**PCC.PHLEB.3.0 VENIPUNCTURE-BLOOD CULTURE**

**PURPOSE**

The quality and value of a laboratory test result begins with the quality of the specimen. This procedure details the process required to safely obtain a quality blood culture specimen.

**SCOPE**

This procedure applies to all MACL facilities where venipuncture is performed.

**OWNERS**

QA and Safety Officer

PCC Supervisors

**RELATED POLICIES AND PROCEDURES**

QA.SPEC.1.0 *Specimen Collection—Verification of Patient Identification*

PCC.SPCOL.1.0 *Identification of Patients and Specimens*

PCC.PHLEB.1.0 *Venipuncture, Evacuated Tube or Butterfly*

**EQUIPMENT**

A. Single-use needle holder

B. Disposable safety butterfly for evacuated tubes with 23 or 21 gauge needle

C. Aerobic and Anaerobic Blood Culture Bottles, Fungal Culture or Acid Fast Culture

D. Tourniquet

E. Chlora-Prep One-Step Frepp Kit

F. Gauze

G. Adhesive bandage

H. Sharps container

I. Gloves

**PROCEDURE**

A. Standard precautions and safety procedures are to be followed with all patient contacts. Refer to MACL safety policies and procedures.

B. Before performing venipuncture

1. Wash hands per policy stated in SAFE.BIOHAZ.1.0 BBP Exposure Control/Infection Control Plan

a. This includes all process stated in SAFE.BIOHAZ.1.0 of handwashing, including rubbing hands together for at least 20 seconds; or, if using sanitizer, that sanitizer be used at most 5 times before handwashing is performed per policy.

2. Identify patient:

a. In-patient: Verify wrist band name and hospital number with computer label information.

b. Out-patient: Ask patient to spell their first and last name, state their date of birth. Verify the patient’s information with the computer label and the requisition documentation.

3. Screw safety butterfly needle into the holder.

NOTE: A butterfly needle is preferred for collecting blood cultures. See PCC.PHLEB.2.0 for syringe collection procedure.

4. The recommended fill for each bottle is 10 mL of blood. Mark each bottle 10 mL above the level of the culture media.

5. Remove plastic flip top or overcap from the aerobic and anaerobic bottles and disinfect with an alcohol pad.

6. Apply tourniquet.

NOTE: In hospital inpatient settings, discard tourniquets after use on a patient (single use). For outpatient settings (eg, PCCs), discard tourniquets after use on no more than 3 patients or when visibly soiled. However, hospital infection control policy takes priority over this outpatient practice, so if there is a hospital requirement for single use tourniquets with both inpatients and outpatients, this practice should be followed.

7. Ask patient to close hand.

8. Select a vein, then release tourniquet. Never draw above a running IV. The only time it is permissible to draw above an IV site is when that IV has been turned off for at least 10 minutes. It is best to draw from the other arm if it does not have an IV. Foot or ankle veins may be used only after the patient’s physician has approved.

9. Clean venipuncture site.

a. Apply gloves

b. Clean site with Chlora Prep one step Frepp Kit applicator.

c. Use repeated back-and-forth strokes of the applicator for approximately 30 seconds. Completely wet the treatment area with antiseptic.

d. Allow to air dry for approximately 30 seconds. Do not blot or wipe dry.

10. Reapply tourniquet

C. Perform venipuncture.

1. While securely grasping the butterfly needle with one hand, use the other to push the holder over the bottle cap. Allow the bottle to fill with blood to the 10 mL fill mark. The aerobic bottle is filled first to displace any air from the butterfly tubing. The anaerobic bottle is filled next.

2. Allow tube(s) to fill completely. The required order of draw is:

a. Sterile—Blood culture

b. Citrate—Light blue stopper (citrate)

b. Serum—Clot tube, red stopper (non-additive)

c. Serum—Clot activator, gel tube, gold or tiger stopper (serum separator)

d*.* Heparin—Green stopper (also PST with gel)

e. EDTA—Lavender, pink, or royal blue stopper

f. Glycolytic Inhibitor—Gray stopper (fluoride)

3. As tubes with additives are removed, they must be inverted 8 - 10 times to mix.

4. Ask patient to open hand.

5. Release tourniquet.

6. Lightly place dry gauze square or cotton ball above venipuncture site.

7. Remove needle from arm. Slide safety shield over needle. Discard entire apparatus into sharps container.

8. Apply pressure to the site for *3-5* minutes. Patient may assist if they are able.

9. Label all bottles and tubes with the computer label or hand label in front of the patient.

10. All patient samples must be labeled with the following:

a. Patient’s first and last name. (No nick names)

b. Patient’s date of birth

c. Date and time collected.

d. Phlebotomist’s initials

e. Site of draw (ie, right antecubital)

11. Apply adhesive bandage.

D. If unsuccessful in collecting blood, attempt second venipuncture using a different site if another acceptable site is found and you and the patient feel comfortable with a second attempt.

E. If second attempt is unsuccessful or either the patient or phlebotomist is uncomfortable with a second attempt, have another phlebotomist check for an acceptable site. Once an acceptable site is found, the second phlebotomist will make the attempt.

NOTE: For Patient Care Centers—If a second phlebotomist is unavailable, or if an acceptable site cannot be located, the patient should be referred another PCC site. Consider patient convenience, along with PCC site associate experience, when making a referral. If the patient is a child, refer to PCC.PHLEB.7.0 *Venipuncture—Pediatric Specimen Collection* for specific referral instructions.

F. Minimum volume requirements for all bottle types:

a. Aerobic bottle—3 mL

b. Anaerobic bottle—3 mL

c. Pediatric Plus bottle—0.5 mL

d. Myco F/Lytic bottle—1 mL

**PROCEDURE NOTES**

A. Blood cultures ordered x 2 must be from 2 different sites; multiple cultures are to be collected from multiple sites.

B. Follow physician orders for time intervals if applicable. If time interval is not specified by the physician’s order, then collect the specified number of blood cultures, one right after the other, from different sites.

C. If only aerobic bottle is collected, add “OONLY” at SREQ field in SunQuest. “OONLY” translates to “Aerobic bottle only received—unable to determine presence of absence of strict anaerobic organism.”

D. When suboptimal amount of blood is collected, fill aerobic bottle with optimal amount first and then fill the rest in the anaerobic bottle.

**REFERENCES**

A. Hoeltke, Lynn B., *The Complete Textbook of Phlebotomy,* 2nd edition, Albany, N.Y., Delmar Publishers, 2000

B. Kovanda, Beverly M., *Phlebotomy Collection Procedures for the Healthcare Provider,* Albany, N.Y., Delmar Publishers, 1998

C. Clinical and Laboratory Standards Institute (CLSI). *Procedures for the Collection of Diagnostic Blood Specimens by Venipuncture; Approved Standard—Sixth Edition.* CLSI document H3-A6. Clinical and Laboratory Standards Institute; Wayne, PA: 2007.

D. Baron EJ, et al. *Cumitech 1C Blood Culture IV*. ASM Press; Washington, DC: 2005.