

Blood Culture Collection Guide

PURPOSE

Proper sterile collection methods are necessary for blood culture draws in order to avoid contamination.

This process describes how to properly collect blood cultures utilizing sterile techniques.

PROCEDURE

- If applicable, it is recommended that blood cultures be drawn prior to the start of any antibiotics.
- If collecting for other tests, inject the blood into the culture bottle(s) first.
- Assess the amount of blood that has been collected and consult the collection chart below to provide each culture device with the optimal volumes.
- If you have an order for blood cultures (x2) or more:
 - a) Draw each set of blood cultures from a **different** site.
 - b) You may use the same site if no other site is available. In this case use a separate draw and *if possible* 15 minutes apart. Follow any care giver request for specific wait times.
 - c) Specimens may be obtained from the same central line or separate central lines. Ensure the line is prepped for each culture and a new transfer device used for each bottle.
 - d) For extremely difficult draws, a yellow pediatric bottle, regardless of patient's age, can be collected. This should only occur in rare situations and the minimum volume is 1mL.
 - e) Document time of each draw. If draws were performed from the same site, the time must be different for each set.

Adults (Age 10 and older)

Test Requested	Bottle or Tube Required	Optimal Volume	Minimum Volume
Blood Culture	Silver BD Bactec (Aerobic)	8-10mL	3mL
	Purple BD Bactec (Anaerobic)	8-10mL	3mL
<i>Note: The BD Bactec adult system includes 2 bottles; one aerobic and one anaerobic. Both bottles should be used whenever possible. If unable to obtain enough volume for both bottles use only the silver aerobic bottle.</i>			
Isolator Culture for: Fungus	ISOLATOR TUBE (yellow tube)	10mL	6mL
Blood Culture – Acid Fast Bacilli (AFB)	DARK GREEN TUBE (Sodium Heparin)	10mL	8mL
<i>Any time an AFB blood culture is ordered it MUST have its own tube.</i>			
Blood Culture-Brucella	Silver BD Bactec (Aerobic)	8-10mL	3mL
	Micro should be notified to extend incubation to 10 days on analyzer.		

Pediatrics (Age 9 and younger) - Volume is "Age plus 1" for mL

Age	Bottle Required	Minimum Volume
Birth – 1 year	Pink BD Bactec (Peds bottle)	1mL
1 year	Pink BD Bactec (Peds bottle)	2mL
2 years	Pink BD Bactec (Peds bottle)	3mL
3 years	Pink BD Bactec (Peds bottle)	4mL
4 years	Silver BD Bactec (Aerobic)	5mL
5 years	Silver BD Bactec (Aerobic)	6mL
6 years	Silver BD Bactec (Aerobic)	7mL
7 years	Silver BD Bactec (Aerobic)	8mL
8 years	Silver BD Bactec (Aerobic)	9mL
9 years	Silver BD Bactec (Aerobic)	10mL

Equipment:

- Blood Culture Bottles: Be sure you are using an age appropriate culture bottle and check the expiration date.
- Isolator collection tube(s), if needed
- Chlorohexidine skin prep product (Use Betadine for infants born less than or equal to 27 weeks gestation or birth weight less than or equal to 1,000 g for the first two weeks of life)
- Gloves and Gauze

1. Clean the venipuncture site by scrubbing the skin for **15 seconds using a back and forth motion using each side of the applicator for a total of 30 seconds** with Chlorhexidine (using Betadine for infants or patients with an allergy to Chlorhexidine) skin prep product.
 - a. NEVER re-palpate the vein directly over the insertion site. If this is necessary, you must re-cleanse the site.
2. If drawing from a central line, stop all infusions, do not change cap; clamp and prepare the line by scrubbing the injection cap with a chlorohexidine prep pad. Allow cap to dry completely, at least 5 seconds.
 - a. Draw waste volume, clamp and scrub with alcohol or equivalent prep pad again. Allow to dry, at least 5 seconds.
 - b. Attach specimen syringe, draw blood volume needed, clamp line and remove culture sample. If more blood needs to be drawn, use alcohol or equivalent prep before each draw.



The most common contamination in blood cultures results from inadequate skin preparation and blood drawing techniques that allow contact with the technicians' skin or dirty glove with the venipuncture site and/or needle. Special care and awareness must be employed to avoid contamination problems. Blood culture contamination rates are monitored on a regular basis to provide quality assurance of the blood culturing procedure.

3. Clean the top of the blood culture bottle with a chlorohexidine (or equivalent) prep pad.

- a. Apply friction for 5 seconds.
- b. Allow top to dry for 5 seconds.



4. Use transfer device to inoculate the blood culture bottles. Invert the bottle 8-10 to mix the blood properly.
5. Label each bottle with appropriate patient labels using two identifiers.
6. Document the amount of blood in each bottle and body site of draw (i.e. 8mLs, Right AC).