



# Microbiology: Information for Users

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## Section 1: General Information

### Laboratory Location

The laboratory is situated on Level 0, Royal Blackburn Teaching Hospital, Haslingden Rd, Blackburn, BB2 3HH. Laboratory Reception is open 9:00 to 17:00 Monday to Friday and Saturday 9:00 to 12:00. Outside these hours the outer doors will be open to Trust staff only for the collection of blood for transfusion from blood bank. Only authorised persons will be allowed access to the laboratory areas.

### Clinical Services

The department provides a general microbiology service including bacteriology, mycology, parasitology and viral serology, with a referral service for special virology specimens. Blood cultures and CSF specimens are treated urgently both during normal hours and the on-call period. Any urgent results and those considered to be particularly important are telephoned as soon as possible. Please see the relevant section in this handbook for specimen collection details, examination procedures and reporting schedules.

### Opening Hours

#### Laboratory:

08.00 – 21.00 Monday to Sunday, including Bank Holidays.  
(Outside these hours an on call system operates via switchboard)

#### MICROBIOLOGY CONSULTANTS – Clinical advice

09.00 - 17.00 Monday to Friday.  
(Outside these hours an on call system operates via switchboard)

### Key Personnel & Contact Information

Replace leading 8 with 73 for external telephone number. (Regional Code = 01254)

<b>Results and General Enquiries</b>	<b>84160</b>
<b>Clinical Enquiries to Consultant Microbiologist, 9-5 Monday to Friday</b>	<b>82593</b>

Microbiology laboratory reception	84160
GP supplies	82974

Secretaries to Consultant Microbiologists	84541
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#### For Specific Consultants

Dr Sandra Long	84379
Dr Giuditta Sanna	84350
Dr Nurul Amir	84294
Dr Luca Kormos	83911
Dr Hisham Ziglam	85904

#### Lead Biomedical Scientist - Microbiology

Ms P Henderson	84173	pamela.henderson@elht.nhs.uk
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#### Directorate Staff

Clinical Director	Prof. A Rowbottom	Anthony.Rowbottom@lthtr.nhs.uk
Pathology Directorate Manager	Mr D Squires	84162 dayle.squires@elht.nhs.uk
Pathology IT Manager	Mr H Briggs	82473 howard.briggs@elht.nhs.uk
Pathology Quality & Training Manager	Mr S Ghorpade	83103 sushant.ghorpade@elht.nhs.uk

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## Complaints

Any complaints about the service should be directed to the Lead Biomedical scientist in the first instance on 01254 734173 or via e-mail.

## Making a Request

Microbiology request forms with an integral plastic bag are provided in two formats:-

1. Requests made by completing the form attached to the plastic bag.
2. ICE pathology request - requested on ICE computer system, print out the form which is then attached to sample bag.

**Danger of Infection” stickers MUST be added to the sample and form from patients suspected of carrying a blood borne virus (Hepatitis B,C or HIV) or suspected to have any of the following infections, Viral Haemorrhagic Fever, Brucella, TB, Typhoid or Paratyphoid fevers, SARS, MerCoV.**

**Please also highlight any recent (within the last year) foreign travel on the form.**

**On no account should specimens be taken from patients suspected of having any pathogen in Hazard Group 4, e.g. viral haemorrhagic fever (Lassa, Marburg, Ebola and Congo-Crimean), or Hendra or Nipah viruses without prior consultation with the on-call medical microbiologist/virologist, infection control and PHE.**

**The specimen transport bag contains an absorbent gel pack that should remain in the specimen bag - do not remove. This is to ensure that the transport of samples complies with UN3373 road transport of specimens regulations.**

Some specialist Virology specimens and PCR requests are referred to virology services in other hospitals. These can be requested using a routine microbiology form.

Request forms should be ordered by each ward directly from stores.

- Please provide relevant clinical details with all specimens.  
The minimum data required on all investigations is:  
Name  
DOB  
Hospital number/NHS number and/or address
- For further information see specimen acceptance policy
- **Antibiotic therapy information and details of foreign travel are particularly important** in guiding investigations.
- Routine specimens which are normally expected to be examined on the day of receipt must arrive in the laboratory before 20.00 hours so as to allow enough time for the procedures to be completed before the laboratory closes for routine work at 21.00 Hours.

