# Microbiology User Handbook

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# 1. Introduction

The Microbiology department at the Salisbury District Hospital NHS Foundation Trust provides an analytical and interpretative service on a wide range of clinical specimens and clinical and infection control advice to hospital and community health care services. The laboratory also provides microbiological support to the local Health Protection Units and Environmental Health departments. Specialist and Reference test services are used where necessary.

We process over 220,000 specimens each year, many requiring multiple investigations. Our ability to process requests in a timely fashion relies heavily on receiving correctly completed request forms from our users. Your compliance with the guidelines concerning safety, specimen identification and transport will help us to deliver a safe, efficient, and legally defensible service.

In its pursuit of excellence and as part of its continuous quality improvement programme the Microbiology department participates in all relevant internal and external quality assurance schemes.

The repertoire of tests provided by Microbiology support the Trust in its diagnostic and screening programmes. The laboratory is accredited by the Institute of Biomedical Science (IBMS) for Biomedical Scientist training and Biomedical Scientist Specialist training.

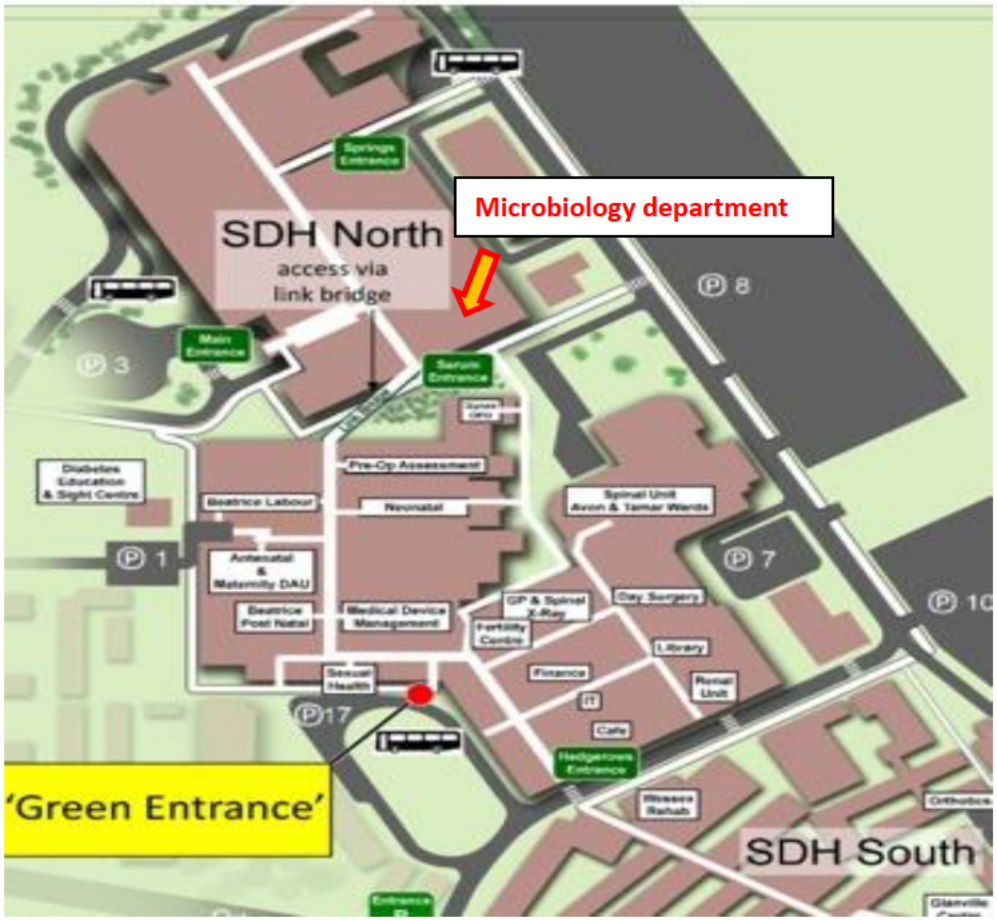
It is anticipated that this handbook will provide the information you require to use our service.

## 1. Change Control

| Date | Version Number | Change | Sections affected |
|---|---|---|---|
| | 1.0 | New document | |
| | | | |
| | | | |
| | | | |
| | | | |

## 2. Laboratory location

[redacted]




## 3. Contact Details

| Position | Name | Telephone Number |
|---|---|---|
| Laboratory Manager | [redacted] | [redacted] |
| Laboratory Administrator: | [redacted] | [redacted] |
| Quality Manager: | [redacted] | [redacted] |
| Consultant Microbiologist<br>Lead Clinician<br>Infection Control Doctor | [redacted] | [redacted] |
| Consultant Microbiologist | [redacted] | [redacted] |
| Dep. Infection Control Doctor | [redacted] | [redacted] |
| Consultant Microbiologist<br>Antimicrobial Lead | [redacted] | [redacted] |
| Bacteriology enquires | | [redacted] |
| Virology enquires | | [redacted] |

<u>The postal address is:</u>
Department of Microbiology
Salisbury District Hospital NHS Foundation Trust
Salisbury
SP2 8BJ

[redacted]

# 4. Opening hours, clinical advice, and results

## 4.1. Laboratory Opening Hours

The laboratory is open:

Monday to Friday: 08:00 – 20:00

Saturday & Sunday: 09:00 – 17:00

Bank Holidays: 09:00 – 17:00

## 4.2. Clinical advice

For clinical advice on diagnosis and the interpretation of Microbiology results, use of antimicrobials or infection control, Consultant advice is available on-site 09:00 – 17:30 Monday to Friday and on an on-call basis at all other times.

For advice during normal working hours: Telephone [redacted]

For advice out of hours: Telephone [redacted].

Friday 17:00hrs to Monday 09:00hrs (non-Bank holiday weekends):

There is a rota with cross-cover provision with Microbiology colleagues from Dorchester. One of the following will be available via pager or other contact number via switchboard:

- [redacted]
- [redacted]
- [redacted]

**NOTE:** [redacted]

## 4.3.Urgent samples

If a result is required urgently and the sample will arrive during normal working hours, the laboratory MUST be notified by telephone so that we can prioritize the request.

Please ensure that the requesting doctor contact details are provided on the request form to enable the result to be telephoned to the requesting clinician.

## 4.4.Testing out of hours

The on-call service is available outside of normal Laboratory opening hours.

The Microbiology out of hours service is an urgent service. Urgent samples out-of-hours should not be sent before agreement with the laboratory on-call staff.

Once the sample has been taken, please contact the duty Biomedical Scientist: [redacted] and give them details of the sample to be tested. Samples should be taken to the Blood Issue room (Blood bank) on [redacted] and placed in the urgent sample box (Microbiology) or placed in the urgent sample box at the reception in Laboratory Medicine.

The use of the service should be restricted to those samples where it is essential to have a result before the next routine session. In general, samples normally accepted for the on-call service would include:

- Cerebrospinal fluid (CSF)
- Other samples approved by Consultant Microbiologist

Non-urgent samples (except blood cultures) dispatched out of hours can be placed in the microbiology refrigerator in the blood-bank room in Pathology [redacted] Blood cultures taken out of hours should be left at room-temperature in the 'Microbiology' box in the same area.

## 4.5. Requesting Tests

All routine tests provided by the microbiology laboratory are provided in Sections 13. All tests should be requested at the time of submitting the specimen to the laboratory.

Amendments and additions to requests can still be discussed with the laboratory after processing has started. In general, additional tests must be requested within 48 hours of sample receipt by the laboratory. In some instances, additional tests may not be possible, and a fresh specimen will be required. Further advice can be obtained from the laboratory.

Occasionally, it may be possible to add additional tests onto a saved (frozen) serum sample.

Before sending specimens to the laboratory for investigation, please ensure that you are not duplicating a sample that has already been sent for the same investigation.

## 5.6. Results

Pathology results are available on the Hospital Review system or via GP computer systems immediately after authorisation.

All laboratory results are returned to the requesting clinician who has ultimate responsibility for ensuring that all results are actioned and communicated to the patient as appropriate.

In cases of difficulty or further clarification, the laboratory enquiry telephone number is [redacted]

Please note that we need to establish the caller's identity before giving results over the telephone. For reasons of confidentiality (Caldicott) and Clinical Governance, we are not permitted to give results directly to patients or their relatives.

We advise all healthcare workers NOT to ask for results pertaining to themselves, but to obtain test results from the requesting physician, their doctor or from Occupational Health as appropriate.

**Please NOTE:** We request that users do not phone the lab to confirm whether samples have been sent or not, as this takes up much valuable time and prevents lab staff from completing their work in a timely fashion. We recommend that patient notes are annotated to confirm samples requested and taken.

### 4.6. Telephoned results

Results of urgent requests and results which may aid the immediate patient management will be telephoned. This includes all positive blood cultures, positive CSFs, and other clinically significant results.

All other results will only be telephoned on request.

### 4.7. Turnaround times

The laboratory continually monitors its turnaround times to ensure that it complies with its responsibilities within the patient pathway. The laboratory measures its turnaround times as the time from receipt until the point at which the result is authorised.

The expected turnaround times for each test are indicated on the individual test sheets. For detailed turnaround times for each test and actual performance, please contact the laboratory.

Interrogation of the electronic systems allows for full audit of the reception, testing and reporting process, including time of report viewing and report printing.

## 5. Sample Collection

### 5.1. Viral and bacterial serology tests

As a general guide, a 4mL yellow top vacutainer tube is adequate for up to three viral serology screening tests plus provide sufficient sample to be used for referral to the reference laboratory if the screening test is positive.

For four or more tests, two 4mL samples are advised. For unusual or “send away” tests not performed at SDH, an additional sample is advised to speed up handling and packaging.

Requests received on Laboratory Medicine (blue) request forms will NOT be accepted. Please use only the appropriate request on T-quest the or Microbiology (black) request forms for viral & bacterial serology tests.

### 5.2. Optimum time of and conditions for collection

Samples for bacterial culture, wherever possible, should be collected prior to commencement of antibiotic treatment.

Actual pus or tissue samples are always preferable to a swab.

To avoid contamination of a specimen during collection, an aseptic technique must be used: always use universal precautions, wash hands, and wear appropriate personal protective clothing.

Decontamination of the sampling site or equipment may be necessary e.g., skin antisepsis before taking blood cultures or Cerebro-spinal fluid (CSF), or catheter port antisepsis before collecting a specimen of urine via a catheter (CSU).

Specimens must be collected into sterile containers with close fitting lids. The specimen must be clearly labelled. Once collected, place the specimen into a plastic specimen bag and seal the bag. Wash your hands and dispose of clinical waste into a yellow clinical waste collection bag. Sharps must be disposed of safely.

### 5.3.Health and safety issues pertaining to sample collection

Every clinical specimen sent for microbiology examination should be treated as potentially infectious. Standard precautions must be observed at all times. Use aseptic technique.

With patients known to be infected, or if there is a strong suspicion that they may be infected with a high-risk organism (e.g., tuberculosis), then procedures likely to produce aerosols must be conducted whilst wearing face masks, goggles, or full facial visors as appropriate. Such investigations include cough inducing procedures and lancing of an abscess.

Used sharps must be disposed of according to Trust policy. This is the responsibility of the individual(s) who generates them.

It is the responsibility of the person collecting the specimen to ensure that it is properly labelled and safe for transportation.

Refer to appropriate Trust policies for further information:

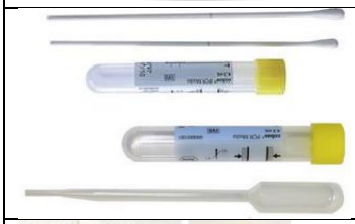
- Hand Hygiene Policy
- Infection Control policy
- Policy for the Prevention of Sharp Injuries

## 6. Sample containers

### 6.1.Supply of specimen containers

The following Microbiology consumables can be obtained from the following locations:

| Consumable | Description | Issue from |
|---|---|---|
|  | White request form (For locations that do not have access to TQUEST only) | Materials Management Team |
|  | Container with boric acid – for urine bacteriology specimens | Materials Management Team |
|  | Container without boric acid – for urine bacteriology specimens | Materials Management Team |

| | | |
|---|---|---|
|  | Bacteriology swabs in Amies transport medium with charcoal | Materials Management Team |
|  | Bacteriology swabs in Amies transport medium | Materials Management Team |
|  | Pernasal swab for whooping cough | Materials Management Team |
|  | Viral swabs in viral transport medium | Materials Management Team |
|  | Faeces container | Materials Management Team |
|  | Sterile universal container | Materials Management Team |
|  | Sputum container | Materials Management Team |
|  | Cobas transport media for *C. trachomatis* and *N. gonorrhoeae* | Materials Management Team |
|  | Blood culture bottles | Materials Management Team |
|  | Vacutainer tubes for blood samples | Materials Management Team |
|  | Urgent nasopharyngeal swab for Covid-19 | Materials Management Team |
|  | Vacutainer tube for blood samples (Peach pink top, paediatric EDTA sample tube) | Materials Management Team |
|  | Sterile plastic bijoux container | Materials Management Team |

| | | |
|---|---|---|
|  | Fungal culture kit | Materials Management Team |

## 6.2.Selection of appropriate containers

Please see Repertoire Index for the selection of appropriate container for test.

Sample containers must be CE marked. Specimen containers must be leakproof and be sufficiently robust to withstand stresses during transit. Only containers approved by the Microbiology Department may be used to ensure sample integrity during transit to the Laboratory. Samples that are sent in non-approved containers may not be processed by the Laboratory. It is the responsibility of the person sending the sample to the Laboratory to ensure that the container used for transportation is appropriate.

The container must be adequately closed to avoid leakage. Samples that have leaked in transit may not be processed by the Laboratory.

**NOTE:** Users are reminded to only retain sufficient stock of sample containers for normal usage and to check the **expiry date** of stock on a regular basis and before collecting the sample.

## 6.3.Labelling of sample containers

Clinical governance requires the sample container to be labelled with sufficient information to provide an unequivocal link with the request form and the patient from whom they are collected.

