80	15	29.41%
90	24	47.06%
100	72	100.00%

Out of 136 laboratories, 72 (53%) received a perfect score, 111 (82%) received scores of 80% or higher.

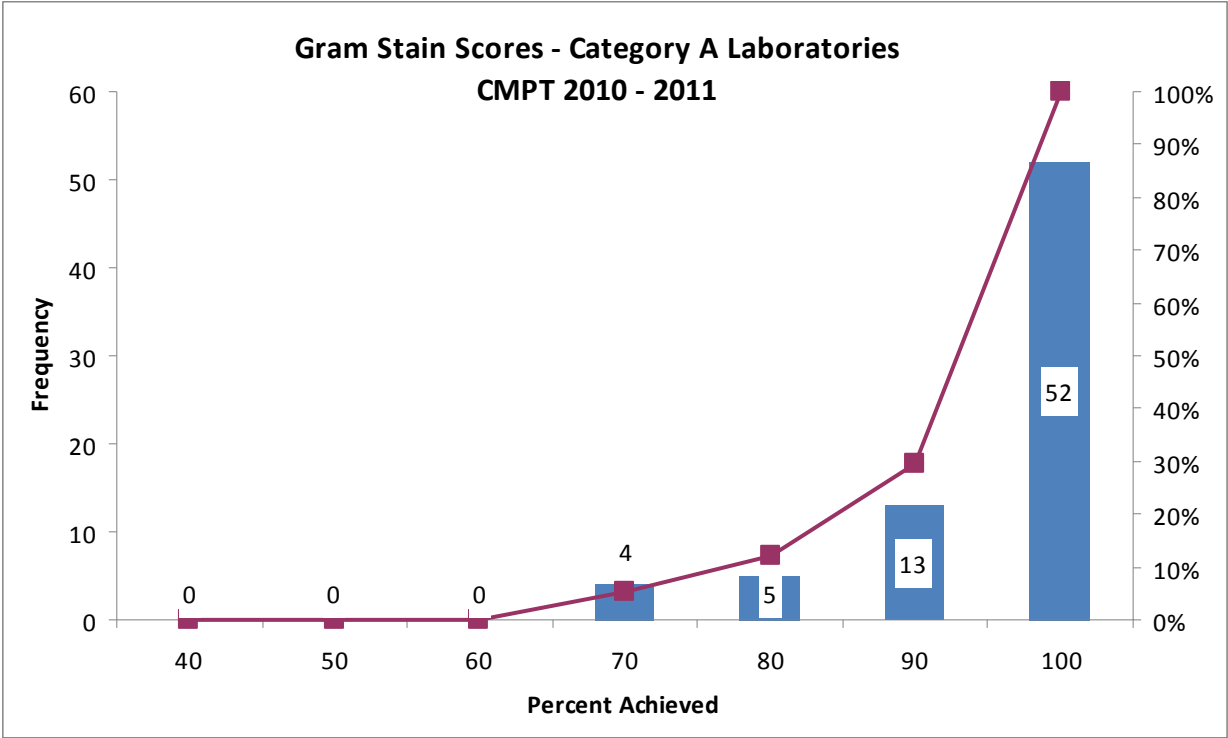
Gram Stain Challenges



Gram Stain Challenges - Category A Laboratories

Score Table: 2010 - 2011 Percentage of category A laboratories with acceptable grades (n=74)		
% acceptable grades	Laboratories (n=74)	Cumulative
40	0	0.00%
50	0	0.00%
60	0	0.00%
70	4	5.41%
80	5	12.16%
90	13	29.73%
100	52	100.00%

Out of 74 laboratories, 52 (70%) received a perfect score; 70 (95%) received scores of 80% or higher.

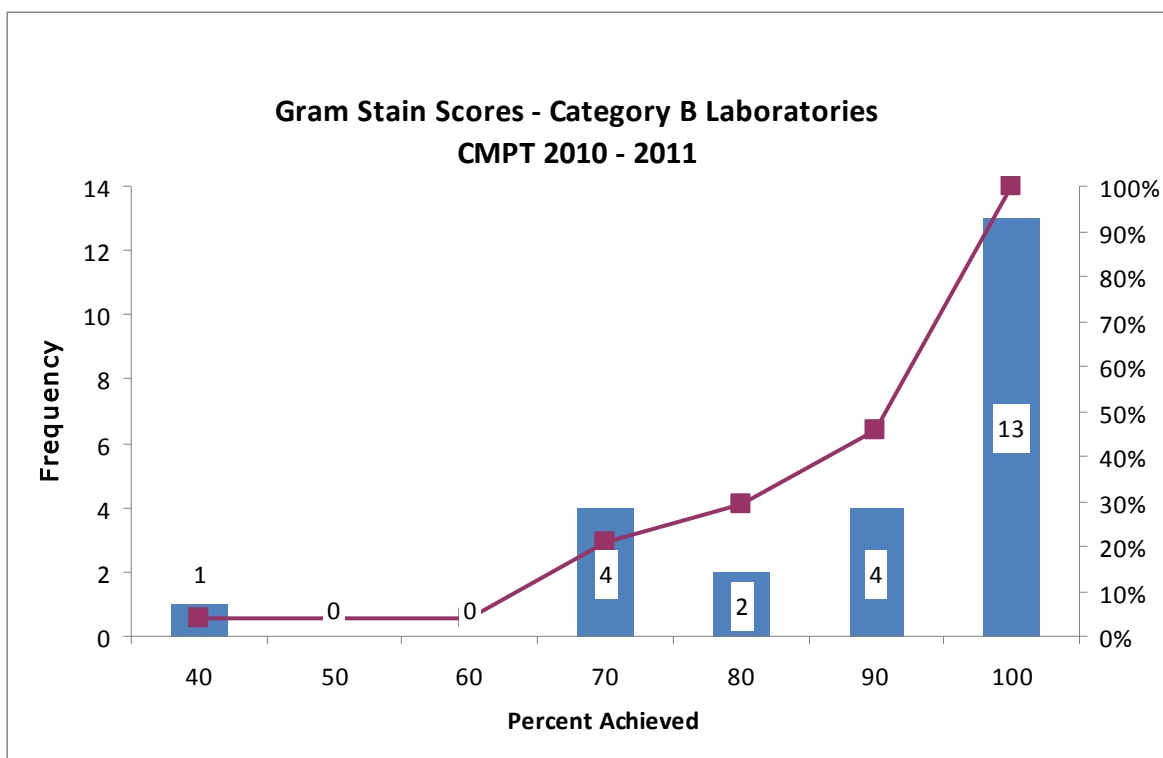


Gram Stain Challenges

Gram Stain Challenges - Category B Laboratories

Score Table: 2010 - 2011 Percentage of category B laboratories with acceptable grades		
% acceptable grades	Laboratories (n=24)	Cumulative
40	1	4.17%
50	0	4.17%
60	0	4.17%
70	4	20.83%
80	2	29.17%
90	4	45.83%
100	13	100.00%

Out of 24 laboratories, 13 (54%) received a perfect score; 17 (71%) received scores of 80% or higher.

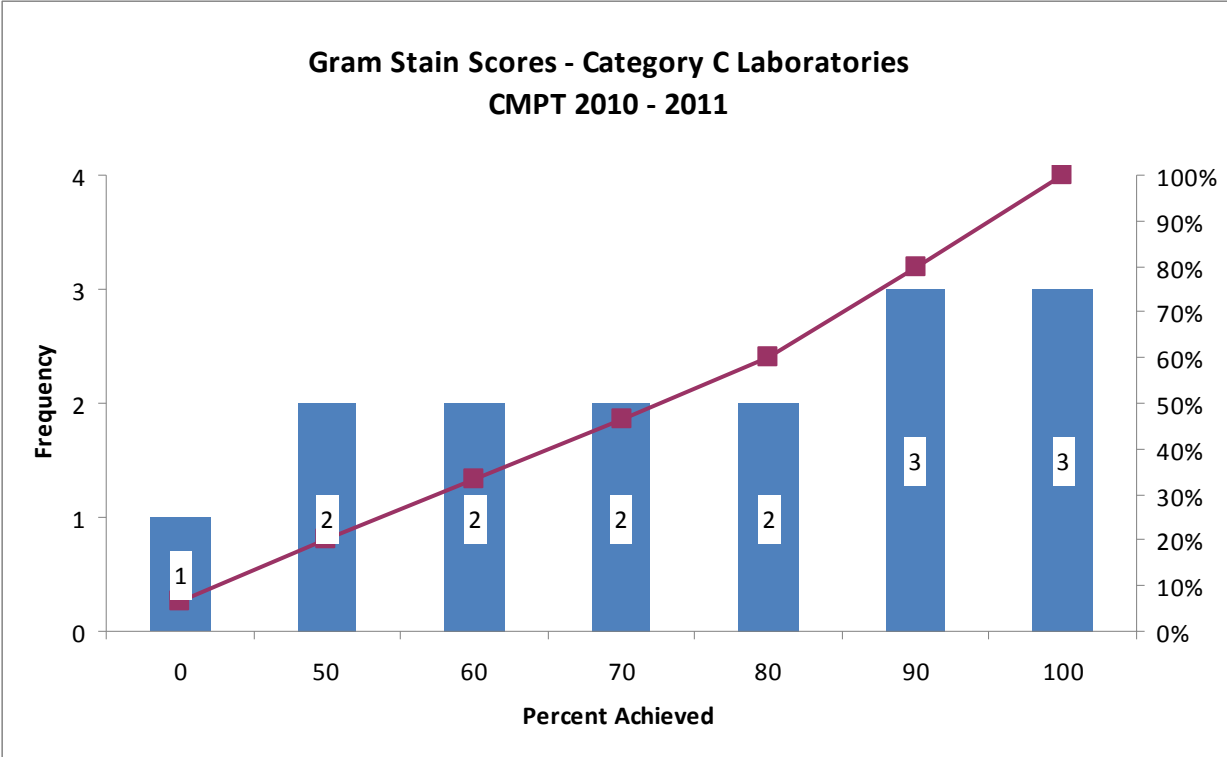


Gram Stain Challenges

Gram Stain Challenges - Category C Laboratories

Score Table: 2010 – 2011 Percentage of category C laboratories with acceptable grades		
% acceptable grade	Laboratories (n=15)	Cumulative
0	1	6.67%
50	2	20.00%
60	2	33.33%
70	2	46.67%
80	2	60.00%
90	3	80.00%
100	3	100.00%

Out of 15 laboratories, 3 (20%) received a perfect score; 8 (53%) received scores of 80% or higher.

