

Microbiology User Information: Blood Cultures

Specimen Type: Blood

Indications for Blood Culture:

Trust Sepsis Resources are available on the trust intranet site: 'sepsis and deteriorating patients'

Hospital antimicrobial guidelines for sepsis: [Sepsis \(formularywkccgmtw.co.uk\)](http://formularywkccgmtw.co.uk)

Request form requirements:

Providing adequate clinical details to microbiology request forms is **vital** for the safety of laboratory staff and ensuring patient tests are correctly interpreted.

Please state all relevant clinical history, including travel history (where and when), current or recent antibiotic therapy and site of sampling. Please include details of any patient known allergies to antibiotics

Blood Culture Bottles:

Adult Blood Culture Set: 2 bottles
One Green, One Pink
(2 sets- 4 bottles should be sent)

Paediatric Blood Culture: 1 yellow bottle



Specimen Collection Method:**Blood Culture Collection Instructions and Self-assessment form**

Collect specimens before antimicrobial therapy where possible.

Collect specimens as soon as possible after the onset of clinical symptoms. Although blood can be sampled at any time, drawing blood at, or as soon as possible after a fever spike is optimal, except in endocarditis where timing is less important

Blood cultures can be taken at any time out-of-hours, there is no requirement to notify Microbiology staff when blood cultures are taken.

Specimens do not require specific incubation temperature and can remain at 'room temperature' overnight if needed. **DO NOT REFRIGERATE.**

Adults:

Correctly filled blood culture bottle ✓

10 ML

BACTERIA CAPTURED

Inadequately filled blood culture bottle ✗

3 ML

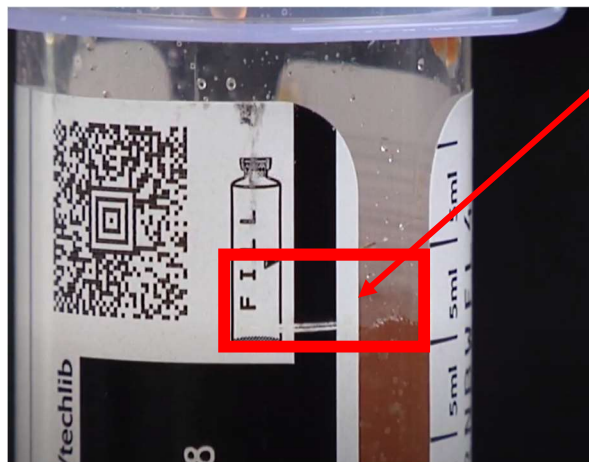
BACTERIA ESCAPED

- Volume of blood cultured is critical to detection of Blood Stream Infection (BSI)
- Between 20-40% of patients with BSI are not on effective treatment.
- By culturing the correct amount of blood you will provide the best chance of detecting the bug making the patient unwell
- The most effective antibiotic can then be selected

Small difference **BIG IMPACT**

GIVE PATIENTS THE BEST CHANCE

PUT 8-10ML IN EVERY ADULT BLOOD CULTURE BOTTLE



8-10 ml (fill to the line)

Preferably, a total volume of at least 40mL (two sets) should be collected.

In case of suspected endocarditis and fever of unknown origin, an extra set is required to improve the sensitivity of the test (a total volume of up to 60 mL)

The chance of obtaining a positive blood culture is closely related to the volume of blood sampled and their optimal (timely) processing. Blood stream infection detection rate increases by 3% for each extra millilitre of blood cultured.

Children and neonates:

No more than 1% of the total blood volume

Time to laboratory**Send to Pathology (Blood Sciences) via the POD system**

Blood culture bottles should be sent to the laboratory as soon as possible as they must be loaded onto the analyser for testing within **4 hours of collection**.

For information on transport, including days and times, please see [Pathology Transport Services](#)

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Laboratory Testing:

All Microbiology laboratory investigations are based on UK Standards for Microbiology Investigations which can be found [HERE](#). If further advice is required, please contact the laboratory

Laboratory Turn Around Time (from Date/Time of Receipt in Laboratory):

Blood cultures are incubated for at least 5 days.

Negatives: Interim report at 48 hours (and 36 hours for neonatal), Final report at 5 days

Positive microscopy and culture results will be telephoned as soon as possible after they become available.

Time limit for requesting additional investigations:

n/a

Adverse factors affecting the interpretation of microscopy and culture results:

- Transport to the laboratory < 4 hours, and 2 sets filled 8-10ml each (adults) is the best way to minimise uncertainty of results
- Delays in processing may result in degradation of microorganisms which generates results that do not reflect the true clinical situation
- Contamination of blood cultures complicates interpretation and may lead to unnecessary antimicrobial therapy and increased costs