

# Fontana-Masson Stain Kit

## (For Argentaffin Cells and Melanin)

**Description:** The Fontana-Masson Stain Kit is intended for use in the histological visualization of Argentaffin cells and Melanin in paraffin or frozen sections. In addition, the Fontana-Masson stain has been reported to be useful in identifying Capsule-Deficient Cryptococcus Neoformans and typical Cryptococcus Neoformans.

Argentaffin Cells:	Black
Melanin:	Black
Cryptococci Cell Wall:	Black
Nuclei:	Red
Cytoplasm:	Light Pink

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

**Control Tissue:** Any paraffin embedded tissue that contains Hair Follicles or Skin for Melanin.  
Small Intestine for Argentaffin.

**Availability/Contents:**


<u>Item #</u>	<u>Kit Contents</u>	<u>Volume</u>	<u>Storage</u>
GCB030	Gold Chloride Solution (0.2%)	30 ml	2-8° Centigrade
SNX009	Silver Nitrate Solution (10%)	2 x 9ml	2-8° Centigrade
STB030	Sodium Thiosulfate Solution (5%)	30 ml	Room Temperature
NFS030	Nuclear Fast Red Solution	30 ml	Room Temperature

**Precautions:** 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.

Storage: 2° C  25° C

**Mixed Storage Conditions.  
Separate Contents.**

Doc: IFU-TemplateMixedStorageev2



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## Preparation of Reagent Prior to Beginning:

Prepare **Ammoniacal Silver Solution** immediately prior to use.

In new or chemically cleaned glassware, mix 27ml Distilled/Deionized water with one vial of Silver Nitrate Solution (10%) and blend completely. Carefully add Concentrated Ammonium hydroxide (25-30%) (Not included) one drop at a time, swirling gently after each drop. Initially the mixture will turn dark brown and then gradually become transparent with a fine layer of sediment. The solution is ready for immediate use when all sediment dissolves.

## Procedure (Standard):

1. Deparaffinize sections if necessary and hydrate to distilled water.
2. Place freshly mixed Ammoniacal Silver Solution in a 58-60°C waterbath and allow adequate time for temperature to equalize.
3. Incubate slide in warmed Ammoniacal Silver Solution for 30-60 minutes or until tissue section becomes yellowish/brown in color. (**NOTE:** Melanin typically stains in 30 minutes while Argentaffin stains in 50-60 minutes)
4. Rinse in several changes of distilled water.
5. Incubate slide in Gold Chloride Solution (0.2%) for 30 seconds.
6. Rinse in several changes of distilled water.
7. Incubate slide in Sodium Thiosulfate Solution (5%) for 1-2 minutes.
8. Rinse for 2 minutes in running tap water followed by 2 changes of distilled water.
9. Incubate slide in Nuclear Fast Red Solution for 5 minutes.
10. Rinse for 2 minutes in running tap water followed by 2 changes of distilled water.
11. Dehydrate very quickly in 3 changes of fresh Absolute Alcohol.
12. Clear, and mount in synthetic resin.

## References:

1. Sheenan, D.C., Hrapchak, B.B. Theory and Practice of Histotechnology, 2<sup>nd</sup> Edition. Battelle Press, Columbus, OH.
2. Gaitanis, G., et al. Novel application of the Masson-Fontana Stain for Demonstrating Malassezia Species Melanin-Like Pigment Production In Vitro and in Clinical Specimens. Journal of Clinical Microbiology. 2005, August; 43(8): pages 4147-4151.
3. Kimura, M., et al. Fontana-Masson – stained tissue from culture-proven mycoses. Archives of Pathology & Laboratory Medicine. 1998, December; 122(12): page 11.
4. Lazcano, O., et al. Combined Fontana-Masson-Mucin staining of Cryptococcus neoformans. Archives of Pathology & Laboratory Medicine. 1991, November; 115(11): pages 1145-1149.
5. Ro, J.Y., et al. Advantage of Fontana-Masson stain in capsule-deficient cryptococcal infection. Archives of Pathology & Laboratory Medicine. 1987, January; 111(1): pages 53-57.

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