

CYTOLOGY HANDBOOK

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1. Introduction

Welcome to the PureLab UK Cytology Handbook .

This handbook is intended to serve as a user guide to the services available from the Cytology Laboratory based at Stephenson Way, London. It is aimed for use by all staff groups involved with requesting Cytological investigations.

The document outlines specimen requirements, service capabilities, reporting processes, quality standards, and referral pathways to ensure specimens are submitted correctly and processed efficiently.

Our aim is to support the delivery of accurate, timely, and clinically relevant diagnostic results while maintaining the highest standards of patient care, safety, and regulatory compliance.

2. About PureLab UK

PureLab UK is a independent diagnostic laboratory providing comprehensive pathology services to private hospitals, clinics, healthcare professionals, and laboratory partners throughout the United Kingdom.

Our services encompass a broad range of diagnostic disciplines, including:

Cellular Pathology

- Histopathology
- Immunohistochemistry (IHC)
- Special stains
- Gynaecological cytology
- Non-gynaecological cytology
- HPV testing
- Molecular pathology investigations

Blood Sciences

- Clinical biochemistry
- Haematology
- Immunology
- Allergy testing

- Microbiology
- Serology
- Capillary testing

We support:

- Routine diagnostic pathways
- Urgent and priority testing
- Fully outsourced pathology services
- Specialist referrals
- Second opinion consultations

PureLab UK is accredited by the United Kingdom Accreditation Service (UKAS) to ISO 15189:2022 Medical Laboratories - Requirements for Quality and Competence under accreditation number 9344.

Users should refer to the latest UKAS Schedule of Accreditation to confirm current accredited tests, services, and locations.

[UKAS Schedule Website](#)

3. Contact Information

Postal Address

PureLab UK
Histology Department

24-32 Stephenson Way
London
NW1 2HD

General Enquiries

Telephone: +44 (0)20 7299 4490

Email: customercare@purelab-uk.com

4. Operating Hours

Laboratory Opening Hours

Day	Opening Times
Monday to Friday	08:30 - 17:30
Weekends and Bank Holidays	Closed

Specimen Reception Hours

Day	Opening Times
Monday to Friday	07:00 - 17:00
Weekends and Bank Holidays	Closed

5. Patient Consent

PureLab UK operates in accordance with current legislation, professional standards, and information governance requirements.

Specific written consent may be required for tests involving:

- Referral to specialist laboratories
- Genetic investigations
- Molecular testing requiring additional patient information
- Tests requiring disclosure of family history or other relevant clinical information

For routine diagnostic histopathology services, consent is generally considered implied when the requesting clinician submits a specimen for diagnostic examination.

It is the responsibility of the requesting clinician to ensure appropriate consent has been obtained and documented

6. Quality Assurance

The laboratory operates daily internal quality control procedures and participates in recognised national external quality assurance schemes covering; sample processing/staining (PHE TEQA), cytology screening/reporting (PHE GEQA), HPV testing (NEQAS microbiology/parasitology) UKNEQAS CPT (for Non-gynae and Cell Blocks) and Digital diagnostic Cytopathology reporting. The reporting pathologist also take part in UKNEQAS scheme for Synovial fluid.

7. Complaints and Compliments

We welcome feedback about our services and are committed to learning from every experience. Whether you would like to share a compliment, raise a concern or make a formal complaint, information on how to contact us and what to expect from the process is available on our Compliments and Complaints webpage.

[Compliments & Complaints Webpage](#)

8. Request Forms

The appropriate request form and dispatch log must accompany every specimen submitted to the laboratory and should include all required patient, clinical and requester information. A PureLab request form can be downloaded from our website, but we also accept a clinic's/hospital's own request forms that meet the acceptance criteria.

Please use the links below to access the latest laboratory request forms and review our specimen acceptance requirements before submitting samples.

[Cytology Request Form](#)

[Cytology Dispatch Log](#)

[Sample Acceptance Criteria Webpage](#)

High Risk Patients

Please indicate clearly on the request form if a specimen is high risk or suspected to be high risk. Histology samples must be clearly labelled with “Risk of Infection” or “High Risk” hazard stickers if the patient is a known or suspected carrier of HIV, Hepatitis B/C, TB or SARS-CoV-2. The request form must also state the reason for the risk of infection.