Pre-printed addressograph labels are acceptable on sample containers for Microbiology investigations.

**Minimum data set for identification:**

- Patient's surname
- Patient's forename
- Date of birth and/or hospital number/NHS number

Microbiology sample containers should additionally include type of sample and site of collection. For antibiotic assay levels, for example Teicoplanin, the following information must be completed on the request form:

- Mg of last dose given
- Date and time of last dose
- Date and time when sample was taken

Failure to comply with correct guidance may result in the sample being rejected by the Microbiology department.

Multiple samples taken at different times on a patient MUST be labelled on the sample container with the time (24 hr clock) when the sample is taken. The request form should be labelled accordingly.

# 7. Request Forms

All samples must be accompanied by a properly completed request form. Failure to comply with correct guidance may result in the sample being rejected by the Microbiology department.

Adding microbiology tests, (e.g., viral serology), to Laboratory Medicine forms may cause serious delays in the sample arriving at the laboratory and result in insufficient sample for testing.

All serology requests should include onset date of symptoms as this has relevance to interpretation of results OR to the sample being held until a second sample is received (atypical viral/ pneumonia serology requests especially).

All requests for investigations must include the requesting physician's signature on the request form. All unsigned forms may be returned to the requestor before testing is commenced.

## 7.1.Electronic requesting

Please use electronic requesting (T-QUEST) orders where available. It is important to ensure that the correct sample accompanies the correct request form before placing inside the sample bag.

Please ensure that you order the correct test and select the correct sample type as failure to do so may lead to incorrect testing. If the test you require is not visible, please contact the laboratory to check that the test is available.

The information required is the same as that required on a handwritten request form and should include clinical details and symptoms, as well as information on antibiotic use, foreign travel, outbreaks, date of onset, etc.

Where TQUEST requesting is not available handwritten request forms must be used.

## 7.2.Handwritten request forms

Minimum Data Set for Identification:

- Hospital number and/or NHS number
- Patient surname and forename (in full, not initials)
- Date of birth (DOB)
- Patient address if hospital number/NHS number not supplied

In addition to the minimum data set for patient identification please ensure all other relevant fields are completed:

- Ward/ Practice, Consultant/GP
- Patient address
- Patient gender
- Date and time of collection
- Specimen type
- Investigation(s) required
- Name of requesting clinician and bleep number
- Relevant clinical details

- Current drug therapy
- Copy reports, if required
- Patient category (PP/NHS)

To ensure samples can be safely and appropriately tested in the laboratory, information including details of foreign travel, symptoms and known or suspected contact with other patients known to have communicable disease is important. For example, samples likely to contain high risk pathogens as described by the Advisory Committee for Dangerous Pathogens are handled at a higher containment level to safeguard both laboratory staff and other downstream workers. The information is also of benefit to the patient ensuring that appropriate testing is performed.

It is essential to use a ballpoint pen when completing request forms. Use of felt tip and fountain pens can lead to delay in processing samples, or requests being missed altogether, as carbon copies are often incomplete. When addressograph labels are used, please ensure that a label is fixed to EACH part of the request form.

### 7.3.Anonymous/uniquely identified samples

In certain circumstances patient identification details are intentionally hidden or substituted with particular identification numbers (e.g., Sexual Health patients). In such instances, a properly coded identifier must be used in place of the patients last name and first name (e.g., GUM patient samples need to have a GUM number, patient gender and DOB).

## 8. Sample Rejection Policy

Samples and request form must be received with all required details completed and matched for the patient, the right sample for the right request and in a safe condition (i.e., not leaking/stained with bodily fluids or toxic chemicals, sample collection containers not out of date) causing a health risk to transport staff, vacuum tube (Whooshy) and laboratory staff alike. The Microbiology Laboratory holds the right to reject any sample received if it is:

- In such a condition that there is a health and safety risk to staff
- The ability to process the sample adequately or safely is in doubt
- Or the laboratory receives the wrong sample for the test(s) requested
- There is inadequate or inappropriate information on the form to indicate specific tests required OR helps towards interpreting test results
- Collection container is out of date

Where possible the requester will be contacted by telephone and advised of the reason for the sample being rejected (and a repeat where possible being sent). A rejected sample will result in a report indicating the key reasons for rejection, with a request for a repeat sample being included where appropriate.

## 9. Transportation of Samples

Please refer to the Trust Specimen Transportation Policy for the correct procedures for submitting samples to the laboratory.

### 9.1. Transportation of routine samples to the laboratory

All sample containers for transport to the Laboratory must be sealed in a plastic bag attached to the request form.

Samples for microbiological investigation should be examined as soon as possible after collection to avoid compromising results. Samples may be transported via normal sample collection rounds during the normal working day.

Where this is not practicable due to delays in transportation samples should be kept refrigerated. Samples may be kept in a refrigerator at a temperature of 4-8°C for a maximum of 24 hours prior to transportation.

Samples taken for blood culture examination MUST NOT be refrigerated. These must be transported to the Laboratory as soon as possible for incubation at 37°C.

Certain samples may be sent direct to the laboratory using the pneumatic chute system:

Pathology address: [redacted]

Microbiology address: [redacted]

Please do not use the vacuum transport tube (whooshy) to transport high-risk samples. Please do not use this system during laboratory closure (i.e., out-of-hours) and especially for one-off samples which cannot be repeated, e.g., CSF, pre-antibiotic joint aspirate. Always send appropriately packed via portering service.

Out-of-hours (from 20:00 until 08:00 Monday to Friday, from 17:00 until 09:00 on Saturdays and Bank Holidays and all-day Sunday) the vacuum tube to the Microbiology reception is switched off, and any samples sent may be randomly sent to locations other than the laboratory!

For transportation of samples to the laboratory from external sites or by post, and use of the pneumatic chute system, please refer to the Trust Specimen Transportation Policy. In cases of difficulty or further clarification, the laboratory enquiry telephone number is [redacted]

### 9.2. Transportation of urgent samples

Urgent samples must be sent to the laboratory immediately. To discuss an urgent sample with the on-call Biomedical Scientist out of hours please phone Switchboard: Telephone [redacted] and ask for the on-call Biomedical Scientist.

## 10. High Risk Samples

All samples should be regarded as potentially infectious. Certain samples from patients who are known or suspected to have the following diseases/conditions constitute a potential higher risk of infection to persons handling the samples:

- Typhoid/paratyphoid fever
- Dysentery

- Tuberculosis (samples from sites where tuberculosis infection is likely)
- Anthrax
- Brucellosis
- Transmissible Spongiform Encephalopathy (including CJD)
- Viral haemorrhagic fever
- Avian Flu
- MERS

Please refer to the Trust's Policy for the Transport of Pathology Specimens.

To minimise the risks, ensure that such samples are packaged as follows:

- Attach a "Danger of Infection" label to the sample container and request form for all qualifying samples (including biochemistry and haematology requests)
- Specify the nature of the risk on the request form
- Use unambiguous and commonly recognised terminology
- Place the sample in a sealable plastic bag and close the seal

This is a necessary procedure to safeguard both laboratory staff and other downstream workers.

**Note:** The Consultant Microbiologist **MUST** be contacted **BEFORE** collecting specimens from a patient suspected of having a viral haemorrhagic fever, human avian flu or CJD. Samples thought to constitute a risk to staff because of inadequate packing or warning may be rejected.

## 11. Sample acceptance criteria

Sample acceptance criteria ensure adequate identification for Microbiology samples and request forms for them to be accepted by the laboratory for analysis. It is important to clearly identify the investigations required with relevant supporting information. Inadequate or inaccurate labelling might cause delays before Microbiology results are available and affect patient care.

If you have any queries, please do not hesitate to contact the laboratory.

The requesting clinician is responsible for the correct completion of the request form and the correct labelling of the sample. The requester needs to ensure that all details are correct, clearly written and that the sample details match those on the form.

In case the sample is not repeatable or not reproducible, it will be processed, but will have a disclaimer added onto the report. Microbiology will accept no responsibility for samples analysed which initially failed to meet the acceptance criteria. Where the sample is repeatable/ reproducible, no analysis will be performed, and an appropriate comment will be included on the Microbiology report.

## 12. Sample storage

Please see the table bellow for sample retention times. If additional investigations are required, please contact the laboratory.

| Type of Clinical Material | Retention time |
|---|---|
| **Semen-vasectomy**<br>**Semen- infertility** | Kept for 48hrs after result is completed |
| **Urine samples** | 3 days |
| **Covid-19 samples (NEGATIVE)** | 4 days |
| **Bacteriological swabs Sputum/NPA/BAL samples**<br>**High risk/Danger of infection samples**<br>**Faeces samples**<br>**Rejected samples**<br>**Chlamydia samples** | 1 week |
| **Mycology samples** | 3 weeks |
| **Tissue/Fluid samples** | 1 month |
| **CSF** | Kept for current month plus 1 month |
| **Resistant organisms from urine samples**<br>**MRSA and resistant organisms from other samples** | 3 months |
| **Covid-19 samples (POSITIVE)** | Up to 6 months (as storage allows) |
| ***C. difficile* positive samples**<br>**Significant blood culture isolates** | 1 year |
| **Antenatal booking blood serum samples**<br>**Needlestick injury serum samples**<br>**Serum samples** | 2 years |
| **Referral CL2 slopes**<br>**Referral CL3 Slopes** | Kept until Reference laboratory report is returned |

## 13. Repertoire of Tests (A-Z)

This section covers the tests that our laboratory offers according to the service repertoire agreed with our users.

Our laboratory offers a range of specialist tests which are undertaken at reference laboratories. The information where a specific specialist test is performed is indicated in the 'Additional Comments' section for each test.

Please contact the laboratory for any queries regarding the tests offered and information regarding any special sample requirements.

Please find a test using the index.

### 13.1. Bacterial, Fungal and Viral Disease Investigations

#### 16s PCP PCR/ 18s Pan-fungal PCR

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| **Investigation** | 16s PCP PCR/18s Pan-fungal PCR |
| **Tests** | PCR |
| **Sample type** | Any (including fixed tissue).<br>Preferably from normally sterile sites. |
| **Collection Container** | Universal (white top) |

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| **Sample collection** | Unless stated otherwise in the test table, please send at least 200µL of liquid sample for testing, preferably 500µL to facilitate additional extraction and testing. Low volume samples may be diluted and tested, but reports will bear a caveat regarding the potential effect on assay sensitivity.<br>For tissue samples, please send a matchstick head sized piece of the appropriate tissue in a sterile container. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Sending sufficient sample is imperative when requesting multiple tests. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Micropathology University of Warwick Reference Laboratory. |

## *Acanthamoeba* Detection

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| **Investigation** | *Acanthamoeba* detection |
| **Tests** | Culture and PCR |
| **Sample type** | • Corneal scrape/biopsy,<br>• Corneal swabs,<br>• Corneal fluids,<br>• Contact lenses (to be sent in the lens case). |
| **Collection Container** | Sterile plastic bijoux container<br>  <br>Sterile universal container<br>  |
| **Sample collection** | The material from a corneal scrape/biopsy should be collected with a needle or blade and rinsed into a small volume (1-2 mL) of sterile saline/distilled water in a small (<5mL) sterile vial/tube.<br>Remove blades or needles as soon as possible after rinsing and before sending.<br>For corneal swabs, do not send dry swabs, please add a small volume (1-2 mL) of sterile saline or sterile distilled water to the swab to prevent drying. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Reference laboratory can also perform culture from contact lenses or fluids; isolation from these specimens, whilst suggestive, does not necessarily implicate the amoeba as causing the patient's symptoms. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at HPA Malaria Reference Laboratory. |

## Adenovirus PCR

This test is used for the diagnosis of acute disease.

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| **Investigation** | Adenovirus PCR |
| **Tests** | PCR |
| **Sample type** | **DEPENDS ON ADENOVIRUS TARGET TYPE** |

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|---|---|
| | • EDTA blood sample (quantitative, immunocompromised patients)<br>• Respiratory secretions<br>• Eye swabs<br>• CSF (qualitative)<br>• Faeces<br>• Broncho-alveolar lavage |
| **Collection Container** | Purple top blood tube<br>  <br>Viral swabs in viral transport medium<br>  <br>  <br>Sterile plastic bijoux container<br>  |
| **Sample collection** | Send a viral (green top or red top) swab of vesicle fluid or affected mucous membranes. Faeces specimen may be passed into a clean, dry, disposable bedpan or similar container and transferred to an appropriate collection container.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | False negatives may occur for a variety of reasons, for example inappropriate timing of sample collection, inappropriate sample, presence of organism below the detectable limit of the assay. Towards the limit of detection of an assay sampling variation will result in lower reproducibility. New and emerging variants may also occur which may not be detected by this assay. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Antenatal (booking blood) Serology

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|---|---|
| **Investigation** | Hepatitis B surface antigen (qualitative)<br>HIV-1 and 2 antibodies and HIV p24 antigen (qualitative)<br>Treponema pallidum antibody (qualitative) |
| **Tests** | Antibody/ Antigen detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Please clearly indicate ALL tests required. |

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| | Please indicate clearly in the clinical details that sample is antenatal screening or booking blood.<br>Please indicate if patient is a 'late booker'.<br>Haemolysis may affect the result. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Anti-streptolysin titre (ASO Titre)

This test is used to determine past or current infection.