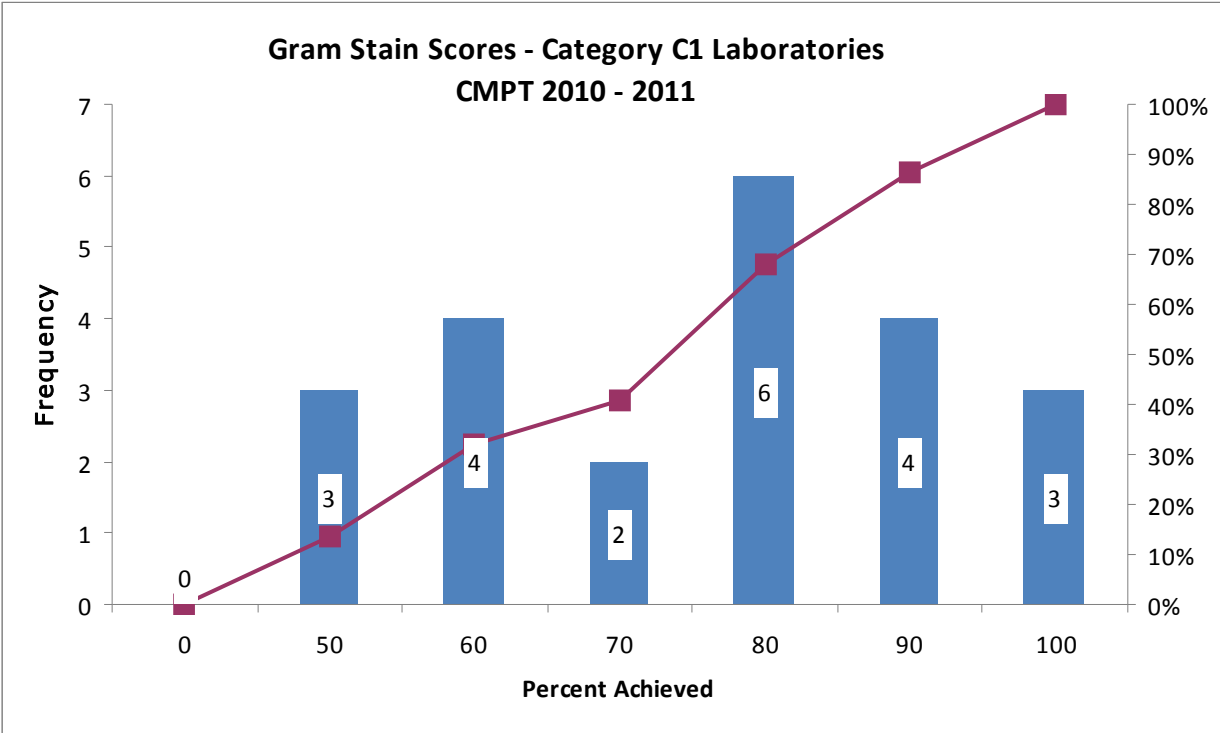


Gram Stain Challenges

Gram Stain Challenges - Category C1 Laboratories

Score Table: 2010 – 2011 Percentage of category C1 laboratories with acceptable grades		
% acceptable grade	Laboratories (n=22)	Cumulative
0	0	0.00%
50	3	13.64%
60	4	31.82%
70	2	40.91%
80	6	68.18%
90	4	86.36%
100	3	100.00%

Out of 22 laboratories, 3 (14%) received a perfect score; 13 (59%) received scores of 80% or higher.

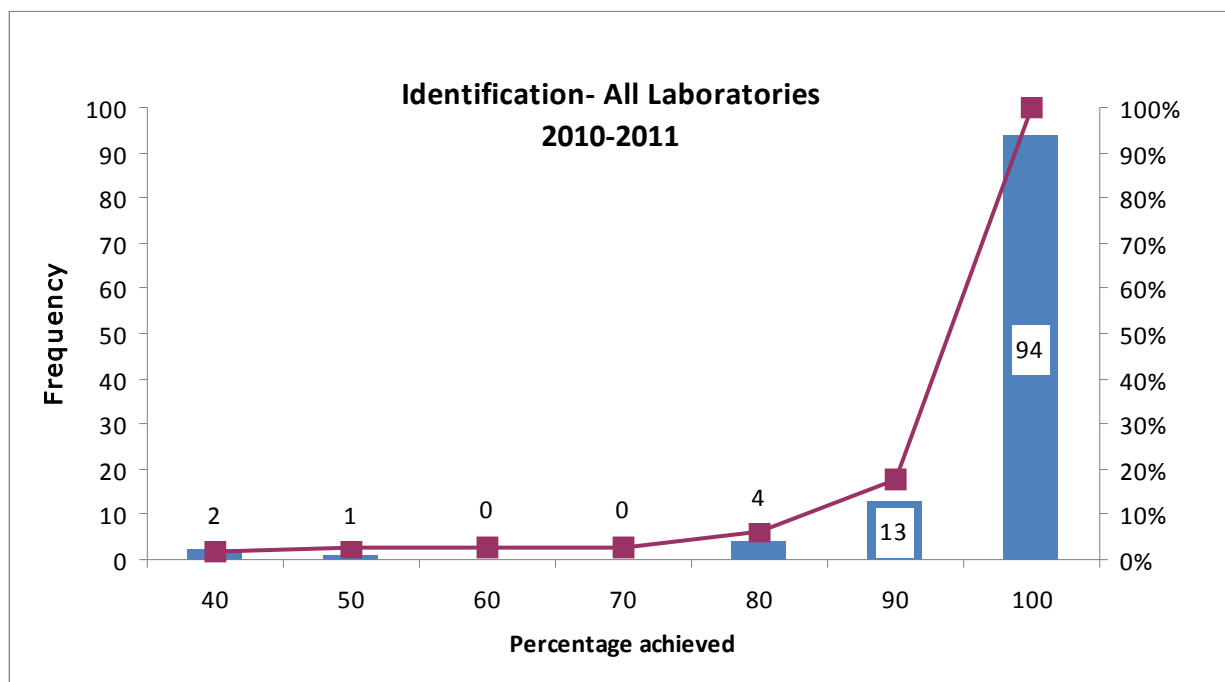


Gram Stain Challenges

Identification Challenges - All Laboratories

Score Table: 2010 – 2011 Percent of all laboratories with acceptable grades		
% acceptable grade	Laboratories (n=136)	Cumulative
40	2	1.75%
50	1	2.63%
60	0	2.63%
70	0	2.63%
80	4	6.14%
90	13	17.54%
100	94	100.00%

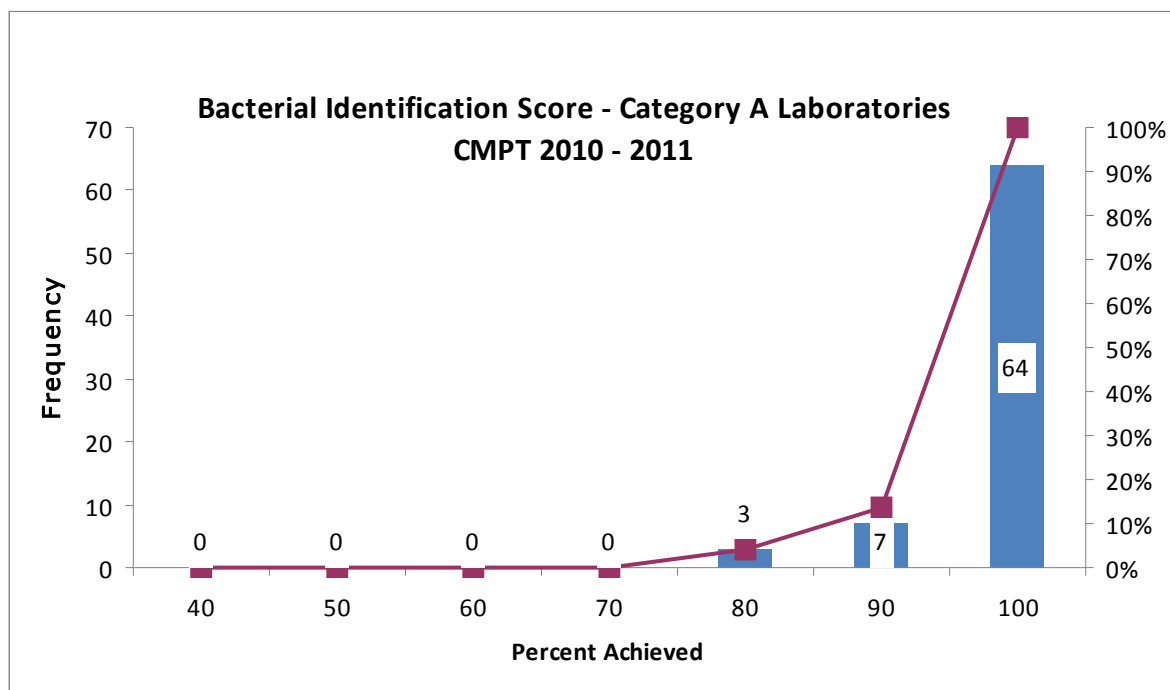
Out of 136 laboratories, 94 (69%) received a perfect score; 111 (82%) received scores of 80% or higher.



Identification Challenges - Category A Laboratories

Score Table: 2010 – 2011 Percent of category A laboratories with acceptable grades		
% acceptable grade	Laboratories (n=74)	Cumulative
40	0	0.00%
50	0	0.00%
60	0	0.00%
70	0	0.00%
80	3	4.05%
90	7	13.51%
100	64	100.00%

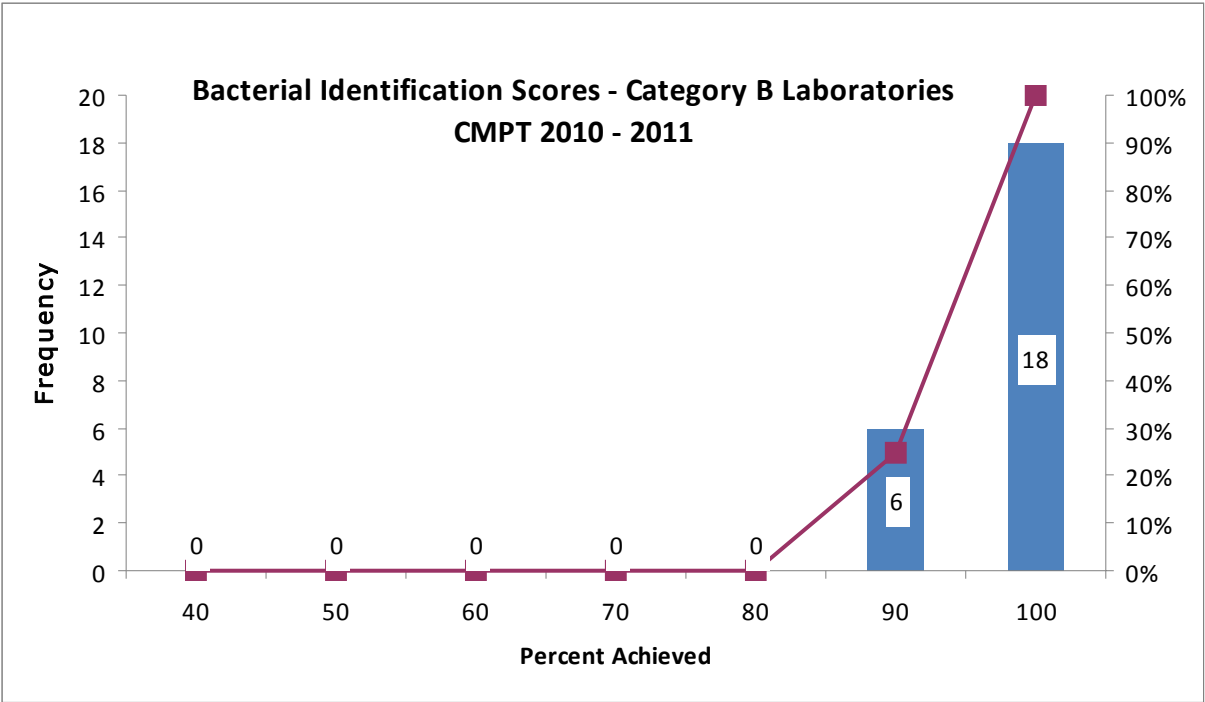
Out of 74 laboratories, 64 (86%) received a perfect score; All laboratories received scores of 80% or higher.



