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### 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.

**Uses/Limitations:** For In-Vitro Diagnostic use **Control Tissue:** 

only. Histological

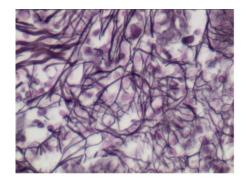
applications. Do not use past expiration date. Use caution when handling

these reagents.

Results: Reticulum: Black

Nuclei: Red Liver

Kidney Lymph Node Spleen



#### **Kit Contents:**

<u>ltem #</u>	<u>Kit Contents</u>	<u>Volume</u>	
SSC-PPD250	Potassium Permanganate Solution	250 ml	
SSC-SAQ015	Sulfuric Acid Solution (1N)	15 ml	
SSC-PMS125	Potassium Metabisulfite Solution (3%)	125 ml	
SSC-FAS125	Ferric Ammonium Sulfate Solution	125 ml	
SSC-SNX065	Silver Nitrate Solution (10%)	65 ml	2-8° C.
SSC-PHC015	Potassium Hydroxide Solution (10%)	15 ml	18-25° C.
SSC-FRL125	Formalin Solution (20%)	125 ml	18-25° C.
SSC-GCB125	Gold Chloride Solution (0.2%)	125 ml	2-8° C.
SSC-STB125	Sodium Thiosulfate Solution (5%)	125 ml	18-25° C.
SSC-NFS125	Nuclear Fast Red Solution	125 ml	18-25° C.

#### Required but not included:

Ammonium Hydroxide Solution, Concentrated **Graded Alcohols Xylene** 

Mixed Storage Conditions. Separate Contents.

For information regarding ordering individual components, please contact us at: 800-442-3573. Control Slides Available. Catalog: CS-RETIC/25, 25/pack



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**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 with 47.5ml of Potassium Permanganate Solution. 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 with 10ml of Silver Nitrate (10%) Solution. Add concentrated ammonium hydroxide; 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. Only a faint cloudiness is desired. 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 may explode. Dispose of waste observing all local, state and federal laws.



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### 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.



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#### 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, 2<sup>nd</sup> Edition. CV Mosby, St. Louis, MO. Pages 181-182, 1980.
- 3. Churukian, CJ., Prolonging the Shelf-life of Solutions Containing Silver Nitrate. Histologic, Volume 10, Page 147, 1980.
- 4. Churukian, CJ., 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.



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### Lot-to-Lot Validation Form Reticulum Stain Kit Catalog: SSK-RETIC(GOM)

Kit Lot Number:	Kit Component Lot #
Kit Expiration Date:	Potassium Permanganate
Date Tested:	Sulfuric Acid (1N) Sol
Control Tissue (#)	Potassium Metabisulfite
Approved for Use: Y/N	Ferric Ammonium Sulfate Silver Nitrate (10%) Sol
Date put into use:	Potassium Hydroxide (10%)
If not approved, corrective actions	Formalin Solution (20%)  Gold Chloride (0.2%)
taken:	Sodium Thiosulfate (5%)
Approved by:	Nuclear Fast Red Sol.

Replacement	Replacement	Lot #	Accepted	Comments
Component if used	Date		Y/N	
Potassium				
Permanganate				
Sulfuric Acid (1N) Sol				
Potassium Metabisulfite				
Ferric Ammonium Sulfate				
Silver Nitrate (10%) Sol				
Potassium Hydroxide				
(10%)				
Formalin Solution (20%)				
Gold Chloride (0.2%)				
Sodium Thiosulfate (5%)				
Nuclear Fast Red Sol.				
Approved By:	•	•		•

StatLab is providing this form to assist with reagent lot validation as stated in CLIA'88 Standard 493.1256-For reagent(s), the laboratory must do the following: Check each batch (prepared in-house), lot number (commercially prepared) and shipment of reagents, stains, and identification systems (systems using two or more substrates or two or more reagents, or a combination) when prepared or opened for positive and negative reactivity, if applicable.