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|---|---|
| **Investigation** | Anti-streptolysin titre (ASO Titre) |
| **Tests** | Toxin Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 7 days |
| **Limitations** | Clinical details are essential for processing.<br>Haemolysis can significantly affect the result. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Ascitic Fluid Culture

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|---|---|
| **Investigation** | Ascitic Fluid Culture |
| **Tests** | Gram stain and culture |
| **Sample type** | Ascitic fluid |
| **Collection Container** | Universal (white top) (For direct culture and microscopy)<br>  <br>Blood culture bottles (For enrichment culture only)<br>  |
| **Sample collection** | Optimally collected before antimicrobial therapy started.<br>Samples should be taken using strict aseptic technique by trained medical staff in line with Trust procedure. Ideally a minimum volume of 1ml should be collected. Where adequate sample, also inoculate into blood culture bottle set.<br>Specimens should be sent to the laboratory without delay during normal working hours. Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days, 5 days if sent in Blood Culture bottles |

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| **Limitations** | Ideally samples should be collected before antibiotic treatment.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Atypical Pneumonia CFTs

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|---|---|
| **Investigation** | Atypical Pneumonia CFTs<br>This test includes:<br>• Influenza A,<br>• Influenza B,<br>• Respiratory syncytial virus (RSV),<br>• *Chlamydia* species,<br>• *Mycoplasma pneumoniae*,<br>• Q Fever Phase II,<br>• Adenovirus |
| **Tests** | Complement fixation test (CFT) |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | The timing of the onset of patient symptoms and the blood sample(s) taken is critical.<br>Samples taken less than 10 days after onset of symptoms is considered an ACUTE sample and will be stored pending arrival of a CONVALESCENT sample (taken 10 to 14 days after the date of the ACUTE sample).<br>Samples taken MORE than 10 days AFTER the onset of symptoms are treated as a CONVALESCENT sample and will be sent for testing. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Acute sample will be saved (not processed) until a convalescent sample is received.<br>Acute sample will be discarded within 3 months if no convalescent sample is received.<br>Please ensure that an onset date for symptoms is given within the clinical details of the electronic or hand-written request form. Failure to do so will incur an unnecessary delay in processing.<br>A four-fold or more increase in complement fixation test (CFT) antibody titre between acute and convalescent samples is indicative of a recent infection. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Avian Precipitins

This test is used to determine past or current infection.

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|---|---|
| **Investigation** | Avian antibodies (precipitins) |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements. |

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| | Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Haemolysis may affect the result. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Immunology Department, Sandwell and West-Birmingham Reference Laboratory. |

## Beta-glucan

This test is used for the diagnosis of fungal infection and exclusion of fungal infection (if negative).

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| **Investigation** | Beta-glucan antigen detection |
| **Tests** | Determination of the presence of 1-3 Beta- D- glucan (fungal cell wall antigen) in serum |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Sample must be <48 hrs by the time it reaches the reference laboratory and must be a primary sample. Please note, a BAL sample is not suitable. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## BK Quantitative PCR virus (Renal patients)

This test is used for the diagnosis of acute disease.

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|---|---|
| **Investigation** | BK quantitative PCR |
| **Tests** | PCR (quantitative) |
| **Sample type** | X 2 EDTA blood samples |
| **Collection Container** | Purple top (minimum volume 500µl)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Clinical details must state that it is a renal screening and sample should be sent to QA Hospital Portsmouth. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Queen Alexandra Hospital Portsmouth Reference Laboratory. |

## BK Quantitative PCR virus (Non-renal patients)

This test is used for the diagnosis of acute disease.

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|---|---|
| **Investigation** | BK quantitative PCR |
| **Tests** | PCR (quantitative) |

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| **Sample type** | X 2 EDTA blood samples |
| **Collection Container** | Purple top (minimum volume 500µl)  |
| **Sample collection** | No special requirements<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | For non-renal patients, or not specified to go to QA Hospital Portsmouth. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Blood culture

Blood cultures are used to detect the cause of an infection leading to bacteraemia or fungaemia. The results are important because they help guide appropriate treatment.
Results of all significant positive blood cultures will be telephoned to a clinician as soon as they become positive. As the isolation time depends upon the organism and the initial inoculum, this may vary from a few hours, up to five days after receipt.

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| **Investigation** | Blood Cultures |
| **Tests** | Gram stain, if positive & Culture |
| **Sample type** | Adult – 5-10 ml of blood per bottle.<br>Paediatric – 3-4 ml of blood. |
| **Collection Container** | Adult blood culture set – Aerobic (blue) and Anaerobic (purple) bottles.<br>Paediatric blood culture bottle – yellow top.<br>  |
| **Sample collection** | A blood culture set is defined as one aerobic and one anaerobic bottle.<br>For infants and neonates, a single aerobic bottle may be requested.<br>Samples should be collected before antibiotic treatment.<br>Samples should be taken as soon as possible after a spike of fever.<br>N.B. To guarantee optimal result please ensure that the blood culture set is transported to the laboratory within 3 hours of the sample being collected. |
| **Turnaround Time** | 1 – 6 days, but it might take longer if the sample is positive or requires extended culture. |
| **Limitations** | Blood cultures should only be taken when there is a reason to suspect infection. They should not be taken for routine assessment. Please collect the sample during or as soon as possible after a spike of temperature.<br>Delays in transportation may affect the recovery of pathogens.<br>Any recent antimicrobial therapy can have a significant effect on blood culture results by decreasing the sensitivity of the test. If patients have received previous antimicrobial treatment, bacteraemia should be considered even if blood culture results are negative. |

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| | False negatives may occur if inadequate blood culture volumes are submitted.<br>Do not remove or cover up barcode labels as these are required in the laboratory. |
| **Out-of-Hours-Testing** | Bottles should be left at room temperature in blood-issue room. |
| **Additional Comments** | |

## *Bordetella pertussis* Culture

Whooping cough is a highly contagious disease that is caused by the fastidious Gram-negative coccobacillus *Bordetella pertussis*. In some cases, this syndrome may also be caused by *Mycoplasma pneumoniae*, and by viruses such as adenoviruses and enteroviruses.

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| **Investigation** | *Bordetella pertussis* culture |
| **Tests** | Isolation and characterisation of *Bordetella* species. |
| **Sample type** | Pernasal swab |
| **Collection Container** | Pernasal swab (blue top)<br>  |
| **Sample collection** | A pernasal swab is inserted through a nostril and advanced along the floor of the nose until it reaches the nasopharynx. Optimally collected before antimicrobial therapy started.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. Delays of over 48 hours are undesirable. |
| **Turnaround Time** | 7 days |
| **Limitations** | Samples taken >2 weeks after onset of symptoms may not yield a positive result.<br>It is advisable to take two pernasal swabs: one for the culture of Bordetella species and the other for viral culture; however nasal swabs for PCR are preferred.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## *Bordetella pertussis* serology

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|---|---|
| **Investigation** | *Bordetella pertussis* serology |
| **Tests** | Anti-PT IgG antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Samples should be taken 2 weeks after onset of paroxysmal coughing.<br>Pernasal swabs are the most reliable way of making the diagnosis of whooping cough. |

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| | Pertussis serology is usually more useful in adults presenting with a prolonged cough.<br>Please state onset date. Vaccination history may help interpretation of results. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## *Bordetella pertussis* PCR

| | |
|---|---|
| **Investigation** | *Bordetella pertussis* PCR |
| **Tests** | PCR |
| **Sample type** | • Pernasal charcoal swab<br>• Nasopharyngeal aspirate (NPA)<br>• Throat swab in VTM |
| **Collection Container** | Pernasal swab for whooping cough<br>  <br>Viral swabs in viral transport medium<br>  |
| **Sample collection** | No special requirement.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Please state vaccination history if known. If sample is urgent, check with a Consultant Microbiologist if Biofire PCR testing is required. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Broncho-alveolar lavage Culture

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|---|---|
| **Investigation** | Broncho-alveolar lavage Culture |
| **Tests** | Gram Stain & Culture |
| **Sample type** | Broncho-alveolar lavage |
| **Collection Container** | Universal (white top)<br>  <br>Sputum container<br>  |
| **Sample collection** | Specimens should be fresh and optimally collected before antimicrobial therapy started. Minimum sample size is preferably 5mL.<br>Specimens should be sent to the laboratory without delay during normal working hours. Outside of normal working hours samples should be refrigerated. |

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| **Turnaround Time** | 5 days |
| **Limitations** | Contact Consultant Microbiologist if *Pneumocystis jirovecii* testing is required.<br>All samples are suitable for overnight refrigeration only, they must not be stored over a weekend.<br>Delays in transportation may affect the recovery of pathogens. Any delay may allow overgrowth of Gram-negative bacilli, and *Haemophilus* species and *Streptococcus pneumoniae* may not get isolated. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## *Brucella* serology

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|---|---|
| **Investigation** | *Brucella* serology |
| **Tests** | Antibody detection |
| **Sample type** | • Clotted blood<br>• CSF |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  <br>Sterile plastic bijoux container<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10 - 14 days |
| **Limitations** | Please provide sufficient clinical details. Please state date of onset, risk factors (including occupation if appropriate), travel abroad over past six months. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is processed at Brucella Reference Laboratory in Liverpool. |

## *Candida* Antifungal Susceptibility testing

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|---|---|
| **Investigation** | Antifungal susceptibility testing for *Candida* species. |
| **Tests** | Antifungal susceptibility testing |
| **Sample type** | Pure culture |
| **Collection Container** | N/A |
| **Sample collection** | N/A |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Consultant Microbiologist will specify which drugs are to be tested. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Mycology Reference Laboratory. |

## Cerebro-spinal Fluid (CSF) Culture

Meningitis is defined as inflammation of the meninges. This process may be acute or chronic and infective or non-infective. Many infective agents have been shown to cause meningitis, including viruses, bacteria, fungi and parasites.

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| **Investigation** | Cerebro-spinal Fluid (CSF) Culture |

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|---|---|
| **Tests** | Cell count, Gram stain and Culture |
| **Sample type** | 1–2ml CSF. |
| **Collection Container** | Two sterile plastic bijoux containers.<br>Please send **1st** and **3rd** samples.<br>  |
| **Sample collection** | Optimally collected before antimicrobial therapy started. Do not delay antibiotic administration if clinically indicated.<br>Dispense CSF (minimum 0.5ml in each bottle) into single use containers and label in order.<br>Specimens should be sent to the laboratory without delay during normal hours. Outside of normal hours samples should be placed in the pathology reception and the on-call Microbiology Biomedical Scientist contacted through switchboard. |
| **Turnaround Time** | 2 hours for microscopy.<br>3 days for culture. |
| **Limitations** | State if TB culture or Cryptococcal culture/antigen testing is required. Cells disintegrate. A delay in transportation may produce a cell count that is not reflective of the clinical situation of the patient. Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | Yes, by arrangement, 24/7. |
| **Additional Comments** | |

## *Chlamydia trachomatis* Infection (Urine)

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|---|---|
| **Investigation** | Detection of *Chlamydia trachomatis* DNA in urine specimens |
| **Tests** | PCR |
| **Sample type** | Urine |
| **Collection Container** | Cobas PCR urine tube (Yellow Top)<br>  <br>Universal white top<br>  |
| **Sample collection** | **<u>Please do not use sample containers with boric acid.</u>**<br>Specimens should be collected and handled following the recommended guidelines on the collection kits. Illustrated collection procedure is provided on the back of the collection kits.<br>Specimens should be sent to the laboratory without delay during normal working hours. |
| **Turnaround Time** | 7 days |
| **Limitations** | Clinical details are essential for processing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Please ensure that the lid of the Cobas PCR tube is securely tightened, to prevent sample from leaking.<br><u>Please note</u> urine testing for chlamydia in women has been known to produce false results. Please contact the Microbiology Laboratory to discuss before submitting urine samples from women. |

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| | The laboratory now screens for *Neisseria gonorrhoeae* for both hospital and community patients. If you do NOT wish to have *N. gonorrhoeae* tested on individual patients, please make this clear on the request form (in the clinical details box). |

## *Chlamydia trachomatis* Infection (genital swabs)

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|---|---|
| **Investigation** | Detection of *Chlamydia trachomatis* DNA in genital swabs |
| **Tests** | PCR |
| **Sample type** | • Endo-cervical swab,<br>• HVS,<br>• Vulvo-vaginal swabs. |
| **Collection Container** | Cobas PCR female swab kit (Yellow Top)  |
| **Sample collection** | Specimens should be collected and handled following the recommended guidelines on the collection kits. Illustrated collection procedure is provided on the back of the collection kits.<br>Specimens should be sent to the laboratory without delay during normal working hours. |
| **Turnaround Time** | 7 days |
| **Limitations** | Clinical details are essential for processing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Chlamydia swabs have TWO separate expiry dates: one for the swab and one for the transport media contained in the pack. Note that the expiry date of the swab may differ by some months to that of the transport media. It is usually the media which has the shortest expiry date.<br>On the Cobas PCR chlamydia swab, the expiry date can be found at the bottom of the blister pack, below the Lot number on the pack. The date is printed in the reverse order to that we normally use in the UK, i.e., YEAR/ MONTH, so March 2023 would appear as 2023/03. Please return any out-of-date swabs to the Microbiology Laboratory and request replacements as required.<br>Please ensure that the lid of the Cobas PCR tube is securely tightened to prevent sample from leaking.<br>The laboratory now screens for *Neisseria gonorrhoeae* for both hospital and community patients. IF you do NOT wish to have *N. gonorrhoeae* tested on individual patients, please make this clear on the request form (in the clinical details box). |

## *Chlamydia trachomatis* infection (Non-genital sites: Eye, Throat, Rectum)

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|---|---|
| **Investigation** | Detection of *Chlamydia trachomatis* DNA in non-genital swabs (Eye, Throat, Rectum, etc.) |
| **Tests** | PCR |
| **Sample type** | Swab from appropriate site |
| **Collection Container** | Cobas PCR female swab sample pack (Yellow Top)  |

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|---|---|
| **Sample collection** | Specimens should be collected and handled following the recommended guidelines on the collection kits. Illustrated collection procedure is provided on the back of the collection kits.<br>Specimens should be sent to the laboratory without delay during normal working hours. |
| **Turnaround Time** | 7 days |
| **Limitations** | Clinical details are essential for processing. This assay is not validated for testing samples from non-genital sites. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Chlamydia swabs have TWO separate expiry dates: one for the swab and one for the transport media contained in the pack. Note that the expiry date of the swab may differ by some months to that of the transport media. It is usually the media which has the shortest expiry date.<br>On the Cobas PCR chlamydia swab, the expiry date can be found at the bottom of the blister pack, below the Lot number on the pack. The date is printed in the reverse order to that we normally use in the UK, i.e., YEAR/ MONTH, so March 2023 would appear as 2023/03. Please return any out-of-date swabs to the Microbiology Laboratory and request replacements as required.<br>Please ensure that the lid of the Cobas PCR tube is securely tightened to prevent sample from leaking.<br>The laboratory now screens for *Neisseria gonorrhoeae* for both hospital and community patients. IF you do NOT wish to have *N. gonorrhoeae* tested on individual patients, please make this clear on the request form (in the clinical details box). |

## *Chlamydia trachomatis* (LGV)

Lymphogranuloma venereum (LGV) is a sexually transmitted infection caused by a particular strain of *Chlamydia* bacteria.

