



Reticulum Stain Kit

Description: The Reticulum Stain Kit is intended for use in histological demonstration of reticular fibers. The main function of reticular fibers is to provide support. They are normally found throughout the body, particularly in liver, lymph node, spleen and kidney. Ammoniacal silver stains are the most commonly used methods for demonstration of reticular fibers.

Reticulum: Black
Nuclei: Red

Control Tissue: Liver
Kidney
Lymph Node
Spleen

Uses/Limitations: Not to be taken internally.
For In-Vitro Diagnostic use only.
Histological applications.
Do not use if reagents become cloudy.
Do not use past expiration date.
Use caution when handling reagents.
Non-Sterile

Kit Contents:

<u>Item #</u>	<u>Kit Contents</u>	<u>Volume</u>	<u>Storage</u>
PPE015	Potassium Permanganate Solution (1%)	15 ml	18-25° C.
PMS015	Potassium Metabisulfite Solution (3%)	15 ml	18-25° C.
FAT015	Ferric Ammonium Sulfate Solution (3%)	15 ml	18-25° C.
FRL015	Formalin Solution (20%)	15 ml	18-25° C.
GCS015	Gold Chloride Solution (0.1%)	15 ml	2-8° C.
STB015	Sodium Thiosulfate Solution (5%)	15 ml	18-25° C.
NFS015	Nuclear Fast Red Solution	15 ml	18-25° C.
SHC010	Sodium Hydroxide Solution (3%)	10 ml x 2 vials	18-25° C.
SNX010	Silver Nitrate Solution (10%)	10 ml x 2 vials	2-8° C.

Precautions: Keep away from open flame.
Avoid contact with skin and eyes.
Harmful if swallowed.
Follow all Federal, State, and local regulations regarding disposal.
Use in chemical fume hood whenever possible.
Wear protective clothing.

Preparation of Reagents Prior to Beginning:

1. Prepare working Ammoniacal Silver Solution using chemically cleaned glassware in a chemical fume hood as follows:
To 17ml of Distilled Water add one (10ml) vial of Silver Nitrate Solution (10%) and mix completely. Add 1ml of Concentrated Ammonium Hydroxide (**Not Included in Kit**) while continuously mixing. The mixture will initially turn brown and then become clear. Add one (10ml) vial of Sodium Hydroxide Solution (3%) and mix completely. If the solution does not remain colorless, add Concentrated Ammonium Hydroxide drop by drop until no precipitate remains. Add Distilled Water to a total volume of 60ml and mix completely. Solution is now ready for use.

Note: Use extreme care in preparation and use of Ammoniacal Silver Solution. Store Ammoniacal Silver Solution in a refrigerator to avoid the formation of explosive compounds. If Ammoniacal Silver Solution is exposed to sunlight, it will explode. Dispose of waste observing all local, state and federal laws.

Procedure (Standard):

1. Deparaffinize sections if necessary and hydrate to distilled water.
2. Place slide in Potassium Permanganate Solution (1%) for 5-10 minutes.
3. Rinse in 3 changes of distilled water.
4. Differentiate in Potassium Metabisulfite Solution (3%) until section is transparent.
5. Rinse in 3 changes of distilled water.
6. Apply Ferric Ammonium Sulfate Solution (3%) for 10 minutes.
7. Rinse in 2 quick changes of distilled water.
8. Apply working Ammoniacal Silver Solution for 2-3 minutes.
9. Rinse in 3 changes of distilled water.
10. Place slide in Formalin Solution (20%) for 1 minute.
11. Rinse in 3 changes of distilled water.
12. Apply Gold Chloride Solution (0.1%) for 3-5 minutes.
13. Rinse in 2 changes of distilled water.
14. Apply Sodium Thiosulfate Solution (5%) for 1-2 minutes to remove unreduced silver.
15. Rinse in tap water for 2 minutes.
16. Counterstain using Nuclear Fast Red Solution for 2-5 minutes.
17. Rinse in tap water followed by distilled water.
18. Dehydrate through 3 changes of Absolute Alcohol.
19. Clear, and mount in synthetic resin.

References:

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5. Wellington, EF., The Explosive properties of ammoniacal-silver solutions. Journal of Medical Lab Technology, Volume 22, Pages 220-223, 1965.
6. Gomori, G., A Modification of the Silver Impregnation Method of Staining Reticular Fibers. American Journal of Clinical Pathology, Volume 21, Pages 897-899, 1951.
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