All doctors responsible for the care of patients have a duty of care towards other members of staff to ensure this is carried out.

9. Transportation of Samples

Samples must be packaged, stored and transported appropriately to preserve their integrity and protect everyone involved in their handling. Please use the link below to access our Transportation Manual and review the requirements before sending specimens to the laboratory.

[Transportation Manual Webpage](#)

10. Accessing Results

Authorised clients can securely access and review their laboratory results through our online reporting portals.

PLEASE NOTE: a negative cytology report does not exclude the presence of disease

Use the link below to sign in to the portal for your results.

[Cytology Portal](#)

11. GYNAE CYTOLOGY

The cervical screening section of the laboratory provides a service to private hospitals and clinics using Thin prep Pap test and Roche COBAS platforms. Our laboratory provides a wide range of tests **suited for private clinic** needs. All tests can be performed on the same specimen vial.

Please use the link below to view our gynecological cytology sample and test list.

[Cytology Test List](#)

11.1 Specimen Acceptance Criteria

To support patient safety, sample integrity and timely processing, all specimens submitted to the laboratory must meet our acceptance requirements.

Please use the link below to review the specimen acceptance criteria, including requirements for patient identification, request forms, and discrepancy guidelines.

[Specimen Acceptance Criteria Webpage](#)

11.2 Sample Rejection Criteria

- The vial is unlabelled.
- The request form does not contain all the essential information.
- The ThinPrep vial has passed its expiry date.
- The vial is received more than 30 days after collection date.
- For ThinPrep® specimens, the sampling broom head should have been removed from the vial.
- The sample has leaked in transit resulting in a significant loss of fluid.
- The sample is received in formalin.

11.3 Advice for Smear Takers

Gynae samples should only be taken by trained staff.

Samples must be collected using a Cervex-broom. Samples are only viable for 30 days from the date taken therefore should be sent to the laboratory soon after collection.

During follow up for an abnormality in endocervical cells, endocervical brush or Cervex-broom may be necessary depending on nature of the cervix.

Use of lubricants should be avoided. If necessary, only a tiny amount of K-Y jelly can be used on the body of the speculum.

The cervix should be seen and noted. If the sample taker has stated that the cervix is not visualised at the time of sample collection, if no abnormality is detected, an inadequate may be given.

Cervex-broom should be rotated 360° at least 5 times.

Smears should be taken mid-cycle whenever possible.

Follow up smears should be taken at least 3 months after the initial smear.

Samples should be kept at room temperature until transported to the laboratory.

Links below can be used by smear takers for further information:

<https://www.gov.uk/government/publications/cervical-screening-primary-hpv-screening-implementation>

NHSCSP Sample acceptance policy <https://www.gov.uk/government/publications/cervical-screening-accepting-samples-in-laboratories/guidance-for-acceptance-of-cervical-screening-samples-in-laboratories-and-pathways-roles-and-responsibilities>

11.4 Turnaround Time

Turnaround times for gynaecological cytology specimens are in accordance with each individual pre-approved client contractual agreement. PureLab Cytology aims to have all results available to meet all individual client contractual agreements as required.

These requirements will also ensure that 80% of results are available in 5 calendar days and 90% of all results in 7 calendar days.

12. NON-GYNAE CYTOLOGY

The non-gynaecological cytology service provides diagnostic examination of a wide range of cellular specimens to support the investigation, diagnosis, and monitoring of both benign and malignant conditions.

We offer expert analysis of fluid specimens, urine samples, respiratory tract samples, fine needle aspirations (FNA), cerebrospinal fluid (CSF), synovial fluid, brushings, washings, and other cytological preparations. Where appropriate, ancillary investigations including cell block preparation, immunocytochemistry, flow cytometry, and molecular testing can be arranged to support patient diagnosis and management.

Please use the link below to view our current non-gynaecological cytology sample and test repertoire.

[Cytology Test List](#)

12.1 Specimen Acceptance Criteria

To support patient safety, sample integrity and timely processing, all specimens submitted to the laboratory must meet our acceptance requirements.

