

Microbiology User Information: Fluids, Pus and Tissue Specimens

Specimen Types:

- Ascitic/ Peritoneal fluid
- Synovial fluid
- Pleural fluid
- Pericardial fluid
- Pus
- Tissue/Bone
- Biopsies
- Prosthetic device samples (intra-operative e.g. orthopaedic/ vascular)

Indications for Laboratory Fluids, Pus and Tissue Samples:

Hospital Septic Arthritis guidelines: [septic-arthritis.pdf \(formularywkccgmtw.co.uk\)](#)

Hospital Acute Osteomyelitis guidelines: [acute-osteomyelitis.pdf \(formularywkccgmtw.co.uk\)](#)

Hospital Respiratory guidelines: [Respiratory Infections \(formularywkccgmtw.co.uk\)](#)

Primary Care antimicrobial guidelines: [Antimicrobial prescribing table \(formularywkccgmtw.co.uk\)](#)

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 include details of relevant clinical information, current, just finished or intended antibiotic therapy.

Please give as much information as possible regarding the type of fluid.

State whether a prosthetic joint is in situ.

If examination for AAFB (TB) is also required- please indicate

Fluids, Pus and Tissues minimum volume:

Fluids, Aspirates and Pus- Ideally minimum 1mL.

Time to laboratory:

Specimens should be sent to the laboratory immediately- **Ideally < 2 hours.**

Urgent specimens out of hours:

- CSF – urgent CSF samples are processed out of hours, contact on call Microbiology BMS through hospital switchboard
- Other sterile fluids (e.g. ascitic fluid, joint fluids) – urgent fluid specimens are processed out of hours until 10 pm, contact the on call Microbiology BMS through hospital switchboard. Samples can be taken after 10pm but will be processed the following morning.

Follow hospital guidelines for empirical treatment where required.

If processing is delayed, refrigeration is preferable to storage at ambient temperature

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

Laboratory Testing:

All joint aspirates are examined for crystals.

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):

Microscopy: Available same day.

Culture results: Within 3 days (up to 10 days if prosthesis in situ)

AAFB Culture: Normally up to 42 days, but may take up to nine weeks

Time limit for requesting additional investigations:

14 days

Requests for extra tests must be received within the sample storage period and must be accompanied by a request form. Please telephone the laboratory before requesting extra tests to ensure the sample is available and still viable



Adverse factors affecting the interpretation of microscopy and culture results:

- Contamination of the sample at the point of collection
- Delay >4 hours in arrival at laboratory
- Excessive temperature
- The volume of specimen influences the viability of anaerobes.
- The recovery of anaerobes is compromised if the transport time exceeds 3hr
- Insufficient sample volume may impede the recovery of organisms

Note: rapid transport to the laboratory is the best way to minimise uncertainty of results

Specimen Collection:

As much as clinically possible, samples should be taken prior to antibiotic treatment

Collection Containers	<p>Fluids, Pus and Biopsy Specimens:</p> <p>Sterile Universal Container (20ml- white)</p> 	<p>Specimens from prosthetic joint revisions:</p> <p>Sterile Container (70ml – Yellow)</p> 
Specimen Type	<p>Ascitic/ Peritoneal fluid, Synovial fluid, Pleural fluid, Pericardial fluid, Pus, Tissue/Bone, Biopsies, Prosthetic device samples - Prosthetic joint aspirate, peri-prosthetic biopsy, intra-operative specimens (debridement and retention or revision surgery), prostheses, fixation devices</p>	

Collection Methods**Sterile Fluids:**

Clean the needle puncture site with alcohol to prevent introduction of infection. Using aseptic technique perform percutaneous aspiration to obtain pleural, pericardial, peritoneal, or synovial fluids.

n.b Fluids from drains are not considered sterile; only send if high degree of infection suspected.

Biopsy Specimens:

Needle aspirate, needle biopsy, tissue - Operate strict sterile precautions. If specimen is small, place it in sterile water to prevent desiccation

DO NOT ADD FIXATIVE OR FORMALIN.

Prosthetic device samples:

Take 3-5 samples from around the infected device using separate sterile instruments for each sample.

If possible stop all antibiotics at least 2 weeks prior to sampling and consider not giving routine surgical prophylaxis until after sampling.

Label the sites that were sampled. Surface or sinus swabs are generally not useful.