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|---|---|
| **Investigation** | *Chlamydia trachomatis* (LGV) |
| **Tests** | PCR |
| **Sample type** | • Rectal swab,<br>• Throat swab,<br>• Vaginal swab,<br>• Penile swab. |
| **Collection Container** | Cobas transport media<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Must be *Chlamydia trachomatis* positive and symptomatic. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Colindale Bacteriology Reference Laboratory. |

## *Clostridium difficile* Toxin detection

*C. difficile* is a Gram positive, spore forming, strictly anaerobic rod, so named because of the difficulty in original culture and characterisation. Toxigenic strains produce large protein toxins A and B, both being major virulence factors. Most disease associated with *C. difficile* is intestinal, though *C. difficile* may be isolated from blood or tissues. Changes in the gut flora associated with broad spectrum antibiotics and chemotherapeutic agents can result in colonisation by *C. difficile*.

| | |
|---|---|
| **Investigation** | *Clostridium difficile* Toxin |
| **Tests** | Toxin Detection |
| **Sample type** | Faeces |
| **Collection Container** | Universal with spoon (blue top)<br>  |
| **Sample collection** | Specimen may be passed into a clean, dry, disposable bedpan or similar container and transferred to an appropriate collection container. Specimens should be sent to the laboratory without delay during normal working hours. Outside of normal working hours samples should be refrigerated. Delays of over 48 hours are undesirable. |
| **Turnaround Time** | 1 day |
| **Limitations** | Only performed on liquid / semi-formed stools (Bristol stool scale 5-7).<br>*C. difficile* toxin test is performed on in-patient samples, patients over 65 years old or if history of antibiotic-associated diarrhoea (please state 3 months antibiotic history).<br>Children less than 2 years old are unsuitable for investigation for *C. difficile*.<br>Do not request if a positive result within previous 28 days. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## *Clostridium difficile* PCR ribotyping

Ribotyping on *C. difficile* isolates from patients with *C. difficile* infection allows for the identification of certain strains such as 027 that can be difficult to control when causing outbreaks and/or may be associated with poor clinical outcome.

| | |
|---|---|
| **Investigation** | *C. difficile* PCR ribotyping |
| **Tests** | PCR |
| **Sample type** | Faeces |
| **Collection Container** | Faeces container<br>  |
| **Sample collection** | No special requirements |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Sample must be positive for *C. difficile*. Please discuss with Consultant Microbiologist. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Leeds Reference Laboratory. |

## CMV Avidity

This test is used to aid differentiation of primary and secondary reactivation of CMV.

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|---|---|
| **Investigation** | CMV Avidity |

| | |
|---|---|
| **Tests** | Enzyme-linked immunosorbent assay (ELISA) |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Must be CMV IgG positive. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## CMV IgG and/or CMV IgM

These tests are used for the diagnosis of acute/recent or reactivated disease (IgM) or if evidence of past infection/exposure required (IgG).

| | |
|---|---|
| **Investigation** | CMV IgG and/or CMV IgM |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 6 days |
| **Limitations** | Clinical details are essential for processing. Clearly state whether screen or suspected infection.<br>Please provide sufficient clinical details. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## CMV PCR

This test is used for the diagnosis of acute disease. For diagnosis of congenital CMV send neonatal urine sample within first three weeks of life.

| | |
|---|---|
| **Investigation** | CMV PCR |
| **Tests** | PCR |
| **Sample type** | • EDTA blood<br>• Urine |
| **Collection Container** | Purple top (minimum volume 500µl)<br>  <br>Universal (white top) or yellow top (minimum volume 5ml)<br>  |
| **Sample collection** | No special requirements. |

| | |
|---|---|
| | Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Clinical details are essential for processing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is processed at UKHSA Bristol Reference Laboratory. |

## Corneal Scrape Culture

Keratitis is infection of the cornea. This is a serious condition requiring prompt and meticulous investigation and may progress to perforation and blindness if treatment is unsuccessful. Initial infection with keratitis may progress to endophthalmitis if inappropriately treated. Predisposing factors include contact lens wear followed by pre-existing ocular disease including herpes simplex keratitis, ocular trauma, ocular surgery, laser refractive surgery and use of topical steroids. The condition may be caused by a wide range of bacteria, fungi and parasites.

| | |
|---|---|
| **Investigation** | Corneal Scrape Culture |
| **Tests** | Gram stain & Culture |
| **Sample type** | Corneal scrape |
| **Collection Container** | Direct inoculation onto plates (CBA, CHOC, FAA & SAB), slide and into saline bottle (if Acanthamoeba investigation is required)<br>  |
| **Sample collection** | Optimally collected before antimicrobial therapy started.<br>Carefully smear material onto agar plates and onto glass slide (circle area with permanent marker).<br>If insufficient specimen to make an impression smear and inoculate plates, please prioritise culture plates.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. Delays of over 48 hours are undesirable. |
| **Turnaround Time** | 2 hours for microscopy (During normal working hours)<br>2 – 5 days for culture. |
| **Limitations** | Requires good amount of cellular material.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## COVID-19 PCR

| | |
|---|---|
| **Investigation** | Covid-19 PCR |
| **Tests** | PCR |
| **Sample type** | • Nose swab<br>• Throat swab<br>• Nasopharyngeal swab |

| | |
|---|---|
| **Collection Container** | Viral swabs in viral transport medium  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours. |
| **Turnaround Time** | 6 hours. |
| **Limitations** | |
| **Out-of-Hours-Testing** | Out of hours testing is performed by POCT team. |

## COVID-19 Genome Sequencing

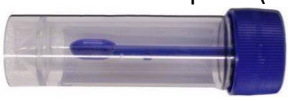
| | |
|---|---|
| **Investigation** | Covid-19 Genome Sequencing |
| **Tests** | Whole Genome Sequencing |
| **Sample type** | Covid-19 positive VTM sample |
| **Collection Container** | Viral swabs in viral transport medium  |
| **Sample collection** | No special requirements |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Sample must be positive for Covid-19. All samples with CT value less than 30 will be sent for sequencing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Porton Down Reference Laboratory. |

## *Cryptococcus* Antigen

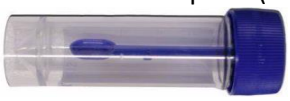
| | |
|---|---|
| **Investigation** | *Cryptococcus* antigen detection |
| **Tests** | Antigen detection |
| **Sample type** | • Clotted blood,<br>• CSF,<br>• Biopsy. |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  Sterile plastic bijoux container  Sterile universal container  |
| **Sample collection** | Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Only tested on immunocompromised (including HIV positive) patients. |

| | |
|---|---|
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at the Mycology Reference Laboratory. |

## *Cryptosporidium* microscopy

| | |
|---|---|
| **Investigation** | *Cryptosporidium* microscopy |
| **Tests** | ZN stain for the detection of *Cryptosporidium* sp. |
| **Sample type** | Faeces |
| **Collection Container** | Universal with spoon (blue top)<br>  |
| **Sample collection** | No special requirements<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 2 days |
| **Limitations** | Only tested on BS5-BS7 type stool samples or if specifically indicated in clinical details. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Detection of Viruses in Faeces samples (e.g., enterovirus, etc.)

| | |
|---|---|
| **Investigation** | Detection of viruses in faeces samples |
| **Tests** | Viral PCR |
| **Sample type** | Faeces |
| **Collection Container** | Universal with spoon (blue top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Send if suspected viral meningitis. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Detection of Viruses in CSF samples

(Standard: HSV, Varicella Zoster, Enterovirus. Children: Parechoviruses and HHV-6)

| | |
|---|---|
| **Investigation** | Detection of viruses in CSF samples |
| **Tests** | Viral PCR |
| **Sample type** | CSF |
| **Collection Container** | 2 sterile glass bijoux containers.<br>Send 1st and 3rd samples, appropriately labelled.<br>  |
| **Sample collection** | Dispense CSF (minimum 0.5ml in each bottle) into single use containers and label in order. |

| | |
|---|---|
| | Specimens should be sent to the laboratory without delay during normal hours. Outside of normal hours samples should be placed in the pathology reception and the on-call Microbiology Biomedical Scientist contacted through switchboard. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Send if suspected viral meningitis.<br>Laboratory may send this sample to reference laboratory if CSF cell count and CSF biochemistry suggests likely viral meningitis. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Ear Swab Culture

| | |
|---|---|
| **Investigation** | Ear Swab Culture |
| **Tests** | Culture |
| **Sample type** | Ear swab |
| **Collection Container** | Transport swab (black top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## EBV Serology

| | |
|---|---|
| **Investigation** | EBV Serology |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Clinical details are essential for processing |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## EBV PCR

This test is used for the diagnosis of acute disease.

| | |
|---|---|
| **Investigation** | EBV PCR |
| **Tests** | PCR |
| **Sample type** | EDTA blood |

| | |
|---|---|
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Clinical details are essential for processing.<br>False negatives may occur for a variety of reasons, for example inappropriate timing of sample collection, inappropriate sample, presence of organism below the detectable limit of the assay. Towards the limit of detection of an assay sampling variation will result in lower reproducibility. New and emerging variants may also occur which may not be detected by this assay. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is processed at UKHSA Bristol Reference Laboratory. |

## Enterovirus IgM (e.g., Coxsackievirus, Echovirus)

The enteroviruses can cause a wide spectrum of human illness, from mild non-specific fever and rash to upper respiratory tract infections, aseptic meningitis, and pleurodynia, through to life-threatening infections such as myocarditis, encephalitis, and paralytic poliomyelitis. Most infections however are asymptomatic.

| | |
|---|---|
| **Investigation** | Enterovirus IgM (e.g., Coxsackievirus, Echovirus) |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Clinical details are essential for processing |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test performed at Epsom Reference Laboratory. |

## Enterovirus Qualitative PCR

| | |
|---|---|
| **Investigation** | Enterovirus Qualitative PCR |
| **Tests** | PCR |
| **Sample type** | Depends on enterovirus target type:<br>• CSF<br>• EDTA blood sample<br>• Faeces<br>• Throat swab |
| **Collection Container** | Sterile plastic bijoux container<br>  |

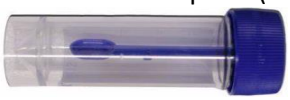
| | |
|---|---|
| | Purple top (minimum volume 500µl)<br>  <br>Faeces container<br>  <br>Viral swabs in viral transport medium<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Primary assay for viral CSF requests with VZV, HSV (and Parechovirus/HHV6 appropriate in children). Enterovirus PCR covers a range of non-polio enteroviruses, echoviruses, parechoviruses and Group A and B coxsackie viruses.<br>Must be discussed with a Consultant Microbiologist prior to sending to the Reference Laboratory. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Eye Swab Culture

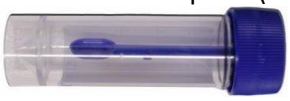
Infections of the eye can be caused by a variety of microorganisms. Swabs from eyes may be contaminated with skin flora, but any organism may be considered for further investigation if clinically indicated. Exogenous organisms may be introduced to the eye via hands, fomites (e.g., contact lenses), traumatic injury, or following surgery. Haematogenous spread from a focus elsewhere in the body can also occur.

| | |
|---|---|
| **Investigation** | Eye Swab Culture |
| **Tests** | Culture |
| **Sample type** | Eye swab |
| **Collection Container** | Transport swab (black top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Separate samples should be collected into appropriate transport media for detection of viruses, *N. gonorrhoeae* and/or *C. trachomatis.*<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Faeces Culture

| | |
|---|---|
| **Investigation** | Faeces Culture |
| **Tests** | Culture and sensitivities |
| **Sample type** | Faeces |
| **Collection Container** | Universal with spoon (blue top)<br>  |
| **Sample collection** | Optimally collected before antimicrobial therapy started.<br>Specimen may be passed into a clean, dry, disposable bedpan or similar container and transferred to an appropriate collection container.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Clinical details are essential for processing.<br>Shigella culture may be less effective if sample arrives more than 4 hours after sample taken.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Faecal Gastroplex PCR

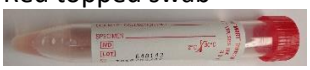
| | |
|---|---|
| **Investigation** | Faecal Gastroplex PCR |
| **Tests** | PCR |
| **Sample type** | Faeces |
| **Collection Container** | Universal with spoon (blue top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Immediate dispatch for testing is preferred. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is processed at UKHSA Bristol Reference Laboratory. |

## Fertility Screening

| | |
|---|---|
| **Investigation** | Fertility screening |
| **Tests** | • HIV,<br>• Hepatitis B core antibody,<br>• Hepatitis B Surface antigen,<br>• Hepatitis C antibody. |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements. |

| | |
|---|---|
| | Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is processed at UKHSA Bristol Reference Laboratory. |

## Full Respiratory Panel (PCR)

| | |
|---|---|
| **Investigation** | Detection of respiratory viruses |
| **Tests** | PCR |
| **Sample type** | Viral swab |
| **Collection Container** | Green topped swab<br>  <br>Red topped swab<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 1-2 days |
| **Limitations** | Samples are firstly tested on the Cepheid Gene Xpert PCR platform to rule out SARS, RSV, Flu A and Flu B infections. If the sample is negative for these viruses, Consultant Microbiologist decides whether it needs testing for full respiratory panel on Biofire PCR platform. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Functional Antibodies (Pneumococcal IgG, Haemophilus IgG, Tetanus IgG)

| | |
|---|---|
| **Investigation** | Functional Antibodies |
| **Tests** | • Pneumococcal IgG,<br>• Haemophilus IgG,<br>• Tetanus IgG. |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | None |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at New Cross Reference Laboratory. |

