

**ARNOT HEALTH  
POLICY & PROCEDURE MANUAL**

**POLICY #:** LS.PAL.0001

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(replaces No. VII.iii.1280)

**TITLE:** BLOOD CULTURE COLLECTION PROCEDURE

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**DATE OF ISSUE:** 11/14/05

**DATE(s) OF REVISION:** 12/09/16; 01/13/17; 03/28/18

**DATE(s) OF REVIEW:** SEE LAST PAGE

**APPROVAL:** Dr. Lenhardt MD, PhD 2/27/17

Dr. Wang, MD 10/19/17

Noemi Bentley, MT 2/22/17

**FACILITIES COVERED:**  AOMC     AMS     SJH     IDMH

**OWNER(S):** Laboratory, CLA Supervisor

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Blood Cultures are ordered when there is a "fever of unknown origin" (FUO) or when there is reason to suspect bacteremia or septicemia. Blood cultures are commonly ordered immediately prior to anticipated fevers spikes when bacteria are most likely to be present in the blood stream. Skin antisepsis is important. Failure to follow sterile technique can introduce contaminant bacteria into the culture bottle and interfere with the interpretation of results.

Materials:

1. 70% isopropyl alcohol pads
2. ChloroPrep One-Step Frepp Applicator (Chlorhexidine Gluconate 2% and Isopropyl Alcohol 70%)
3. 21 or 23 gauge butterfly
4. Sterile gauze
5. Anaerobic and aerobic culture bottles

Warnings and Precautions:

Pathogenic microorganisms, including hepatitis viruses and Human Immunodeficiency Virus, may be present in clinical specimens. Standard precautions must be followed in handling all items contaminated with blood and other body fluids.

Prior to use, each blood culture bottle should be examined for evidence of damage, contamination or deterioration. Culture bottle contamination may not be readily apparent. Any evidence of damage or contamination such as leakage, cloudiness, discoloration (darkening), bulging or depressed septum should not be used. A contaminated bottle could contain positive pressure. If a contaminated bottle is used for direct draw, contaminated culture media from the bottle could be refluxed into the patient's vein.

Procedure:

1. Locate the vein to be used for the procedure.
2. Release tourniquet.
3. Cleanse the site by using a **30- second friction scrub of the ChloroPrep, using concentric circles of increasing diameter** starting from the anticipated needle insertion point to the outside. Completely wet the treatment area with antiseptic.
4. Allow to air dry for at least **one minute**. Do not blot or wipe dry. Re-apply tourniquet.
5. The intended venipuncture site should not be touched. ***If not exactly sure where to insert the needle after the skin has been prepped, palpate above and below the intended puncture site, but not the site itself.***
6. Perform venipuncture with 21 or a 23 gauge butterfly connected to a needle holder directly into the blood culture bottles. A 10 cc or a 20 cc syringe with Luer-Lok brand tip is also acceptable.

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Procedure continued:

7. Inoculate appropriate Bactec Bottles:
  - A. Routine Blood cultures collect:  
1 Bactec standard aerobe (BLUE) bottle  
and 1 Bactec Lytic anaerobe (PURPLE) bottle
  - B. Pediatric, nursery, 1 Peds plus (PINK) bottle
  
8. Inoculation of bottle(s):
  - A. Remove flip-off cap from bottles and inspect for cracks, contamination, excessive cloudiness, and bulging or indented stoppers. Do not use if any defect is noted.
  - B. Swab the septum (stopper) with 70% isopropyl alcohol prior to inoculation.
  - C. Inoculate blood into each bottle.
  - D. Inoculate the aerobic bottle first (8-10 cc), then the anaerobic bottle (8-10 cc).
  - E. If less than 10 cc of blood is obtained, inoculate the aerobic bottle only
  - F. Inoculate the Peds Plus (pink) bottle (1-3 cc) **for pediatric patients only.**
  
9. Labeling:

Attach the computer label to the vial and write your Tech Code and collection time.

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Prepared By: Noemi Bentley, CLA Supervisor      11/14/05

Approved By: Medical Director: Terence Lenhardt, MD      11/17/05

Reference: Clinical and Laboratory Standards Institute, 2005  
Center for Phlebotomy Education, Inc,  
BD Bactec by Becton, Dickinson and Company

Annual Review: NB 09/21/06; NB 01/12/07; NB 08/01/08; NB 06/19/09; NB 08/03/10; NB 08/02/11; NB 08/06/13;  
NB 08/11/14; NB 04/10/15; NB 12/09/16; NB 01/13/17; NB 03/12/18; NB 01/10/19; NB 1/08/20

Revisions Made:  1. Deleted 30- minutes' apart collection time between 2 sets by NB 2. Added line item #5 2 <sup>nd</sup> statement by NB	Date: 12/09/16
Revisions Made:  1. Changed antiseptic to ChloroPrep #3 2. Peds Plus to be inoculated for pediatric patients only	Date: 1/13/2017

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Revised by: Noemi Bentley, CT 1/13/2017; NB 03/28/18  
Revision excluded direct venipuncture draw due to the risk of backflush 03/28/18

Revisions Approved and Signed By: Terence Lenhardt, MD, PhD  
Medical Director 2/22/17  
Yafei Wang, MD  
Medical Director 10/19/17