Certain pathology requests are referred to other reporting centres for either initial analysis or for confirmatory/ specialised review.

Please see within the table in the column ‘See Referral Centre’ if this applies. For details about the referral centres we use, [click here](https://www.mtw.nhs.uk/gps/pathology/pathology-service-information/test-catalogue/).

See [Order of draw](https://www.mtw.nhs.uk/gps/pathology/pathology-service-information/test-catalogue/) for the order in which to collect blood samples

Click [here](http://www.mtw.nhs.uk/gps/pathology/microbiology-2/) for the different Microbiology swab types and specimen collection techniques

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# A

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17-Hydroxyprogesterone (17OHP) (adult) | State clinical indication. Consultant endocrinologists, obstetricians and gynaecologists only. | Blood | Plain Clot  (red top) | Referred | Synnovis | 20 days |  | Clinical Chemistry |
| 17-hydroxyprogesterone (17OHP) (Paediatrics) | Do not take until newborn >48hrs old. | Blood | Lithium Heparin (Green Top) | Referred | Synnovis | 20 days |  | Clinical Chemistry |
| 25 OH Vitamin D | See Vitamin D |  |  |  |  |  |  |  |
| 5 HIAA (5-Hydroxyindole Acetic Acid) | Investigation and monitoring of patients with carcinoid syndrome. | 24hr urine | 5L Acid Container | Referred | EKHUFT | 21 days | 5 days | Clinical Chemistry |
| AAFB (TB) other | Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | Fluid, Pus, Tissue (Not swabs) | Plain 20mL Universal (white top) | **Microscopy**  3 working days.  Same day if urgent.  **Cultures:** up to 42 days but may take up to  nine weeks. | National Mycobacterium Reference Service-South, National Infection Service, Colindale | Susceptibility testing on positives: 1-2 months depending on strain |  | Microbiology |
| AAFB (TB) Sputum | Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | Sputum | 60ml (white top) | **Microscopy**  3 working days.  Same day if urgent.  **Cultures:** up to 42 days but may take up to nine weeks | Micropathology Ltd (Fast Track)  Colindale for susceptibility | TB Fast Track up to 4 days.  Susceptibility testing on positives: 1-2 months depending on strain |  | Microbiology |
| AAFB (TB) Urine | Please see  [Microbiology User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2022/12/Microbiology-User-Information-Urine-Specimens-1.1.pdf) | 3 x Early morning urine | EMU x3 - kits provided | **Cultures:** normally up to 42 days but may take up to nine weeks. | National Mycobacterium Reference Service-South, National Infection Service, Colindale | Susceptibility testing on positives: 1-2 months depending on strain |  | Microbiology |
| Acanthamoeba | Deliver to laboratory on day of collection  Please see [Acanthamoeba Instructions](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Acanthamoeba-instruction.pdf) | Contact Lens or Contact Lens fluid or Contact Lens Case or eye swab in normal sterile saline. | See specimen type | Referred | Micropathology Ltd | 90% in 2 working days |  | Microbiology |
| ACE (Angiotensin Converting Enzyme) | Not indicated if patient on ACE inhibitors. Not recommended for screening. Consultant Chest, Neurologist or Opthalmolomist or confirmed sarcoid | Blood | Gel Clot  (Gold top) | Referred | EKHUFT | 14 days |  | Clinical Chemistry |
| ACRA (Acetylcholine Receptor Ab) | Paediatric samples must be red top | Blood | Gel Clot  (Gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| ACTH (Adrenocorticotropic Hormone) | Should be taken with an appropriately paired 9am cortisol sample i.e. part of a SST or repeat ONDST .  Not available to request by primary care. | Blood | EDTA  Purple top) | Referred | Synnovis | 21 days |  | Clinical Chemistry |
| Acylcarnitine | Guthrie card required  Test not available to request by primary care. | Blood spot | Guthrie card | Referred | Synnovis | 125 days |  | Clinical Chemistry |
| Adalimbab | Only available for Gastroenterology Consultants | Blood | Gel Clot  (Gold top) | Referred | Synnovis | 3 weeks |  | Clinical Chemistry |
| Adenovirus PCR | Please see  [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf)  [User Information- ENT swabs](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Ear-Eye-Mouth-Throat-and-Nasal-Swabs-User-Guide.pdf) | Blood/  eye swab | EDTA  (Purple top) /viral transport swab | Referred | Micropathology Ltd  (Synnovis for Kings Liver Transplant patients) | 3 working days  (4 working days) |  | Microbiology |
| Adrenal Antibodies | Paediatric samples must be red top | Blood | Gel Clot  (Gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Adult Coeliac Screen |  | Blood | Gel Clot  (Gold top) | Referred | EKHUFT | 8 days |  | Immunology |
| AFP (Alpha Feto Protein) | Not recommended for screening. Only recommended for Hepatocellular, Hepatoma, Ca testes, Ca ovary | Blood | Gel Clot  (Gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Albumin (24hr Urine) |  | Urine | 5L plain container | 24 hr |  |  | 3 days | Clinical Chemistry |
| Albumin (serum) |  | Blood | Gel Clot  (Gold top) | 4 hr |  |  | 3 days | Clinical Chemistry |
| Albumin excretion rate | Overnight timed urine collection - usually 8 hrs.  Please state times. | Urine | 5L plain container | 24 hr |  |  | 3 days | Clinical Chemistry |
| Albumin/Creat ratio (Urine) |  | Urine | Monovette | 24 hr |  |  | 3 days | Clinical Chemistry |
| Aldosterone/ Renin | Only available for Endocrinologists. Send sample to lab within 10 mins.  Patient must stop beta blockers, spirolactone for at least two weeks prior to sample collection. Electrolytes replaced if indicated before testing.  Do not fridge or put on ice  Test not available to request by primary care. | Blood | Lithium Heparin (Green Top) | Referred | Imperial College Healthcare NHS Trust | 28 days |  | Clinical Chemistry |
| Allergy Testing | See RAST testing |  |  |  |  |  |  |  |
| ALP (Alkaline phosphatase) |  | Blood | Gel Clot  (Gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| ALP isoenzymes (Alkaline phosphatase isoenzymes) |  | Blood | Gel Clot  (Gold top) | Referred | EKHUFT | 54 days |  | Clinical Chemistry |
| Alpha 1 Antitrypsin |  | Blood | Gel Clot  (Gold top) | Referred | Sheffield Teaching Hosptial | 18 days |  | Clinical Chemistry |
| ALT (Alanine Transaminase) |  | Blood | Gel Clot  (Gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| AMH (Anti-mullerian hormone) | Available to MTW fertility consultants only. | Blood | Gel Clot  (Gold top) | Referred | Medway Foundation Trust | 8 days |  | Clinical Chemistry |
| Amikacin – once daily dosage | Take Pre-dose before giving the next dose. Post dose levels are not required. | Blood | 9 ml  Plain Clot (Red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | 1 working day |  | Microbiology |
| Amikacin – 2- or 3-times daily dosage | Take samples Pre dose & 1hr post dose | Blood | 2x 9ml Plain Clot (Red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | 1 working day |  | Microbiology |
| Amino Acids (Blood) | Paediatric consultants only | Blood | Lithium Heparin (Green Top) | Referred | Synnovis | 28 days | 3 days | Clinical Chemistry |
| Amino acids (Urine) | Random sample. Test available for paediatric consultants only | Urine | Plain 30mL Universal (white top) | Referred | Synnovis | 28 days |  | Clinical Chemistry |
| Amiodarone | Please state dosage and time of last dose. | Blood | EDTA  (Purple top | Referred | Cardiff and Vale Univerisity Health Board (Toxicology) | 11 days |  | Clinical Chemistry |
| Ammonia (Plasma) | Only available after requesting clinician has pre-arranged with Biochemistry. Must be hand delivered to lab on ice within 15 mins of collection and handed directly to staff. Contact lab if out of hours.  Test not available to request by primary care. | Blood | EDTA  (Purple top) | 4 hr |  |  |  | Clinical Chemistry |
| Amoeba (Hot stool) | Requires approval from Consultant Microbiologist.  Test not available to request by primary care.  Please see [User Information- Stool Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Stool-Specimens-1.pdf) | Faeces | Plain 30ml blue top universal | 30 Mins post voiding | N/A | N/A |  | Microbiology |
| Amoebic serology | Please see- [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | 9 ml plain Clot (red top) | Referred | Hospital for tropical diseases | 12 working days |  | Microbiology |
| Amylase (Serum) (Adults) | Adults | Blood | Gel Clot  (Gold top) | 4 hr |  |  | 3 days | Clinical Chemistry |
| Amylase (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (Green Top) | 4 hr |  |  | 3 days | Clinical Chemistry |
| ANCA (Anti neutrophil cytoplasmic antibody) | Can be done urgently by arrangement with lab. Initially please contact Maidstone Biochemistry. Paediatric samples must be red top | Blood | Gel Clot  (Gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Androstenedione | Consultant Endocrinologist or Gynaecologist only | Blood | Plain Clot  (Red top) | Referred | Synnovis | 4 weeks |  | Clinical Chemistry |
| Antenatal serology | Please see  [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 6 working days | positives: see referral centres for tests: Hep B, HIV, Syphilis |  | 1 year | Microbiology |
| Anti C1q |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 21 days |  | Immunology |
| Anti CCP |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 14 days |  | Immunology |
| Anti-Cardiolipins |  | Blood | Plain Clot  (red top) | 4 weeks |  |  | 48 hrs | Haematology |
| Antinuclear Antibodies (ANA/ANF) | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Antiphospholipid antibodies | see Anti-Cardiolipins and Immunology |  |  |  |  |  |  |  |
| Antithrombin III | Only stable for 4 hours.  Send to lab immediately following after venepuncture on MTW site.  Part of Thrombophilia Screen | Blood | Citrate  (blue top) | 4 weeks |  |  | Within 4 hrs of venepuncture | Haematology |
| APC resistance | Refer to Thrombophilia Screen |  |  |  |  |  |  |  |
| APTT (Activated Partial Thromboplastin Time) | Only stable for 4 hours.  Request this test on its own for heparin monitoring only. | Blood | Citrate  (blue top) | 4 hours for MTW  24 hours of all other users |  |  | Within 4 hrs of venepuncture | Haematology |
| Ascitic Fluid – cytology | See Fluids for cytology |  |  |  |  |  |  |  |
| Ascitic Fluid – microbiology | See Fluids (MCS) |  |  |  |  |  |  |  |
| ASO  (Anti-streptolysin O) | Please see  [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot (red top) | 5 working days |  |  |  | Microbiology |
| ASOT | see ASO |  |  |  |  |  |  |  |
| ASPERGILLUS (IgE) | see RAST |  |  |  |  |  |  |  |
| Aspergillus PCR | Please see  [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood    BAL (Bronchial wash) | Plain Clot (red top)  60ml (white top) | 2 working days |  |  | Blood- 2 weeks BAL- 3 days | Microbiology |
| Aspergillus Precipitins (antibodies) | Please see  [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | EKHUFT | 2 weeks |  | Microbiology |
| Aspergillus antigen (Galactomannan) | Please see  [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | UKHSA Mycology Reference Laboratory, Southmead Hospital, Bristol | 4 working days |  | Microbiology |
| AST (Aspartate transaminase) |  | Blood | Gel Clot  (gold top) | 4 hours for MTW  24 hours of all other users |  |  | 3 days | Clinical Chemistry |
| Avian precipitins | Please see  [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Mycology Reference Centre, Leeds General Infirmary, Leeds | 16 working days |  | Microbiology |

