

Blood Culture Collection Volume Requirements
Provincial Laboratory Services | Microbiology Division
www.healthpei.ca/src/lab

December 14, 2017

This information applies to: Physicians, Nurse Practitioners, Directors of Nursing, Nurse Managers, Clinical Instructors/Educators, Enterostomal Nurses, Infection Control Practitioners and Laboratory Managers

The most important factor in recovering microorganisms from patients with blood stream infections is the volume of blood obtained for each blood culture set. Collection of blood volumes that are too low or too high may cause falsely negative cultures or delayed time to detection. A blood culture volume audit will now be performed in conjunction with the annual blood culture utilization and contamination audit.

Optimal blood volumes for each culture vial are as follows:

Vial type	Bottle top colour/label colour	Purpose	Optimal volume
Plus Aerobic/F	Blue/silver	All purpose recovery of aerobic organisms	8-10mL
Lytic/10 Anaerobic/F	Purple/purple	Increases detection/recovery of anaerobic organisms	8-10mL
Peds Plus/F	Silver/pink	Small volume collections	1-3mL***
Myco/F Lytic	Red/red	Recovery of Mycobacterium, yeast, and fungi	3-5mL

***Please see the QEH Blood Culture Collection Policy for guidelines regarding blood volumes for children.

Please consider the following:

- When submitted, blood culture vials must be labeled with the patient's correct full name and medical record number (MRN).
- The culture must be accompanied by an electronic (CIS barcode) or written requisition indicating at minimum, ordering physician/nurse practitioner, date and time of collection, and site of collection.
- Transport culture vials to the laboratory as soon as possible after collection. Do not refrigerate.
- Collection prior to the start of antimicrobial therapy is optimal.

REFERENCES: Baron, E. J., Weinstein, M. P., Tenenbaum, W. M., Tenenbaum, P., Tenenbaum, D. F., & Tenenbaum, D. M. (2005). Blood Cultures IV. In E. J. Baron (Ed.), Cumitech: Cumulative techniques and procedures in clinical microbiology (pp. 3-4). Washington, DC: ASM Press.

Becton Dickinson (2015, May). BD Life Sciences – Diagnostic Systems package inserts. Retrieved December 14, 2017 from Becton Dickinson, Sparks, MD, Web site: <https://www.bd.com/en-us/support/diagnostic-systems-package-inserts>.

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