



# CONWAY MEDICAL CENTER

## PROCEDURE

When in hard copy form, refer to Policy Manager to validate this as the most current revision.

TITLE:	LAB-SPC-05.02- Blood Culture Collection-PRO		
ISSUED BY:	Laboratory Administrative Director	REFERENCE #:	LAB-SPC-05.02-PRO
APPROVED BY:	Lab Director	EFFECTIVE DATE:	2006-04-26

**SCOPE:** All potential collectors of blood cultures submitted to the laboratory at Conway Medical Center.

### I. PRINCIPLE:

The blood of healthy individuals is normally sterile; therefore the presence of microorganisms in the blood is of utmost diagnostic importance. Rapid and accurate detection and identification/susceptibility testing is one of the most important functions of the Microbiology department. Left undetected and untreated septicemia can be fatal within 24 hours.

### II. SUPPLIES:

- A. Skin Antiseptic Swabstick® (3.15% Chlorhexidine Gluconate/70% Isopropyl Alcohol)
- B. Skin Antiseptic Swab (3.15% Chlorhexidine Gluconate/70% Isopropyl Alcohol)
- C. Butterfly blood collection set bioMerieux Adapter Cap and Insert

### III. MEDIA AND STORAGE:

- A. BacT/ALERT PF Plus (Pediatric-color coded yellow) Bottle: Sample size: 0.5 to 4 ml of Blood. Use for pediatric patients **only** ( $\leq 12$  years of age). Sensor black, indicates bottle is not broken.

**Note:** These bottles **are not** FDA approved for culturing body fluids.

**Note:** These bottles have not been validated by the manufacturer for use on adult patients. *Specimens collected on adults using pediatric bottles will be rejected and re-collection will be required.*

- B. BacT/ALERT FA Plus (Aerobic-Antibiotic-color coded green) Bottle: Sample size: 5 to 10 ml Blood or Body fluid. Sensor black, indicates bottle is not broken.
- C. BacT/ALERT FN Plus (Anaerobic-Antibiotic-color coded orange) Bottle: Sample size: 5 to 10 ml Blood or Body fluid. Sensor black, indicates bottle is not broken.
- D. BD BACTEC MYCO/F-Lytic (Mycobacteria –color coded red) Send to DHEC. Blood draw volume is 1-5ml.
- E. Store all media at room temperature (15-30° C), protected from light.
- F. Do not use media beyond the last day of the month of expiration.

### IV. SPECIMEN COLLECTION NOTES:

- A. Great care must be taken to prevent contamination of the patient sample during



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venipuncture and during inoculation into the culture bottles.

- B. For best optimal patient results, obtain blood culture samples prior to initiating antibiotic therapy.
- C. Transport to the lab as soon as possible. If immediate transport to the laboratory is not possible, the inoculated BacT/ALERT bottles may be held at room temperature (15 – 30°C).
- D. **Note that on babies any amount will not be rejected.**

### V. SPECIMEN COLLECTION:

- A. Specimen collection is extremely important in obtaining blood cultures. Proper skin disinfection is essential to reduce the incidence of contamination.
- B. *Note: Standard Precautions must be followed.*
- C. Identify the patient upon arrival to the patient's room. Check the name, account number with your order and explain what you are about to do.
- D. Wear proper PPE prior to venipuncture.
- E. Locate the vein by palpation.
- F. Open the skin Antiseptic Swabstick packet.
- G. Remove Swabstick from packet.
- H. Cleanse site by scrubbing with Swabstick back and forth for 15 seconds.
- I. Discard swabstick.
- J. Repeat step H with second Swabstick.
- K. Discard Swabstick.
- L. Allow the area to dry for approximately 30 seconds. This will allow maximal effectiveness of the disinfectant.
- M. Should further palpation of the vein become necessary, the gloved finger must be disinfected with skin Antiseptic Swab.
- N. Remove the flip-top from the bottles and cleanse the stopper of the blood culture bottles with the skin Antiseptic Swab.
- O. Allow the disinfectant to sit for 1 minute and remove any excess disinfectant with sterile gauze.