## Fungal Culture

| | |
|---|---|
| **Investigation** | Fungal Culture |
| **Tests** | Microscopy & Culture |
| **Sample type** | • Skin<br>• Nails<br>• Hair |
| **Collection Container** | Fungal culture kit  Universal white top  |
| **Sample collection** | **Skin Specimens:** Skin lesions should be collected by scraping skin from the advancing edge of the lesion with a blunt scalpel blade or other sharp instrument. Place the scraping into a special Mycology transport pack. Please make sure you send enough material for both microscopy and culture. At least 5mm2 of skin flakes are required.<br>**Nails:** Clippings should include the full thickness of the nail and extend as far back from the edge as possible. Samples should be sent in a Mycology transport pack. Several small parings are preferred to one large sample to optimise culture results. Nail parings should be taken from the diseased area, the discoloured or brittle parts of the nail and cut back as far as possible from the free edge as some fungi are restricted to the lower parts. Scrapings can also be taken from under the nail to supplement the clipping. Nail clippings often fail to grow fungi even if present.<br>**Hair**: Hair should be plucked from affected areas together with skin scrapings from associated scalp lesions. Broken lustreless hair should be selected from the margin of the scalp lesion. Hair should be removed with epilating forceps. The hair follicle and one inch of proximal hair should be sent to the laboratory. Receipt of cut distal ends will not be processed. |
| **Turnaround Time** | 7 – 10 days for microscopy 3 – 4 weeks for culture. |
| **Limitations** | Swabs are of little value for the investigation of dermatophyte infections.<br>Delays in transportation may affect the recovery of pathogens.<br>For further information and guidance on recommended treatment options please refer to PHE guide:<br>Fungal_skin_and_nail_infections_guidance.pdf (publishing.service.gov.uk) |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Fungal precipitins

| | |
|---|---|
| **Investigation** | Fungal precipitins |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |

| | |
|---|---|
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Clinical details are essential for processing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is processed at UKHSA Bristol Reference Laboratory. |

## Gonococcal Culture (GUM clinic only)

| | |
|---|---|
| **Investigation** | Culture for *Neisseria gonorrhoeae* (GUM clinic only) |
| **Tests** | Culture and sensitivities |
| **Sample type** | • Endo-cervical swab,<br>• Urethral swab,<br>• Throat swab,<br>• Rectal swab. |
| **Collection Container** | Transport swab (black top)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Swabs for gonococcal investigation should not be refrigerated as this significantly reduces the recovery rate. |
| **Turnaround Time** | 4 days |
| **Limitations** | Clinical details are essential for processing.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Gynaecological Culture

| | |
|---|---|
| **Investigation** | Gynaecological Culture |
| **Tests** | Microscopy (where applicable) & Culture |
| **Sample type** | • Vaginal swab,<br>• Endocervical swab,<br>• Urethral swab,<br>• Penile swab. |
| **Collection Container** | Transport swab (black top)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated.<br>Optimally collected before antimicrobial therapy started. |
| **Turnaround Time** | 4 days |

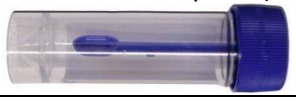
| | |
|---|---|
| **Limitations** | Please refer to guidance on PHE website as to when and how to send a swab to the laboratory. Essentially, in uncomplicated cases of vaginal discharge a diagnosis can be reached using clinical history, characteristic appearance, and the pH of the discharge.<br>Please note that routine culture for *Neisseria gonorrhoeae* is no longer conducted. The laboratory now provides PCR for the detection of *N. gonorrhoeae*. For *N. gonorrhoeae* testing please send a Cobas PCR *Chlamydia* swab and make it clear that testing for *N. gonorrhoeae* is required. One Cobas swab can be used to test for both *Chlamydia* and *N. gonorrhoeae* if requested.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## *Haemophilus influenzae* Type B Ab

This test measures the amount of anti-Hib IgG immunoglobulin (antibody) in the blood.

| | |
|---|---|
| **Investigation** | *Haemophilus influenzae* Type B antibodies |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Sandwell and West Birmingham Hospital Immunology Department. |

## *Helicobacter pylori* Antigen Detection

| | |
|---|---|
| **Investigation** | *Helicobacter pylori* antigen detection in stool specimens |
| **Tests** | *H. pylori* antigen testing |
| **Sample type** | Fresh or frozen stool samples (no preservatives) |
| **Collection Container** | Universal with spoon (blue top)<br>  |
| **Sample collection** | Specimen may be passed into a clean, dry, disposable bedpan or similar container and transferred to an appropriate collection container.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 1 day |
| **Limitations** | The test is a qualitative assay for *H. pylori* antigen in stool and does not indicate the quantity of the antigens. A negative result does preclude the possibility of infection with *H. pylori*. |
| **Out-of-Hours-Testing** | No |

| | |
|---|---|
| **Additional Comments** | *H. pylori* stool antigen testing is more specific and allows post treatment testing or re-testing if symptoms re-occur despite therapy.<br>The alternative test (if faeces is unacceptable to the patient) is the Urea Breathe Test. This should be arranged through the Gastroenterology Department or via Community prescription at the local pharmacy.<br>Public Health England produces a useful guide on who and when to test for *H. pylori*:<br>https://www.gov.uk/government/publications/helicobacter-pylori-diagnosis-and-treatment<br>For more guidance on the management of common infection related problems and the appropriateness of sending a specimen to the laboratory for investigation, please visit the PHE website at<br>https://www.gov.uk/government/organisations/public-health-england<br>or https://www.gov.uk/topic/health-protection/infectious-diseases<br>and search for 'quick reference guides'. This will produce several documents primarily aimed at primary care practitioners which have been produced in collaboration with GPs and the Association of Medical Microbiologists (AMM). |

## Hepatitis A Serology

Hepatitis A IgG test is used to screen for hepatitis past infection or immunity. Positive result indicates exposure at some time.
Hepatitis A IgM test is used for the diagnosis of acute Hepatitis A infection (jaundice in adults).

| | |
|---|---|
| **Investigation** | Hepatitis A IgM and IgG |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Clinical details are essential for processing, especially onset date. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Hepatitis A PCR

| | |
|---|---|
| **Investigation** | Hepatitis A PCR |
| **Tests** | PCR |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |

| | |
|---|---|
| **Limitations** | Must be hepatitis A positive or equivocal. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Virus Reference Department UKHSA Colindale Reference Laboratory. |

## Hepatitis B surface Antibody

This test is used to determine if protective immunity has been achieved following immunisation. Low levels of hepatitis B virus surface antibody may be found in patients who have past infection.

| | |
|---|---|
| **Investigation** | Hepatitis B surface antibody detection |
| **Tests** | Antibody detection<br>(for post vaccination) |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Vaccination history is required for full interpretation of result.<br>Blood should be tested 6-8 weeks after final dose of Hepatitis B vaccination. Accurate interpretation of this result is reliant upon detailed vaccination history and clinical details. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Hepatitis B Core Total Antibody

| | |
|---|---|
| **Investigation** | Hepatitis B Core Total Antibody detection |
| **Tests** | Antibody detection<br>(acute infection/ evidence of natural immunity) |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Clinical details are essential for processing |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Hepatitis B Surface Antigen

This test is used for the diagnosis of acute or recent hepatitis B or carrier state.

| | |
|---|---|
| **Investigation** | Hepatitis B Surface Antigen detection |
| **Tests** | Antigen detection |
| **Sample type** | Clotted blood |

| | |
|---|---|
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5-7 days |
| **Limitations** | Requests must be clearly indicated. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Hepatitis B e Antigen and Antibody and Hepatitis B core IgM

These tests are used to assess infective risk level in acute and chronic hepatitis B virus infections.

| | |
|---|---|
| **Investigation** | • Hepatitis B e Antigen detection<br>• Hepatitis B e Antibody detection<br>• Hepatitis B core IgM detection |
| **Tests** | Antibody/antigen detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Requests must be clearly indicated.<br>Patient should be Hepatitis B surface antigen positive and/or Hepatitis B core total antibody positive. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Hepatitis B DNA Viral load

| | |
|---|---|
| **Investigation** | Hepatitis B DNA Viral load |
| **Tests** | PCR |
| **Sample type** | EDTA blood |
| **Collection Container** | Purple top (minimum volume 3 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Requests must be clearly indicated.<br>Patient must be Hepatitis B positive. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Hepatitis C Ab

Marker of infection at some time.

| | |
|---|---|
| **Investigation** | Hepatitis C Antibody detection |
| **Tests** | Detection of Hepatitis C antibody (qualitative). |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days<br>Confirmation of positive result: 10-14 days |
| **Limitations** | Requests must be clearly indicated. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Confirmation of positive results are sent to UKHSA Bristol Reference Laboratory. |

## Hepatitis C PCR Qualitative

| | |
|---|---|
| **Investigation** | Hepatitis C PCR Qualitative |
| **Tests** | RNA detection by PCR |
| **Sample type** | 2 x Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Requests must be clearly indicated. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Hepatitis C Genotype

| | |
|---|---|
| **Investigation** | Hepatitis C Genotype |
| **Tests** | Genotype detection by PCR |
| **Sample type** | 2 x EDTA blood |
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Requests must be clearly indicated.<br>Patient must be HCV positive with active infection |
| **Out-of-Hours-Testing** | No |

| | |
|---|---|
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Hepatitis C Viral Load

| | |
|---|---|
| **Investigation** | Hepatitis C Viral Load |
| **Tests** | PCR |
| **Sample type** | 2 x EDTA blood |
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Requests must be clearly indicated. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Hepatitis D (Delta agent)

| | |
|---|---|
| **Investigation** | Hepatitis D (Delta agent) |
| **Tests** | • Antibody detection,<br>• PCR. |
| **Sample type** | Clotted sample |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Request must be clearly indicated.<br>**Must be Hepatitis B positive.** |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Virus Reference Department UKHSA Colindale Reference Laboratory. |

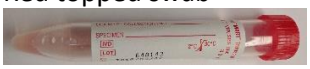
## Hepatitis E IgM and IgG

| | |
|---|---|
| **Investigation** | Hepatitis E IgM and IgG |
| **Tests** | • Antibody detection,<br>• PCR. |
| **Sample type** | Clotted sample |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |

| | |
|---|---|
| **Turnaround Time** | 7-10 days if confirmation is required |
| **Limitations** | Request must be clearly indicated.<br>ALT needs to be >100 |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | If sample is positive, it gets sent to the reference laboratory for PCR testing. This test is performed at Virus Reference Department UKHSA Colindale Reference Laboratory. |

## Herpes Simplex Virus 1 and 2 PCR (Qualitative)

For diagnosis of acute disease.

| | |
|---|---|
| **Investigation** | Herpes Simplex virus 1 and 2 PCR |
| **Tests** | PCR |
| **Sample type** | Viral swab |
| **Collection Container** | Green topped swab<br>  <br>Red topped swab<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | False negatives may occur for a variety of reasons, for example inappropriate timing of sample collection, inappropriate sample, presence of organism below the detectable limit of the assay. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## HIV 1/2 Ab/Ag

| | |
|---|---|
| **Investigation** | HIV 1/2 Ab/Ag |
| **Tests** | HIV-1 and 2 antibodies and HIV p24 antigen detection(qualitative) |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days (May take longer if confirmation is required). |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | If sample is positive, it gets sent to UKHSA Bristol Reference Laboratory for confirmation. |

## HIV Pro-Viral DNA Load

| | |
|---|---|
| **Investigation** | HIV Pro-Viral DNA Load |

| | |
|---|---|
| **Tests** | DNA detection in Infants <1 year old |
| **Sample type** | 2 x EDTA blood |
| **Collection Container** | Peach Pink top (paediatric EDTA sample tube)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10 days |
| **Limitations** | Requests for HIV must be clearly indicated, and the request form signed.<br>Sample must be sent with EDTA sample from HIV positive mother. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Virus Reference Department, UKHSA Colindale. |

## HIV 1 RNA Viral Load

| | |
|---|---|
| **Investigation** | HIV 1 RNA Viral Load |
| **Tests** | RNA detection in adults and children >1 year old |
| **Sample type** | 3 x EDTA blood |
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 1-2 days |
| **Limitations** | Requests for HIV must be clearly indicated, and the request form signed.<br>Patient MUST be HIV 1 positive. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## HIV Genotypic Resistance Test

| | |
|---|---|
| **Investigation** | HIV Genotypic Resistance Test |
| **Tests** | HIV resistance to anti-retroviral therapy |
| **Sample type** | 10ml EDTA blood |
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated.<br>Please submit the sample with a completed specific Royal Free HIV genotypic resistance test form and Salisbury Microbiology request form. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Request from GUM clinic ONLY. |
| **Out-of-Hours-Testing** | No |

| | |
|---|---|
| **Additional Comments** | This test is sent to the Royal Free London Reference Laboratory. |

## HIV-2 Viral Load and HIV-2 Pro-viral testing

| | |
|---|---|
| **Investigation** | HIV-2 Viral load and HIV-2 Pro-Viral testing |
| **Tests** | PCR |
| **Sample type** | • 1 x Whole Blood EDTA (4-5mL)<br>• 1 x Whole Blood EDTA for Pro-Viral testing |
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No. |
| **Additional Comments** | This test is performed at UCLH Department of Clinical Virology Reference Laboratory in Tottenham. |

## HTLV-1 & HTLV-2 Ab

Used to determine past or current infection.

| | |
|---|---|
| **Investigation** | HTLV-1 and HTLV-2 Ab |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days. |
| **Limitations** | |
| **Out-of-Hours-Testing** | No. |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Human Herpes Virus-6 DNA Quantitative PCR

For diagnosis of HHV-6 infection.

| | |
|---|---|
| **Investigation** | Human Herpes Virus-6 DNA Quantitative PCR |
| **Tests** | PCR |
| **Sample type** | • Clotted sample<br>• EDTA blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  <br>Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |

| | |
|---|---|
| **Turnaround Time** | 10-14 days |
| **Limitations** | False negatives may occur for a variety of reasons, for example inappropriate timing of sample collection, inappropriate sample, presence of organism below the detectable limit of the assay. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Virus Reference Department, UKHSA Colindale |