Identification Challenges - Category B Laboratories

Score Table: 2010 – 2011 Percent of category B laboratories with acceptable grades		
% acceptable grade	Laboratories (n=24)	Cumulative
40	0	0.00%
50	0	0.00%
60	0	0.00%
70	0	0.00%
80	0	0.00%
90	1	4.17%
100	23	100.00%

Out of 24 laboratories, 23 (96%) received a perfect score; all laboratories received scores of 80% or higher.

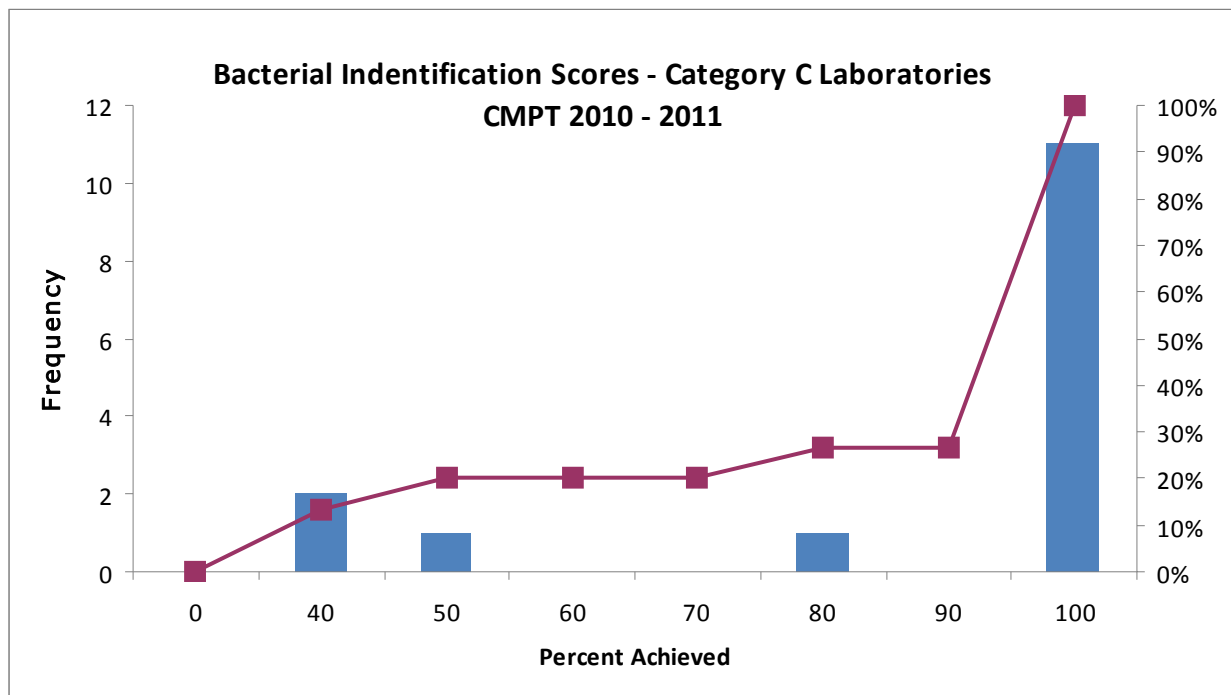


Identification Challenges

Identification Challenges - Category C Laboratories

Score Table: 2010 – 2011 Percent of category C laboratories with acceptable grades		
% acceptable grade	Laboratories (n=15)	Cumulative
0	0	0.00%
40	2	13.33%
50	1	20.00%
60	0	20.00%
70	0	20.00%
80	1	26.67%
90	0	26.67%
100	11	100.00%

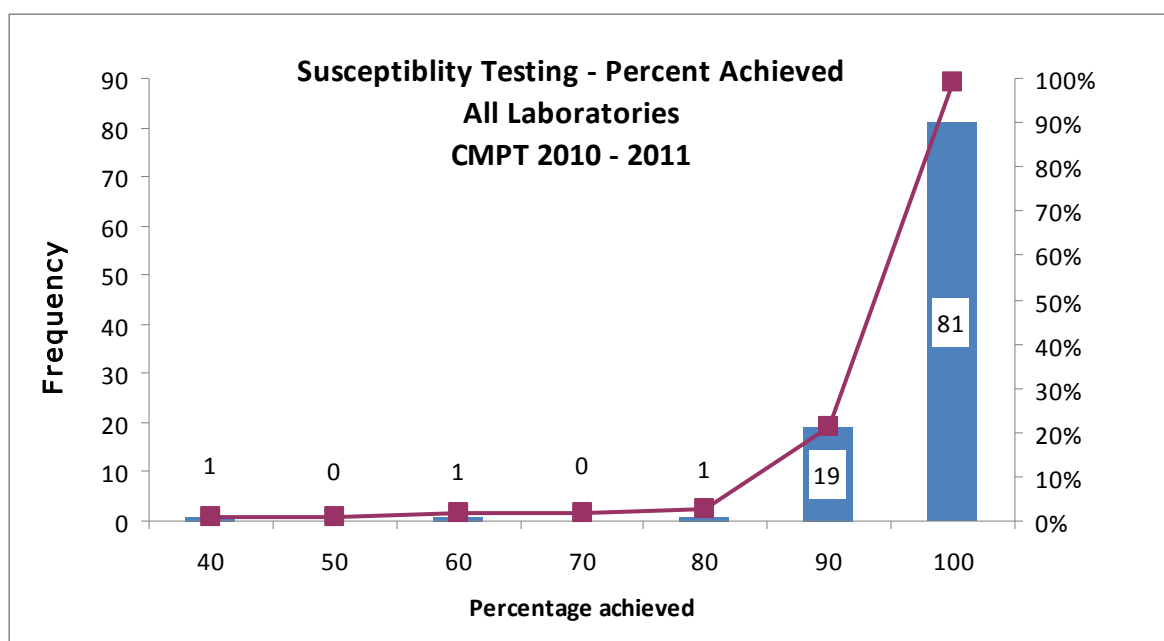
Out of 15 laboratories, 11 (73%) received a perfect score, 12 (80%) received scores of 80% or higher.



Antimicrobial Susceptibility Testing - All Laboratories

Score Table: 2010 – 2011 Percent of all laboratories with acceptable grades		
% acceptable grade	Laboratories (n=103)	Cumulative
40	1	0.96%
50	0	0.96%
60	1	1.92%
70	0	1.92%
80	1	2.88%
90	19	21.15%
100	81	99.04%

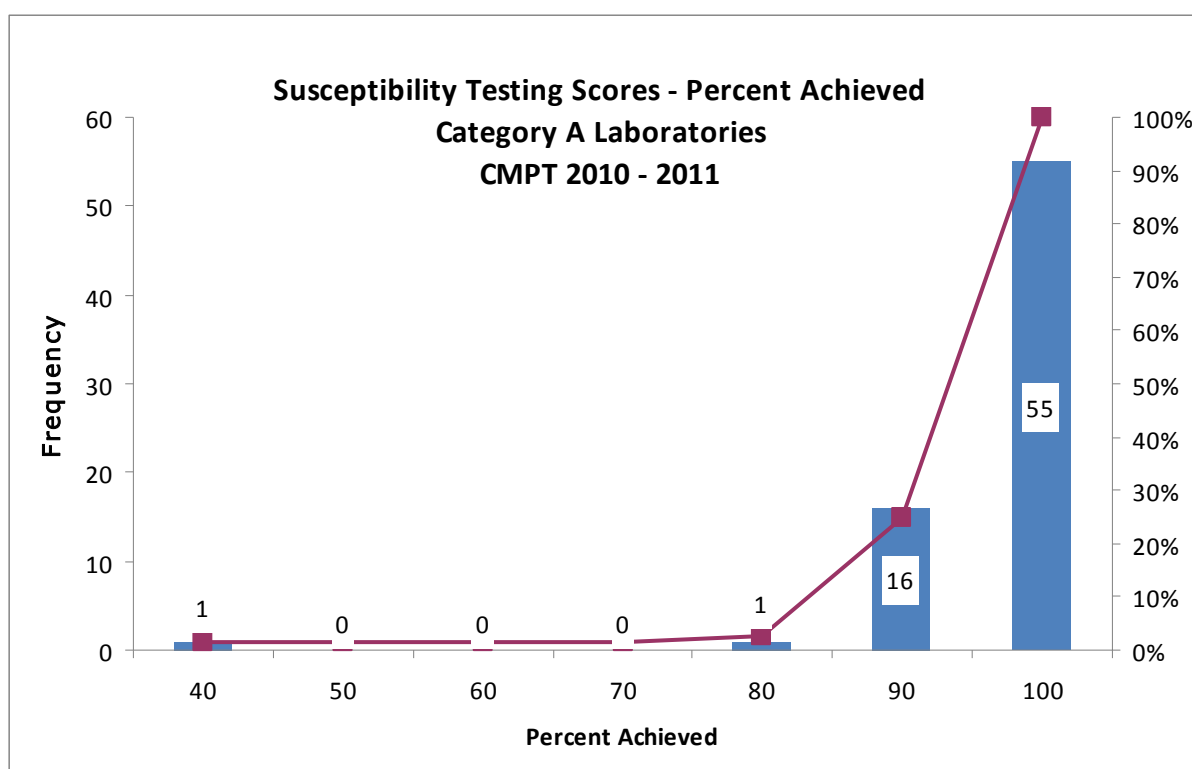
Out of 103 laboratories, 81 (79%) received a perfect score; 101(98%) laboratories received scores of 80% or higher.



