

10 Steps for Proper Blood Culture Collection

A Blood Culture is one of the most important laboratory tests because it is used to help determine if a patient has bacteremia/septicemia, a life-threatening condition. Blood is a sterile fluid, and a normal, healthy patient does not have bacteria in the blood. However, many bacteria do colonize the skin. It is therefore most important to use proper, sterile technique to decontaminate the patient's skin before collecting the blood culture. If disinfecting steps are not properly followed, skin bacteria can transfer to the bottle and cause false positive results.

ADULT



- 1 Plus aerobic/F (gray/blue top)
- 1 Lytic/10 anaerobic/F (purple/burgundy top)
- **Transfer 8-10 mL of blood into each bottle.**

PEDIATRIC



- One bottle (pink/silver top)
- **Transfer 1-3 mL of blood into the bottle (optimal)**
- No Minimum Volume

Routine Blood Culture Collection

1. Remove plastic caps from tops of bottles.
2. Vigorously cleanse rubber septa on the bottles with 70% alcohol wipe and allow to dry.
3. Thoroughly disinfect venipuncture site by vigorously cleansing for 30 seconds back and forth across the site with a new 70% isopropyl wipe followed by **2% chlorhexidine antiseptic (ChloroPrep One Step®)**.
4. Allow ChloroPrep® to dry completely (at least 30 seconds). Do **NOT** wipe the site with gauze. Do **NOT** touch the venipuncture site with fingers.
NOTE: ChloroPrep One Step® cannot be used on infants less than 2 months old. For patients less than 2 months old, use povidone-iodine prep pad.
5. Collect blood using a syringe attached to a butterfly collection system. Attach the syringe to a blood transfer device and fill the blood culture bottles with required volumes illustrated above.
6. Blood culture bottles must be standing upright to ensure that there is no backflow of the bottle contents and appropriate volume of blood is added.
7. Document **exact site** and **collection time** for **each** culture in the appropriate LIS fields and on the collection label.
8. Blood cultures can be obtained over a very short time interval after which empiric therapy can be initiated. It is not necessary to obtain blood cultures at specifically timed-intervals. Do **NOT** collect multiple cultures from one venipuncture.
9. Apply collection labels vertically to blood bottles. Do **NOT** cover the manufacturer's bar-code label.
10. Transport bottles to Microbiology as soon as possible. When using the pneumatic tube system, make sure adequate foam padding is in the carrier and send no more than two bottles per carrier.

Special Tips

- Do **NOT** relocate the vein after disinfection unless a sterile glove is worn.
- Do **NOT** use iodine on the rubber septa of the bottles.
- Do **NOT** use expired blood culture bottles.
- Do **NOT** overfill the blood culture bottles (adding > 10 mL of blood to an adult bottle can cause a false positive result)
- Please notify Microbiology of any special instructions (e.g. risk of Brucella or Francisella).
- For further information, reference *Blood for Bacterial Culture* in the Specimen Collection Manual.