## Human Herpes Virus-7 DNA Quantitative PCR

For diagnosis of HHV-7 infection.

| | |
|---|---|
| **Investigation** | Human Herpes Virus-7 DNA Quantitative PCR |
| **Tests** | PCR |
| **Sample type** | • EDTA blood<br>• CSF<br>• Serum |
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  <br>Yellow top (minimum volume 3.5 ml)<br>  <br>Sterile plastic bijoux container<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | False negatives may occur for a variety of reasons, for example inappropriate timing of sample collection, inappropriate sample, presence of organism below the detectable limit of the assay. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Virus Reference Department, UKHSA Colindale. |

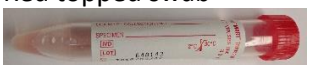
## Human Herpes Virus-8 DNA Quantitative PCR

For diagnosis of HHV-8 infection.

| | |
|---|---|
| **Investigation** | Human Herpes Virus-8 DNA Quantitative PCR |
| **Tests** | PCR |
| **Sample type** | EDTA blood |
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |

| | |
|---|---|
| **Limitations** | False negatives may occur for a variety of reasons, for example inappropriate timing of sample collection, inappropriate sample, presence of organism below the detectable limit of the assay. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Virus Reference Department, UKHSA Colindale. |

## Influenza A/B

| | |
|---|---|
| **Investigation** | Influenza A/B |
| **Tests** | PCR |
| **Sample type** | • Nasopharyngeal swab<br>• Nose and throat swab in VTM |
| **Collection Container** | Green topped swab<br>  <br>Red topped swab<br>  |
| **Sample collection** | Samples should be collected wearing correct PPE. Samples should be double bagged. Do not remove viral transport media from sample container. |
| **Turnaround Time** | 1 day |
| **Limitations** | Requests must be clearly indicated |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## IV Cannula Culture, e.g., CVP line tip

| | |
|---|---|
| **Investigation** | IV Cannula Culture, e.g., CVP line tip |
| **Tests** | Culture |
| **Sample type** | End of cannula tip (end 4 cm)<br>Note: blood culture is preferable |
| **Collection Container** | Universal (white top)<br>  |
| **Sample collection** | Sample should be collected before antimicrobial therapy started.<br>Disinfect the skin around the cannula entry site, remove cannula using aseptic technique, and cut off 4 cm of the tip into an appropriate CE marked leak proof container using sterile scissors.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Cannula should only be sent if there is evidence of infection. Where line related infection/sepsis suspected, send blood cultures (central and peripheral taken simultaneously), prior to line removal. Do NOT send line tips if they are being removed routinely and infection is NOT suspected.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Joint Fluid Culture

| | |
|---|---|
| **Investigation** | Joint Fluid Culture |
| **Tests** | Gram stain, culture and crystals |
| **Sample type** | Joint fluid |
| **Collection Container** | Universal (white top)<br>  |
| **Sample collection** | Samples should be taken using strict aseptic technique in line with Trust procedure. Ideally a minimum volume of 1ml should be collected. Where adequate sample, also inoculate into blood culture bottle set.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Please indicate if microscopy for crystals is required.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | Not routinely tested out of hours. |
| **Additional Comments** | |

## Leptospiral serology IgM
## Leptospiral PCR

| | |
|---|---|
| **Investigation** | • Leptospiral serology IgM<br>• Leptospiral PCR |
| **Tests** | • Antibody detection<br>• PCR |
| **Sample type** | • Clotted blood<br>• EDTA blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  <br>Purple Top (minimum volume 4 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Requests must be clearly indicated. Please state date of onset, nature of symptoms and exposure history are essential for processing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is sent to PHE Porton Down reference Laboratory. |

## Lyme (*Borrelia burgdorferi*) IgG and IgM

| | |
|---|---|
| **Investigation** | *Borrelia burgdorferi* IgG and IgM |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |

| | |
|---|---|
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Requests must be clearly indicated.<br>Other samples (e.g., CSF, joint fluid) by arrangement with Consultant Microbiologist only. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Reactive results are sent to PHE Porton Down Reference Laboratory for Immunoblotting. |

## Lyme Immunoblot (*Borrelia burgdorferi*)

This test is used to confirm positive Lyme IgG/IgM results.

| | |
|---|---|
| **Investigation** | Lyme Immunoblot |
| **Tests** | Immunoblot test |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Sample must ne Lyme IgG/IgM positive |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at PHE Porton Down Reference Laboratory. |

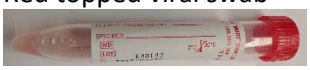
## Measles Serology IgM

| | |
|---|---|
| **Investigation** | Measles Serology IgM |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Measles Serology IgG

| | |
|---|---|
| **Investigation** | Measles Serology IgG |
| **Tests** | Antibody detection (evidence of immunity). |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Requests must be clearly indicated.<br>For acute infection contact local Health Protection Unit (HPU) for oral swab test kit |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Measles PCR

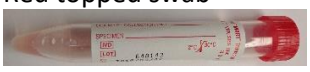
| | |
|---|---|
| **Investigation** | Measles PCR |
| **Tests** | PCR |
| **Sample type** | • Oral fluid,<br>• Throat swabs,<br>• NPA,<br>• CSF (150µl),<br>• Urine,<br>• Tissue. |
| **Collection Container** | Green topped viral swab<br>  <br>Red topped viral swab<br>  <br>Universal (white top)<br>  <br>Sterile plastic bijoux container<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Please contact the laboratory before sending a tissue. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Meningococcal PCR

| | |
|---|---|
| **Investigation** | Meningococcal PCR |
| **Tests** | DNA detection |
| **Sample type** | Older children/adults: CSF<br>Young children: EDTA blood |
| **Collection Container** | Sterile plastic bijoux container<br>  <br>Purple top (minimum volume 4 ml)<br>  <br>Pink top<br>  |
| **Sample collection** | Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated.<br>Where a CSF sample is available, this should be sent in addition to an EDTA blood sample. Clinical details are essential for processing. |
| **Turnaround Time** | 10-14 days<br>(Positive result will be phoned earlier) |
| **Limitations** | Requests must be clearly indicated. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Meningococcal Reference Laboratory, Manchester PHE. |

## Monkeypox (Mpox) PCR

In the first instance, suspected cases must be discussed with Consultant Microbiologist. Make sure that the request form indicates the risk factors and the reason that Mpox is suspected.

| | |
|---|---|
| **Investigation** | Monkeypox PCR |
| **Tests** | PCR |
| **Sample type** | • Viral swab,<br>• EDTA,<br>• Throat swab in VTM,<br>• Urine. |
| **Collection Container** | Green topped swab<br>  <br>Red topped swab<br>  <br>Purple top (minimum volume 4 ml)<br>  <br>Universal (White top)<br>  |

| | |
|---|---|
| **Sample collection** | Collect specimens as per normal procedure. Specimens should be double bagged, with the request form in the outer bag. Specimens should be sent to the laboratory without delay. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Suspected cases need to be discussed with the Consultant Microbiologist first. |
| **Out-of-Hours-Testing** | No. |
| **Additional Comments** | This test is performed at RIPL UKHSA Reference Laboratory. |

## Mouth Swab Culture

| | |
|---|---|
| **Investigation** | Mouth Swab Culture |
| **Tests** | Culture |
| **Sample type** | Mouth swab |
| **Collection Container** | Transport swab (black top)<br>  |
| **Sample collection** | Optimally collected before antimicrobial therapy started.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Culture directed to *Candida* sp. (For herpes simplex please refer to virology section).<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## MRSA Culture

| | |
|---|---|
| **Investigation** | MRSA Culture |
| **Tests** | Culture |
| **Sample type** | • Swab,<br>• Urine,<br>• Sputum. |
| **Collection Container** | Transport swab (Black topped)<br>  <br>Universal (White top)<br>  <br>Universal (60ml wide-mouth, metal top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |

| | |
|---|---|
| **Turnaround Time** | Negative: 1 – 2 days<br>Positive: 2-4 days |
| **Limitations** | Culture directed to MRSA only.<br>See Trust MRSA Policy.<br>Axilla & throat swabs are not accepted.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Mumps Serology IgG

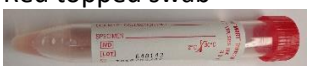
| | |
|---|---|
| **Investigation** | Mumps Serology IgG |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Requests must be clearly indicated. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Mumps Serology IgM

| | |
|---|---|
| **Investigation** | Mumps IgM |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Requests must be clearly indicated.<br>For acute infection contact local Health Protection Unit (HPU) for oral swab test kit. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Virus Reference Department UKHSA Colindale Reference Laboratory. |

## Mumps PCR

| | |
|---|---|
| **Investigation** | Mumps PCR |
| **Tests** | PCR |
| **Sample type** | Mouth/throat swab |
| **Collection Container** | Green topped swab |

| | |
|---|---|
| |  <br>Red topped swab<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Clinical details are essential. Please state vaccination history. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Virus Reference Department, Colindale Reference Laboratory |

## *Mycobacterium tuberculosis* Fast Track

| | |
|---|---|
| **Investigation** | *M. tuberculosis* Fast Track test |
| **Tests** | Detection of *M. tuberculosis* complex by molecular amplification techniques |
| **Sample type** | • CSF (min 0.5mL Whole CSF),<br>• Wax blocks (for wax blocks, an annotated diagram or slide is required indicating the area where AFB were seen, or testing should be performed from). |
| **Collection Container** | Sterile plastic bijoux container<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at National Mycobacterium Reference Service – South (NMRS – South) PHE Colindale Reference Laboratory. |

## *Mycoplasma genitalium* PCR

| | |
|---|---|
| **Investigation** | Detection of *Mycoplasma genitalium* rRNA |
| **Tests** | PCR |
| **Sample type** | • Swab in VTM media,<br>• Cobas media,<br>• Urine (in green tube or sterile universal container). |
| **Collection Container** | Green topped swab<br>  <br>Red topped swab<br>  <br>Cobas transport media (swab) |

| | |
|---|---|
| |  <br>Cobas transport media (for urine)<br>  <br>Universal (White top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Colindale Bacteriology (BRD Colindale) Reference Laboratory. |

## Neonatal Screen Culture

| | |
|---|---|
| **Investigation** | Neonatal Screen Culture |
| **Tests** | Culture |
| **Sample type** | • Swabs<br>• Gastric aspirate |
| **Collection Container** | Transport swab (black top)<br>  <br>Universal container<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Non-indigenous mycoses (e.g., *Histoplasma*) serology

| | |
|---|---|
| **Investigation** | Non-indigenous mycoses serology |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements. |

| | |
|---|---|
| | Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Travel history is essential. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Mycology Reference Laboratory. |

## Nose Swab Culture

| | |
|---|---|
| **Investigation** | Nose Swab Culture |
| **Tests** | Culture |
| **Sample type** | Nose swab |
| **Collection Container** | Transport swab (black top)<br>  |
| **Sample collection** | Optimally collected before antimicrobial therapy started.<br>No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Nasal swabs should NOT be taken to investigate the presence of *Bordetella pertussis*.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Parasitology Investigation

| | |
|---|---|
| **Investigation** | Parasitology |
| **Tests** | Microscopy |
| **Sample type** | Faeces |
| **Collection Container** | Universal with spoon (blue top)<br>  |
| **Sample collection** | Specimen may be passed into a clean, dry, disposable bedpan or similar container and transferred to an appropriate collection container.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 6 days |
| **Limitations** | Please contact Laboratory if 'hot-stool' examination is required |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Parasitology investigation for *Enterobius vermicularis*

| | |
|---|---|
| **Investigation** | Microscopy for *Enterobius vermicularis* |
| **Tests** | Microscopy |
| **Sample type** | • Sellotape slide, |

| | |
|---|---|
| | • Perianal swab. |
| **Collection Container** | Laboratory no longer supplies collection kits.<br>• Sellotape slide,<br>• Cotton-wool swab in dry container. |
| **Sample collection** | **Sellotape slide**<br>Apply clear Sellotape to the perianal region, pressing the adhesive side of the tape firmly against the left and right perianal folds several times; the tape can be wrapped around a tongue depressor to aid specimen collection. Smooth the tape back on the slide, adhesive side down.<br>**Perianal swab**<br>Perianal specimens are best obtained in the morning before bathing or defecation. Three specimens should be taken on consecutive days before pinworm infection is ruled out. Cotton-wool swab in dry container should be used for collection.<br>Spread buttocks apart and rub the moistened cotton wool swab over the area around the anus, but do not insert into the anus. Place cotton wool swab back in its container (no transport medium required).<br>Occasionally, an adult worm may be collected from a patient and sent in saline or water for identification.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 6 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Parasite disease serology

Various including *Schistosoma*, Amoebic (abscess), *Toxocara*, etc.

| | |
|---|---|
| **Investigation** | Serology for various parasites including *Schistosoma*, Amoebas (abscess), *Toxocara*, etc. |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Clinical details including countries visited & dates are essential.<br>Contact duty Consultant Microbiologist if required. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Department of Clinical Parasitology (UCLH) Health Services Reference Laboratory. |

## Parvovirus B19 IgG and IgM Serology

| | |
|---|---|
| **Investigation** | Parvovirus Serology |
| **Tests** | Antibody detection |

| | |
|---|---|
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Clinical details are essential for processing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Parvovirus B19 PCR

| | |
|---|---|
| **Investigation** | Parvovirus B19 PCR |
| **Tests** | PCR |
| **Sample type** | • EDTA,<br>• Serum. |
| **Collection Container** | Purple top (minimum volume 4 ml)<br>  <br>Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Pleural Fluid Culture

| | |
|---|---|
| **Investigation** | Pleural Fluid Culture |
| **Tests** | Gram stain & Culture |
| **Sample type** | Pleural fluid |
| **Collection Container** | Universal (white top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Pneumococcal PCR

| | |
|---|---|
| **Investigation** | Pneumococcal PCR |
| **Tests** | DNA detection |
| **Sample type** | EDTA blood and/or CSF |
| **Collection Container** | Purple top for blood (minimum volume 4 ml)<br>  <br>Sterile plastic bijoux container<br>  |
| **Sample collection** | Dispense CSF (minimum 0.5ml in each bottle) into single use containers and label in order.<br>CSF specimens should be sent to the laboratory without delay during normal hours. Outside of normal hours samples should be placed in the pathology reception and the on-call Microbiology Biomedical Scientist contacted through switchboard.<br>No special requirements for EDTA samples.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days (positive result will be phoned earlier). |
| **Limitations** | Requests must be clearly indicated. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at PHE Manchester reference laboratory. |