# B

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| B12 | See Folate (serum) & Vitamin B12 |  |  |  |  |  |  |  |
| B2MIC (Beta 2 Microglobulin) | Not recommended for screening. Recommended to monitor diagnosed myeloma, leukaemia and lymphoma. | Blood | Gel Clot  (gold top) | 5 days |  |  | 3 days | Clinical Chemistry |
| Basal Ganglia Ab's | Paediatric samples must be red top |  | Gel Clot  (gold top) |  | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Clinical Chemistry |
| beta-D Glucan | Needs to be tested within 48hrs of collection. Do not take the sample on a Friday or Saturday  Please see  [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | UKHSA Mycology Reference Laboratory, Southmead Hospital, Bristol | 90% in 4 working days |  | Microbiology |
| Beta Hydroxybutyrate | Adult.  Paired glucose sample needed for interpretation. Send sample immediately to Biochemistry for processing. | Blood | Gel Clot  (gold top) | Referred | Guildford (BSPS) | 20 days |  | Clinical Chemistry |
| Beta Hydroxybutyrate | Paed. | Blood | Lithium Heparin (Green Top) preferred  *OR*  Plain serum  (red-top | Referred | GOSH | 20 days |  | Clinical Chemistry |
| Bile Acids | Cholestasis of pregnancy. Only indicated weekly as agreed with MTW Obstetrics & Gynaecology department | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Bilharzia (Schistosomiasis) | Please see [User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/01/Urine-Specimens.pdf) | Terminal Urine | Plain 20mL Universal (white top) | Microscopy Same day |  |  |  | Microbiology |
| Bilirubin- conjugated (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (green Top) | 24 hr for MTW  3 days for all other users |  |  | 3 days | Clinical Chemistry |
| Bilirubin- Conjugated |  | Blood | Gel Clot  (gold top) | 24 Hr for MTW  3 days for all other users |  |  | 3 days | Clinical Chemistry |
| Bilirubin (Total) (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (green Top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Bilirubin (Total Serum) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Biotinidase | Paediatric only. Please state clinical indication | Blood | Lithium Heparin (green Top) | Referred | Synnovis | 34 days | 3 days | Clinical Chemistry |
| BJP (Bence Jones Protein) | Early morning urine. Reporting may be delayed if further investigation is needed e.g. immunofixation | Urine | Plain 20mL Universal (white top) or monovette | 5 days |  |  | 3 days | Clinical Chemistry |
| BK/JC virus DNA |  | Blood, urine or CSF | EDTA  (purple top) /plain 20mL Universal (white top) | Referred | Micropathology Ltd | 3 working days |  | Microbiology |
| Blood Cultures MC&S | Please see [Blood Culture User Guide](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Blood-Cultures.pdf)  Send directly to lab during normal hours.  Out of hours leave a room temperature – transport to lab as soon as possible for 9am.  For external users: Please contact laboratory for advice before taking samples | Blood | Blood culture kit- See instruction sheet | Cultures are incubated for at least five days. Significant results are telephoned as soon as possible. |  |  |  | Microbiology |
| Blood Grouping & Antibody screen | Any grouping or antibody anomalies may need to be referred to the NHSBT for further investigation and additional samples may be requested.  Antenatal antibody titrations are undertaken by the NHSBT. | Blood | 7 ml EDTA (pink Top) | Next working day | NHSBT | 14 days |  | Transfusion |
| BNP (Brain Natriuretic Peptide) | See Pro BNP |  |  |  |  |  |  |  |
| Bordetella | See Pertussis |  |  |  |  |  |  |  |
| Bronchial brush samples for cytology | Do not allow to air dry. Include site of brush sample on request form and slide (e.g. left lower lobe).  Do not send dry brushes, the lab can provide CCF vials, to process brush tips if necessary. | Bronchial brush samples | Alcohol-fixed slides + slide transport container | within 1 week (unless marked urgent) |  |  |  | Cellular Pathology |
| Bronchial wash/BAL for cytology | Do not attach pre-printed label over the clear section of the container | Bronchial wash BAL | Plain 20mL Universal (white top) | within 1 week |  |  |  | Cellular Pathology |
| Bronchial Washing – Microbiology  Test not available to external users | Transport to laboratory on same day  Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | Bronchial washing | 60ml (white top) | 3 days |  |  | 2 days | Microbiology |
| Brucella serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Brucella Reference Unit, Liverpool Clinical Laboratories, Royal Liverpool and Broadgreen Hospital | 12 days |  | Microbiology |

