medilines

Gomori's Trichrome

for Muscle & Collagen

DESIGN TO DEMONSTRATE

To identify collagen fibers in liver and kidney tissue. It is often used to demonstrate increased collagen deposition that is associated with replacement of functional tissue by scar tissue. This stain is useful in diagnosing sclerosis of the liver in which thickened collagen replaces normal tissue causing liver dysfunction.

REAGENTS & PREPARATIONS

Gomori Solution A	
Gomori Solution B	
Gomori Solution 1:	Mix A and B in equal volume (Solution will remain stable for one weak. Preferably prepare fresh)
Decolourizer:	Ready to use
Gomori Solution 2:	Ready to use
Gomori Solution 3:	Ready to use

TISSUE SAMPLE

4-5µ paraffin sections of 10% neutral buffered formalin.
Trichrome stains often benefit from initial Bouin, formal sublimate or B5 fixation. Zenker and Helly fixation is usually satisfactory.

Note: Formalin variants are generally sufficient, but staining can be intensified by secondary fixation (Mordant) in Bouin's Fluid

Place section after the 1st step of following staining procedure in Bouin's fluid for an hour at 56-60°C (or microwave 1 minute, allow to stand for 15 minutes} and wash in running tap water for 5 minutes to remove Picric Acid.

STAINING PROCEDURES

1. Remove Paraffin through xylene, rehydrate through descending graded ethanol and bring sections to distilled water just prior to staining.
2. Place into **Gomori Solution 1** for 5-7
3. Place in **Decolourizer** for 5 seconds. Wash in running tap water for 30 seconds and rinse in distilled water.
4. Place into **Gomori Solution 2** for 10-20 minutes.
5. Quickly rinse off stain with distilled water.
6. Differentiate in **Gomori Solution 3** for 30-60 seconds and rinse in distilled water
7. Dehydrate up through graded ethanol to absolute ethanol.
8. Clear in xylene and mount with a resinous medium.

Expected results

- Muscle, Cytoplasm, Keratin – red
- Collagen and Mucus – green
- Nuclei – Black

Notes

1. Once a satisfactory stain has been achieved, the time should remain constant. Any change in fixation, processing or section thickness warrants reviewing the staining time.
2. Avoid microbial contamination of reagents; otherwise increase in nonspecific staining may occur.
3. The user must validate any changes made to the factory-released procedure.
4. Store reagent packs in an upright position when not in use.
5. Keep reagent packs out of direct sunlight and away from heat-generating sources.
6. Wear appropriate Personal Protective Equipment to avoid contact with eyes and skin.

Quality Control

Practically every tissue has an internal control, so no other control sections are needed; however, if a control is desired, uterus, small intestine, appendix, or fallopian tube will provide good material.

Reference

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