Antimicrobial Susceptibility Testing - Category A Laboratories

Score Table: 2010 – 2011 Percent of category A laboratories with acceptable grades		
% acceptable grade	Laboratories (n=73)	Cumulative %
40	1	1.37%
50	0	1.37%
60	0	1.37%
70	0	1.37%
80	1	2.74%
90	16	24.66%
100	55	100.00%

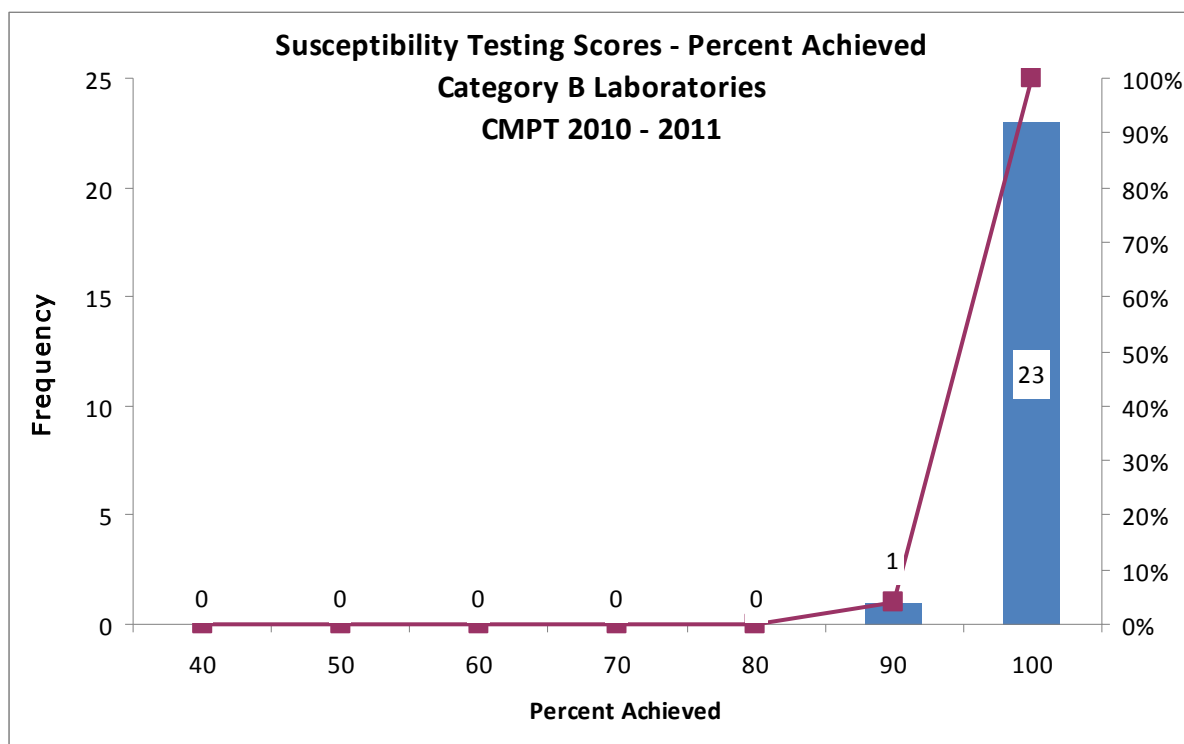
Out of 73 laboratories, 55 (75%) received a perfect score, 72 (96%) laboratories received scores of 80% or higher.



Antimicrobial Susceptibility Testing - Category B Laboratories

Score Table: 2010 – 2011 Percent of category B laboratories with acceptable grades		
% acceptable grade	Laboratories (n=24)	Cumulative
40	0	0.00%
50	0	0.00%
60	0	0.00%
70	0	0.00%
80	0	0.00%
90	1	4.17%
100	23	100.00%

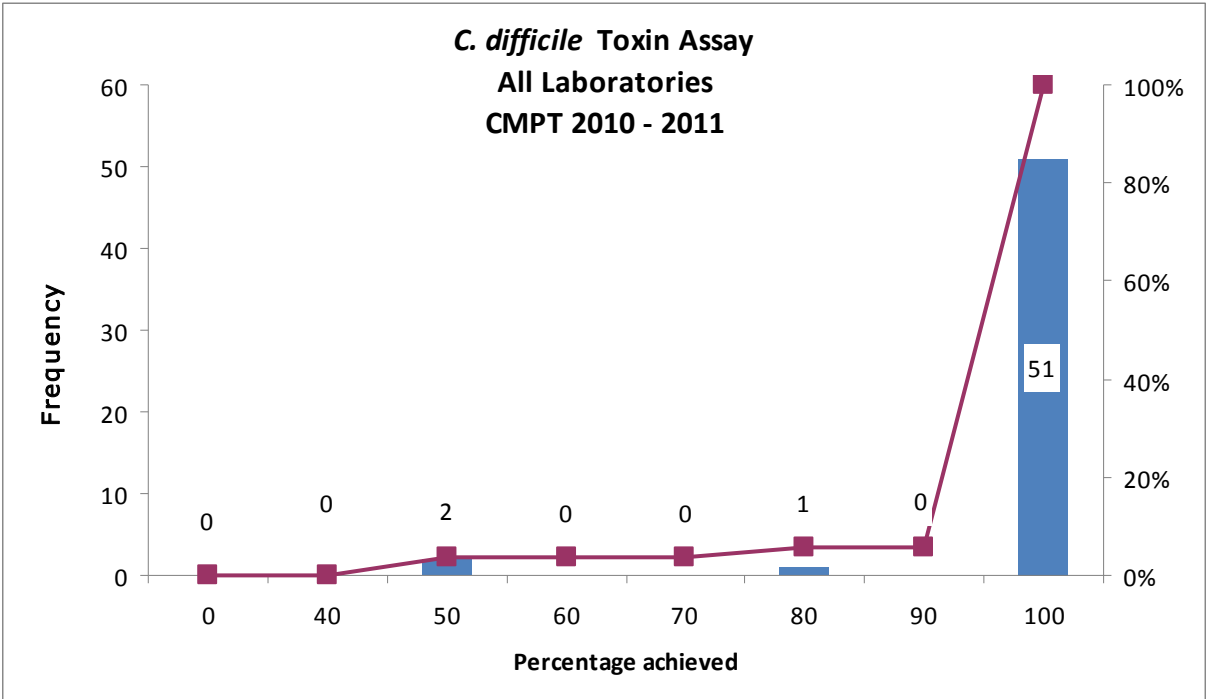
Out of 24 laboratories, 23 (86%) received a perfect score; all laboratories received scores of 80% or higher.



Clostridium difficile Toxin Detection - All Laboratories

Score Table: 2010 – 2011 Percent of all laboratories with acceptable grades		
% acceptable grades	Laboratories (n=54)	Cumulative
0	0	0.00%
40	0	0.00%
50	2	3.70%
60	0	3.70%
70	0	3.70%
80	1	5.56%
90	0	5.56%
100	51	100.00%

Out of 54 laboratories, 52 (96%) received scores of 80% or higher.

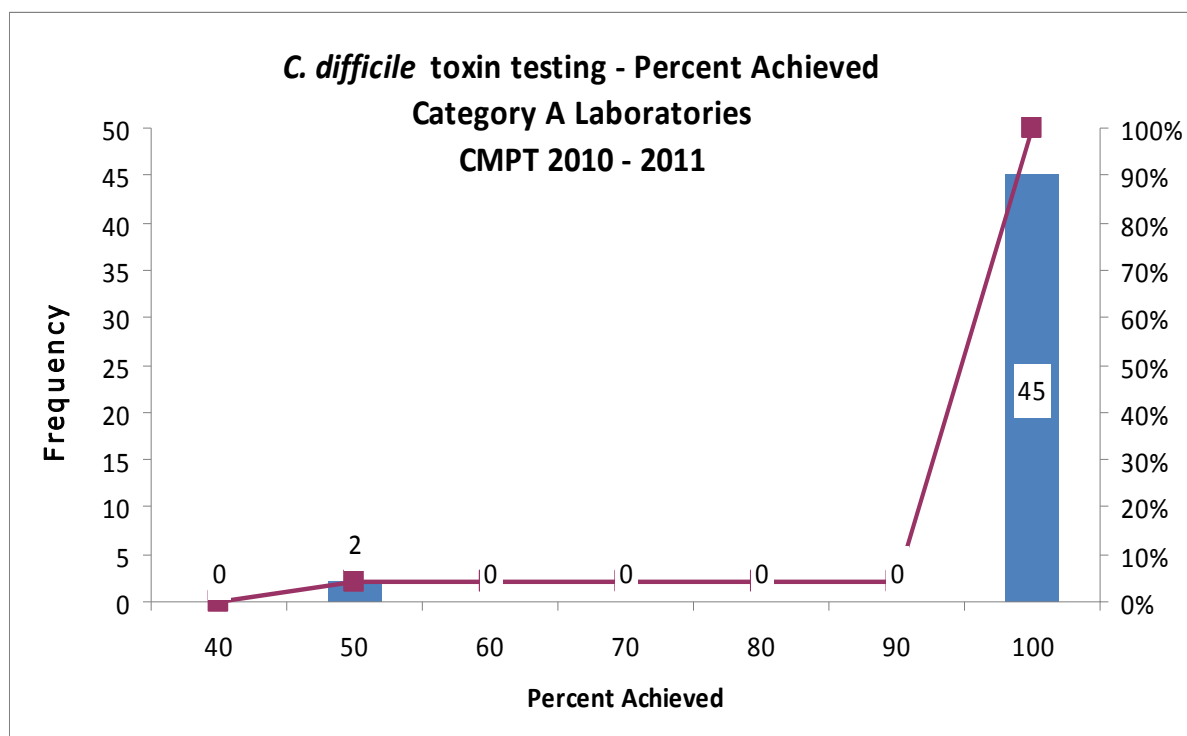


Clostridium difficile Toxin Detection

***Clostridium difficile* Toxin Detection - Category A Laboratories**

Score Table: 2010– 2011 Percent of category A laboratories with acceptable grades		
% acceptable grades	Laboratories (n=47)	Cumulative
40	0	0.00%
50	2	4.26%
60	0	4.26%
70	0	4.26%
80	0	4.26%
90	0	4.26%
100	45	100.00%

