INTENDED USE

The Fontana-Masson Stain Kit is intended for use in the histological visualization of argentaffin cells and melanin in paraffin or frozen sections. Fontana-Masson Stain reagents are for “In Vitro Diagnostic Use.”

Fontana-Masson staining is used for the demonstration of argentaffin substances such as melanin, argentaffin granules of carcinoid tumors and some neurosecretory granules. Argentaffin cells and melanin possess the ability to bind silver from a silver solution and reduce to visible metallic silver without the need for a reducing agent.

REAGENTS

SILVER NITRATE SOLUTION, Catalog No. HT2001-50 ml 10% aqueous solution
GOLD CHLORIDE SOLUTION, Catalog No. HT2002-125 ml 0.2% aqueous solution
SODIUM THIOSULFATE SOLUTION, Catalog No. HT2003-125 ml 5% aqueous solution

STORAGE AND STABILITY:

Store unopened Fontana-Masson Stain kit and individual reagents in refrigerator (2-8°C). Reagents are stable until the expiration dates shown on the labels. Ammoniacal Silver Solution should be used once and then discarded. In dry form, ammoniacal salts may present an explosive hazard. Do not allow ammoniacal silver solution to dry out. Store used ammoniacal silver solution in plastic bottles – do not store in glass. Wallington recommended the inactivation of the ammoniacal silver solution by the addition of dilute hydrochloric acid or sodium chloride solution.

PREPARATION: AMMONIACAL SILVER SOLUTION:

1. In a new or chemically cleaned glass Erlenmeyer flask, add 27 ml distilled water.
2. Pipette 9 ml Silver Nitrate Solution into the flask.
3. In a hood, while shaking or swirling the flask continuously, carefully add concentrated Ammonium Hydroxide, drop by drop, swirling gently after each drop addition.
4. Solution will turn dark brown and then gradually become transparent with a fine layer of sediment. Do not add excess Ammonium Hydroxide.
5. Solution is ready to use when all sediment dissolves. Use once and do not store.

Other reagents are supplied ready for use.

PRECAUTIONS:

Normal precautions exercised in handling laboratory reagents should be followed. Dispose of waste observing all local, state, provincial or national regulations. Refer to Safety Data Sheet and product labeling for any updated risk, hazard or safety information.

Note:

Argentaffin and Melanin TISSUE-TROL control slides are paraffin embedded human tissue and should be considered potentially infectious.

PROCEDURE

SPECIMEN COLLECTION:

It is recommended that specimen collection be carried out in accordance with CLSI document M29-A3. No known test method can offer complete assurance that blood samples or tissue will not transmit infection. Therefore, all blood derivatives or tissue specimens should be considered potentially infectious.

Fix specimen in 10% neutral buffered formalin, process and embed in paraffin. Specimens should be considered potentially infectious. Samples or tissue will not transmit infection. Therefore, all blood derivatives or tissue

PROCEDURE:

1. Deparaffinize sections and hydrate to distilled water.
2. Place slides in Sodium Thiosulfate Solution for 1-2 minutes. Place slides in Sodium Thiosulfate Solution for 1-2 minutes.
3. Wash slides in tap water for 2 minutes.
4. Rinse in several changes of distilled water. Rinse slides in several changes of distilled water.
6. Rinse for 2 minutes in running tap water followed by 2 changes of distilled water. Rinse for 2 minutes in running tap water followed by 2 changes of distilled water.
7. Place slides in Sodium Thiosulfate Solution for 1-2 minutes.
8. Wash slides in tap water for 2 minutes.
9. Rinse slides in several changes of distilled water. Rinse slides in several changes of distilled water.
11. Rinse for 2 minutes in running tap water followed by 2 changes of distilled water. Rinse for 2 minutes in running tap water followed by 2 changes of distilled water.
12. Dehydrate in two changes each of 95% ethanol and absolute ethanol. Dehydrate in two changes each of 95% ethanol and absolute ethanol.
13. Clear in xylene and mount with synthetic resin. Clear in xylene and mount with synthetic resin.

PERFORMANCE CHARACTERISTICS

Argentaffin Cells: Brown to Black
Melanin: Brown to Black
Background: Pink to Rose

If observed results vary from expected results, please contact Sigma-Aldrich Technical Service for assistance.

REFERENCES


TISSUE-TROL is a trademark of Sigma-Aldrich Co., LLC

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Procedure No. HT200
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