# C

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C1-esterase inhibitor (Total) | Pembury site please take separate form and sample for forwarding to Maidstone biochemistry | Blood | Plain Clot  (red top) | Referred | St Georges University Hospital Foundation Trust, Tooting. | 14 days |  | Clinical Chemistry |
| C1Q antibodies | Paediatric samples must be red top | Blood | Gel Clot  (Gold top) |  | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Ca125 | Not recommended for screening. May be grossly raised in ascites of any cause. Only recommended for the serial monitoring of diagnosed tumours (ovary) or pre-op. | Blood | Gel Clot  (Gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Ca15-3 | Not recommended for screening. Only recommended to monitor known cases of Ca breast. Note also increased in benign breast disease. | Blood | Gel Clot  (Gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Ca19-9 | Not recommended for screening. To monitor known cases of Ca pancreas / colon (rarely ovary), colorectal cancer. Note also increased in cholestasis. | Blood | Gel Clot  (Gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Caeruloplasmin |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 21 days |  | Clinical Chemistry |
| Calcitonin | Fasting sample recommended. Send sample immediately to Biochemistry for processing within 10 mins of collection.  Test not available to external users. | Blood | Gel Clot  (gold top) | Referred | Imperial College Healthcare NHS Trust | 27 days |  | Clinical Chemistry |
| Calcium (24hr Urine) |  | 24 hr urine | 5L plain container | 24 hr |  |  |  | Clinical Chemistry |
| Calcium + Albumin (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (green top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Calcium + Albumin (Serum Adults) | Avoid using a tourniquet when taking the sample. | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Calprotectin | See Faecal Calprotectin |  |  |  |  |  |  |  |
| Candida serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | UKHSA Mycology Reference Laboratory, Southmead Hospital, Bristol | 5 working days |  | Microbiology |
| Carbamazepine | (CBZ: Tegretol, Novartis) Please state dosage and time of last dose. Trough (pre-dose) sample recommended. | Blood | Plain Clot  (red top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Carboxyhaemoglobin | Samples for carboxyhaemoglobin are no longer being received in the laboratory and patients must go to A&E |  |  |  |  |  |  |  |
| Cardiac | see Creatine Kinase |  |  |  |  |  |  |  |
| Cardiolipin Antibodies | see Anti-Cardiolipins |  |  |  |  |  |  |  |
| Cat Scratch PCR (Bartonella genus) | Must Contact Consultant Microbiologist for advice  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood or Tissue | EDTA (Purple top)  /plain 20mL Universal (white top) | Referred | Micropathology Ltd | 4 working days |  | Microbiology |
| Catecholamines (Urine Adrenaline, Noradrenaline and Dopamine) | For paediatrics only. Investigation of neuroblastoma. | 24 hr urine/ timed urine | 5L Acid Container |  | St Heliers (Epsom and St Heliers trust) | 14 days | 5 days | Clinical Chemistry |
| CCP Antibodies (Cyclic Citrullinated Peptide antibody) | Paediatric samples must be red top |  | Gel Clot  (gold top) |  | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| CD3/ CD4/CD8 Count (Immune monitoring) | Available Mon-Thur only | Blood | EDTA  (Purple top) | 7 days |  |  | 24 hrs | Haematology |
| C.difficile toxin | see FAECES - Clostridium difficile toxin A+B |  |  |  |  |  |  |  |
| CEA (Carcinoembryonic Antigen) | Not recommended for screening. Only recommended for serial monitoring of diagnosed tumour, or pre-op Ca GI tract incl. Pancreas (rarely ovarian) Colorectal. | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Cell Markers | See Immunophenotyping |  |  |  |  |  |  |  |
| Childhood vaccine antibody levels (Hib/pneumococcal) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Immunology Laboratory, Churchill Hospital, Oxford University Hospitals NHS Trust | 9 working days |  | Microbiology |
| Chlamydia – genital | Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf) | Swab | Kit provided (Yellow cap) | 7 working days |  |  |  | Microbiology |
| Chlamydia – eye | Please see [User Information- ENT swabs](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Ear-Eye-Mouth-Throat-and-Nasal-Swabs-User-Guide.pdf) | Swab | Kit provided (Yellow cap | 7 working days |  |  |  | Microbiology |
| Chlamydia Urine | Please see  [Microbiology User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2022/12/Microbiology-User-Information-Urine-Specimens-1.1.pdf) | Urine | plain 20mL Universal (white top) | 7 working days |  |  |  | Microbiology |
| Chlamydia serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot (red top) | Referred | Synnovis | 16 working days | 1 year | Microbiology |
| Chlamydia psittaci PCR | Must contact Consultant Microbiologist for advice before taking specimen  Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | BAL (Bronchial wash)  /Nasopharyngeal swab | plain 20mL Universal (white top)  / Viral transport medium | Referred | Micropathology Ltd | 4 working days |  | Microbiology |
| Chloramphenicol Levels | Pre & post levels Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | 3 working days |  | Microbiology |
| Chloride (Serum) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Cholesterol (Total) | Also see Lipids | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Cholinesterase | Suxamethonium apnoea. Please provide relevant full clinical details. | Blood | Gel Clot  (gold top)  Green Lithium Heparin (plasma) acceptable) |  | Synnovis | 3 weeks |  | Clinical Chemistry |
| Chromogranin A+B | Not required to fast (unless part of full gut hormone profile)  Send sample immediately to Biochemistry for processing within 10 mins. | Blood | EDTA  (purple top) | Referred | Charing cross Hospital  (Imperial College Healthcare NHS Trust) | 21 days |  | Clinical Chemistry |
| Chromosomes | See Genetic Testing |  |  |  |  |  |  |  |
| Citrate (24h urine) | Please state clinical indication | 24 hr urine | 5L Acid Container | Referred | Royal Sussex County Hospital, Brighton | 21d | not available | Clinical Chemistry |
| CK (Creatine Kinase) Paediatrics | When being collected into a paediatric bottle | Blood | Lithium Heparin (green top) | 4 hr for MTW  24 hr for all other users |  |  | 3d | Clinical Chemistry |
| CK (Creatine Kinase) Adults |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3d | Clinical Chemistry |
| Clostridium difficile toxin | See C.difficile toxin |  |  |  |  |  |  |  |
| Clotting Factor Assays | Only stable for 4 hours | Blood | Citrate  (blue top) |  | EKHUFT | 1 month | Within 4 hrs of venepuncture | Haematology |
| Clotting Screen | Only stable for 4 hours  Includes APTT and PT (do not request for patients on anticoagulants) | Blood | Citrate  (blue top) | 4 hr for MTW  24 hr for all other users |  |  | Within 4 hrs of venepuncture | Haematology |
| CJD | Only on advice of National CJD Research & Surveillance Unit  Please see [User Information- CSF Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/CSF-Specimens.pdf) | CSF | plain 20mL Universal (white top) | Referred | National CJD Research & Surveillance Unit, Edinburgh | Not published |  | Microbiology |
| CMV | See Cytomegalovirus |  |  |  |  |  |  |  |
| Cobalt and Chromium | MTW Orthopaedics requests only | Blood | Trace element bottle  (Royal blue top) | Referred | Sandwell and West Birmingham NHS Trust | 21 days |  | Clinical Chemistry |
| Coccidiodes / Histoplasma serology | Contact Consultant Microbiologist for advice | Blood | Plain clot  (red top) | Referred | Synnovis | Not published |  | Microbiology |
| Coeliac Screen (Child) | Paediatric samples must be gold top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Coeliac Screen (Adult) |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Complement (C3+ C4) | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Copper | and caeruloplasmin. Please state clinical indication | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 17 days |  | Clinical Chemistry |
| Copper (24h Urine) | Special acid washed container from biochemistry by prior arrangement. Usually part of penicillamine challenge - please contact biochemistry for advice | 24 hr urine | 5L Acid Wash Container | Referred | Synnovis | 21 days |  | Clinical Chemistry |
| Corneal scrape (MC&S) | Inform lab.  Transport directly to lab  Test not available to external users  Please see [Corneal Scrape Specimen Instructions](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Corneal-scrape-instructions.pdf) | Corneal scrape | Direct plates (supplied by Lab.)  Slide | Microscopy results available same day.  Culture results can take up to 10 days |  |  |  | Microbiology |
| Cortisol (serum) | 9am sample recommended. Random samples are difficult to interpret. | Blood | Plain Clot  (red top) | 3 days |  |  |  | Clinical Chemistry |
| Cortisol (24h Urine) | Only available after requesting clinician has pre-arranged with Biochemistry | 24 hr urine | 5L plain container | Referred | EKHUFT | 16 days |  | Clinical Chemistry |
| Covid 19 | See SARS-Cov2 |  |  |  |  |  |  |  |
| Coxiella serology (Q-Fever) Serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood or BAL | Plain clot  (red top) | Referred | Porton Down | 12 working days |  | Microbiology |
| Coxiella serology (Q-Fever) PCR | Contact Consultant Microbiologist for advice  Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | BAL or Sputum or Nasopharyngeal swab | Plain 20mL Universal /60ml sputum  / Viral transport | Referred | Micropathology Ltd | 3 working days |  | Microbiology |
| CPE Carb.prod. Enterobac. Screen | Please see [User Information- Infection Control Swabs](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Infection-Control-Screening-Swabs-MRSA-CRE-and-GRE.pdf) | Faeces or Rectal swab (must have visable faeces) | Faeces (blue top universal) or Black transport swab | 2 working days |  |  |  | Microbiology |
| C-peptide | Plus Insulin if indicated. Paired glucose sample needed for interpretation. Send sample immediately to Biochemistry for processing. | Blood | Gel Clot  (gold top) + Fluoride oxalate  (grey top) | Referred | Berkshire and Surrey Pathology Service | 21 days |  | Clinical Chemistry |
| C-peptide | Only available to Diabetes Consultant | Urine | Boric Acid Monovettes | Referred | Royal Devon & Exeter NHS Foundation Trust | 3 weeks |  | Clinical Chemistry |
| Creatinine (24hr Urine) | Please also send Gel Clot (Gold top) if Creatinine Clearance Calculation required | 24 hr urine | 5L plain container | 24 hr |  |  | 3 days | Clinical Chemistry |
| Creatinine (Serum) | & estimated Glomerular Filtration Rate (eGFR) | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| CRP (C-Reactive Protein) (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (green top) | 4 hr for MTW  24 hr for all other users |  |  |  | Clinical Chemistry |
| CRP (C-Reactive Protein) (Adults) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Crystals- Joint Fluids | Please see [User information: Fluids, Pus and Tissue Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Fluids-Pus-and-Tissue-Specimens.pdf) | Joint fluid | Plain 20mL Universal (white top) | 24 hr |  |  |  | Microbiology |
| Cryptococcal antigen | Please see [User Information- CSF Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/CSF-Specimens.pdf)  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood/CSF | Plain clot  (red top)/ Plain 20mL Universal (white top) | Referred | EKHUFT | 6 days |  | Microbiology |
| CSF – Microbiology C&S | Telephone laboratory once taken.  Transport to the lab immediately by hand.  Do NOT send via vacuum tube  Test not available to external users  Please see [User Information- CSF Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/CSF-Specimens.pdf) | CSF tubes 1&3 | Plain 20mL Universal (white top) | Microscopy: same day. Culture results:  3 days |  |  |  | Microbiology |
| CSF – Microbiology PCR (viral) | Telephone laboratory once taken. Transport to the lab ASAP. Do NOT send via vacuum tube  Test not available to external users  Please see [User Information- CSF Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/CSF-Specimens.pdf) | CSF tubes 2&3 | Plain 20mL Universal (white top) | < 24 hours (if WBC count >10) | Micropathology Ltd | 4 Working days |  | Microbiology |
| CSF for cytology | Send immediately to Cytology Laboratory |  | Plain 20mL Universal (white top) | Within 2 days |  |  |  | Cellular Pathology |
| Cyclosporin A | Please state dosage and time of last dose. Referral hospital dependent on Rx/Txp | Blood | EDTA  (purple top) | Referred | EKHUFT or Synnovis as directed by Duty Biochemist | 19 days |  | Clinical Chemistry |
| Cyst Fluid | See Fluids for cytology |  |  |  |  |  |  |  |
| Cytomegalovirus (CMV) antibody IgG | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 5 working days |  |  |  | Microbiology |
| Cytomegalovirus (CMV) antibody IgM | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 3 working days |  |  |  | Microbiology |
| Cytomegalovirus (CMV) PCR | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | EDTA  (purple top) | Referred | Micropathology Ltd  (Synnovis for Kings Liver Transplant patients) | 3 working days  (4 working days) |  | Microbiology |
| Cytomegalovirus (CMV) PCR | Please see [User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/01/Urine-Specimens.pdf) | Urine | Plain universal | Referred | Micropathology Ltd | 3 working days |  | Microbiology |
| Cytology – diagnostic fluids | See Fluids for cytology |  |  |  |  |  |  |  |

# D

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| D-Dimers | Only stable for 4 hours. | Blood | Citrate  (blue top) | 4 hr for MTW  24 hours for all other users |  |  | Within 4 hrs of venepuncture | Haematology |
| Dengue/ Rickettsia | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Porton Down | 6 working days |  | Microbiology |
| DHEA-sulphate | Please state clinical indication | Blood | Plain Clot  (red top) | Referred | Synnovis | 21 d | not available | Clinical Chemistry |
| Digoxin | Must be taken 6-8 hours after the dose. Please state dosage and time of last dose. | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hours for all other users |  |  | 2 days | Clinical Chemistry |
| Diphtheria antibodies | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | UKHSA Colindale | 24 working days |  | Microbiology |
| Diphtheria culture | MUST state relevant clinical details & foreign travel on request form | Throat swab | Black transport swab | 3 days |  |  |  |  |
| Direct Antiglobulin test (DAT) |  | Blood | 7 ml EDTA (pink top) or EDTA  (purple top) | 24 hrs |  |  |  | Transfusion |
| Double Stranded DNA Antibodies | Reflex test following ENA. Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 3 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| DPD | Consultant oncologist request only | Blood | EDTA  (purple top) | Referred | Synnovis | 2 weeks |  | Clinical Chemistry |
| Drug Screen (Drugs of abuse) | See urine Toxicology. |  |  |  |  |  |  |  |

# E

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| eGFR (Estimated Glomerular Filtration Rate) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hrs for other users |  |  | 3 days | Clinical Chemistry |
| ENA (Extractable Nuclear Antigen) | Reflex test following ANA, includes Ro SSA, La SSB, Sm, J0-1, Scl-70. Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| ENA ID SCREEN | Reflex test following ENA. Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Endomysial Ab | Reflex test following Coeliac Screen. Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| EBV PCR  (Epstein Barr Virus) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | EDTA  (purple top) | Referred | Micropathology Ltd  (Synnovis for Kings Liver Transplant patients) | 3 working days  (4 working days) |  | Microbiology |
| EBV EBNA IgG  (Epstein Barr Virus)  EBV VCA IgG and EBV VCA IgM reflex testing performed as indicated | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot (Red top) | 2 working days |  |  |  | Microbiology |
| Enterobius vermicularis | Please see [User Information- Stool Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Stool-Specimens-1.pdf) | Sellotape slide | Plain white topped universal | 1 working day |  |  |  | Microbiology |
| Enterovirus RNA PCR | CSF- see CSF virology | Faeces or throat viral swab | Plain white topped universal or green top viral swab | Referred | Micropathology Ltd | 3 working days |  | Microbiology |
| ESR |  | Blood | EDTA  (purple top) | 4 hr |  |  | 8 hrs from venepuncture | Haematology |
| Ethanol | Only available in exceptional circumstances. Patients presenting in A&E departments with head injuries or after discussion with laboratory.  Test not available to external users | Blood | Fluoride oxalate  (grey top) | 4 hr |  |  | 24 hr | Clinical Chemistry |

