

Preanalytics Histopathology

Specimens

Tissue samples taken from all organs (through biopsy, excision, curettage, resection)

Sampling

- Ensure careful sampling and handling of specimens to avoid mechanical artifacts.
- Ensure sample size is sufficient and representative.
- Use marking sutures on surgical specimens to enable accurate orientation.
- Include legend if marking sutures are used.
- Fix standard specimens immediately after removal and place into 4 % buffered formalin.
- Tighten the cap securely.
- If the specimens pose any particular biohazards (radioactive, infectious sample), label the cassette with a warning label.
- All containers with specimens for histological examinations must be clearly labelled and identifiable. Patient's name and date of birth are required. If several containers are submitted for the same patient, number them consecutively.
- Include useful details such as the tissue type and anatomic site of the specimen, suspected diagnoses, and previous findings.
- The usual fixative used in routine histology examinations is 4 % buffered formalin.
- The specimen to formalin ratio should be at least 1:5, ideally 1:10.

Specific requests

- Direct immunofluorescence (DIF): Submit biopsy unfixed in container with Michel's solution.
- Frozen section biopsy: Submit unfixed specimen in empty container.

Tab. 1 Fixation

Specimen	Fixative
Standard specimen (with exceptions)	4% neutral buffered formalin solution Ratio specimen to formalin volume, at least 1:5
Frozen section biopsy	Unfixed
Biopsies for direct (DIF) studies (skin)	Unfixed in container with Michel's solution



Submit request

All specimens to be submitted must be accompanied by a completed request form. The form must clearly indicate the following:

- Patient's surname, name, date of birth, address.
- Sender (address and phone number of the ordering physician).
- Date and time of specimen sampling (specify exact time).
- Sampled material and clinical diagnosis.
- Relevant findings from previous histological examinations.
- Clinical queries or specific request form.
- Specific anatomic site sampled and specimen type.

Subcontracted Analyses

For specific queries, testing will be subcontracted to contract testing laboratories, or a second opinion is sought. Results from contract laboratories will be included in the final report, and the external report will also be delivered.

A contract laboratory is selected based on the following criteria:

- Expertise and scientific qualifications (experts).
- Competence awarded by professional associations (reference centres).
- Comprehensive Quality Management (accreditation according to ISO 15189:2022 initialised).