Please use the link below to review the specimen acceptance criteria, including requirements for patient identification, request information, sample type, containers, labelling and storage.

[Specimen Acceptance Criteria Webpage](#)

12.2 Specimen Rejection Criteria

Sometimes tests cannot be performed due to sample acceptance criteria not been met. The potential risk to the patient is delay to the result/diagnosis, patient management pathway and breach in turnaround times.

Summary list for sample rejection

- Insufficient sample received.
- No sample received.
- Labelling or form issues (mislabelled / unlabelled / no forms / no clinical information).
- Sample contamination (e.g., being in the same bag as a leaking sample)
- Samples that are received in expired thinprep vials
- Improper sample containers (e.g., Urine sample received in Boric Acid)

To reduce the risk of sample rejection or delay to provision of results, please ensure all sample acceptance criteria are met.

12.3 Turnaround Time

Routine turnaround time for non-gynae reporting is 48 hours. URGENT specimens can be reported within the same day.

13. COLLECTION GUIDE

Please note all fresh cytology specimens should be sent to the laboratory promptly. For slight delays keep refrigerated and for overnight transportation add equal volume of cytology fixative such as T Thinprep CytoLyt solution to preserve the cells.

Fluids Specimen Container: All fluids should preferably be sent unfixed to the laboratory in a standard universal container.



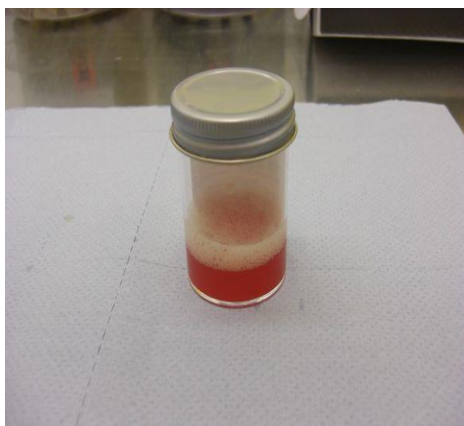
Serous Fluid Samples (pleural/ascitic/peritoneal/pericardial fluids & peritoneal washing) and All Other Drained Fluids

50 -100 ml of fresh fluid should be sent in a clean dry sterile container with screw top required for reliable assessment of malignancy. The sample should be delivered as soon as possible to minimize cell deterioration. If there is a delay in delivering the sample to the laboratory, the sample should be kept refrigerated at 4°C.

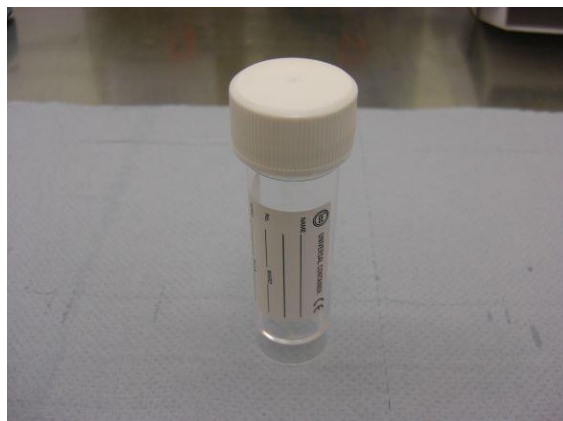
****DO NOT send more than 100ml of as the laboratory is not equipped to deal with this volume of sample****

Note: no formalin or alcohol should be added to the sample as both can cause interference with adherence to slide and quality of staining

Serous fluid



Cyst fluid



Cyst Fluid Samples

Cyst fluid samples should be put into a clean dry sterile container with screw top.

The fluid should be submitted as soon as possible to minimise cell deterioration, so that cell preservation is not compromised.

If there is a delay in delivering the sample to the laboratory, the sample should be kept refrigerated at 4°C.

Note: No formalin or alcohol should be added to the sample as both can cause interference with adherence to slide and quality of staining

Cerebrospinal Fluid

CSF samples should be collected in clean dry sterile containers with screw top.

About 5ml of a sample is usually adequate for cytological examination. It is **VERY IMPORTANT** to transport the sample to the laboratory immediately as an **URGENT** sample, as the cells degenerate rapidly and therefore must be prepared immediately.