# F

| **TEST** | **Specimen Instructions/ Comments** | | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Faecal Elastase | Random Sample, minimum pea sized sample | | Faeces | Faeces 30 mL universal (blue top) | Referred | Sandwell and West Birmingham NHS Trust | 2 weeks |  | Clinical Chemistry |
| Faecal Calprotectin | Recommended first stool of the day.  Please ask patient to write the collection date on the specimen bottle and send to the laboratory on the day of collection. | | Faeces | Faeces 30 mL universal (blue top) at least half filled | 2 weeks |  |  |  | Clinical Chemistry |
| FAECES -  Clostridium difficile test | Collect specimen into disposable clean dry container without urine (if possible). Use blue scoop in lid of container to transfer at least a walnut sized piece into specimen pot | | Faeces | Faeces 30mL universal (blue top) | 24 hours | Ribotyping: CDRN Reference Laboratory, UKHSA Leeds General Infirmary | 16 working days | 1 year for positives (typing only) | Microbiology |
| Faecal Pathogens PCR | Collect specimen into disposable clean dry container without urine (if possible). Use blue scoop in lid of container to transfer at least a walnut sized piece into specimen pot  Please see [User Information- Stool Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Stool-Specimens-1.pdf) | | Faeces | Faeces 30mL universal (blue top | 24 hours | UKHSA Colindale for typing | 19 working days |  | Microbiology |
| FAECES OTHER parasites, virology (rotavirus, adenovirus, norovirus) | Collect specimen into disposable clean dry container without urine (if possible). Use blue scoop in lid of container to transfer at least a walnut sized piece into specimen pot  Please see [User Information- Stool Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Stool-Specimens-1.pdf) | | Faeces | Faeces 30mL universal (blue top) | 2 working days.  Virology 1 day |  |  |  | Microbiology |
| Farmers Lung |  | | Blood | Plain clot  (red top) | Referred | UKHSA Mycology Reference Laboratory, Southmead Hospital, Bristol | 7 working days |  | Microbiology |
| Ferritin | As part of test rationalisation iron studies should be monitored via ferritin alone. | | Blood | Gel Clot  (gold top) | 24 hr |  |  | 3 days | Clinical Chemistry |
| Filarial antibodies |  | | Blood | Plain clot  (red top) | Referred | Hospital for Tropical Diseases | 12 working days |  | Microbiology |
| Fine needle aspirate (FNA) for cytology | Alcohol-fixed slides:  Fix immediately by fixation spray. |  | Breast, lymph node, thyroid, parotid, bilary etc. | Alcohol-fixed slides + slide transport container | 1 week |  |  |  | Cellular Pathology |
| Fine needle aspirate (FNA) for cytology | Air dried slides.  Slides must be spread thinly and quickly and completely dried before placing in slide transport container. | breast, lymph node, thyroid, parotid, TBFNA etc | Air Dried slides + slide transport container | 1 week |  |  |  | Cellular Pathology |
| Fine needle aspirate (FNA) for cytology -  Needle rinse | Wash needle in cytospin collection fluid | | Thyroid, etc | Cytospin collection fluid | 1 week |  |  |  | Cellular Pathology |
| Fine needle aspirate (FNA) for cytology – endoscopic brushings | Place unsheathed brush tip in cytospin collection fluid.  Dry brushes CANNOT be accepted. | |  | Cytospin collection fluid | 1 week |  |  |  | Cellular Pathology |
| Flu (A+B) | Nose/  throat swab  Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | | Viral swab (green top or red in-house top) |  | 2 days |  |  |  |  |
| Fluids for cytology | Do not attach pre-printed label over the clear section of the container | | Ascitic, pleural, cyst aspirates, pericardial, peritoneal etc. | 2 x Plain 20mL Universal (white top) | 1 week |  |  |  | Cellular Pathology |
| Fluids (MC&S) excluding CSF | If required urgently, please contact the laboratory. Transport to the laboratory within one day  Please see [User information: Fluids, Pus and Tissue Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Fluids-Pus-and-Tissue-Specimens.pdf) | | Ascitic, joint, pleural, cyst aspirates etc. | Plain 20mL Universal (white top) | Microscopy:  1 working day. Culture results:  10 days |  |  |  | Microbiology |
| FOB | see Faecal Occult Blood | |  |  |  |  |  |  |  |
| Folate (red cell) | See Red Cell Folate | |  |  |  |  |  |  |  |
| Folate (serum) & Vitamin B12 |  | | Blood | Plain Clot (red top) | 7 days |  |  |  | Haematology |
| Fructosamine | Only available for patients with Hb variants. | | Blood | Gel Clot  (gold top) | Referred | Sandwell and West Birmingham NHS Trust | 25 days |  | Clinical Chemistry |
| FSH (Follicular Stimulating Hormone) | Female patients – day 1 -5 if regular cycles. Please state LMP. | | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| FT3 (Free tri iodothyronine) | FT3 tested if indicated by clinical details and/or depending on TSH level. | | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| FT4 (Free Thyroxine) | FT4 tested if indicated by clinical details and/or depending on TSH level. | | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Full Blood Count (FBC) |  | | Blood | EDTA  (purple top) | 1 hr agreed urgent pathways  4 hr inpatients  24 hr all other users |  |  | 8 hrs | Haematology |
| Fungi (Mycology) (Dermatophytes) | click heading above for instructions on sample collection  Please see [User Information- Mycology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Mycology-user-guide.pdf) | | Skin, Hair or Nail clippings | [Dermapak or Plain 20mL Universal (white top)](http://mtwintranet/pathology/fungal-investigations.asp) | Microscopy results within 4 days. Culture results may take up to four weeks. | UKHSA Mycology Reference Laboratory, Southmead Hospital, Bristol  – for difficult isolates | 7-14 working days |  | Microbiology |

# G

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Gabapentin | Please state dosage and time of last dose. | Blood | Plain Clot  (red top) | Referred | Synnovis | 21 days |  | Clinical Chemistry |
| GAD 2 (Glutamic acid decarboxylase) Antibodies | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Galactamannan | See Aspergillus antigen |  |  |  |  |  |  |  |
| Galactose-1-Phosphate uridyltransferase | Paediatric consultants only.  Must collect sample Mon-Wed  (to arrive at Synnovis lab Mon-Thurs) | Blood | 2 x Lithium Heparin (green Top) | Referred | Synnovis | 27 days |  | Clinical Chemistry |
| Ganciclovir level |  | Blood | Plain Clot  (red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | 3 working days |  | Microbiology |
| Ganglioside Antibodies Screen | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Ganglioside Antibodies profile | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Gastric Parietal Cell Antibody |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 3 days | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Gastrin | See Gut Hormones |  |  |  |  |  |  |  |
| GBM (Glomerular Basement Membrane) Antibodies | Can be done urgently by arrangement with lab. Initially please contact Maidstone Biochemistry. Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Genetic Testing | Genetic Studies/ Karyotyping. Pathology reception will send on requestor's behalf, must reach lab by 11am with the appropriate South East Genomics paperwork  Use link to access request form:  [https://southeastgenomics.nhs.uk/glh/forms/](https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fsoutheastgenomics.nhs.uk%2Fglh%2Fforms%2F&data=05%7C01%7Chayley.williams15%40nhs.net%7C4289a47f6b4349b9009c08dbafa82620%7C37c354b285b047f5b22207b48d774ee3%7C0%7C0%7C638296908944760419%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=65KYHA7JIIIKP93pSxWrjRR%2FAL%2B0h2TgBJiK8BbNuVc%3D&reserved=0) | Blood | See Genetics form |  | South East Genomics |  |  | Clinical Chemistry |
| Genital Ulcer Screen PCR  (HSV, H.ducreyi & Syphilis) | Refer patient to GUM clinic  Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf) | Viral swab or fluid | Viral transport medium. Kit provided | Referred | Micropathology Ltd | 4 working days |  | Microbiology |
| Gentamicin (paediatric) | When being collected into a paediatric bottle  Not available to external users | Blood | Lithium Heparin (green top) | 4 hr |  |  | 3 days | Clinical Chemistry |
| Gentamicin (adult & older children) | Once daily is preferred regime. Take 18-24 hours post dose (state time collected).Pre dose Gentamicin - Take just before the dose Post dose Gentamicin - Take 1 hour after the IV dose. Please refer to Trust Policy | Blood | Gel Clot  (gold top) | 4 hr |  |  | 3 days | Clinical Chemistry |
| GGT (Gamma-glutamyl transferase) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| GH (Growth Hormone) | Patient must fast for 14 hours. | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 17 days |  | Clinical Chemistry |
| Glandular Fever Screening Test | Also known as Paul Bunnell or Monospot | Blood | EDTA  (purple top) | 4 hr for urgent,  48 hr for all other requests |  |  |  | Haematology |
| Glucose (CSF) | Do NOT use Vacuum tube (pod) to transport CSF samples  Request not available to external users | CSF | Fluoride oxalate  (grey top) | 4 hr |  |  |  | Clinical Chemistry |
| Glucose (Fluid) | Do NOT use Vacuum tube (pod) to transport fluid samples  Request not available to external users | Fluid | Fluoride oxalate  (grey top) | 4 hr |  |  |  | Clinical Chemistry |
| Glucose (Plasma) | Random or Fasting (minimum 12 hrs water only) | Blood | Fluoride oxalate  (grey top) | 4 hr for MTW  24 hr for all other users |  |  |  | Clinical Chemistry |
| Glucose-6-Phosphate Dehydrogenase (G6PD) | If request if urgent, please liaise directly with laboratory | Blood | EDTA  (purple top) | Referred | Synnovis | 1 day for urgent requests other wise 7 days |  | Haematology |
| Glucose Tolerance test | [Special protocol](http://www.mtw.nhs.uk/gps/pathology/biochemistry/) |  |  |  |  |  |  |  |
| Glucagon | See Gut Hormones |  |  |  |  |  |  |  |
| GM1 Antibodies | Paediatric samples must be red top | Blood | Gel Clot (gold top) |  |  | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| GRE Screen | Please see [User Information- Infection Control Swabs](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Infection-Control-Screening-Swabs-MRSA-CRE-and-GRE.pdf) | Rectal swab | Black transport swab | 4 days |  |  |  | Microbiology |
| GQ1b Antibodies | Paediatric samples must be red top | Blood | Gel Clot  (gold top) |  |  | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Gut Hormone Screen: Chromogranin A&B, Glucagon, Gastrin, Vasoactive intestinal Polypeptide | Patient needs to fast. Send sample immediately to Biochemistry for processing within 10 mins. | Blood | 2x EDTA (purple top) | Referred | Imperial College Healthcare NHS Trust | 21 days |  | Clinical Chemistry |