### VI. DIRECT COLLECTION INTO BOTTLES:

- A. Mark the bottle **prior** to collection where the media starts. This mark is used along with the volume demarcations on the bottle label to assist in estimating proper blood volume.
- B. Remove flip-top from the bottles and disinfect the septum with the skin antiseptic swab solution.
- C. Firmly tighten the luer connector of the butterfly collection set to the Adapter Cap Perform the venipuncture.
- D. When the needle is in the vein, secure it with tape or hold it in place.
- E. With the bottle on a flat surface, place the Adapter cap on the aerobic BacT/ALERT culture bottle septum and press down to penetrate and obtain blood flow. Vertically press the Adapter Cap down on the bottle.



# CONWAY MEDICAL CENTER

## PROCEDURE

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- F. After obtaining the specified amount of blood using the demarcations on the bottle label, move the Adapter Cap from the aerobic bottle to the anaerobic bottle and continue the collection.
- G. Fill to acceptable levels 5-10ml. Optimum is 10ml. **Do not overfill.**
- H. If additional blood is required for other tests, place the Adapter insert into the Adapter Cap and snap into place. This cap makes it compatible with vacuum collection tubes.

### VII. TRANSFER BLOOD FROM A SYRINGE DRAW: (only as a last resort)

- A. Prepare bottles with the skin antiseptic swab and change the needle before **entering** the culture bottles.
- B. If a full 10mL syringe of blood is collected, split equal amounts (5mL) between the anaerobic and aerobic vials, inoculating the anaerobic bottle first.
- C. In the rare case that between 5-10mL if blood is collected, transfer the entire volume to the aerobic bottle.

### VIII. SPECIMEN LABELING:

- A. Label bottles with accession label. If labeling with a demographic label, include the collector name and date/time of collection.
- B. Place labels vertically (not horizontally) on bottles.
- C. Upon specimen arrival in lab, receive accession number in computer. Print an extra set of labels and pull bottle number tab from bottle and stick to accession labels.
- D. Review bottles for appropriate specimen volume. Reject samples which do not meet specimen requirements and reorder the specimen for re-collection.
- E. Give blood culture bottles to the Microbiology tech to load into the BacT/ALERT 3D.
- F. Do Not Vent Bottles.

### REFERENCE:

- BacT/ALERT 3D Microbial Detection System Blood Culture Procedure; bioMerieux, Inc. 2004
- Package Inserts: BacT/ALERT Culture Bottles: FA Plus, FN Plus, PF Plus bioMerieux, April 2013
- Principles and Procedures for Blood Cultures; Approved Guidelines MA7-A, 2007
- Clinical Microbiology Procedure Manual; Isenberg H., vol.1 sect.3.4.1, 4<sup>th</sup> Edition 2016
- Chlorascrub (Preventics) Swabstick NDC 10819-4075-1
- Clinical and Laboratory Standards Institute (CLSI), *Collection of Diagnostic Venous Blood Specimens*, 7<sup>th</sup> ed. CLSI standard GP41 (ISBN 1-56238-812-4)

**REFERENCE STANDARDS: CAP COM.04000; COM.06000; COM.06001; COM.06300**



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### REVISION/REVIEW HISTORY:

Date	Affected Section(s)	Summary of Changes ('Reviewed' or details of change)
05/24/2011dlt	None	Reviewed/Revised Electronically saved in Lab G drive
11/03/2011lds	Format	Placed in MCN policy manager format.
04/10/2013 dlt/mp	Reviewed All	Added New Blood Culture Bottles to the procedure. Chloraswab name changed used generic description. Revised references.
09/18/13 dlt	Section V :J &K	Added an additional step to cleansing the venipuncture site.
04/20/14 dlt	Section III	Discontinued Use of Aerobic and Anaerobic bottles Reference: Removed SA and SN
01/29/16 dlt/mp	Section VII-A	Changes made to be consistent with prepping of the bottles.
04/04/16 mp	Section III-A,B,C	Changes made to reflect the change in blood culture media.
2/14/17 mp	All	Reviewed. No changes. Updated Clinical Micro Reference
09/19/17 lds	VIII	Removed reference to Meditech. No content review
04/04/18 jg	III-A VI-A VIII References	Changed wording to reflect that pediatric bottles are to be used for pediatric patients <b>only</b> . Added use of label volume demarcations for estimating blood volume. Modified to reflect Cerner processes. CAP Standards updated.