

Guidelines for the Collection of Stool Specimens for Culture and Sensitivity

1. Background:

The following laboratory guidelines are intended to provide community physicians with information on routine culture and sensitivity testing on stool samples.

Guidelines are, by their nature, general in focus and cannot apply in every clinical situation. They do not serve as a substitute for sound clinical judgement.

In the evaluation of acute bacterial diarrheas many physicians order sets of 3 stool cultures. This practice is neither necessary nor appropriate and may in fact be detrimental to patient care by virtue of delaying the diagnosis. A College of American Pathologists Study (ref 1) showed that culture of a single stool specimen identified 96.9% of significant pathogens.

A routine stool culture will usually identify: *Salmonella*, *Shigella*, *Campylobacter*, *Yersinia* and *E.coli* 0157:H7. If appropriate, a special request for the detection of *Vibrio cholerae* or for the detection of *Clostridium difficile* toxin may be made; *C. difficile* cultures are not recommended.

2. Indications:

A single stool specimen for culture is appropriate for:

1. Any acute severe diarrheal condition.
2. The assessment of individuals suspected of having been infected in an outbreak situation (food poisoning).

Routine follow-up stool cultures after treatment or recovery are not required.

However, additional follow-up stool cultures may be indicated to assure clearance of an enteric pathogen where a public health risk exists (e.g. food handlers, infant and child care workers).

3. Recommendations:

A single stool specimen for C & S properly collected and stabilized in transport medium should be promptly delivered to the laboratory. This will result in the most rapid identification of a pathogen and expedite proper treatment and/or containment of the infection.

For *C. difficile* toxin detection, a fresh stool specimen should be submitted in a sterile container without transport media.

Stools from inpatients who have been in hospital for more than three days should not be routinely cultured for enteric bacterial pathogens.

4. References:

Rohner, P., Pittet, D., Pepey, B., Nije-Kinge, T., Auckenthaler, R., 1997. Etiological agents of infectious diarrhea: implications for requests for microbial culture. *J Clin Microbiol* 1997 Jun; 35(6):1427-32.

Craven, D., Brick, D., Morrissey, A., O'Riordan, MA., Petran, W., Schreiber, JR., 1998. Low yield of bacterial stool culture in children with nosocomial diarrhea. *Pediatr Infect Dis J* 1998 Nov; 17(11): 1040-4.

The Ontario Association of Medical Laboratories

The Ontario Association of Medical Laboratories (OAML) represents the community-based laboratory sector in Ontario.

Its mission is to promote excellence in the provision of laboratory services and, as an essential component of the health care system, to contribute to shaping the future of health care in Ontario.

The OAML encourages the highest level of professional and ethical integrity and technical excellence among laboratory owners, operators and staff in the provision of laboratory services for the benefit of the people of Ontario.

<p>Guidelines for Clinical Laboratory Practice</p> <p>The OAML, through its Quality Assurance and Clinical Laboratory Practice Committee, co-ordinates the development and dissemination, implementation and evaluation of Guidelines for Clinical Laboratory Practice.</p> <p>A proposed Guideline is developed by a working group of the Committee with the participation of outside experts. The proposed guideline is then submitted to the Committee as a whole and to a Professional Advisory Group who provide an overall review of the document. The comments of the Committee and the Professional Advisory Group are incorporated into a revision of the guideline and this draft is submitted to laboratory Medical Directors, professional associations and other representatives of end users for additional comment. The document is revised in light of these comments and submitted to the OAML Board of Directors for approval.</p> <p>Approved guidelines are distributed to Community-based Laboratories and by them to their client physicians.</p>	<p>There may be additional educational materials produced, if it is thought that they might be useful, and these are distributed with the guideline.</p> <p>The comments of end users are essential to the development of guidelines and will encourage adherence. You are strongly encouraged to submit your comments on this or on any other OAML Guideline to:</p> <p>Chair Quality Assurance and Clinical Laboratory Practice Committee Ontario Association of Medical Laboratories 5160 Yonge Street, Suite 710 North York, Ontario M2N 6L9</p> <p>Tel: (416) 250-8555 Fax: (416) 250-8464 E-mail: oaml@oaml.com Internet: http://www.oaml.com</p>
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