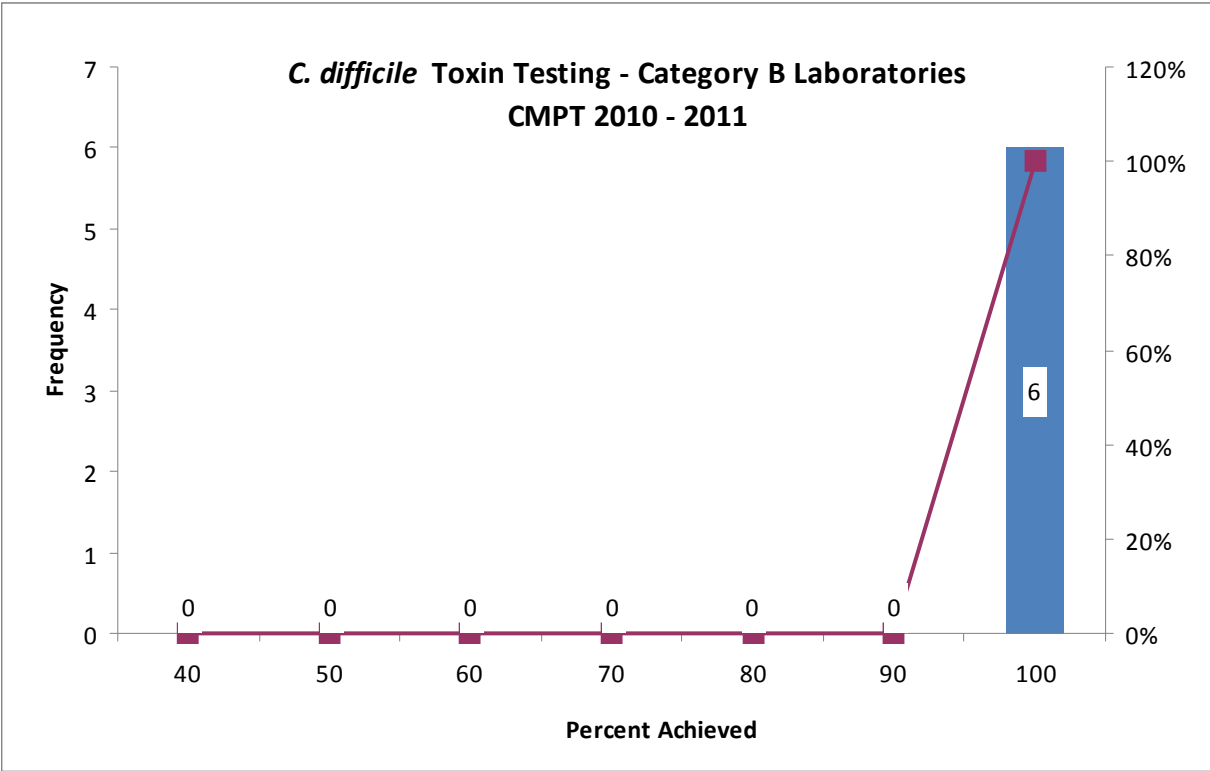
Out of 47 laboratories, 45 (96%) received scores of 80% or higher.



Clostridium difficile Toxin Detection - Category B Laboratories

Score Table: 2010 – 2011 Percent of category B laboratories with acceptable grades		
% acceptable grades	Laboratories (n=6)	Cumulative
40	0	0.00%
50	0	0.00%
60	0	0.00%
70	0	0.00%
80	0	0.00%
90	0	0.00%
100	6	100.00%

All laboratories received a perfect score.



Clostridium difficile Toxin Detection

WATER MICROBIOLOGY PROGRAM

CMPT acknowledges with appreciation the valuable and essential advisory and technical support of:

Chris Enick BSc.....Exova, Surrey, BC

Joe Fung BSc MPH.....BCCDC Environmental Microbiology, Vancouver, BC

CMPT participates with the following organizations to provide external quality assessment challenges and assistance for water bacteriology.

- Enhanced Water Quality Assurance (British Columbia Water Bacteriology Approval Committee)
- BCCDC Environmental Microbiology Laboratory British Columbia Ministry of the Environment

Water Program Overview

In 2010, forty-seven laboratories participated in the water bacteriology program. Drinking Water challenge surveys are shipped to laboratories three times per year. Each survey consists of sets of 4 drinking water samples.

Recreational Water challenge surveys are shipped two times per year. Each survey consists of one set of recreational water samples (spa water, freshwater beach or marine water). Participants can choose to participate in one, two, or all the recreational water challenge samples.

Not all laboratories perform all challenges and not all laboratories use the same methods when testing water samples. Laboratories performing testing use one to four methods depending on the laboratory's accreditation criteria. Laboratories also perform a qualitative method, the Presence/Absence method, as their primary method or in addition to the quantitative methods.

The grading scheme for the Water Program is shown in tables 1 to 4.

The drinking water bacteriology (membrane filtration, Enzyme Substrate, MPN and Presence/Absence methods) challenge records for 2010 are shown in Table 5 and the recreational water challenge records are shown in Table 6.

Water Program Grading Scheme

Table 1. CMPT Grading Scale for PT Drinking Water Samples

Mean, cfu/100mL or MPN/100mL	0	15	25	30	40	60	70	80
Scores (see Table 2)	NG = 3	1 - 29 = 3	10 - 42 = 3	16 - 59 = 3	21 - 62 = 3	46 - 119 = 3	49 - 139 = 3	52 - 159 = 3
	Growth = 0	30 - 59 = 2	1 - 9, 43 - 59 = 2	1 - 15 = 2	1 - 20 = 2	16 - 45, >119 = 2	23 - 49, >140 = 2	30 - 51, >160 = 2
		>59 = 1	>59 = 1	>59 = 1	>62 = 1	1 - 15 = 1	1 - 22 = 1	1 - 29 = 1
		NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0

NG: no growth

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Based on this high level of reliability, the new assessment scale is as follows:

Score	Assessment Criteria
3	Result is considered accurate (see Table 1)
2	Result is acceptable with minor error (see Table 1)
1	Major error (see Table 1) False Positive: a sample containing only total coliforms is reported as containing thermotolerant coliforms
0	Very major error with potential water safety consequences, i - A sample containing only thermotolerant bacteria is reported as containing total coliforms, or ii - False Negative: a report of no growth when bacteria are present.

Please Note:

- Total Coliforms and thermotolerant coliforms are a combined score out of 3 for drinking water samples: #1, 2, 3, 4, **Total =12**.
- Additional scores for *E. coli* testing are out of a score of 3 each for drinking water samples #1,2, 3, 4, **Total =12**.
- When only one component (ie TC, ThC or EC) of a water sample is reported, a qualitative score is given, eg "correct/incorrect".
- When no definitive MF count is reported, ie count is preceded by > or <, a qualitative score is given, eg "correct/incorrect".
- Recreational water samples for *Enterococci*, *Pseudomonas* or fresh water beach *E. coli* testing is out of a **total of 3 per sample**.
- Laboratories are graded depending on the scope of testing that is performed.

Table 3: CMPT Grading Scale for PT Recreational Samples: Membrane Filtration

Mean, cfu/100 ml (MF)	20	30	50	60	70	80	90	100	200	300	500	600
Scores	1 - 39 = 3	1 - 49 = 3	28 - 69 = 3	38 - 80 = 3	44 - 99 = 3	55 - 103 = 3	62-118 = 3	69 - 134 = 3	155 - 248 = 3	253 - 345 = 3	428 - 575 = 3	525 - 679 = 3
			1 - 28 = 2	1-37 = 2	1- 43 = 2	1 - 54 = 2	1 - 61 = 2	1-68 = 2	1 - 154 = 2	1 - 252 = 2	1 - 427 = 2	1 - 524 = 2
	≥ 40 = 2	≥ 50 = 2	≥ 70 = 2	≥ 81 = 2	≥ 100 = 2	≥ 104 = 2	≥ 119 = 2	≥ 135 = 2	≥ 249 = 2	≥ 346 = 2	≥ 576 = 2	≥ 680 = 2
	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0

Table 4: CMPT Grading Scale for PT Recreational Samples: Colilert Quantitray, Enterolert, MPN

Mean, MPN/100ml	20	30	40	50	60	70	100	200	300	500
Scores	1 - 59 = 3	1 - 89 = 3	10 - 119 = 3	20 - 149 = 3	22 - 170 = 3	25 - 219 = 3	30 - 289 = 3	70 - 710 = 3	100 - 1100 = 3	200 - 1999 = 3
			1 - 9 = 2	1 - 19 = 2	1 - 21 = 2	1 - 24 = 2	1 - 29 = 2	1 - 69 = 2	1 - 99 = 2	1 - 199 = 2
	≥ 60 = 2	≥ 90 = 2	≥ 120 = 2	≥ 150 = 2	≥ 171 = 2	≥ 220 = 2	≥ 290 = 2	≥ 711 = 2	≥ 1101 = 2	≥ 2000 = 2
	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0	NG = 0

NG: no growth

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Table 5: Simulated drinking water bacteriology challenge record for 2010

Date	Sample No.	Organism	Membrane Filtration mean/median cfu/100mL		Enzyme Substrate mean/median MPN/100mL		MPN mean/median MPN/100mL		Presence/Absence (P/A)
			Total Coliforms	<i>E. coli</i>	Total Coliforms	<i>E. coli</i>	Total Coliforms	<i>E. coli</i>	Total Coliforms/ <i>E. coli</i>
W101 April 19, 2010	1	<i>Escherichia coli</i>	74/72	74/72	82/81	74/78	>23/>23	>23/>23	P/P
	2	no organisms present	0/0	0/0	0/0	0/0	0/0	0/0	A/A
	3	<i>Escherichia coli</i>	37/37	37/37	79/82	73/80	>23/>23	>23/>23	P/P
	4	<i>Enterobacter</i> species	74/74	0/0	82/76	0/0	>23/>23	0/0	P/A
W102 July 5, 2010	1	<i>Escherichia coli</i>	16/16	16/16	21/18	20/18	12/9	12/9	P/P
	2	<i>Escherichia coli</i>	15/15	15/15	18/18	18/18	15/16	16/16	P/P
	3	<i>Enterobacter</i> species	71/72	0/0	74/77	0/0	>23/>23	0/0	P/A
	4	<i>Enterobacter</i> species	70/70	0/0	79/78	0/0	>23/>23	0/0	P/A
W103 Nov. 1, 2010	1	<i>Enterobacter</i> species	39/39	0/0	41/40	0/0	>23/>23	0/0	P/A
	2	<i>Enterobacter</i> species	80/81	0/0	87/88	0/0	>23/>23	0/0	P/A
	3	<i>Escherichia coli</i>	36/35	35/35	37/36	37/36	>23/>23	>23/>23	P/P
	4	no organisms present	0/0	0/0	0/0	0/0	0/0	0/0	A/A