# H

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Haematology (Adenovirus, CMV, EBV PCR) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | EDTA  (purple top) | Referred | Micropathology Ltd | 3 working days |  | Microbiology |
| Haemochromatosis (gene marker) |  | Blood | EDTA  (purple top) |  | NHSBT | 7 d |  | Haematology |
| Haemoglobin caplliary electrophoresis  (for thalassaemia and Haemoglobinopathy screening) | Please ensure to complete Family Origin Questionnaire for antenatal requests. | Blood | EDTA  (purple top) | 3 days | Synnovis | 2 weeks | 24 hr | Haematology |
| Haemophilus (Hib)  Antibody level | see Childhood vaccine antibody levels (Hib/pneumococcal) |  |  |  |  |  |  |  |
| Haptoglobin | Send sample to laboratory ASAP after venepuncture |  | 4 mL Plain Clot  (red top) | 10 days | Synnovis | 2 weeks |  | Haematology |
| HbA1c | HbA1c for monitoring diabetic control or for the diagnosis of diabetes mellitus. | Blood | EDTA  (purple top) | 7 Days |  |  |  | Clinical Chemistry |
| HCG (Molar Preg) | Molar pregnancy monitoring | Blood | Gel Clot  (gold top) | Referred | Imperial College Healthcare NHS Trust | 8 days |  | Clinical Chemistry |
| HCG (Serum) (Human Chorionic Gonadotropin/ beta HCG) | Not appropriate as a first-line pregnancy test. Only recommended for query ectopic pregnancy two request 48 hrs apart  Not available to external users | Blood | Gel Clot  (gold top) | 24 hr |  |  | 3 days | Clinical Chemistry |
| HCG (Tumour Marker) | Not recommended for screening . Only recommended for Ca testes/ovary | Blood | Gel Clot  (gold top) | 24 hr |  |  | 3 days | Clinical Chemistry |
| Helicobacter pylori (Antibody) | No longer available - see H pylori antigen |  |  |  |  |  |  |  |
| Helicobacter pylori (Antigen) | Do not perform this test in patients that had a PPI in the last two weeks or antibiotics in the last four weeks as it may lead to false negative results.  Please see [User Information- Stool Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Stool-Specimens-1.pdf) | Faeces | Stool pot (blue top) | 4 working days |  |  |  | Microbiology |
| Helicobacter pylori Culture & Sensitivity | MUST Contact Consultant Microbiologist  Specimens must be sent to the laboratory ASAP as they need to be referred within 24 hours of collection. | Biopsy | plain 20mL Universal (white top | Referred | UKHSA Colindale | 17 working days |  | Microbiology |
| Hepatitis A IgG antibodies  (immunity) | Not a funded test.  Contact Microbiology if  required.  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) |  |  |  |  |  | 1 year | Microbiology |
| Hepatitis A IgM (for acute infection) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 3 working days | UKHSA Colindale for Confirmation of positives | 10 working days |  | Microbiology |
| Hepatitis B core antibody (HBcAb) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 2 working days |  |  |  | Microbiology |
| Hepatitis B immunity check (anti-HBs) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 5 working days |  |  |  | Microbiology |
| Hepatitis B PCR viral load | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | EDTA  (purple top) | Referred | EKHUFT | 9 working days |  | Microbiology |
| Hepatitis B surface antigen (HBsAg) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 2 working days |  |  |  | Microbiology |
| Hep B markers | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | EKHUFT | 8 working days |  | Microbiology |
| Hepatitis C antibodies | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot (red top) | 2 working days | Micropathology Ltd for confirmation of positives | 7  working days |  | Microbiology |
| Hepatitis C PCR & genotype | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | EDTA  (purple top) | Referred | Micropathology Ltd | 7 working days |  | Microbiology |
| Hepatitis D serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | UKHSA Colindale | 17 working days |  | Microbiology |
| Hepatitis E serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred |  | 6 working days |  | Microbiology |
| Herpes simplex virus (HSV) PCR | Transport to the lab within one day  Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf). | Viral swab | Viral transport medium. Kit provided. | Referred | EKHUFT | 12  working days |  | Microbiology |
| HSV serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | EKHUFT | 4 working days |  | Microbiology |
| Histoplasma | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | Not published |  | Microbiology |
| HIV 1+2 | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot (red top) | 2 working days | Positives: PHE Colindale for confirmation | 10 working days |  | Microbiology |
| HIV viral load | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | EDTA  (purple top) | 7 working days |  |  |  | Microbiology |
| HLA - B27 | Test once only in lifetime. Samples can only be accepted Monday-Thursday. | Blood | EDTA  (purple top) | 1 week |  |  | 12 hours | Haematology |
| HLA - others | Contact Haematology consultants before sending. Samples referred to NBS laboratories. | Blood | 7 ml EDTA (pink Top) or EDTA  (purple top) |  | NHSBT | 2 - 3 weeks |  | Transfusion |
| HLA antibody screens | Contact Haematology consultants before sending. Samples referred to NBS laboratories. | Blood | Plain Clot  (red top) |  | NHSBT | 7-10 days |  | Transfusion |
| Homocysteine | Patient must be fasting. Send sample immediately to Biochemistry for processing within 10 mins.  Test not available to external users | Blood | Lithium Heparin (green Top) | Referred | University Hospitals Pathology East | 21 days |  | Clinical Chemistry |
| HTLV 1 antibody | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red clot) | Referred | EKHUFT | 5 working days |  | Microbiology |
| HVS MC&S | See swabs MC&S |  |  |  |  |  |  | Microbiology |
| Hydatid serology |  | Blood | Plain clot  (red top) | Referred | Hospital for Tropical Diseases | 12 working days |  | Microbiology |

# I

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IgA Endomysial Ab | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| IgG Endomysial Ab | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| IgG Insulin Ab | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| IgE only |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 16 days |  | Immunology |
| IGF-1 (Insulin-like Growth Factor-1) |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 18 days |  | Clinical Chemistry |
| Indirect immunofluorescence (immunology) | see Pemphigus/goid Ab |  |  |  |  |  |  |  |
| Influenza (A+B) | See Flu A & B |  |  |  |  |  |  |  |
| Immunoglobulins G, A & M (adults) |  | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Immunoglobulins G,A& M (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (green top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Immunoglobulins Subclasses |  | Blood | Gel Clot  (gold top) | Referred | South West London Pathology | 33 days |  | Clinical Chemistry |
| Immunophenotyping | Available Mon-Thur only | Blood or bone marrow  (specify if it blood or bone marrow on request) | EDTA  (purple top) | 4 weeks | Synnovis. | 4 weeks | 8 hours from sample collection | Haematology |
| Infliximab | Consultant gastroenterologist only | Blood | Gel Clot  (gold top) | Referred | Synnovis | 3 weeks |  | Clinical Chemistry |
| Inhibin B |  | Blood | Gel Clot  (gold top) | Referred | Imperial College Healthcare NHS Trust | 4 weeks |  | Clinical Chemistry |
| INR (International Normalised Ratio)  [Prothrombin time] | Only stable for 4 hours.  Request this test only when patients are on oral anticoagulants- see guidelines on pathology website | Blood | Citrate  (blue top) | 1 hr for agreed urgent pathways  4 hrs for all other inpatient requests  1 day for all other requests |  |  | Within 4 hrs of venepuncture | Haematology |
| Insect for identification |  |  | Plain universal | 48 hr | LSHTM | Not published |  | Microbiology |
| Insulin | Paired Glucose sample needed for interpretation. Send sample immediately to Biochemistry for processing. | Blood | Gel Clot  (Gold top) + Fluoride oxalate (  Grey top) | Referred | Berkshire and Surrey Pathology Service | 20 days |  | Clinical Chemistry |
| Intraconazole levels | Take a pre-dose sample after 7 days of treatment  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Mycology Reference Centre, Leeds General Infirmary, Leeds | 10 days |  | Microbiology |
| Intrinsic Factor Ab | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Iron (Fe) | If suspected of overdose, please contact lab. | Blood | Gel Clot  (gold top) | 48 hr |  |  | 3 days | Clinical Chemistry |
| Iron, Transferrin + Saturation | As part of test rationalisation iron studies should be monitored via ferritin alone.  Iron/transferrin saturation remain available in exceptional circumstances depending on clinical details, inflammatory markers and FBC results. | Blood | Gel Clot  (gold top) | 48 hr for MTW requests  72 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Islet Cell Antibody | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 4 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |

# J

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| JC/BK virus |  | Blood, urine or CSF | EDTA  (purple top)/ plain 20mL Universal (white top) | Referred | Micropathology Ltd | 3 working days |  | Microbiology |
| Joint Fluid | For Culture see **Fluids** (MC&S)  For Crystals see **Crystals** –joint fluids |  |  |  |  |  |  |  |

# K

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Karyotype | See Chromosomes |  |  |  |  |  |  |  |
| Kleihauer tests (foetal maternal haemorrhage estimation) | Sample must not be taken within 30 minutes of the sensitising event.  Same sample cannot be used for blood group and antibody screen. | Blood | 7 ml EDTA (pink Top) | 1 working day | NHSBT for positive confirmations | 72 hours |  | Transfusion |

# L

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lactate Dehydrogenase (Fluid LDH ) | Measurement of fluid LDH values and the calculation of fluid to serum total protein ratios will aid in differentiating exudates from transudates. Not available for CSF.  Do NOT use Vacuum tube (pod) to transport fluid samples | Fluid | 20 mL white top Universal | 4 hr for MTW  24 hr for all other users |  |  |  | Clinical Chemistry |
| Lactate dehydrogenase (Serum LDH) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  |  | Clinical Chemistry |
| Lamotrigine | Please state dosage and time of last dose. | Blood | Plain Clot  (red top) | Referred | Synnovis | 10 days |  | Clinical Chemistry |
| Lead (Blood) | Please state source of exposure | Blood | EDTA  (purple top) | Referred | Synnovis | 7 days |  | Clinical Chemistry |
| Legionella Antigen Screen | Please see  [Microbiology User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2022/12/Microbiology-User-Information-Urine-Specimens-1.1.pdf) | Urine - 10 ml | 20mL Plain Universal (white top) or Boric Acid Monovettes | 1 day |  |  |  | Microbiology |
| Leishmania serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Hospital for Tropical Diseases | 12 working days |  | Microbiology |
| Leptospira serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Porton Down | 6 working days |  | Microbiology |
| Levetiracetam | Please state dosage and time of last dose. | Blood | EDTA  (purple top | Referred | Cardiff and Vale University Health Board | 16 days | 3 days | Clinical Chemistry |
| LFT (Liver Function Tests) (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (green top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| LFT (Liver function tests) (Adult) | Profile = Bilirubin, ALP, ALT and Albumin | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| LGV (lymphogranuloma venereum) |  | Rectal swab | Chlamydia container | Referred | Micropathology Ltd | 6 working days |  | Microbiology |
| LH (Luteinising hormone) | Female patients – day 1 -5 if regular cycles. Please state LMP. | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Lipase | Gastroenterology and Paediatrician Consultants only | Blood | Gel Clot  (gold top | Referred | Synnovis | 2 weeks |  | Clinical Chemistry |
| Lipids | Profile = Cholesterol, Triglycerides, HDL, non-LDL, LDL and Chol/HDL. Fasting 12 hr minimum, ideally 14 hr water only. | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Lipoprotein (A) |  | Blood | Gel Clot  (gold top) | Referred | Synnovis | 21 days |  | Clinical Chemistry |
| Lithium | 12 hours post dose. | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Liver Antibodies | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Lupus anticoagulant Screen | Only stable for 4 hours. Discuss with Consultant Haematologist before ordering request. | Blood | 2 x Citrate (blue top) | 4 weeks |  |  | Within 4 hrs of venepuncture | Haematology |
| Lyme serology (Borrelia burgdorferi) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 5 working days | Positives: Porton Down | 10 working days |  | Microbiology |
| Lymphocyte subsets | [Discuss with haematology consultant before taking samples](http://mtwweb/Pathology/Contacts/HaemContacts.htm#Haematology%20Consultant) | Blood | EDTA  (purple top) | Referred | Synnovis | 4 weeks |  | Haematology |