If out of hours sampling is unavoidable, storing the sample in refrigerator at 4°C may help preserve cells for up to 24 hours. Specimens collected at the weekend are unsuitable for malignant cell analysis.

(Please note: If other investigations are required, such as microbiology (MC&S), clinical chemistry (100A, Clinical pathology) and flow cytometry (Cytology dept), separate samples should be collected and sent DIRECTLY to those relevant departments to avoid unnecessary delays in sample processing.

Please note: Separate samples should be collected for Flow cytometry and sent DIRECTLY to Cytology department to avoid unnecessary delays in sample processing. Samples to be couriered ASAP after extraction to arrive MON-FRI, with the cut off 12pm on Friday.

For CSF and other very low yield sample Transfix preservative should be added.

(Supplier details: Transfix CSF storage tube- Cytomark Limited Product code: TVT-03-1/2/50)

Brushings

Oesophageal and biliary tract brushings or any material obtained by brushing can be spread on a slide and fixed promptly or sent to the laboratory in a cytology fixative such as Thinprep Cytolyt. The brush should be included. ****Please make sure that the brush tip end is in the fixative****. The necessary patient identifying details must be clearly labelled in pencil on the frosted end of the slide.

DO NOT USE FORMALIN FIXATIVE

Respiratory Tract Samples to Include: (Sputum, Bronchoalveolar Lavage, Bronchial Washings, and Bronchial Brushings).

Sputum Samples: Sputum sample should only be submitted if the patient has suspected lung cancer and is unfit for bronchoscopy. Multiple specimens (usually x 3) may be necessary, but these should be sent on 3 separate days, not all taken at the same time.

Best results are achieved with freshly obtained sputa with an early morning sputum before the patient has eaten and brushed their teeth. Contamination with large amounts of saliva or food leads to inadequate specimens.

Sputum samples should be collected into sterile containers with screw top and submitted to the laboratory as soon as possible after collection. The accompanying request form should give precise details of the patient clinical background.

If microbiological examination is also required a separate sample should be sent to the Microbiology department.

Bronchial Washings/Bronchial Alveolar Lavages

These specimens are collected during bronchoscopy to investigate focal or diffuse lung abnormalities. The nature of the abnormality being investigated should be clear from the clinical information included with the specimen so that the laboratory can perform the appropriate preparations. Please send a maximum of 25 ml of washings

in a clean sterile universal container. If transport is delayed add cytology fixative such as Thinprep Cytolyt then refrigerate sample at 4°C.

If microbiological examination is also required a separate sample should be sent to the Microbiology department.

Bronchial Brushings

Bronchial brushings are taken at bronchoscopy for the investigation of suspected tumours. The highest diagnostic yield is found when a visible abnormality is sampled. Bleeding induced by biopsy of the lesion may obscure the cellular material and thus the brushing should be performed before a biopsy is taken. The brush should be broken off, unsheathed, and immersed in cytology fixative such as Thinprep Cytolyt. If smears are to be made the brush can be spread on a slide, they must be fixed promptly or sent to the laboratory in a cytology fixative such as Thinprep Cytolyt. The brush should be included. ****Please make sure that the brush tip end is in the fixative****

The necessary patient identifying details must be clearly labelled in pencil on the frosted end of the slide.

Urinary Tract Samples

PLEASE NOTE: The first sample voided in the morning is unsuitable for cytological examination.

Second voided urine sample of the day is considered as the adequate sample. Collect urine in a clean dry sterile container with a screw top.

A neat sample of 20ml to 50ml container is suitable. Urine can be collected from catheters as well as washings from the bladder or upper urinary tract. The appearance of urine cytology is significantly altered by instrumentation or catheterisation which should thus be recorded in the clinical information accompanying the specimen. If there is a delay in delivering the sample to the laboratory, the urine sample should be kept in a fridge at 4°C; or a preservative, such as Thinprep Cytolyt may be added to the sample. 20ml max of urine fluid in a plain sterile 60ml container and add equal volume of Thinprep CytoLyt. This must be recorded on the request form.

PLEASE NOTE: RED TOPPED Borate universals are NOT SUITABLE FOR CYTOLOGY. The laboratory will not accept these samples.

