BLOOD CULTURE COLLECTION

A **blood culture** is a lab test that identifies disease-causing organism(s) in the blood, especially in patients/residents who have temperatures higher than normal due to an unknown cause.

Approximately 25% of positive blood culture results are due to contamination, leading to inappropriate antibiotic treatment, additional unneeded tests, and extended hospital stays. The preferred method for obtaining blood cultures is by peripheral venipuncture (not through a central line) to minimize the frequency of false positive results. In addition, it is essential to avoid drawing from lines within an hour of completion of antibiotic infusion as the antimicrobial agent may be passed into the blood culture bottles and prohibit growth.

BEST PRACTICE SPECIMEN COLLECTION AND HANDLING RECOMMENDATIONS

Site Preparation	Sample Amount	Transport Time
Blood obtained via aseptic venipuncture. Proper skin preparation with 70% alcohol and chlorhexidine will reduce the risk of contamination.	On average 30-40 ml; 10 ml into each bottle, and collect two sets from separate sites to ensure >95% sensitivity.	Transport specimen within <2 hours at room temperature.

Know and follow specified protocols of your microbiology lab.

This material was prepared by Health Quality Innovators (HQI), a Quality Innovation Network-Quality Improvement Organization (QIN-QIO) under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. 12SOW/HQI/QIN-QIO-0535-05/12/23

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BLOOD CULTURE COLLECTION

SPECIMEN COLLECTION GUIDELINES

- Use standard precautions for collecting and handling all clinical specimens.
- Assemble supplies and equipment needed for specimen collection.
- Use sterile equipment and aseptic technique to collect specimens. The septum of collection bottle(s) must be properly cleaned before puncture.
- Collect specimens during the acute phase of illness (or within 2 to 3 days for viral infections).
- Collect specimens before administration of antibiotics wherever possible.
- Avoid contamination with indigenous flora from surrounding skin, tissues, or secretions.
- Collect a sufficient volume of specimen to ensure that all tests requested may be performed. Inadequate amounts of specimen may yield false-negative results.
- Label specimens properly with patient's name and identification number, source, specific site, date, time of collection, and initials of collector.

The most important step in the recovery of pathogenic organisms responsible for infectious disease is proper specimen collection, processing, and handling.

Obtaining Blood Cultures by Venipuncture Versus from Central Lines | Pub-Med

Practical Guidance for Clinical Microbiology Laboratories | ASM

Blood Culture Contamination | CDC

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