## Pneumococcal Serology

| | |
|---|---|
| **Investigation** | *Streptococcus pneumoniae* antibody detection |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Sandwell and West Birmingham Hospital Immunology Department. |

## Pus Culture

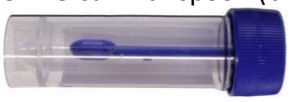
| | |
|---|---|
| **Investigation** | Pus Culture |
| **Tests** | Gram stain & Culture |
| **Sample type** | Pus |
| **Collection Container** | Universal (white top) |

| | |
|---|---|
| |  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Rabies Serology

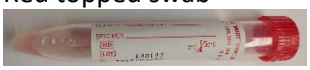
| | |
|---|---|
| **Investigation** | Rabies antibody detection |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Vet Lab Reference Laboratory, Weybridge. |

## Rotavirus EIA

| | |
|---|---|
| **Investigation** | Rotavirus EIA |
| **Tests** | Antigen detection |
| **Sample type** | Faeces |
| **Collection Container** | Universal with spoon (blue top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 1 day |
| **Limitations** | Limited to children who are less than 5 years old. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## RSV Detection

| | |
|---|---|
| **Investigation** | RSV detection |
| **Tests** | PCR |
| **Sample type** | • Nasopharyngeal aspirate,<br>• Viral swab. |

| | |
|---|---|
| **Collection Container** | Trap bottle<br>  <br>Green topped swab<br>  <br>Red topped swab<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 1 day |
| **Limitations** | Clinical details are essential for processing |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Rubella Serology

| | |
|---|---|
| **Investigation** | Rubella Serology IgG/IgM |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days |
| **Limitations** | Clinical details are essential for processing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Schistosoma Serology

| | |
|---|---|
| **Investigation** | Schistosoma antibody detection |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Please state travel history or other relevant clinical details. |
| **Out-of-Hours-Testing** | No |

| | |
|---|---|
| **Additional Comments** | This test is performed at the Department of Clinical Parasitology (UCLH) Health Services Reference Laboratory. |

## Skin Swab Culture

The skin is colonised by normally non-harmful flora. When the skin is broken because of trauma, burns, bites or surgical procedures, colonisation with a range of bacteria may occur. Infections of the skin and subcutaneous tissues are caused by a wide range of organisms; however the majority are caused by *Staphylococcus aureus* and β haemolytic streptococci groups A, C and G. Microbiological cultures help to establish the causative organism enabling antibiotic sensitivity testing which is essential to ensure optimal treatment regimens.

| | |
|---|---|
| **Investigation** | Skin Swab Culture |
| **Tests** | Culture |
| **Sample type** | Skin swab |
| **Collection Container** | Transport swab (black top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Sputum Culture

| | |
|---|---|
| **Investigation** | Sputum Culture |
| **Tests** | Culture |
| **Sample type** | Sputum |
| **Collection Container** | Universal (60ml wide-mouth, metal top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | If fungal culture required e.g., in an immuno-compromised patient, please indicate on request form.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Staphylococcus and Streptococcus Reference Service (and PVL)

| | |
|---|---|
| **Investigation** | Staphylococcus and Streptococcus Reference Service including PVL testing |

| | |
|---|---|
| **Tests** | Genotyping, Toxin detection, etc. |
| **Sample type** | Pure culture |
| **Collection Container** | N/A |
| **Sample collection** | N/A |
| **Turnaround Time** | 10-14 days |
| **Limitations** | Consultant Microbiologist will decide which isolates need to be sent for further investigation. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | These tests are performed at UKHSA Colindale Bacteriology Reference Laboratory. |

## Syphilis Serology

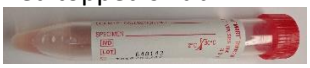
| | |
|---|---|
| **Investigation** | Syphilis antibody detection. |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days, longer if the sample is positive and needs sending to the reference laboratory for confirmation. |
| **Limitations** | Clinical details are essential for processing. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Positive in-house samples are sent to UKHSA Bristol Reference Laboratory for full confirmation. |

## Syphilis IgM, RPR, TPPA, alternative EIA and Immunoblots

| | |
|---|---|
| **Investigation** | Syphilis IgM, RPR, TPPA, alternative EIA and Immunoblots |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5-7 days (Longer if sample needs to be sent to Reference Laboratory). |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | If sample is positive, it is sent to UKHSA Bristol Reference Laboratory for confirmation. |

## Syphilis PCR

| | |
|---|---|
| **Investigation** | Syphilis PCR |
| **Tests** | Detection of *Treponema pallidum* DNA |

| | |
|---|---|
| **Sample type** | Swab in viral transport media |
| **Collection Container** | Green topped swab  Red topped swab  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at PHE Colindale (STBRU) Reference Laboratory. |

## TB Culture (Urine)

| | |
|---|---|
| **Investigation** | TB Culture (Urine) |
| **Tests** | Culture |
| **Sample type** | First-pass early morning urine (from 3 consecutive days) |
| **Collection Container** | Universal (60ml wide-mouth, metal top)  |
| **Sample collection** | 3 specimens should be sent from 3 consecutive days.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours specimens should be refrigerated. |
| **Turnaround Time** | 6 weeks |
| **Limitations** | No microscopy performed on urine TB samples |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is currently performed at Southampton General Hospital. |

## TB Culture (Sputum/ BAL/ Tissue/ Pus)

| | |
|---|---|
| **Investigation** | TB Culture (Sputum/ BAL/ Tissue/ Pus) |
| **Tests** | Microscopy & Culture |
| **Sample type** | • Sputum<br>• BAL<br>• Tissue<br>• Pus |
| **Collection Container** | Universal (60ml wide-mouth, metal top)  |
| **Sample collection** | Sputum specimens should be collected early morning. |

| | |
|---|---|
| | Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours specimens should be refrigerated. |
| **Turnaround Time** | 2 days for microscopy.<br>6 weeks for culture. |
| **Limitations** | Please do not send samples in formalin. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is currently performed at Southampton General Hospital. |

## TB (*Mycobacterium tuberculosis*) T-SPOT

| | |
|---|---|
| **Investigation** | TB (*Mycobacterium tuberculosis*) T-SPOT |
| **Tests** | Gamma interferon test |
| **Sample type** | X2 Lithium blood |
| **Collection Container** | Green top (minimum volume 5 ml)<br>  |
| **Sample collection** | Specimens not to be refrigerated. Specimens should be sent to the laboratory without delay.<br>Sample volume:<br>• Patient <2 years old: 2mL<br>• Patient 2-10 years old: 4 mL<br>• Patient >10 years old: 6 mL |
| **Turnaround Time** | 24-48 hrs |
| **Limitations** | On agreement by Consultant Microbiologist only.<br>Clinical details are essential for processing.<br>Monday to Friday ONLY.<br>Must be accompanied by Revvity Reference Laboratory request form.<br>Samples must arrive in lab by **16:00** hrs and have been taken that morning. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Revvity Reference Laboratory, Oxford. |

## Tetanus Serology

| | |
|---|---|
| **Investigation** | Tetanus IgG antibody detection |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at Sandwell and West Birmingham Hospital Immunology Department or Manchester UKHSA Vaccine Evaluation Unit. |

## Throat Swab Culture

| | |
|---|---|
| **Investigation** | Throat Swab Culture |
| **Tests** | Culture |
| **Sample type** | Throat swab |
| **Collection Container** | Transport swab (black top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days, longer if prolonged culture is required (for persistent/recurrent sore throats) |
| **Limitations** | Isolation of *Neisseria* spp. only on request.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Tissue Culture

| | |
|---|---|
| **Investigation** | Tissue Culture |
| **Tests** | Gram stain & Culture |
| **Sample type** | Tissue |
| **Collection Container** | Universal (white top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 7 days |
| **Limitations** | Please do not send samples in formalin.<br>Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## *Toxoplasma gondii* Serology

| | |
|---|---|
| **Investigation** | *Toxoplasma gondii* antibody detection |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days, longer if confirmation of positive result is required. |
| **Limitations** | Clinical details are essential for processing |

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| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Confirmation of positive results sent to Swansea Hospital. |

## Tropical Disease Serology (Regional Travel Screen)

Various including Dengue, Viral haemorrhagic fevers, etc.

| | |
|---|---|
| **Investigation** | Tropical disease (e.g., Dengue, VHF, etc.) antibody detection |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 7-14 days |
| **Limitations** | Clinical details including countries visited & dates are essential.<br>Vaccinations & antibiotics given are essential as may affect test results.<br>Contact duty Consultant Microbiologist if required |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at PHE Porton Down Reference Laboratory. |

## Ulcer Swab

| | |
|---|---|
| **Investigation** | Ulcer Swab |
| **Tests** | Culture |
| **Sample type** | Ulcer swab |
| **Collection Container** | Transport swab (black top)<br>  |
| **Sample collection** | Specimens should be collected before antimicrobial therapy started.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Routine swabbing is unnecessary unless there is a clinical indication of infection. Delays in transportation may affect the recovery of pathogens. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Urine Antigen Tests: Pneumococcal and Legionella

| | |
|---|---|
| **Investigation** | Detection of *Legionella pneumophila* serogroup 1 and *Streptococcus pneumoniae* antigen in urine |
| **Tests** | Antigen detection |
| **Sample type** | Urine |
| **Collection Container** | Universal (white top) or<br>  <br>yellow top urine collection tubes |

| | |
|---|---|
| |  <br>Green top tube with boric acid.<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 1 day |
| **Limitations** | Please contact Laboratory if urgent processing is required. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## Urine Culture

| | |
|---|---|
| **Investigation** | Urine Culture |
| **Tests** | Microscopy & Culture |
| **Sample type** | Urine |
| **Collection Container** | Green top tube with boric acid.<br>  <br>Container without boric acid<br>  <br>Universal (white top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Please state in clinical details:<br>• Sample type: MSU/ CSU/ SPA/ Bag/ Ileal conduit sample.<br>• Antibiotic use (recent and/or intended): helps with interpretation of results and guides further work up. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | DO NOT USE DIPSTICKS TO SCREEN CATHETER SAMPLES. Catheters will invariably be colonised with bacteria and the presence of a catheter may induce pyuria without the presence of infection. Therefore, dipstick testing should not be used as an aid to the diagnosis of UTI in catheterised patients. Clinical criteria in this instance should be used to judge whether a patient has an infection.<br>Please give relevant clinical information which suggests why UTI is suspected. Listing of dipstick tests alone does not count as adequate clinical details since the tests may be positive for other reasons, e.g., blood during menstruation, urethritis, etc.<br>Routine urine culture is not required to manage uncomplicated lower UTI in women but should be reserved for those women with recurrent |

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| | urinary tract infection, complicated UTI or those who have not responded to empirical therapy (usually trimethoprim or nitrofurantoin). Delays in transportation may affect the recovery of pathogens.<br>For more detail guidance, please refer to:<br>https://www.gov.uk/government/publications/urinary-tract-infection-uti-diagnosis |

## Urinary Parasitology (Schistosomiasis)

| | |
|---|---|
| **Investigation** | Microscopy for *Schistosoma haematobium* |
| **Tests** | Microscopy |
| **Sample type** | Urine |
| **Collection Container** | Universal (white top)<br>  |
| **Sample collection** | Please collect the sample around 10AM – 2PM after 15 minutes of light exercise.<br>Ideally, a minimum volume of 10mL is required. |
| **Turnaround Time** | 5 days |
| **Limitations** | In urinary schistosomiasis, very few ova are present in the urine. The number of ova in the urine varies throughout the day, being highest in urine obtained between 10am and 2pm. In patients with haematuria, eggs may be found trapped in the blood and mucus in the terminal portion of the urine specimen. It is therefore preferable to obtain total urine collected over the time period between 10am and 2pm. Alternatively, a 24hr collection of terminal samples of urine may be helpful.<br>Sterile containers without boric acid must be used. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | |

## *Varicella zoster* Serology (Chickenpox)

This test is used to determine past chickenpox infection (or vaccination). It indicates immunity.

| | |
|---|---|
| **Investigation** | *Varicella zoster* IgG antibody detection. |
| **Tests** | Antibody detection |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 5 days normal<br>1 day (urgent) |
| **Limitations** | Please contact Laboratory if urgent processing is required.<br>Please state date of contact. |
| **Out-of-Hours-Testing** | Saturday/ Sunday/ Bank Holiday morning (by arrangement only). |
| **Additional Comments** | When requesting *Varicella zoster* antibody following contact with chickenpox in both pregnant women and immunocompromised patients |

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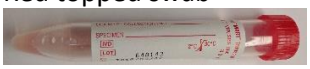
| | it is essential that the date the patient was in contact with the chickenpox case is stated in the clinical details as well as the onset date of the chickenpox case's rash as these are used to assess the value of *Varicella Zoster* Immunoglobulin (VZIG) in every case.<br>Please contact the laboratory in such cases so that the samples can be tested urgently on arrival. This is particularly important on Fridays, weekends, and Bank Holidays when staffing is reduced. Please include contact number (bleep or extension) so the result could be telephoned through to the clinician.<br>For non-immune contacts, VZIG is only available if the result is known less than 10 days after contact, otherwise other therapeutic options may be required. |