Table 6: Simulated recreational water bacteriology challenge record for 2010

Date	Source	Challenge	Membrane Filtration mean/median cfu/100mL	Enzyme Substrate mean/median MPN/100mL
R101 April 19, 2010	Spa Water	<i>Pseudomonas aeruginosa</i>	274/258	N/A
	Freshwater Beach	<i>Escherichia coli</i>	283/270	342/340
	Marine Water	<i>Enterococcus</i> species	19/19	14/15
R102 August 9, 2010	Spa Water	<i>Pseudomonas aeruginosa</i>	268/258	N/A
	Freshwater Beach	<i>Escherichia coli</i>	80/70	94/91
	Marine Water	<i>Enterococcus</i> species	64/67	70/70

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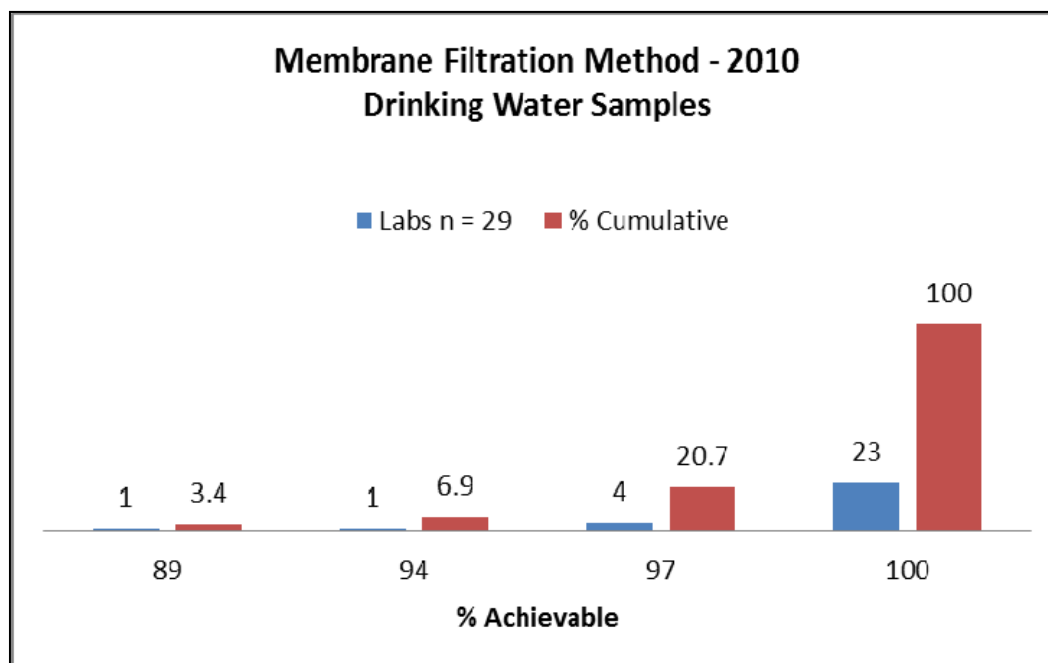
Water Bacteriology (Drinking and Recreational Water Sample) Score

Laboratory testing results are graded based on the Membrane Filtration, Enzyme Substrate, MPN and/or Presence/Absence methods.

All methods are graded on a point scale for assessment of water samples with the exception of the Presence/Absence method — a qualitative method — which is therefore, graded qualitatively. With 12 drinking water samples tested for the program year, the maximum score is 36. With 3 recreational water samples, laboratories can receive up to a maximum score of 9.

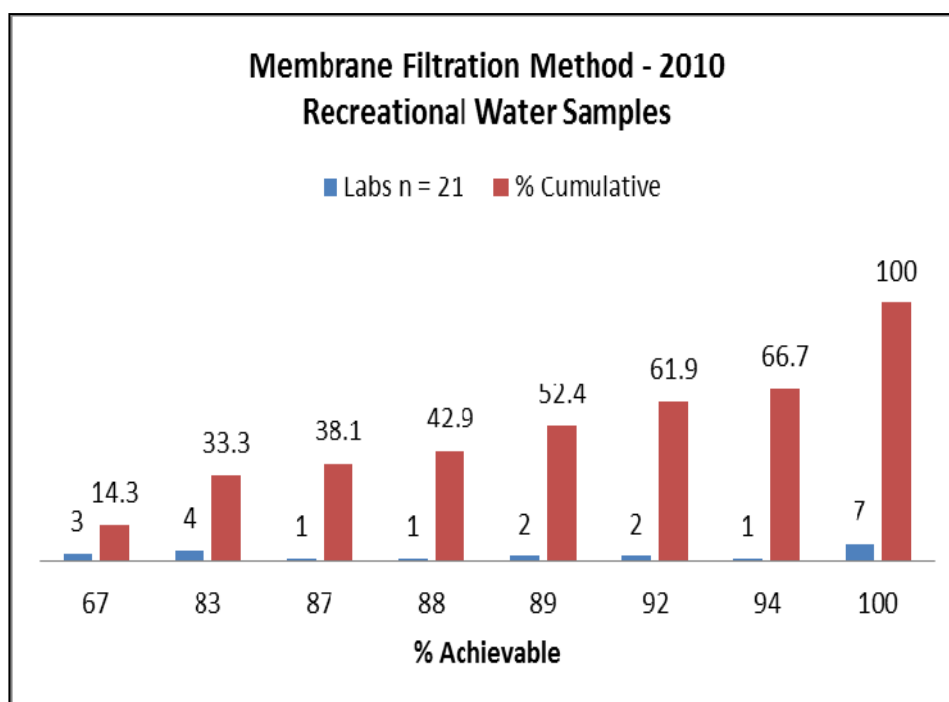
The following Score Tables illustrate the % Achievable scores for each method during 2010.

% Achievable	Labs (n=29)	% Cumulative
89	1	3.4
94	1	6.9
97	4	20.7
100	23	100



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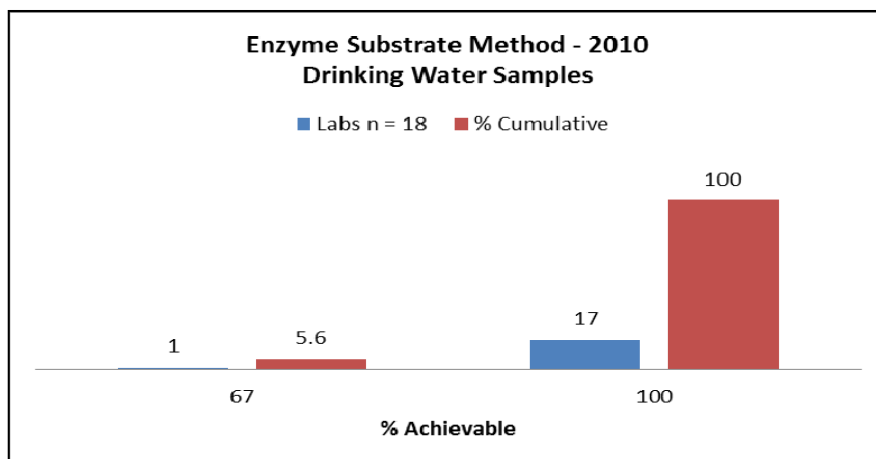
Table 8. Membrane Filtration Method Score Table Recreational Water Testing Laboratories Performance for 2010		
% Achievable	Labs (n=21)	% Cumulative
67	3	14.3
83	4	33.3
87	1	38.1
88	1	42.9
89	2	52.4
92	2	61.9
94	1	66.7
100	7	100.0



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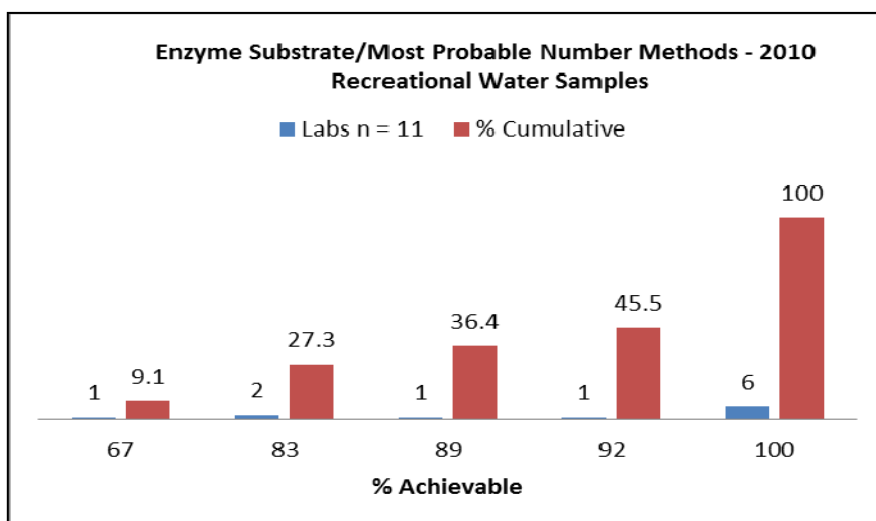
**Table 9. Enzyme Substrate Method Score
Drinking Water Testing Laboratories Performance for 2010**

% Achievable	Labs (n=18)	% Cumulative
67	1	5.6
100	17	100.0



**Table 10. Enzyme Substrate/Most Probable Method (MPN) Score
Recreational Water Testing Laboratories Performance for 2010**

% Achievable	Labs (n=11)	% Cumulative
67	1	9.1
83	2	27.3
89	1	36.4
92	1	45.5
100	6	100.0



WATER MICROBIOLOGY PROGRAM

Table 11. Most Probable Number (MPN) Method Score Drinking Water Testing Laboratories Performance for 2010		
% Achievable	Labs (n=8)	% Cumulative
100	8	100

