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# Reticulum Stain Kit

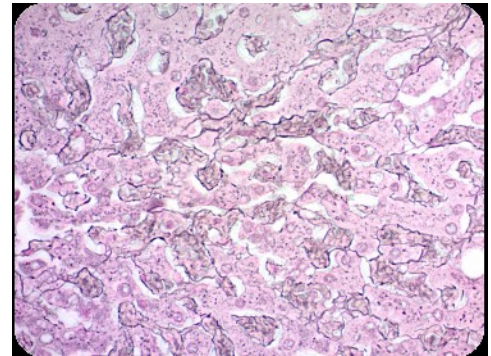
## (Modified Gomori's)

**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.

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:**

<u>Item #</u>	<u>Kit Contents</u>	<u>Volume</u>	<u>Storage</u>
PPD060	Potassium Permanganate Solution	60 ml	18-25° C.
SAQ004	Sulfuric Acid Solution (1N)	4 ml	18-25° C.
PMS030	Potassium Metabisulfite Solution (3%)	30 ml	18-25° C.
FAS030	Ferric Ammonium Sulfate Solution	30 ml	18-25° C.
SNX020	Silver Nitrate Solution (10%)	20 ml	2-8° C.
PHC004	Potassium Hydroxide Solution (10%)	4 ml	18-25° C.
FRL030	Formalin Solution (20%)	30 ml	18-25° C.
GCB030	Gold Chloride Solution (0.2%)	30 ml	2-8° C.
STB030	Sodium Thiosulfate Solution (5%)	30 ml	18-25° C.
NFS030	Nuclear Fast Red Solution	30 ml	18-25° C.

**Required but not included:**

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

Storage: 2° C  25° C  
**Mixed Storage Conditions.**  
**Separate Contents.**



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# Instructions For Use

## GRS-2-IFU

Rev. Date: 7/9/2018

Revision: 3

Page 2 of 3

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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 (SAQ004) with 47.5ml of Potassium Permanganate Solution (PPD060). 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 (PHC004) with 10ml of Silver Nitrate (10%) Solution (SNX020). 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.

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Page 3 of 3

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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, 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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