



LIMITATIONS AND PRECAUTIONS IN HISTOLOGY

1. *Limitations*

- The test procedure, precautions, and interpretation of results for each test should be followed carefully.
- Do not accept the incomplete labelling specimens
- The specimen should be kept in the right ratio of fixatives when the test is not performed immediately.
- Most of the fixatives work better in neutral pH. In fact, good fixation occurs when pH remains 6 – 8, and no morphological distortion is seen in that range of pH.
- Dehydration is necessary to remove water but too much time in the dehydrating fluid, the tissue becomes hard and brittle.
- Prolonged exposure of the tissue in clearing agent may make the tissue brittle and more friable.
- It may also cause tissue shrinkage and hardening in case of prolonged impregnation.
- The correct embedding and orientation of the tissue is very important for proper cutting and microscopic examination. Tissue is usually placed as flat on the central part of the mold. It should be oriented in such a way so that cutting is easy by knife of the microtome.
- Ribbons section are not produced when paraffin is hard, using dirty or dull knife, surface of the block is uneven, rotation of the microtome is clumsy.
- The staining procedure should be performed in accurate timing for reduce uneven coloration of the t/s structures.
- Mounting media should be colorless and neutral pH to prevent fading of the stain. It should quickly dry and stick to the slide.
- In order to have consistently stained sections day after day, it is necessary to make microscopic checks after critical steps in the staining procedure.

2. *Warnings & Precautions*

- No smoking, eating, drinking & mouth-pipetting in the laboratory.
- Glassware with damaged edges or broken glassware should not be used or discarded into a definitive impermeable container.
- Used hypodermic needles in commercial, puncture-proof containers must be incinerated.
- All bottles must be kept upright on firm surface, recapped & cleanly labeled to show their contents.
- Certain dyes, stains & chemicals are potentially harmful & clearly labeled with the international hazards symbols.
- An appropriate fume-cupboard should be used when working with toxic or irritant vapor evolving chemicals.
- Spillage from patient specimens should be covered with a disinfectant cloth for > 10 minutes.
- All working surfaces should be disinfected & cleaned after use.

Reference

- University of Medical Technology, Department of Medical Technology, *Histopathology Practical Manual Handbook*