## Data Protection

All data and patient information will be handled in line with Trust Policies C079 'Information Governance Policy 2021'; C077 'Confidentiality of Personal Information' & C045 'Information Security Policy'



## Section 2 – Test list

Please note that if the specific sample requirements are not met for the test that you require, then either the test may not be performed or the results may not be accurate. The laboratory reserves the right to reject any samples that they deem unfit for testing in line with the sample requirements. False negative results may occur if insufficient sample volumes are taken, and antibiotic use prior to specimen collection for microbiology investigation may also affect patient results

Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>Blood culture (adult)</b>	Blood	Blood culture bottle (Aerobic) – blue and Blood culture bottle (Anaerobic) – orange Fill blood cultures prior to other samples tubes or use a separate sample	3-10ml in each bottle	If the patient is difficult to bleed or only a small amount of blood can be taken, please use the aerobic bottle only.	Incubated for 5 days. Interim report released if culture negative at 48 hours.
<b>Blood culture (paediatric)</b>	Blood	Blood culture bottle (PF) - yellow Fill blood cultures prior to other samples tubes or use a separate sample	2-4ml	If the patient is difficult to bleed or only a small amount of blood can be taken, 0.1ml is acceptable.	
<b>CSF</b> • Culture & sensitivity • Virology (PCR)	CSF	30ml White top universal container x 3 (samples no.1 & no.3 (of three) for microbiology, no.2 for blood sciences	1-2ml in each	Please telephone the laboratory to inform that a CSF in being sent. If requesting virology (PCR), please state specific tests, e.g. herpes, Enterovirus, VZV, CMV, etc.  DO NOT put CSF samples in the POD transport system	WBC & Gram stain results telephoned immediately. 48-72 hours for culture.

Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>Swab</b> - Routine culture & sensitivity	Charcoal swabs: <ul style="list-style-type: none"> <li>• skin</li> <li>• wound</li> <li>• abscess/ulcer</li> <li>• ear</li> <li>• eye</li> <li>• throat</li> <li>• mouth</li> <li>• HVS</li> <li>• Endocervical Swab (ECS)</li> <li>• urethral</li> <li>• nasal</li> </ul>	Transwab® charcoal swab (black cap)	N/A	Please take throat swabs before antibiotic therapy is started and avoid contact with the tongue and mouth.	48-72 hours for routine swabs & HVS.
	• per-nasal	For per-nasal swabs use Transwab® charcoal media (blue cap).		For per-nasal swabs for whooping cough pass the swab into the post-nasal space through the nose.	7-8 days for per-nasal swabs.
	• IV tips	For IV device please place tip in sterile universal container with aluminium lid.			
	• IUCD	For IUCDs please place in sterile universal container with aluminium lid.			5-6 days for IUCDs.

Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>Chlamydia (PCR)</b>	Female – Endocervical or HVS  Male – urine  Rectal, throat & eye swabs	Cobas® collection kit (yellow cap)	N/A	For urine samples please fill to 'urine fill line'.  A combined chlamydia & GC test can also be performed on these samples.	14 days (samples are referred to Preston).
<b>MRSA Screen</b>	Nose and groin - can be submitted as combined sample but only 1 swab must be left in the tube  If above not available Single nose and groin charcoal swabs and any other area for ?MRSA	Copan Eswab – liquid media (pink cap)  Transwab® charcoal swab (black cap)	N/A	Please do not pour liquid out of Eswab container. Where 2 areas are swabbed: swab 1 <sup>st</sup> area, place swab (red) in tube and stir to release organisms into liquid then discard swab. Swab 2 <sup>nd</sup> area, place swab in tube, snap swab (white) where indicated and attach lid to tube.	24 hours for negative samples.  48 hours for positive samples.
<b>Faeces</b> • Routine culture • C. difficile • Rotavirus/Adenovirus • Ova, cysts & parasites  • H. pylori antigen	Faeces	Blue top universal (with spoon)	Any amount but do not fill to top	Faeces requesting routine culture are investigated for Giardia and Cryptosporidium in addition to culture for Salmonella, Shigella, E. coli 0157, and Campylobacter	24 hours for C. difficile samples.  48-96 hours for routine culture.  2-5 days for H. pylori antigen

Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>Urine</b> - culture & sensitivity	<ul style="list-style-type: none"> <li>• Midstream specimen of Urine (MSU)</li> <li>• Catheter Specimen of Urine (CSU)</li> <li>• Clean Catch</li> <li>• Pad/Bag (paediatric only)</li> <li>• Nephrostomy</li> <li>• Voided Bladder (VB3)</li> <li>• Suprapubic aspirate (SPA)</li> </ul>	<p>30ml red top universal (boric acid) as routine unless otherwise stated below</p> <p><i>Paediatric samples:</i> 5ml red top universal (boric acid) for paediatric samples*</p> <p><i>Suprapubic aspirate (SPA):</i> 60ml sterile container without additives</p>	20ml	*For very small paediatric samples please do not use boric acid. Please use a white top universal.	<p>24 hours for negative samples.</p> <p>48-72 hours for positive samples.</p>
<b>Expressed Prostatic Secretion (EPS)</b> - culture & sensitivity	Expressed Prostatic Secretion (EPS)	60ml sterile container without additives	Any		48-72 hours
<b>Urine</b> - Legionella/Pneumo coccus antigen	Urine	30ml white top universal	5-20ml		Same day
<b>Sputum</b> <ul style="list-style-type: none"> <li>• Culture and sensitivity</li> <li>• Pneumocystis PCR</li> </ul>	Sputum	60ml sterile container (aluminium lid)	Any amount but do not fill	Sputa for any investigation should be taken first thing in the morning. Please note: TB is not a routine investigation and must be specifically requested.	48-72 hours for culture & sensitivity.



Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>TB investigations</b>	<ul style="list-style-type: none"> <li>Sputum</li> <li>Urine</li> <li>CSF</li> <li>Bodily fluids (sterile or non-sterile)</li> <li>Faeces</li> <li>Swabs</li> <li>Tissue/Bone</li> <li>BAL</li> </ul>	Sputum - 3 samples from consecutive days if possible - 3x 60ml sterile clear container (aluminium lid)	Any amount but do not fill		48 hours for microscopy result. 6 weeks for routine culture result.
		Urine - All of first urine passed each day for 3 days in 300ml plastic bottle (x 3 samples)			
		Faeces - Blue top universal container (with spoon)			
		CSF, bodily fluids, tissues/bone – 30ml sterile universal (white top) or 60ml sterile clear container (aluminium lid)			
		Swabs - Transwab® charcoal swab (black cap)			
	<ul style="list-style-type: none"> <li>Blood/bone marrow</li> </ul>	Blood and bone marrow samples for TB culture should be sent in a vacutainer containing citrated or lithium-heparin	Min 2ml	<b>Do not</b> send these samples in EDTA as mycobacterial survival will be affected	
<b>Non-sterile body fluids</b> - culture & sensitivity	Pus, drains, seminal fluid etc.	30ml white top universal or 60ml clear container (aluminium lid)	Any amount but do not fill	Please note: TB is not a routine investigation and must be specifically requested.	48-72 hours
<b>Sterile body fluids</b> - culture & sensitivity	Joint, ascitic, pleural	30ml white top universal or 60ml sterile clear container (aluminium lid)	Any amount but do not fill		48-72 hours
<b>Tissue</b> - culture & sensitivity	Tissue from any area	60ml sterile clear container (aluminium lid)	N/A		48-72 hours

Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>Mycology</b>	Nails, skin scrapings, hair	30ml white top universal or MycoTrans wax paper	N/A	Please note: a report will be issued as soon as the isolation of a pathogenic fungus is confirmed. However, some fungi are slow-growing therefore isolation can take several weeks.	24-48 hours for microscopy result. 3 weeks for culture result.
<b>CRE Screen</b>	Faeces or Rectal swab	Blue top universal tube (with spoon) or Transwab® charcoal swab (black cap)	N/A		24-72 hours.
<b>Nasopharyngeal aspirate/Tracheal aspirate for RSV antigen</b>	Fresh aspiration of NPA or tracheal aspirate	30ml white top universal	N/A	Please transport to laboratory as soon as possible. If this is not possible please refrigerate. Please note: heavily blood-stained samples cannot be tested.	Same day
<b>COVID - Routine/Rapid</b>	Swab Nose & throat	Viral Transport media (VTM)	N/A	Rapids: Ensure rapid sticker is on the specimen bag and inform specimen reception when arriving to the laboratory. <b>CSM to call on call BMS if out of hours</b>	Rapid : 1-2 hours  Routine: 8-24 hours
<b>Biofire Respiratory Panel</b>	Nasopharyngeal swab	Viral Transport media (VTM)	N/A	Ensure the sample bag can easily be identified as a Biofire. Out of hours, if deemed urgent, Contact the on call Microbiology Biomedical scientist via switchboard.	1-4 hours

Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>Corneal scrape</b> <b>Contact lenses</b> <b>Intraocular fluids</b> <b>(All for culture &amp; sensitivity)</b>	Taken from the eye under consultant supervision	<p>Corneal scrapes must be inoculated onto a Blood Agar plate (CBA), Chocolate Agar plate (CHOC), Sabouraud Agar plate (SAB) and a microscope slide.</p> <p>Contact lenses must be placed into a sterile universal (either 30ml white top or 60ml aluminium lid) with sterile saline.</p> <p>Intraocular fluids must be placed into a sterile universal (either 30ml white top or 60ml aluminium lid) with the needle removed.</p>	N/A		Same day for microscopy results. 48 -72 hours for routine culture.
<b>Gastric/antral biopsy for <i>Helicobacter pylori</i> culture</b>	Taken from gastric antrum at endoscopy	60ml clear container (aluminium lid) with sterile saline	N/A	Please transport to laboratory as soon as possible (preferable within 6 hours). If this is not possible please refrigerate.	7 days for negative samples (10 days if post eradication therapy). 10 days for positive samples (further reports issued if antibiotic testing is required).

Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>Virology</b> Herpes, varicella, adenovirus, H1N1, measles	Swab from any area for herpes and varicella. Eye swab for adenovirus. Throat swab for H1N1 and measles.	Remel Microtest™ M5® Transport (liquid media, green cap) EXCEPT throat swab for measles*	N/A	*Please note – for throat swabs for measles please send a dry swab. Contact laboratory for more details.	14 days (samples are referred to Preston or Manchester)
<b>Blood</b> (referred virology) e.g. EBV CMV Toxoplasma Lyme's Disease	Blood	4.9ml serum gel tube (brown cap)	2-4.5ml		14 days (samples are referred to Preston & other reference laboratories)
<b>Blood – Serology</b> Varicella zoster Hepatitis A IgM antibodies Hepatitis B core antibody Hepatitis B surface antigen Hepatitis B surface antibodies Hepatitis C antibodies HIV antibodies & p24 antigen (combination assay) Rubella IgG Syphilis ( <i>Treponema pallidum</i> )	Blood	4.9ml serum gel tube (brown cap)	2-4.5ml	Please note: urgent Varicella zoster is tested in-house for pregnant women who have been in contact with chicken pox. Routine VZ screening is referred to Preston.	24 hours  Positive samples – further report issued in 5-10 days (positive samples are referred to Preston for confirmation)

Test	Sample	Container details	Sample volume	Notes	Turnaround time
<b>PCR Testing</b> <ul style="list-style-type: none"> <li>• Meningococcal</li> <li>• CMV</li> <li>• Hepatitis C</li> <li>• HIV</li> </ul>	Blood	2.7ml EDTA tube (red cap)	1-2.5ml		5-10 days (samples are referred to Preston & Manchester)
<b>Gamma Interferon (QuantiFeron) -</b> In response to TB antigen (3 tube set)	Blood	TB Gold Plus blood tube (grey cap) TB Gold Plus blood tube (purple cap) TB Gold Plus blood tube (yellow cap) TB Gold Plus blood tube (green cap)	1-1.2ml 1-1.2ml 1-1.2ml	All 4 tubes must be taken for this test to be performed. Test kits are available from Microbiology.  Please note: these samples must be sent to the laboratory within 16 hours of collection. <b>**DO NOT REFRIGERATE**</b> These samples are batch-tested on a weekly basis.	7-10 days

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