

Modified Movats Stain

Catalog #26385

Fixation

10% Buffered Neutral Formalin or Bouin's Solution

Note: If formalin fixative is used, decerated tissue sections must be mordanted in Bouins Fluid for 1 hour in a 50 °C oven. Wash well in running water to remove picric acid deposits.

Sections

4-6 microns

Procedure

1. Decerate section and hydrate to distilled water.
2. Stain in Alcian Blue, 1% for 20 minutes.
3. Dip five times in distilled water.
4. Place in Alkaline Alcohol in a 56°C oven for 10 minutes.
5. Wash in running tap water for 2 minutes.
6. Stain in Orcein-Verhoeff working solution for 2 hours.

To prepare Orcein-Verhoeff working solution:
Immediately before use, in the following order, combine the solutions below:

Orcein	0.2% 25.0 ml
Alcoholic Hematoxylin	5% 8.0 ml
Ferric Chloride	10% 5.0 ml
Lugol's Iodine	5.0 ml

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8. Wash in running tap water for 3 minutes.
9. Stain in Woodstain Scarlet- Acid Fuchsin working solution for 2 1/2 minutes.
10. Place in Acetic Acid, 0.5% for 30 seconds.
11. Differentiate in Phosphotungstic Acid, 5% for 5-10 minutes, well differentiated sections demonstrate colorless collagen and blue-green mucopolysaccharides.
12. Rinse in Acetic Acid, 0.5% for 30 seconds.
13. Three changes of 100% ethyl alcohol, 1 minute each,
14. Stain in Alcoholic Saffron for 8 minutes.
15. Dehydrate in 100% ethyl alcohol, two changes.
16. Clear in xylene, three changes.
17. Coverslip.

Stain Results

Nuclei	Black
Cytoplasm	Red
Elastic Fibers	Purple to Black
Collagen and Bone	Yellow

Mucopolysaccharides
Muscle

Blue-Green
Red

References

Movat, H.Z .,: Demonstation of all C onnecti ve Tissue Elements in a Single S ection.
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Roman N., et al: Orcein-Hematoxylin in I odize d Ferric Chloride as a Stain for E lastic T issue.
Stain Techn ., 42:199-202, 1967.

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