# M

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Magnesium (24h urine) |  | 24 hr urine | 5L plain container | Referred | EKHUFT | 2 weeks | 3 days | Clinical Chemistry |
| Magnesium (Serum) (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (green top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Magnesium (Serum) (Adults) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other users |  |  | 3 days | Clinical Chemistry |
| Malarial Parasites |  | Blood | EDTA  (purple top) | 4 hr if urgent  6 hr for all other requests | Hospital for Tropical Diseases | 3 days | 6 hr | Haematology |
| Measles IgM antibodies | Acute infection  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot (Red top) | Referred | UKHSA Colindale | 6 working days |  | Microbiology |
| Measles IgG antibodies  (immunity check) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot (Red top) | 7 working days |  |  |  | Microbiology |
| MRES-CoV | MUST contact Consultant Microbiologist |  |  |  |  |  |  |  |
| Metabolic stone screen (Urine) | Profile = 24 hr Urine Calcium, Creatinine, Phosphate, Urate, Oxalate and Osmolality | 24hr urine | 5 L plain container | 24 h + Oxalate - Referred | University Hospitals Sussex NHS foundation Trust/EKHUFT | 27 days |  | Clinical Chemistry |
| Meningococcal PCR | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf)  Please see [User Information- CSF Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/CSF-Specimens.pdf) | Blood  CSF | EDTA  (purple top)  Plain 20mL Universal (white top) | Referred | UKHSA Meningococcal Reference Unit, Manchester Royal Infirmary | 14 days |  | Microbiology |
| Metanephrines | For investigation of Pheochromocytoma | 24hr urine | 5 L plain container | Referred | EKHUFT | 14 days |  | Clinical Chemistry |
| Mitochondrial Cell Antibody |  | blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 days |  | Immunology |
| MPO Antibodies | Reflex test following ANCA. Paediatric samples must be red top | blood | Gel Clot  (gold top) | Referred | EKHUFT | 3 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| MRSA screen | Transport to the laboratory within one day  Please see [User Information- Infection Control Swabs](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Infection-Control-Screening-Swabs-MRSA-CRE-and-GRE.pdf) | Swab | Blue top plastic shaft | 2 days |  |  |  | Microbiology |
| MSSA screen | Transport to the laboratory within one day | Nose Swab | Blue top plastic shaft | 2 days |  |  |  | Microbiology |
| Mucopolysaccharides | Please state clinical indication.  External users, please contact laboratory before requesting test. | Urine | Plain 20mL Universal (white top) | Referred | Synnovis | 43 days |  | Clinical Chemistry |
| Mumps IgG antibodies | Immunity  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | EKHUFT | 6 working days |  | Microbiology |
| Mumps IgM antibodies | Acute infection  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | UKHSA Colindale | 12 working days |  | Microbiology |
| Mycobacteria | See AAFB |  |  |  |  |  |  |  |
| Mycophenolate | Please state dosage and time of last dose. Referral hospital dependent on Rx/Txp | Blood | EDTA  (purple top) | Referred | Kings College Institute of Liver Studies | 12 days |  | Clinical Chemistry |
| Mycoplasma genitalium PCR | Refer patient to GUM Clinic  Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf) | Swab or urine | Use Chlamydia collection - Kit provided (Yellow cap)  Urine- plain 20mL Universal (white top) |  |  | 7 working days |  | Microbiology |
| Mycoplasma pneumoniae IgM | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | EKHUFT | 7-10 days | 1 year | Microbiology |
| Mycoplasma pneumoniae PCR | Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | BAL, Sputa or NPA  Nose/ Throat Swab | Plain 20mL Universal (white top)  Viral transport medium | Referred | Micropathology Ltd | 3 working days |  | Microbiology |

# N

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| N.gonorrhoea PCR | Please see  [Microbiology User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2022/12/Microbiology-User-Information-Urine-Specimens-1.1.pdf) or Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf) | Swab or Urine | Swab and urine samples in Chlamydia container (yellow top) | 7 working days | For confirmation: Micropathology Ltd | 11  working days |  | Microbiology |
| Needlestick injury - RECIPIENT | Serum saved  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) |  |  |  |  |  |
| Needlestick injury - DONOR | Hepatitis Bs Ag, Hepatitis C Ab and HIV - Patient must give consent.  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 1 day |  |  | 1 year | Microbiology |
| Neuronal Antibody (Hu/R) | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Neutrophil Antibodies | Consultant Haematologist approval required. | Blood | Plain Clot  (red top) | Referred | NHSBT | 14 days |  | Transfusion |
| NSE (Neurone Specific Enolase) | Please state clinical indication | Blood | Gel Clot  (gold top) | Referred | Sheffield NHS Teaching Hospitals NHS Foundation Trust | 9 days |  | Clinical Chemistry |
| Neurotensin | See Gut Hormones |  |  |  |  |  |  |  |
| Norovirus | see FAECES- C&S, parasites, virology (rotavirus, adenovirus, norovirus) |  |  |  |  |  |  |  |

# O

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 OH Vitamin D | See Vitamin D |  |  |  |  |  |  |  |
| Oestradiol | State LMP or HRT preparation. | Blood | Plain Clot (red top) | 3 days |  |  | 2 days | Clinical Chemistry |
| Oligoclonal Bands | Paired serum and CSF sample should be sent. Do NOT use Vacuum tube (pod) to transport CSF samples | Blood + CSF | Gel Clot (gold top) + Plain 20mL Universal (white top) | Referred | St George’s University Hospitals NHS Foundation Trust | 51 days |  | Clinical Chemistry |
| Organic acids (Urine) | Please state clinical indication | Urine | Plain 20mL Universal (white top) or monovette | Referred | Synnovis | 60 days |  | Clinical Chemistry |
| Osmolality (Serum) |  | Blood | Gel Clot (gold top) | 24 h r |  |  | 3 days | Clinical Chemistry |
| Osmolality (Urine) | Random sample | Urine | Plain 20mL Universal (white top) or monovette | 24 hr |  |  | 3 days | Clinical Chemistry |
| Oxalate (24h Urine) |  | 24hr urine | 5 L plain container | Referred | EKHUFT | 27 days | not applicable | Clinical Chemistry |
| Ovarian Antibodies | Paediatric samples must be red top | Blood | Gel Clot (gold top) |  | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |

# PQ

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Paracetamol | Sample must be taken at least 4 hrs post dose.  Test not available to external users | Blood | Gel Clot  (gold top) | 4 hr |  |  | 2 Days | Clinical Chemistry |
| Parasite Micro | See Faeces |  |  |  |  |  |  | Microbiology |
| Parathyroid hormone (PTH) | Please also request paired calcium and phosphate (gold top). Sample must reach biochemistry on the day of collection. | Blood | EDTA  (purple top) + Gel Clot  (gold top) | 7 days |  |  |  | Clinical Chemistry |
| Parvovirus IgG/IgM | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | EKHUFT | 9 working days | 1 year | Microbiology |
| Pemphigus/goid Ab (aka Indirect immunofluorescence (serum)) | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Peritoneal fluid | See Fluids for cytology or  Fluids for Microbiology as appropriate |  |  |  |  |  |  |  |
| PERTUSSIS (Bordetella) children <12 months old | refer patient to the hospital paediatric team  Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | NPA (Nasopharyngeal aspirate) | Plain 20mL Universal (white top) or collection tube | Referred | UKHSA, Southampton Laboratory, Southampton General Hospital | 6 working days |  | Microbiology |
| PERTUSSIS (Bordetella) children >12 months old and adults | Collect >2 weeks after onset of symptoms. Not suitable if primary or booster pertussis vaccination given within the last 12 months  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | UKHSA Colindale | 12 working days | 6 months (if other microbiology tests requested) | Microbiology |
| pH Urine & Fluids | Send sample immediately to Biochemistry for processing  Test not available to external users | Urine or fluid | 20 mL white top Universal | 4 hr |  |  |  | Clinical Chemistry |
| Phenobarbitone | Please provide dosage and time of last dose in clinical details | Blood | Plain Clot  (red top) | Referred | Synnovis | 13 days |  | Clinical Chemistry |
| Phenytoin | Please provide dosage and time of last dose in clinical details | Blood | Plain Clot  (red top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Phosphate (24hr Urine) |  | 24hr urine | 5L plain container | 24 hr |  |  | 3 days | Clinical Chemistry |
| Phosphate (Serum) (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin (green top) | 4 hr for MTW  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Phosphate (Serum) (Adults) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Platelet antibodies | Consultant Haematologist approval required. | Blood | Plain Clot  (red top) | Referred | NHSBT | 14 days |  | Transfusion |
| Platelet function test (platelet aggregation studies) | Consultant Haematologist approval required.  This is a specialised test performed on fresh blood by the Haemophilia Centre at EKHUFT (Kent and Canterbury Hospital). The patient is referred by appointment.  Tel: 01227 783157 | Blood |  |  | EKHUFT |  |  | Haematology |
| Pleural fluid | See - Fluids for cytology or  Fluids for Microbiology as appropriate |  |  |  |  |  |  |  |
| Pneumococcal antibody level | See - Childhood vaccine antibody levels (Hib/pneumococcal) |  |  |  |  |  |  |  |
| Pneumococcal Antigen Screen | Please see  [Microbiology User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2022/12/Microbiology-User-Information-Urine-Specimens-1.1.pdf)  Performing *Streptococcus pneumoniae* urinary antigen test within 5 days of vaccination is not recommended. | Urine –  10 ml | Plain Universal (white top) | 1 day |  |  | 24 hrs after sample collected | Microbiology |
| Pneumocystis Pneumonia (PCP) | Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | BAL, sputum, NPA | Plain 20mL Universal (white top) | Referred | Micropathology Ltd | 3 working days |  | Microbiology |
| PNH Screen (Paroxysmal Nocturnal Haemoglobin Uria) | Send sample to laboratory straight after venepuncture | Blood | EDTA  (purple top) | Referred | St Georges University Hospital Foundation Trust, Tooting. |  |  | Haematology |
| Porphyrins (Blood) | Sample must be protected from light Please state full clinical details to aid helpful interpretation. Sample required within 8 hours of collection. | Blood | EDTA  (purple top) | Referred | Synnovis | 21 days |  | Clinical Chemistry |
| Porphyrins (Faeces) | Sample must be protected from light Please state full clinical details to aid helpful interpretation. Sample required within 8 hours of collection. | Faeces | Faeces 30 mL universal (blue top) | Referred | Synnovis | 21 days |  | Clinical Chemistry |
| Porphyrins (Urine) | Sample must be protected from light Please state full clinical details to aid helpful interpretation. Sample required within 8 hours of collection. | Urine | Plain 20mL Universal (white top) or monovette | Referred | Synnovis | 21 days |  | Clinical Chemistry |
| Posaconazole Level | Take a pre-dose sample after 7 days of treatment  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot (red top) | Referred | Mycology Reference Centre, Leeds General Infirmary | 10 days |  | Microbiology |
| Potassium (24hr Urine) |  | 24hr urine | 5L plain container | 24 hr |  |  | 3 days | Clinical Chemistry |
| Potassium (Random Urine) |  | Urine | Plain 20mL Universal (white top) | 24hr |  |  | 3 days | Clinical Chemistry |
| Potassium (serum) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| PR3 Antibodies | Reflex test following ANCA. Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 3 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Primidone | Metabolises to phenobarbitone. Request phenobarbitone |  |  |  |  |  |  |  |
| Procollagen-3-NP |  | Blood | Gel Clot  (gold top) | Referred | Sheffield NHS Teaching Hospitals NHS Foundation Trust | 15 days |  | Clinical Chemistry |
| Progesterone | Useful only day 21 of Cycle or mid luteal phase. In certain PUL (not routine EPC) patients Consultant request only | blood | Plain Clot  (red top) | 24 hr |  |  | 3 days | Clinical Chemistry |
| Prolactin | Please state all medication. | blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Prosthetic Joint | Do NOT add formalin to sample  Please see [User information: Fluids, Pus and Tissue Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Fluids-Pus-and-Tissue-Specimens.pdf) | Tissue | Sterile theatre pack  Yellow top (do not add formalin) | Interim report in 2 days.  Final report in 12 days |  |  |  | Microbiology |
| Protein & albumin (Fluid) | Do NOT use Vacuum tube (pod) to transport fluid samples  Test not available to external users. | Fluid | Plain 20mL Universal (white top) | 4 hr |  |  | 3 days | Clinical Chemistry |
| Protein C | Only stable for 4 hours.  Requires approval from Consultant Haematologist if ordering separately from Thrombophilia screen.  If clinical indications do not meet those set out in BSH guidelines, this test will be rejected. | Blood | 1 x Citrate (blue top) (if requested as individual test) | 4 weeks |  | 4 weeks | not available | Haematology |
| Protein/Creatinine ratio (random urine) | Available acute obstetrics at weekend if received before 12:00 at TWH | Urine | Plain 20mL Universal (white top) or monovette | 24 hr for MTW requests  3 days for all other requests |  |  | 3 days | Clinical Chemistry |
| Protein Electrophoresis (Serum) | Not applicable <18 years old. Reporting may be delayed if further investigation is needed e.g. immunofixation | Blood | Gel Clot  (gold top) | 5 days |  |  | 3 days | Clinical Chemistry |
| Protein S | Only stable for 4 hours.  Requires approval from Consultant Haematologist if ordering separately from Thrombophilia screen.  If clinical indications do not meet those set out in BSH guidelines, this test will be rejected. | Blood | 1 x Citrate (Blue top) (if requested as individual test) | 4 weeks |  | 4 weeks |  | Haematology |
| Prothrombin Time | Tested as part of Clotting Screen. Request INR if this test is required for INR ratio only. Refer to INR test in this instance. |  |  |  |  |  |  |  |
| Pro BNP  (NT Pro BNP) | Only available to PCT. Must reach biochemistry within 8 hours. Not recommend to repeat within 1 year.  Test not available to MTW users | Blood | EDTA  (purple top) | 3 days |  |  |  | Clinical Chemistry |
| PSA (Prostate Specific Antigen Total) |  | Blood | Gel Clot  (gold top) | 3 days |  |  | 3 days | Clinical Chemistry |
| PTH (Parathyroid hormone) | Please also request paired calcium and phosphate (gold top). Sample must reach biochemistry on the day of collection. | Blood | EDTA  (purple top) + Gel Clot  (gold top) | 7 days |  |  |  | Clinical Chemistry |
| Purkinje Ab (Yo) | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Purkinje Cell Antibody |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 21 days | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| qFIT (quantitative faecal immunochemical test) | Random Sample.  Please ask patient to write the  collection date on the specimen  bottle and send to the laboratory on  the day of collection. | Faeces | Green top qFIT collection device | 1 week |  |  |  | Biochemistry |
| Q-Fever | See - Coxiella serology |  |  |  |  |  |  |  |