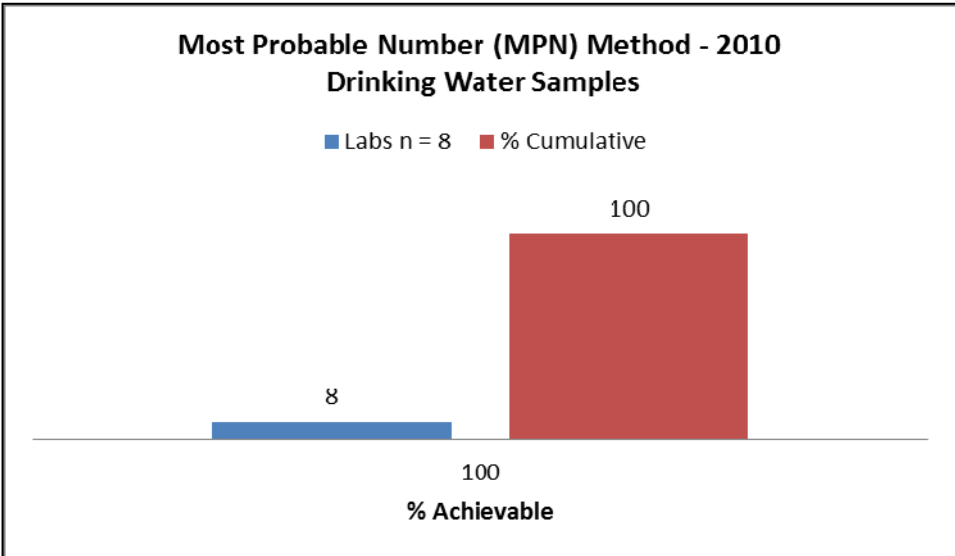
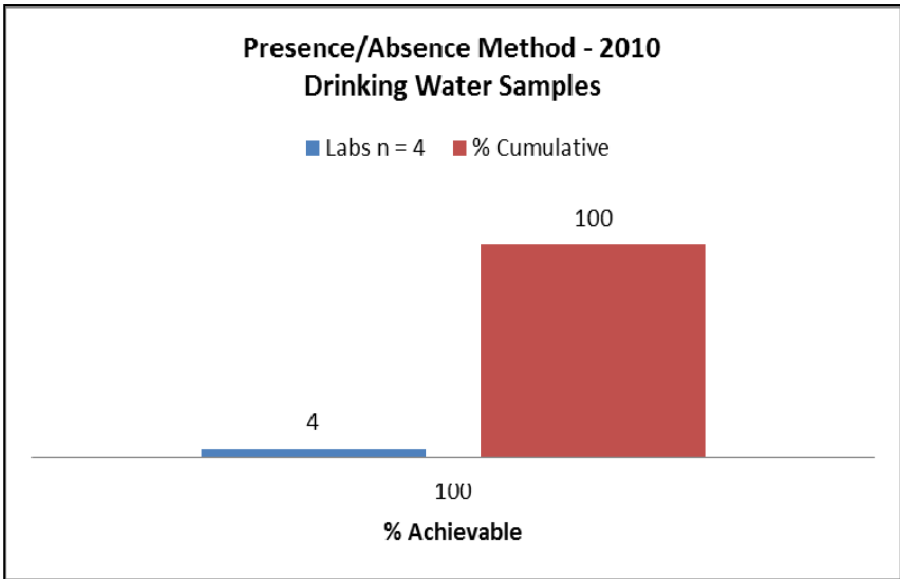


Table 12. Presence/Absence Method Score Water Testing Laboratories Performance for 2010		
% Achievable	Labs (n=4)	% Cumulative
100	4	100



WATER MICROBIOLOGY PROGRAM

E.coli Supplemental Testing

A total of 16 laboratories perform supplemental water bacteriology testing to discern *Escherichia coli* from other thermotolerant coliforms.

These laboratories are assessed as a separate group and were assessed an additional 36 points maximum for the program year per method if they reported *Escherichia coli* and thermotolerant coliforms.

The Membrane Filtration and the MPN methods were the methods used.

Table 13. Membrane Filtration Method Score: *E. coli* Testing, 2010

% Achievable	Laboratories (n=16)	% Cumulative
100	16	100

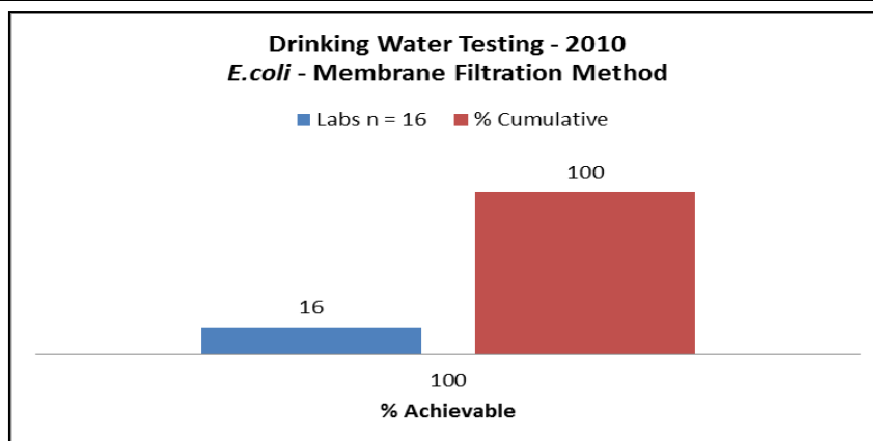
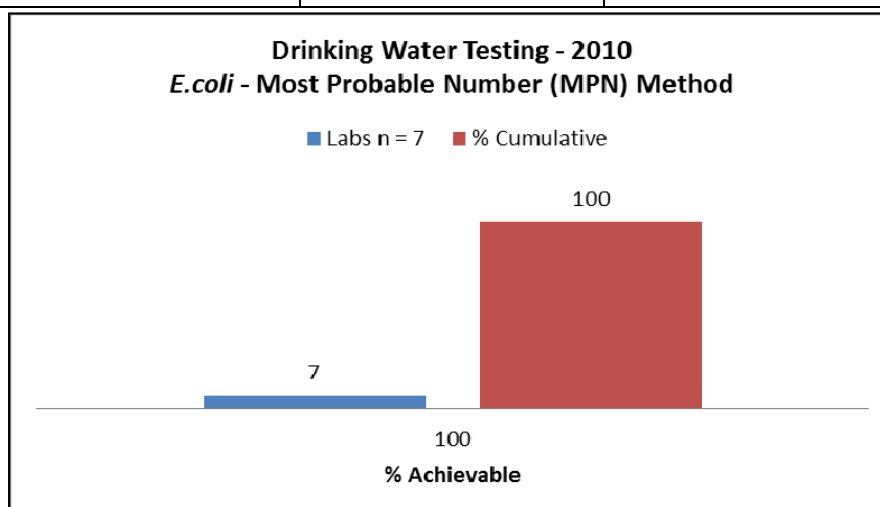


Table 14. Most Probable Number Method Score: *E. coli* Testing, 2010

% Achievable	Laboratories (n=7)	% Cumulative
100	7	100



MYCOLOGY PROGRAM

CMPT acknowledges with appreciation the valuable and essential advisory and technical support of:

Pamela Kibsey MD FRCPC.....Royal Jubilee Hospital, Victoria, BC
 Robert Rennie MD FRCPC.....University of Alberta Hospital, Edmonton, AB
 Jeff Fuller FCCM, (D)ABMM.....University of Alberta, Edmonton, AB
 Romina Reyes MD FRCPC.....LifeLabs, Burnaby, BC
 Brad Jansen BSc, MLT.....University of Alberta Hospital, Edmonton, AB

Basic Mycology Program

The Basic Mycology Program serves two constituent groups:

- British Columbia clinical dermatologists who perform mycology cultures in office laboratories.
- Microbiology laboratories that participate in this program to supplement other quality assurance programs to maintain proficiency in handling and identifying dermatology related fungi and yeasts.

For the past 21 years, CMPT has provided a **Basic Mycology Program** for proficiency testing suitable for those doing office mycology and as a supplement for laboratories requiring a small number of additional challenges. The primary focus is the identification of dermatophytes and commonly recovered contaminants. The four fungal isolates for 2010-2011 are listed in Table 1.

Table 1: Basic Mycology Program Challenges 2010 - 2011

Date	Sample	KOH / Identification Challenge
September 2010	1009	KOH: negative
	1009-1	<i>Candida krusei</i>
	1009-2	<i>Microsporum canis</i>
April 2011	1104	KOH: positive
	1104-1	<i>Candida albicans</i>
	1104-2	<i>Microsporum audouinii</i>

Mycology - Grading Schemes

Mycology challenges are not graded. The compiled results are available to participants in critique format posted on the website after the challenge.

MYCOLOGY PROGRAM

Table 2: Mycology Plus Program Challenges 2010 - 2011

Date	Challenge	Results
September 2010 10 participants	1009-1: <i>Candida krusei</i> Urine sample	7- <i>C. krusei</i> 1- <i>C. krusei/inconspicua</i> 1- yeast, germ tube negative 1- not routinely processed 3- reported susceptibilities
	1009-2: <i>Microsporum canis</i> Skin scraping	7- <i>Microsporum canis</i> 1- not routinely processed
	1009-3 <i>Fusarium</i> species Skin scraping	8- <i>Fusarium</i> species 1- Fungus, unable to identify 1- not routinely processed
	1009 KOH A: negative	All correct
	1009 KOH B: negative	9 correct, 1 incorrect
January 2011 10 participants	1101-1: <i>Rhodotorula</i> species Blood culture sample	3- <i>Rhodotorula mucilaginosa</i> 1 - <i>Rhodotorula rubra</i> 5 - <i>Rhodotorula</i> species 1- not routinely processed 1- reported susceptibilities
	1101-2: <i>Trichophyton mentagrophytes</i> Nail sample	5 - <i>T. mentagrophytes</i> 1 - <i>T. rubrum</i> 2 - <i>Trichophyton</i> species 1- <i>T. tonsurans</i> 1 - sample not normally processed
	1101-3: <i>Epidermophyton floccosum</i> Skin scraping	8 - <i>E. floccosum</i> 1- <i>Epidermophyton</i> species 1 - sample not normally processed
	1101-4: <i>Malbranchea</i> species Sputum sample	2- <i>Malbranchea</i> species 1- <i>Trichosporon</i> species 1- Mold, refer 3- Fungus refer 1- <i>Geotrichum candidum</i> 1- not normally processed
	1101-4 KOH A: Positive	9 correct, 1 incorrect
	1101-4 KOH B: Positive	All correct
April 2011 10 participants	1104-1: <i>Candida albicans</i> Central line sample	9 - <i>C. albicans</i> 1 - sample not routinely processed 5- reported susceptibilities
	1104-2: <i>Microsporum audouinii</i> Skin scraping sample	2 - <i>M. audouinii</i> 2 - <i>T. tonsurans</i> 1 - <i>T. rubrum</i> 2 - <i>Trichophyton</i> species 2 - Fungus, refer 1 - sample not normally processed
	1104-3: <i>Penicillium</i> species Environmental sample	8 - <i>Penicillium</i> species 1 - <i>Streptomyces</i> species 1 - sample not normally processed
	1104-4 KOH A: Positive	All correct
	1104-4 KOH B: Negative	All correct

ENTERIC PARASITOLOGY PROGRAM

CMPT acknowledges with appreciation the essential advisory and technical support of:

Tara Bonham, RT.....BC Biomedical Laboratories, Surrey, BC

Sylvie Champagne MD FRCPC.....St. Paul's Hospital, Vancouver, BC

Joan Tomblin MD FRCPC.....BC Biomedical Laboratories, Surrey, BC

Quantine Wong BSc.....BCCDC Laboratory, Vancouver, BC

Program Overview

Samples are supplied by McGill University Centre of Tropical Diseases, Montreal, Quebec, BC BioMedical Labs and BCCDC. The program consists of 3 surveys. Each survey consists of 3 SAF preserved samples requiring a total of 9 challenge readings that include 3 concentrates and 3 stained smears.

