



Reticulum Stain Kit

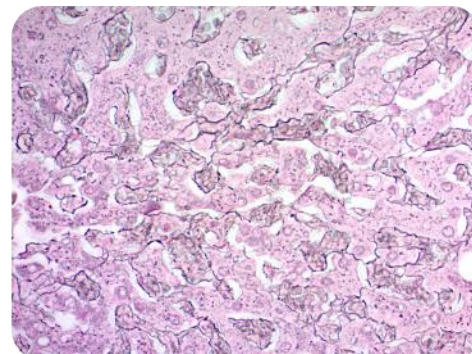
(Modified Gomori's)

Description: The Reticulum Stain Kit (Modified Gomori's) 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

Uses/Limitations: For In-Vitro Diagnostic use only.
Histological applications.
Do not use past expiration date.
Use caution when handling these reagents.

Control Tissue: Liver
Kidney
Lymph Node
Spleen



Availability/Contents:

Item #	Kit Contents	Volume	Storage
SSC1113-0.5	Potassium Permanganate Solution	250 ml	18-25° C.
SSC1184	Sulfuric Acid Solution (1N)	15 ml	18-25° C.
SSC1183	Potassium Metabisulfite Solution (3%)	125 ml	18-25° C.
SSC1159-2	Ferric Ammonium Sulfate Solution	125 ml	18-25° C.
SSC1121	Silver Nitrate Solution (10%)	65 ml	2-8° C.
SSC1182	Potassium Hydroxide Solution (10%)	15 ml	18-25° C.
SSC1161	Formalin Solution (20%)	125 ml	18-25° C.
SSC1080	Gold Chloride Solution (0.2%)	125 ml	2-8° C.
SSC1131	Sodium Thiosulfate Solution (5%)	125 ml	18-25° C.
SSC1099	Nuclear Fast Red Solution	125 ml	18-25° C.

Required but not included:

Concentrated Ammonium hydroxide Solution (25-30%)
Graded Alcohols
Xylene

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 Potassium Permanganate Solution by mixing 2.5ml of Sulfuric Acid Solution (SSC1184) with 47.5ml of Potassium Permanganate Solution (SSC1113-0.5). Mixed solution is stable for 2 days.
2. Prepare working Ammoniacal Silver Solution using chemically cleaned glassware in a chemical fume hood as follows:
Mix 2.5ml of Potassium Hydroxide Solution (SSC1182) with 10ml of Silver Nitrate (10%) Solution (SSC1121). Add concentrated ammonium hydroxide (25-30%); drop by drop, while swirling the flask continuously, until precipitate just dissolves. A few potassium hydroxide crystals will remain. Carefully add Silver Nitrate Solution (10%), drop by drop, until one drop causes the solution to become cloudy. Measure the resulting volume, dilute with an equal volume of distilled water. **Filter into chemically cleaned coplin jar.**

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 working Acidified Potassium Permanganate Solution for 1 minute.
3. Rinse in 3 changes of distilled water.
4. Differentiate in Potassium Metabisulfite Solution for 1 minute.
5. Rinse in running tap water for 3 minutes.
6. Rinse in distilled water.
7. Apply Ferric Ammonium Sulfate Solution for 30 seconds.
8. Immediately rinse slides in running tap water for 2 minutes.
11. Rinse in 2 quick changes of distilled water.
12. Apply working Ammoniacal Silver Solution for 1 minute.
13. Rinse quickly in 3 changes of distilled water.
14. Place slide in 20% formalin for 3 minutes.
15. Rinse in running tap water for 3 minutes.
16. Rinse in 2 changes of distilled water.
17. Apply Gold Chloride Solution for 2-5 minutes.
18. Rinse in 2 changes of distilled water.
19. Apply Sodium Thiosulfate Solution for 1-2 minutes to remove unreduced silver.



20. Rinse in tap water for 2 minutes.
21. Counterstain using Nuclear Fast Red Solution for 5 minutes.
22. Rinse in tap water.
23. Rinse in distilled water.
24. Dehydrate through graded alcohols.
25. Clear, and mount in synthetic resin.

References:

1. Carson, FL., Histotechnology: A Self Instructional Text, ASCP Press, Chicago, IL. Pages 150-155, 1990.
2. Sheenan, D.C., Hrapchak, B.B. Theory and Practice of Histotechnology, 2nd Edition. CV Mosby, St. Louis, MO. Pages 181-182, 1980.
3. Churukian, C.J., Prolonging the Shelf-life of Solutions Containing Silver Nitrate. Histologic, Volume 10, Page 147, 1980.
4. Churukian, C.J., Modified Gomori's method for staining reticulum and collagen. Histologic, Volume 2, Page 23, 1972.
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.
7. Gomori, G., Silver Impregnation of Reticulum in Paraffin Sections. American Journal of Clinical Pathology, Volume 13, Pages 993-1002, 1937.

Description:	Hazard Class	Packing Group	UN# Proper Shipping Name
Formalin Solution	3	III	UN1198 Formaldehyde Solution
Potassium Hydroxide 10%	8	II	UN1814 Potassium Hydroxide Solution
Potassium Permanganate 0.5% (Marine Pollutant)	9	III	UN3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Potassium Permanganate)
Silver Nitrate 10% (Marine Pollutant)	9	III	UN3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Silver Nitrate)