# R

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RA (Rheumatoid Arthritis) Screen  Also known as RF |  | Blood | Gel Clot  (gold top) | 72 hrs |  |  |  | Haematology |
| Rabies Serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Animal & Plant Health Agency | Not published |  | Microbiology |
| RAST (Allergy Screen). [Reference Guide available](http://mtw.nhs.uk/gps/pathology/biochemistry/) | Please complete [allergy form](http://mtw.nhs.uk/gps/pathology/biochemistry/) stating specific allergen required and send with sample | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 18 days |  | Immunology |
| Red Cell Cholinesterase | For organophosphate use | [Requesting clinician to contact H&S Laboratory Buxton directly](http://www.hsl.gov.uk/) |  |  |  |  |  |  |
| Renal (Paediatrics) | When being collected into a paediatric bottle | blood | Lithium Heparin (green top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Renal (Adults) | Profile = Sodium Potassium Creatinine | blood | Gel Clot  (gold top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Renin | See Aldosterone |  |  |  |  |  |  |  |
| Respiratory viruses (except Flu A/B, RSV, Covid) PCR | Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | Nose/  throat swab | Viral swab (green top) | Referred | Micropathology Ltd | 3 working days |  | Microbiology |
| Reticulocyte Count | Request with FBC if this test is required. | Blood | EDTA  (purple top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 8 hrs | Haematology |
| RF (Rheumatoid Factor) | see Rheumatoid Arthritis |  |  |  |  |  |  |  |
| Rifampicin levels | Take a pre-dose sample and three post dose samples at 1h, 2h and 4h after oral dose  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | 5 working days |  | Microbiology |
| RSV screen | Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | NPA | Plain universal | 1 day | EKHUFT | 4 working days |  | Microbiology |
| Rubella IgM | Acute infection  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | EKHUFT | 16 working days |  | Microbiology |
| Rubella IgG antibodies | Immunity  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 7 working days |  |  |  | Microbiology |

# S

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Salicylate | Test not available to external users | Blood | Gel Clot  (gold top) | 4 h |  |  | 3 days | Clinical Chemistry |
| Salivary Gland Antibody |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 21 days |  | Immunology |
| SARS-Cov2 RNA PCR | Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | Nose/  throat swab, NPA, Sputum | Viral swab (green top or red in-house top)  NPA- Plain universal  Sputum- 60ml  (white top) | Screening: 48hrs |  |  |  | Microbiology |
| SARS-Cov2 RNA  Rapid Testing |  | Nose/  throat swab | specific bottle type issued from ED mini lab | 3 hrs |  |  |  | Rapid Testing |
| Schistosoma serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Hospital for Tropical Diseases | 12 working days |  | Microbiology |
| Selenium | Please state clinical indication  Please contact laboratory if Royal Blue Bottle required | blood | Trace element bottle  (royal blue top)  Paediatric: Plain Clot (red top), | Referred | Royal Wolverhampton NHS Trust operating as Black Country Pathology Services | 8 days |  | Clinical Chemistry |
| Serous fluids | See Fluids for cytology |  |  |  |  |  |  |  |
| Serum Free Light Chains  (FLC, Serum free Kappa, and Lambda light chains) | Only available to Consultant Haematologists | Blood | Gel Clot  (gold top) | Referred | Synnovis | 3 weeks |  |  |
| Schistosoma serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Hospital for Tropical Diseases | 12 working days |  | Microbiology |
| Sickle cell screen | Contact lab for urgent requests if patient going into imminent surgery | Blood | EDTA  (purple top) | 24 hr |  |  | 24 hrs | Haematology |
| Skeletal Muscle Antibody |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 21 days |  | Immunology |
| Skin Antibody |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 21 days |  | Immunology |
| Smooth Muscle Antibody |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 3 days |  | Immunology |
| Sodium (24hr Urine) | 24 hr collection. | 24hr urine | 5L plain container | 24 hr |  |  | 3 days | Clinical Chemistry |
| Sodium (Random Urine) |  | Random urine | Plain Universal (white top) | 24 hr |  |  |  | Clinical Chemistry |
| Sodium/Potassium (Serum) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Somatostatin | See Gut Hormones |  |  |  |  |  |  |  |
| Sputum C&S | Do not send saliva. Avoid mouth wash. Transport to the laboratory the same day.  Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) | 2-5 ml Sputum | 60ml  (white top) | 90% in 3 days |  |  |  | Microbiology |
| Sputum for cytology | Detection rates of malignancy from sputum are very low | Early morning deep cough specimen | 60ml  (white top) | within 1 week (unless marked urgent) |  |  |  | Cellular Pathology |
| Steroid Profile (24 hr Urine) | Please state clinical indication | 24 hr urine | 5L plain container | Referred | Synnovis | 36 days |  | Clinical Chemistry |
| Steroid profile (Random Urine) | Please state clinical indication | Urine | Plain Universal (white top) | Referred | Synnovis | 36 days |  | Clinical Chemistry |
| Stone | Please state site of stone | Stone | Plain Universal (white top) | Referred | HSL (Analytics) LLP | 16 days |  | Clinical Chemistry |
| Streptococcus pneumoniae Antigen Screen | See - Pneumococcal Antigen Screen |  |  |  |  |  |  |  |
| Streptomycin Level | Pre-& Post dose to be collected after 2nd – 4th dose  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | 5 working days |  | Microbiology |
| Strongyloides serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Hospital for Tropical Diseases | 12 working days |  | Microbiology |
| SWABS- BACTERIAL (all sites) (C&S) (Pus is always preferred) | Transport swabs are stable at room temperature for 24 hours but refrigerate samples where possible.  Please see [User Information- ENT swabs](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Ear-Eye-Mouth-Throat-and-Nasal-Swabs-User-Guide.pdf)  Please see [User Information- Wound, Skin and Ulcer Swabs](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Wound-Skin-and-Ulcer-swabs.pdf)  Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf) | Charcoal swab. ENT and Urethral/ CX wire swabs available. | Black top, plastic shaft. | 3 working days |  |  |  | Microbiology |
| SWABS - CHLAMYDIA | Transport to the lab within one day.  Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf) |  | Kit supplied | 7 working days |  |  |  | Microbiology |
| SWABS – HSV (Herpes simplex virus) PCR | Transport to the lab within one day.  Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf) |  | Viral transport medium.  Kit provided. | Referred | EKHUFT | 6 working days |  | Microbiology |
| SWABS - VIRAL investigation | Provide full clinical details and specify which viral PCR requested  Transport to the lab within one day.  Please see [User Information- ENT swabs](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Ear-Eye-Mouth-Throat-and-Nasal-Swabs-User-Guide.pdf)  Please see [User Information: Respiratory Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Respiratory-Specimens.pdf) |  | Viral transport medium.  Kit provided. | Referred | Micropathology Ltd | 14 working days |  | Microbiology |
| Sweat test | Please contact the Paediatricians. | Sweat |  | Referred | EKHUFT |  |  | Clinical Chemistry |
| Syphilis (IgG/IgM) | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 5 working days | Positives sent to UKHSA Bristol | 8 working days |  | Microbiology |

