

Verhoffs Van Geison

Catalog #: 26374-Series

Fixation:

Any common well-fixed tissue – 10% Buffered Neutral Formalin (#15741-01) or Russell's Zenker (#64123-05) is preferred.

Sections:

5µm sections.

Staining Procedures:

1. Hydrate slides to distilled water.
2. Stain in Verhoff's Working Solution* for 1 hours. Tissue should be completely black. Depth of stain required for the elastic fibers. (Nuclei may be stained in Weigert Iron)
* To prepare Verhoff's Working Solution, add in order the following reagents – prepare fresh! :
Alcoholic Hematoxylin, 5% (#26374-01) - 20 ml
Ferric Chloride, 10% (#26374-02) - 8 ml
Weigert's Iodine Solution (#26374-03) - 8 ml
Mix well, solution should be jet black. Used immediately.
At the conclusion of staining time, pour off the Verhoff mixture into a container and save it until after the differentiation process has been properly completed. If it should prove necessary, the saved solution may be used.
3. Rinse in tap water with 2 or 3 changes.
4. Differentiate in Ferric Chloride, 2% (#26374-04). Agitate Slide gently during the process. Stop differentiation with several changes of tap water and check microscopically for black elastic fiber staining and gray background. Repeat Ferric Chloride, 2% treatment and tap water rinses as necessary for adequate demonstration. Kidney and myometrium are good controls. If the elastic fiber staining is too pale, re-stain in the saved Verhoffs solution for 30 minutes and then proceed with the subsequent Van Gieson counterstain can extract the elastic stain somewhat.
5. Wash slides in tap water.
6. Treat with Sodium Thiosulfate, 5% (#26374-05) for 1 minute. Discard solution.
7. Wash in running tap water for 5 minutes
8. Counterstain in Van Gieson Solution (#26374-06) for 3 to 5 minutes.
9. Dehydrate, clear in Xylene and coverslip, using a synthetic mounting medium.

Stain Results:

Elastic Fibers	Blue-black to Black. Fine elastic fibrils may not be stained with this methods
Nuclei	Blue to Black
Collagen	Red
Other Tissue Elements	Yellow

References:

Sheehan, Dezna C., Hrapchack, Barbara B. Theory and Practice of Histotechnology, 2nd ed. The C.V. Mosby Company, St Louis, p. 196 – 197. c. 1980.