Grading is assessed on the combined results of the stained smear and the concentrate and is based on a 2 point scale (acceptable or unacceptable). Table 1 lists the samples and grades received for the 2010 challenges.

Table 1: Enteric Parasitology Challenges - 2010

Date	Sample	Parasite(s)	Acceptable	Unacceptable
April 2010	1004-1	No ova or parasites seen	23	1
	1004-2	<i>Iodamoeba butschlii</i>	22	3
			Ungraded: 1	
1004-3	<i>Giardia lamblia</i>	23	2	
July 2010	1007-1	<i>Taenia species</i>	24	2
	1007-2	<i>Cryptosporidium species</i>	25	1
	1007-3	<i>Blastocystis hominis</i>	26	0
October 2010	1010-1	<i>Strongyloides stercoralis</i>	25	1
	1010-2	<i>Entamoeba histolytica/ dispar</i> , <i>Endolimax nana</i> , <i>Entamoeba coli</i> , <i>Entamoeba hartmanni</i> , <i>Blastocystis hominis</i>	Ungraded	
			25	1
	1010-3	No ova or parasites seen	25	1
		Total	168	11

2010 - 2011 CMPT PROGRAMS' PARTICIPANTS

Clinical Bacteriology - Distribution of Participant Laboratories

Province / Territory	Joined in	A	B	C	C1	Total
Alberta	1992	16		2	1	19
British Columbia	1982	25	3	1	20	49
Manitoba	2001	13	3		1	17
New Brunswick	1993	4	1			5
Newfoundland and Labrador	1997	1				1
Nova Scotia	1993	6	3			9
Northwest Territories	1992	1				1
Nunavut	1994		1			1
Ontario	2004	1				1
Prince Edward Island	1993	2				2
Saskatchewan	1996	13	3	6		22
Yukon	1992	1				1
Total		83	14	9	22	128

Clinical Bacteriology - Reference Laboratories

Alberta	Calgary Laboratory Services Division of Microbiology & Public Health DynaLIFE _{DX} Laboratories
British Columbia	Children's & Women's Health Centre of BC Royal Columbian Hospital Royal Inland Hospital Royal Jubilee Hospital St. Paul's Hospital Vancouver General Hospital
Manitoba	Health Sciences Centre St. Boniface General Hospital
New Brunswick	Moncton Hospital (SE Healthcare Corp.)
Nova Scotia	Queen Elizabeth II Hospital & Health Sciences Centre
Saskatchewan	Regina General Hospital Royal University Hospital

Clinical Bacteriology - Category A Laboratories

Alberta

Bonnyville Health Centre
 Calgary Laboratory Services
 Chinook Regional Hospital
 Division of Microbiology & Public Health
 DynaLIFE_{Dx} Laboratories
 Grande Prairie Regional Hospital
 High River General Hospital
 Medicine Hat Diagnostic Lab
 Medicine Hat Regional Hospital
 Mineral Springs Hospital
 Northern Lights Health Care Complex
 Red Deer Regional Hospital
 Southern Alberta Provincial Laboratory
 St. Mary's Hospital
 Wainwright Health Complex
 Westlock Health Care Centre

British Columbia

Abbotsford Regional Hospital
 BCCDC Provincial Laboratory
 Burnaby Hospital
 Campbell River Hospital
 GR Baker Memorial Hospital
 Children's & Women's Health Centre of BC
 Dawson Creek & District Hospital
 East Kootenay Regional Hospital
 Kelowna General Hospital
 Kootenay Boundary Regional Hospital
 LifeLabs, Burnaby
 LifeLabs, Victoria
 Nanaimo Regional General Hospital
 Penticton Regional Hospital
 Powell River General Hospital
 Royal Columbian Hospital
 Royal Inland Hospital
 Royal Jubilee Hospital
 St. Joseph's Hospital
 St. Paul's Hospital
 Surrey Memorial Hospital
 University Hospital of Northern BC
 Valley Medical Laboratory
 Vancouver General Hospital
 Vernon Jubilee Hospital

Yukon

Whitehorse General Hospital

Manitoba

Boundary Trails Health Centre
 Cadham Provincial Laboratory
 Churchill Regional Hospital
 Dauphin Regional Health Centre
 Flin Flon General Hospital
 Health Sciences Centre
 Portage District General Hospital
 Selkirk & District Hospital
 St. Boniface General Hospital
 Swan River Valley Hospital
 The Pas Health Complex
 Thompson General Hospital
 Westman Regional Laboratory

New Brunswick

Dr. Everett Chalmers Hospital
 Edmundston Regional Hospital
 Moncton Hospital
 Saint John Regional Hospital

Newfoundland and Labrador

Newfoundland Public Health Lab

Nova Scotia

Cape Breton Hospital
 Colchester Regional Hospital
 Cumberland Regional Healthcare Centre
 I.W.K. Health Center
 Queen Elizabeth II Hospital & Health Sciences Centre
 St. Martha's Regional Hospital

Northwest Territories

Stanton Regional Hospital

Ontario

Sioux Lookout Meno-Ya-Win Health Centre

Prince Edward Island

Queen Elizabeth Hospital (PEI)
 Prince County Hospital

Saskatchewan

Battlefords Union Hospital
 Cypress Regional Hospital
 Lloydminster Hospital
 Melfort Hospital
 Moose Jaw Union Hospital
 Nipawin Hospital
 Regina General Hospital
 Royal University Hospital
 Saskatchewan Disease Control Laboratory
 St. Joseph's Hospital
 Victoria Hospital
 Weyburn General Hospital
 Yorkton Regional Health Centre

Clinical Bacteriology - Category B Laboratories

British Columbia

LifeLabs, Kamloops
Mills Memorial Hospital
Prince Rupert Regional Hospital

Manitoba

Central Medical Labs
Tranor Laboratory
UniCity Laboratory Services

New Brunswick

Campbellton Regional Hospital

Nunavut

Qikiqtani General Hospital

Nova Scotia

Health Services Association South Shore
Valley Regional Hospital
Yarmouth Regional Hospital

Saskatchewan

Humboldt District Hospital
Kamsack Hospital
Meadow Lake Union Hospital

Clinical Bacteriology - Category C and C1 Laboratories

Alberta

Peace River Health Centre
St. Joseph's General Hospital
Vermilion Health Centre

Manitoba

Bethesda Hospital

Saskatchewan

All Nations' Healing Hospital
Kinderseley Union Hospital
Kipling Health Centre
La Ronge Hospital
St. Anthony's Hospital
St. Peter's Hospital

British Columbia

Abbotsford Regional Hospital
Aberdeen Laboratory
Bulkley Valley District Hospital
Chilliwack General Hospital
Delta Hospital
Fort Nelson General Hospital
Fort St. John Hospital
Fraser Canyon Hospital
Kitimat General Hospital
Lakes District Hospital
Langley Memorial Hospital
Mackenzie District Hospital
Mission Memorial Hospital
Peace Arch District Hospital
Queen Charlotte Islands General Hospital
Ridge Meadows Hospital
Royal Columbian Hospital
St. John Hospital
Stuart Lake Hospital
Surrey Memorial Hospital
Wrinch Memorial Hospital

Water Microbiology Laboratories

Alberta

AGAT Laboratories
 ALS Environmental - Calgary
 DynaLIFE_{Dx} Medical Labs
 Maxxam Analytics Inc. - Calgary
 Maxxam Analytics Inc. - Edmonton
 Maxxam Analytics Inc. - Fort McMurray
 Provincial Lab for Public Health - Edmonton
 Provincial Laboratory for Public Health - Calgary

British Columbia

Agrichem Analytical
 ALS Environmental - Fort St John
 ALS Environmental - Vancouver
 BCCDC Environmental Microbiology
 Capital Regional District Water Dept. Lab
 CARO Analytical Services
 City of Kamloops, Wastewater Treatment Plant
 Eco-Tech Laboratory Ltd.
 Exova
 IG MicroMed Inc.
 M.B. Labs Ltd.
 Maxxam Analytics Inc. - Burnaby
 Maxxam Analytics Inc. - Victoria
 Metro Vancouver
 North Island Laboratory
 Northern Labs
 Prince George Water Assay

Manitoba

ALS Environmental - Winnipeg
 Maxxam Analytics Inc. - Winnipeg

New Brunswick

Dr. Everett Chalmers Hospital
 Edmundston Regional Hospital
 N. B. Dept. of Environment, Public Health Lab

Newfoundland and Labrador

Central Newfoundland Hospital
 Curtis Memorial Hospital
 G.B. Cross Memorial Hospital
 Health Labrador, Melville Hospital
 James Paton Memorial Hospital
 Newfoundland Public Health Laboratory
 Western Memorial Hospital

Nova Scotia

Queen Elizabeth II Hospital and Health Sciences Center

Northwest Territories

Stanton Regional Hospital
 Taiga Environmental Laboratory

Ontario

Maxxam Analytics Inc. - Mississauga
 ALS Environmental - Waterloo

Prince Edward Island

Dept. of Environment, Province of PEI

Saskatchewan

Saskatchewan Disease Control Laboratory

Mycology Laboratories (Clinical laboratories only)

Alberta

Division of Microbiology and Public Health

British Columbia

Abbotsford Regional Hospital
 Children's & Women's Health Centre of BC
 LifeLabs, Burnaby
 Royal Columbian Hospital
 Royal Jubilee Hospital
 Vancouver General Hospital

New Brunswick

Moncton Hospital

Newfoundland and Labrador

Newfoundland Public Health Laboratory

Nova Scotia

Queen Elizabeth II Hospital and Health Sciences Centre

Prince Edward Island

Queen Elizabeth Hospital

Saskatchewan

Royal University Hospital

Enteric Parasitology Laboratories

Alberta

Division of Microbiology and Public Health
 Red Deer Regional Hospital

British Columbia

Abbotsford Regional Hospital
 BC Bio-Medical Laboratories **
 BCCDC, Provincial Laboratory **
 East Kootenay Regional Hospital
 Kelowna General Hospital
 Kootenay Boundary Regional Hospital
 LifeLabs, Burnaby
 LifeLabs, Victoria
 Royal Inland Hospital
 St. Joseph's Hospital
 University Hospital of Northern BC
 Valley Medical Laboratory
 Vancouver General Hospital

International - Sweden

Swedish Institute for Infectious Disease Control

(** Reference laboratories)

New Brunswick

Dr. Everett Chalmers Hospital
 Moncton Hospital
 Saint John Regional Hospital

Newfoundland and Labrador

Newfoundland Public Health Laboratory

Nova Scotia

IWK Health Centre
 Queen Elizabeth II Hospital and Health Sciences Centre
 Yarmouth Regional Lab

Prince Edward Island

Queen Elizabeth Hospital

Saskatchewan

Saskatchewan Disease Control Laboratory
 Royal University Hospital