If microbiological examination is also required a separate sample should be sent to the Microbiology department.

Synovial Fluids

Sample is aspirated from joint for the assessment of birefringent crystals (Gout and Pseudogout). A neat sample should be collected into a clean, dry, sterile 30 ml universal container and sent to the Cytology laboratory as soon as possible.

If microbiological examination is also required a separate sample should be sent to the Microbiology department.

Fine Needle Aspiration

Fine needle aspiration is a reliable method and initial choice of determining the nature of lumps and bumps. This involves aspirating a lump using a fine needle and then testing the material obtained. It is a very safe and minimally invasive procedure for the diagnosis and further management.

Aspirated material is spread along the length of the slides using another slide. Half of the slides prepared are immediately fixed using an alcohol spray fixative to prevent air drying, while the others are rapidly air dried. We recommend preparing a maximum of 4 direct spread slides.

Label each slide IN PENCIL on the frosted end of the slide (Do not write in ink which is washed off in the fixative) with patient's name, DOB, and hospital number – the details must be written on the same side of the slide as the spread sample. Please ensure that the sample is spread onto the correct side of the slide.

Rinse any residual material left in the syringe into a labelled sample vial containing Thinprep Cytolyt.

Ideally, a designated extra pass from the sample site is vital for needle washings in cases where cell block or other ancillary tests are required. Rinse needle into the original sample vial containing Thinprep Cytolyt "Needle washings". Check cap is securely tightened.

Airdried slides should never be placed near Formalin as its vapour causes artefact resulting in difficulty in interpretation or an inadequate report.

Please note: Separate samples should be collected for Flow cytometry and sent DIRECTLY to Cytology department to avoid unnecessary delays in sample processing. Samples to be couriered ASAP after extraction to arrive MON-FRI, with the cut off 12pm on Friday.

For CSF and other very low yield sample Transfix preservative should be added. See Supplier details

Factors Affecting Sample & Report Quality:

- Correct sample taking – refer to sections above for non-Gynae
- Use of correct sample container
- Refrigeration of fresh samples if there is a delay in sending / collection (i.e., overnight / weekends).
- Samples in Thinprep CytoLyt solution must be stored at room temperature (between 4°C and 30°C).
- Correct slides used for FNA samples – refer to section above
- Sample spread on correct side of the slide – i.e., sample & patient details written in PENCIL (on the frosted end) must be on the SAME side of the slide.
- Slides must be sent in a plastic slide mailer – one slide per section (maximum of 4 slides per box)
- Ensure that slides are correctly & sufficiently labelled on the ground glass end in pencil – full name, HRN & / or DOB
- Use the correct request form & complete in ink in legible writing
- Correct labelling of sample container & completion of request form
- Ensure sample vial is labelled with specimen site / type.
- Please contact the laboratory with any queries or for additional information.

Please note: New clients should contact customercare@purelab-uk.com to register with us before sending specimens

Supplier Details

For Transfix fixative:

Product can be purchased from the link below. Please note Transfix is suitable to fix all cytology fluid types (CSF, FNA, BAL, EBUS, pleural, ascitic)

[Products \(TF-CSF\) - Caltag Medsystems](#)

Long Description:	TransFix CSF Sample Storage Tubes consist of 5ml screw cap tubes containing 0.2ml of TransFix, which can be used to stabilise between 1-4ml of CSF. These tubes are available in packs of 2, 10 and 50.
Product Weight kg:	0.213
Stability:	12 months or until the expiration date on the label

TransFix CSF 1-4ml Sample Storage Tube (10 tubes)	TF-CSF-L-10
TransFix CSF 1-4ml Sample Storage Tube (2 tubes)	TF-CSF-L-2
TransFix CSF 1-4ml Sample Storage Tube (50 tubes)	TF-CSF-L-50

80 centrifuge tubes (50ml) containing 30ml of CytoLyt solution - Hologic. Product code: 0236080.

For contact details for ordering CytoLyt products, it would be best for your clients to reach out to CustomerServiceUK CustomerServiceUK@hologic.com. They can also submit an online enquiry via <https://www.hologic.co.uk/en-gb/contact-us>.

Please note consumables are NOT provided by PureLab.