## *Varicella zoster* PCR

| | |
|---|---|
| **Investigation** | Detection of *Varicella zoster* DNA |
| **Tests** | PCR |
| **Sample type** | • Viral swab<br>• CSF<br>• Whole EDTA |
| **Collection Container** | Green topped swab<br>  <br>Red topped swab<br>  <br>Sterile glass bijoux container<br>  <br>Purple top (minimum volume 4 ml)<br>  |
| **Sample collection** | For screening, swab should be taken from the affected site.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days. |
| **Limitations** | Please provide sufficient and relevant clinical details (e.g., vesicular rash, shingles). |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Wound Swab Culture

| | |
|---|---|
| **Investigation** | Wound Swab Culture |
| **Tests** | Culture |
| **Sample type** | Wound swab |
| **Collection Container** | Transport swab (Black top)<br>  |
| **Sample collection** | No special requirements. |

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|---|---|
| | Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 4 days |
| **Limitations** | Pus sample should be sent ideally (in a white topped universal).<br>Delays in transportation may affect the recovery of pathogens.<br>Please note that chronic wounds and ulcers will invariably be colonised with organisms and the presence of bacterial growth does not necessarily indicate infection is present.<br>Leg ulcers: Please only send swabs if there is clear evidence of infection, e.g., spreading erythema around the ulcer, new pus, cellulitis, increasing pain.<br>Before sampling remove colonising organisms by washing with sterile saline. Use swab to get deep to the ulcer base and under any over-hanging edges.<br>Please provide description of any clinical signs to aid interpretation of results. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Please refer to the PHE guidance on when it is appropriate to take and submit swabs from leg ulcers at:<br>https://www.nice.org.uk/guidance/ng152 |

## Zika Virus Serology

| | |
|---|---|
| **Investigation** | Detection of Zika virus antibodies |
| **Tests** | Antibody detection (IgG & IgM) |
| **Sample type** | • Clotted blood<br>• Urine (minimum volume 1 mL) |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  <br>Universal (white top)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 10-14 days |
| **Limitations** | For further guidance, please refer to: Zika virus: sample testing advice - GOV.UK (www.gov.uk) |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at PHE Porton Down (RIPL) Reference Laboratory. |

## 13.2 Antibiotic assays

## Gentamicin Levels

| | |
|---|---|
| **Investigation** | Gentamicin Level |
| **Tests** | Antibiotic assay |

| | |
|---|---|
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 1 day |
| **Limitations** | Timing of sample, and drug dose and timing regimen essential for interpretation of result<br>Refer to gentamicin guidelines on MICROGUIDE |
| **Out-of-Hours-Testing** | Yes (must be arranged with on call biomedical scientist in **Laboratory Medicine**). |
| **Additional Comments** | This test is performed in Laboratory Medicine. |

## Tobramycin Levels

| | |
|---|---|
| **Investigation** | Tobramycin Levels |
| **Tests** | Antibiotic assay |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 2-3 days for verbal result, 7 – 10 days for electronic report. |
| **Limitations** | Timing of sample, and drug dose and timing regimen essential for interpretation of result.<br>Please make sure that you complete the request form fully and provide dosing details. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Amikacin Levels

| | |
|---|---|
| **Investigation** | Amikacin Levels |
| **Tests** | Antibiotic assay |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated.<br>Please use a black microbiology request form. |
| **Turnaround Time** | 2-3 days for verbal result, 7 – 10 days for electronic report. |
| **Limitations** | Timing of sample, and drug dose and timing regimen essential for interpretation of result. |

| | |
|---|---|
| | Please make sure that you complete the request form fully and provide dosing details. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Vancomycin Levels

(Pre dose only unless requested by Microbiologist)

| | |
|---|---|
| **Investigation** | Vancomycin Levels |
| **Tests** | Antibiotic assay |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated.<br>Please use a green biochemistry request form. |
| **Turnaround Time** | 1 day |
| **Limitations** | Timing of sample, and drug dose and timing regimen essential for interpretation of result.<br>Refer to vancomycin guidelines on MICROGUIDE. |
| **Out-of-Hours-Testing** | Yes - during daytime at weekends.<br>**(Must be arranged with on call biomedical scientist in Laboratory Medicine).** |
| **Additional Comments** | This test is performed in Laboratory Medicine. |

## Teicoplanin level

(Pre dose only as advised by Microbiologist)

| | |
|---|---|
| **Investigation** | Teicoplanin level |
| **Tests** | Antibiotic assay |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 2-3 days for verbal result, 7 – 10 days for electronic report |
| **Limitations** | Timing of sample, and drug dose and timing regimen essential for interpretation of result.<br>Please make sure that you complete the request form fully and provide dosing details. |
| **Out-of-Hours-Testing** | No – unless agreed before the weekend with Consultant Microbiologist |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Other antibiotic level, e.g., Co-trimoxazole

| | |
|---|---|
| **Investigation** | Other antibiotic level, e.g., Co-trimoxazole |

| | |
|---|---|
| **Tests** | Antibiotic assay |
| **Sample type** | Clotted blood |
| **Collection Container** | Yellow top (minimum volume 3.5 ml)<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated. |
| **Turnaround Time** | 2-3 days for verbal result, 7 – 10 days for electronic report |
| **Limitations** | Timing of sample, and drug dose and timing regimen essential for interpretation of result<br>Pre-arrangement with Consultant Microbiologist ONLY.<br>Please make sure that you complete the request form fully and provide dosing details. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | This test is performed at UKHSA Bristol Reference Laboratory. |

## Anti-fungal drug level

| | |
|---|---|
| **Investigation** | Anti-fungal drug level |
| **Tests** | Anti-fungal assay |
| **Sample type** | Red top serum tube (Non-separator) |
| **Collection Container** | Red top<br>  |
| **Sample collection** | No special requirements.<br>Specimens should be sent to the laboratory without delay during normal working hours.<br>Outside of normal working hours samples should be refrigerated.<br>Please use a black microbiology request form. |
| **Turnaround Time** | 2-3 days for verbal result, 7 – 10 days for electronic report. |
| **Limitations** | Timing of sample, and drug dose and timing regimen essential for interpretation of result.<br>Pre-arrangement with Consultant Microbiologist ONLY.<br>Please make sure that you complete the request form fully and provide dosing details. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | These tests are done at Bristol HPA Mycology Laboratory. |

## 13.3 Family Planning

## Sub-fertility semen analysis

Semen analysis is the microscopic examination of the semen to see how many sperm cells there are and whether they function correctly.

| | |
|---|---|
| **Investigation** | Sub-fertility semen (Andrology) |
| **Tests** | Microscopy (analysis of cells and cell count) |
| **Sample type** | Semen sample |
| **Collection Container** | Universal (Non-Toxic specimen container - contact laboratory) |

| | |
|---|---|
| **Sample collection** | The sample needs to be collected in the morning. Patient must abstain from sexual activity for 48 hours (but no longer than 7 days) before collecting the sample. Sample should be collected into the provided container (it can be collected from GP or fertility specialist). Sample should be collected by masturbation and the entire specimen should be collected into the container. Please do not use a sheath or condom for collection as they are harmful to sperm. After the collection, please keep the sample close to the body whilst travelling as sperm is sensitive to temperature changes.<br>To ensure the test results will be accurate, please aim to deliver the sample within 1 hour of its production. |
| **Turnaround Time** | 7 days |
| **Limitations** | Samples by appointment only (patient to contact laboratory).<br>Fresh sample taken on day of submission.<br>To arrive within 1 hour of being taken. |
| **Out-of-Hours-Testing** | No |
| **Additional Comments** | Please note: Patient leaflets with instructions on how to take samples for Sub-fertility (Semen analysis) samples are available on the Salisbury NHS Foundation Trust MICROGUIDE web site at:<br>Diagnostic Semen Analysis (Male Fertility Testing) (microguide.global)<br><br>The department runs a weekly andrology clinic on Wednesday mornings. There are 6 appointment slots available per week except for days where bank holidays occur. Please ring the laboratory on extension [redacted] to make an appointment prior to sample collection. Patients providing semen samples for Fertility assessment attend with their samples and complete a questionnaire to ensure the Andrology service complies with UKAS quality requirements.<br>Please notify the laboratory if you are unable to attend your appointment so that the appointment slot can be offered to other patients where possible.<br>Please ensure that patients attending for Fertility tests are provided with a completed black Microbiology form PLUS a suitable non-toxic wide-mouthed sterile container to permit the complete semen sample to be captured by the patient. The laboratory provides assembled “collection packs” for Fertility patients which are available at all surgeries/ clinics. If replacement packs are required, please ring ([redacted] to request replacements.<br>**We advise that the requesting clinician goes through the process with the patient at the time the form and container are supplied to ensure the patient understands when and how to collect the sample.** This will help to ensure complete semen sample collection and therefore improve the accuracy of the test.<br>Samples received in alternative containers to the issued sterile non-toxin containers will **NOT** be processed.<br>Fertility is a multi-factorial state and it is advised that the semen test result should be read whilst taking into account other physical and physiological factors affecting a couple’s fertility. |

## Post vasectomy semen analysis

Post-vasectomy semen analysis is the test done by the laboratory to confirm that "No sperms are seen", however, this test does NOT exclude presence of a very small number of sperms in the sample provided.

| | |
|---|---|
| **Investigation** | Post vasectomy semen analysis |
| **Test** | Microscopy |
| **Sample type** | Semen sample |
| **Collection Container** | Universal (Non-Toxic specimen container-contact laboratory) |
| **Sample collection** | The sample needs to be collected in the morning. Patient must abstain from sexual activity for 48 hours (but no longer than 7 days) before collecting the sample. Sample should be collected into the provided container (it can be collected from GP). Sample should be collected by masturbation and the entire specimen should be collected into the container. Please do not use a sheath or condom for collection as they are harmful to sperm. After the collection, please keep the sample close to the body whilst travelling. |
| **Turnaround Time** | 3-4 days |
| **Limitations** | Fresh sample taken on day of submission. To arrive in Lab between 09:00 and 12:00<br>First sample taken 16 weeks post vasectomy and after 24 ejaculations. Second sample 2-4 weeks after first sample |
| **Out-of-Hours Testing** | No |
| **Additional Comments** | **Post vasectomy** samples can by submitted any weekday (Monday – Friday) except bank holidays. Patients are asked to bring their samples to the pathology reception desk on level 3. No appointment is required.<br>Please note: Patient leaflets with instructions on how to take samples for post-vasectomy samples are available on the Salisbury NHS Foundation Trust MICROGUIDE web site at:<br>post-vasectomy-for-printing-april-2020.docx (live.com)<br>Please ensure that patients attending for post-vasectomy testing are provided with a completed black Microbiology form PLUS a suitable non-toxic wide-mouthed sterile container to permit the complete semen sample to be captured by the patient.<br>**We advise that the requesting clinician goes through the process with the patient at the time the form and container are supplied to ensure the patient understands when and how to collect the sample.** This will help to ensure complete semen sample collection and therefore improve the accuracy of the test. |

# 14. Point of Care Testing (POCT)

Our Microbiology Department offers Point of Care Testing from 8PM to 6AM every night. POCT team performs SARS-CoV-2, Flu and RSV testing. They are located on level 3, opposite the Accident and Emergency Department.

POCT team uses the Xpert Xpress SARS-CoV-2/Flu/RSV test, which is an automated *in vitro* diagnostic test for the qualitative detection and differentiation of RNA from Flu A, Flu B, RSV and SARS-CoV-2 virus. The assay is performed on the GeneXpert instrument system which performs sample preparation, nucleic acid extraction, amplification, and detection of target sequences in simple or complex samples using real time polymerase chain reaction (RT-PCR) assays.

The assay is suitable for detection of viruses from nasopharyngeal swabs, nasal swabs, or nasal wash/aspirate specimens.
All negative results are phoned to wards and positive results are phoned to the Site Manager.

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# 16. Patient Consent Disclosure

## 16.1. Laboratory policy on protection of personal information

The Microbiology Department regards the lawful and correct treatment of patients' personal information as vital to successful operations and to maintaining the confidence of users of the service. Our policy is that we will treat personal information lawfully and correctly in adherence to the principles of data protection described in the Data Protection Act 1998 part 1, 3 (9).
As part of the Salisbury District Hospital NHS Foundation Trust, we also work to its governance and data protection policies.

## 16.2. Patient consent

All samples need to have patients consent, therefore all requests for investigations must include the requesting physician's signature on the request form. All unsigned forms may be returned to the requestor before testing is commenced.

## 16.3. Medico-legal samples

Any specimens submitted for medico-legal purposes should have documentation accompanying these specimens to provide an unbroken chain of evidence.

For further guidance on handling medicolegal samples and preserving the chain of evidence please refer to this website: New guidance for handling medicolegal samples and preserving the chain of evidence (rcpath.org)

### 16.4. The Human Tissue Act

Salisbury District Hospital NHS Foundation Trust are licensed by the Human Tissue Act (HTA) to undertake examinations of post-mortem samples submitted by clinical consultants and pathologists. Under the license, the samples may be retained until the examination has been completed and in line with the sample retention policies. It is the obligation of the requesting clinician or pathologist to ensure that examination of samples they submit have been requested by the coroner or appropriate consent has been obtained from the deceased person or their relatives. Only the specific examinations requested by the sending clinician or pathologist may be performed.
If additional work on samples from the deceased is thought necessary by the medical microbiologist or virologist, they must obtain written confirmation of consent from the sending departments. All relevant material is stored securely and under conditions which maintain the integrity of the sample if possible and confidentiality is maintained in compliance with Caldicott principles, as are all samples received. Following processing, relevant material is only retained for the period of time specified by the retention policy.
For further information please refer to Human Tissue Act 2004:
Human Tissue Act 2004 (legislation.gov.uk)

## 17. Feedback on our microbiology service and complaints procedure

The laboratory is committed to providing a high-quality service to all service users, however, it understands that aspects of the service may not always meet the requirements of the customer. Should this occur and there be a requirement to give feedback or make a complaint to the laboratory please submit your feedback or complaint in writing to the following:

| | |
|---|---|
| [redacted] | [redacted] |
| [redacted] | [redacted] |
| [redacted] | [redacted] |