# T

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| T- spot TB test | The sample must arrive at Microbiology within 24 hours of collection. **DO NOT COLLECT SAMPLE AT WEEKENDS**. The sample needs arrive at the reference laboratory within 36 hours of collection  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | 2 x Lithium Heparin (green top) |  | Oxford Diagnostics Laboratories | 1-2 Days |  | Microbiology |
| Tacrolimus | Please state dosage and time of last dose. | Blood | EDTA  (purple top) | Referred | ESTH/ Kings College Institute of Liver Studies | 7 days |  | Clinical Chemistry |
| TB (tuberculosis) culture | See AAFB |  |  |  |  |  |  |  |
| Teicoplanin | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | 3 working days |  | Microbiology |
| Tips MC&S | Disinfect the skin around the cannula entry site, remove cannula using aseptic technique, and cut off 4cm into appropriate sterile  Please see [User Information- Cannulae/ Central line tips](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Intravascular-Cannulae-.pdf) | Tip | Plain universal | 3 working days |  |  |  | Microbiology |
| Testosterone/SHBG | Male patients collect sample 8-11 am. SHBG routinely reported for female patient | Blood | Plain Clot  (red top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Theophylline | Please state dosage and time of last dose. | Blood | Plain Clot  (red top) | 3 days |  |  | 3 days | Clinical Chemistry |
| Thioguanine nucleotides (TGN) Methylmercaptopurine(MeMP) | Only available to consultant Gastroenterologists | Blood | EDTA  (purple top)  Whole blood |  | Synnovis | 2 weeks | 3 days |  |
| THREAD-WORM | See instruction sheet | cellotape onto slide. | Plain 20mL Universal (white top) | Microscopy results available same day. |  |  |  | Microbiology |
| THREAD-WORM | See instruction sheet | Saline wash and swab. | Plain 20mL Universal (white top) | Microscopy results available same day. |  |  |  | Microbiology |
| Thrombin Time | Only stable for 4 hours. | Blood | Citrate  (blue top) | 1 hr for agreed urgent requests  4 hr for all other requests |  |  | Within 4 hrs of venepuncture | Haematology |
| Thrombophilia screen | Only stable for 4 hours.  If clinical indications do not meet those set out in BSH guidelines, this test will be rejected. | Blood | 4 x Citrate (blue top) and 1 x Plain Clot (red top) | 4 weeks |  | 4 weeks |  | Haematology |
| Thyroglobulin | Recommended for monitoring patients with papillary and follicular thyroid carcinoma | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 20 days |  | Clinical Chemistry |
| Thyroid Autoantibody |  | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 14 days |  | Immunology |
| Thyroid Peroxidase | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 2 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Tissue - culture | see also Prosthetic joint. Do NOT add formalin  Please see [User information: Fluids, Pus and Tissue Samples](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Fluids-Pus-and-Tissue-Specimens.pdf) | Tissue | Plain 20mL Universal (white top) | Microscopy –same day  Interim Culture –3 working days |  |  |  | Microbiology |
| Tissue - histology biopsies | Add sufficient formalin to cover tissue  Test not indicated for external users | Tissue | 60ml formalin container (purple top) | 7 days | Tissue and Test type dependent |  |  | Histology |
| Tissue - histology large specimens | Add sufficient formalin to cover tissue  Test not indicated for external users | Tissue | .05l - 2l bucket | 10 days` | Tissue and Test type dependent |  |  | Histology |
| Rapid Frozen section – fresh tissue | DO NOT add formalin or any fixative to tissue | Tissue | 60ml pot - 2l bucket |  |  | Same Day – intraoperative assessment |  | Histology |
| Tissue - Skin IMF | Must be in Michel’s medium –sufficient medium to cover tissue | Tissue | Cryotube |  | Not applicable | Not applicable |  | Cellular Pathology |
| TOBRAMYCIN | Take Pre-dose before giving the next dose. Post dose levels are not required  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Antimicrobial reference laboratory, Southmead Hosp, Bristol | 24 hr  (Mon-Thurs) 72 hrs (Fri) from receipt phoned result |  | Microbiology |
| TORCH screen | Sent with stored antenatal sample  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot (Red top) | 7 working days | EKHUFT | 15 working days from time stored samples sent | 1 year | Microbiology |
| Total Protein (CSF) | Do NOT use Vacuum tube to transport CSF samples  Test not available for external users | CSF | Plain 20mL Universal (white top) | 4 hr |  |  | 3 days | Clinical Chemistry |
| Total Protein (Fluid) | Do NOT use Vacuum tube (pod) to transport fluid samples  Test not available for external users | Fluid | Plain 20mL Universal (white top) | 4 hr |  |  |  | Clinical Chemistry |
| Total Protein (Serum) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Toxicology Screen (Urine) | Please state which drug or substance in particular suspected in the clinical details.  Not available for medico-legal work or employment screening. | Urine | Plain 20mL Universal (white top) | Referred | Synnovis | 25 days | 3 days | Clinical Chemistry |
| Toxoplasma screen | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 7 working days | Positives: Toxoplasma reference unit, Public Health Wales Swansea, Singleton Hospital | 9 to 12 working days | 1 year | Microbiology |
| TPHA (Treponema haemagglutination) | See Syphilis |  |  |  |  |  |  |  |
| TPMT (Thio Purine Methyl Transferase) | Only indicated once (unless previously post transfusion) | Blood | EDTA  (purple top) | Referred | Synnovis | 23 days |  | Clinical Chemistry |
| Trichomonas vaginalis (TV) PCT | Please see [User Information - Genital Tract Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Samples-from-the-genital-tract.pdf) | Swab or urine | Use Chlamydia collection - Kit provided (Yellow cap)  Urine- plain 20mL Universal (white top) |  |  | 7 working days |  | Microbiology |
| Troponin T | Only available to MTW in-patients. Troponin T should not be requested at triage but only after medical review (unless obvious suspected acute coronary event) in which case contact laboratory or indicate on request form | Blood | Gel Clot  (gold top) | 4 hr |  |  | 24 hrs | Clinical Chemistry |
| Tryptase | Anaphylactic reactions = sample asap after emergency treatment started. It is important to state approx time reaction started/exposure to allergen.Second sample ideally within 1–2 hours (but no later than 4 hours) from the onset of symptoms. NICE CG134. | Blood | EDTA  (purple top) or Lithium Heparin (green top) preferred– but Gel Clot  (gold top) acceptable | Referred | Sheffield NHS Teaching Hospitals NHS Foundation Trust | 21 days |  | Clinical Chemistry |
| TSH (Thyroid Stimulating hormone) | Please state all medication. FT4 and FT3 will be reflexed by the laboratory if indicated by clinical details and/or depending on TSH level. TSH should not be re-requested within a month. | Blood | Gel Clot  (gold top) | 24 hr for MTW requests  3 days for all other requests |  |  | 3 days | Clinical Chemistry |
| Toxocara serology | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Hospital for Tropical Diseases | 12 working days |  | Microbiology |

# U

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Urate (24hr Urine) |  | 24hr urine | 5L plain container | 1 working day |  |  | 3 days | Clinical Chemistry |
| Urate (Serum) | Uric Acid | Blood | Gel Clot  (gold top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Urea (24 hr Urine) |  | Urine | 5L plain container | 24 hr |  |  | 3 days | Clinical Chemistry |
| Urea (Serum) (Paediatrics) | When being collected into a paediatric bottle | Blood | Lithium Heparin  (green top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Urea (Serum) (Adults) |  | Blood | Gel Clot  (gold top) | 4 hr for MTW requests  24 hr for all other requests |  |  | 3 days | Clinical Chemistry |
| Urine for cytology | Detection rates of malignancy from urine are very low.  Urine samples are not suitable for haematuria pathway investigation. | First part of second voided sample. | Plain 20mL Universal (white top) | 1 week |  |  |  | Cellular Pathology |
| URINE MC&S | Please see  [Microbiology User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2022/12/Microbiology-User-Information-Urine-Specimens-1.1.pdf) | Urine | Boric Acid Monovette- fill to line | Microscopy available same day.  Culture results within 2 days |  |  |  | Microbiology |
| URINE MC&S Paediatric | Where <10ml can be collected  Please see  [Microbiology User Information- Urine Specimens](https://www.mtw.nhs.uk/wp-content/uploads/2022/12/Microbiology-User-Information-Urine-Specimens-1.1.pdf) | Urine | Plain 20mL Universal (white top) | Microscopy available same day.  Culture results within 2 days |  |  |  | Microbiology |

# V

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Valproate (Sodium Valproate) | (Epilim) Please state dosage and time of last dose. | Blood | Plain Clot  (red top) | Referred | Synnovis | 11 days |  | Clinical Chemistry |
| Vancomycin | Pre-dose: take just before dose. Post dose levels are not required  Test not available to external users | Blood | Gel Clot  (gold top) | 4 hr |  |  | 2 days | Clinical Chemistry |
| Very Long Chain Fatty Acids | Paediatrics only. Please state clinical indication | Blood | EDTA  (purple top) | Referred | Synnovis | 2 weeks |  | Clinical Chemistry |
| VDRL | See Syphilis |  |  |  |  |  |  |  |
| Viral cultures | see Swabs - viral |  |  |  |  |  |  |  |
| Viral loads | See specific virus  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | EDTA  (purple top) | See specific virus | See specific virus |  |  | Microbiology |
| Viral titres | Specify virus  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | Referred | Depends on virus |  | 1 year | Microbiology |
| 25 OH Vitamin D | See Vitamin D |  |  |  |  |  |  |  |
| Vitamin B12 | see Folate (serum) & Vitamin B12 |  |  |  |  |  |  |  |
| Vitamin D (VitD3, 25 hydroxy vitamin D, 25 OH Vitamin D.) | Do not retest within 80 days of previous result.  [See guidelines for the replacement of low Vitamin D](http://www.mtw.nhs.uk/gps/pathology/biochemistry/) | Blood | Plain Clot  (red top) | 5 days |  |  |  | Clinical Chemistry |
| VIP (vasoactive intestinal peptide) | See Gut Hormones |  |  |  |  |  |  |  |
| VMA | See Catecholamines |  |  |  |  |  |  |  |
| Voltage Gated Calcium channel antibody | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Voltage Gated Potassium channel antibody | Paediatric samples must be red top | Blood | Gel Clot  (gold top) | Referred | EKHUFT | 7 weeks | 7 days if no immunology already requested, 6 weeks if additional immunology test | Immunology |
| Voriconazole levels | Pre-dose, within 5 days of staring therapy  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain clot  (red top) | Referred | Mycology Reference Centre, Leeds General Infirmary, Leeds | 10 working days |  | Microbiology |
| VZV (chicken pox) contact immunity check | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 24 hr |  |  | 1 year | Microbiology |
| VZV Occ Health immunity check | Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot  (red top) | 7 working days |  |  | 1 year | Microbiology |

# WXYZ

| **TEST** | **Specimen Instructions/ Comments** | **Specimen Type** | **Specimen Container** | **Internal Turnaround time** | **Referral centre** | **Referral Turnaround time** | **Add on time limit** | **Pathology department** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Whooping Cough | See Pertussis |  |  |  |  |  |  | Microbiology |
| Xanthochromia | Samples must reach lab within 1 hour. Protect from the light.  [See protocol](http://www.mtw.nhs.uk/gps/pathology/biochemistry/)  Test not available to external users | CSF | [See protocol](http://www.mtw.nhs.uk/gps/pathology/biochemistry/) | 24 hr |  |  |  | Clinical Chemistry |
| Zinc | Please state clinical indication  Please contact laboratory if Royal Blue Bottle required | blood | Trace element bottle  (royal blue top)  Paediatric: Plain Clot (red top), | Referred | Royal Wolverhampton NHS Trust operating as Black Country Pathology Services | 8 days |  | Clinical Chemistry |  |
| Zika Virus | Discuss with Consultant Microbiologist prior to sending sample to ensure compliance with PHE guidelines  Please see [User Information- Bacterial and Viral Serology](https://www.mtw.nhs.uk/wp-content/uploads/2023/08/Bacterial-and-Viral-Serology.pdf) | Blood | Plain Clot (red top), & EDTA  (purple top) | Referred | UKHSA RIPL, Porton Down | 7 working days | 1 year | Microbiology |  |