

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.

Kit Contents	Catalog	Product	Volume	Storage
	HGCB125	Gold Chloride Solution (0.2%)	125 ml	2-8°C
	HSNX009	Silver Nitrate Solution (10%)	5 x 9ml	2-8°C
	HSTB125	Sodium Thiosulfate Solution (5%)	125 ml	18-25°C
	HNFS125	Nuclear Fast Red Solution	125 ml	18-25°C

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.

Procedure

1. 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 (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.

2. Deparaffinize sections if necessary and hydrate to distilled water.
3. Place freshly mixed Ammoniacal Silver Solution in a 58-60°C waterbath and allow adequate time for temperature to equalize.
4. 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)
5. Rinse in 3 changes of distilled water.
6. Incubate slide in Gold Chloride Solution (0.2%) for 30 seconds.
7. Rinse in 3 changes of distilled water.
8. Incubate slide in Sodium Thiosulfate Solution (5%) for 1-2 minutes.
9. Rinse for 2 minutes in running tap water followed by 2 changes of distilled water.
10. Incubate slide in Nuclear Fast Red Solution for 5 minutes.
11. Rinse for 2 minutes in running tap water followed by 2 changes of distilled water.
12. Dehydrate very quickly in 3 changes of absolute alcohol.
13. Clear, and mount in synthetic resin.

References

1. Sheenan, D.C., Hrapchak, B.B. Theory and Practice of Histotechnology, 2nd 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.