Masson’s Trichrome Stain Kit

DESCRIPTION

This method is used to differentiate between smooth muscle and of collagen fibers in tissue sections. The Trichrome Stain can assess the degree of fibrosis in the liver, which gives important information about stage and progression of a disease. Liver diseases such as hepatitis B and C viral infections, fatty liver disease, alcoholic liver disease and chronic biliary diseases show the formation of fibrous tissue including bridging fibrous septa leading to the end-stage process called cirrhosis.1 The stain is used to make treatment decisions; utilized to assess the effect of therapy, medications in clinical trials and needed for all liver biopsy specimen and tissues such as skin and heart.

KIT CONTENTS

100 ml & 500 ml kits available
Bouin’s Fixative
Weigert’s Iron Hematoxylin (A and B)
Biebrich Scarlet - Acid Fuchsin Solution
Phosphotungstic/Phosphomolybdic Acid
Aniline Blue
1% Acetic Acid

PROCEDURE (FORMALIN FIXED PARAFFIN EMBEDDED TISSUE)

1. Bring sections to water with xylene and alcohol. Mordant in Bouin’s solution, microwave 1 minute, allow to stand 15 minutes. (Conventional method: Mordant in Bouin’s solution, 60°C for 1 hour)
2. Wash in running tap water to remove the picric acid for 5 minutes.
3. Stain in Weigert’s iron hematoxylin working solution for 10 minutes. (To prepare Weigert’s iron hematoxylin working solution mix Weigert’s Hematoxylin A and Weigert’s Hematoxylin B at a 1:1 ratio) Wash in running tap water for 5 minutes, rinse in distilled water.
4. Biebrich Scarlet - Acid Fuchsin Solution for 5 minutes.
5. Rinse in distilled water.
6. Phosphotungstic/phosphomolybdic acid for 10 minutes, discard solution.
7. Drain slide and transfer to Aniline Blue for 5 minutes.
8. Rinse in distilled water (3 changes).
9. 1% Acetic acid for 1 minute, discard solution, rinse in distilled water.
10. Dehydrate in 95% ethanol, then 100% ethanol for 1-2 minutes each.
11. Clear in xylene for 1-2 minutes.
12. Mount with a xylene based mounting medium, Poly-Mount (Cat. # 08381).

PROCEDURE: (FROZEN TISSUE)

1. Fix sections in 10% formalin for 1 hour.
2. Mordant in Bouin’s Solution at room temp overnight.
3. Wash slides with tap water for 2 minutes to remove the picric acid, then rinse in distilled water.
4. Stain in Weigert’s Iron Hematoxylin working solution for 10 minutes. To prepare Weigert’s Iron Hematoxylin working solution, mix Weigert’s Hematoxylin A and Weigert’s Hematoxylin B at a 1:1 ratio.
5. Wash in running tap water for 5-10 minutes to remove excess hematoxylin and intensify the nuclear staining. Rinse in distilled water.
6. Stain in Biebrich Scarlet-Acid Fuchsin Solution for 5 minutes.
7. Wash in 3 changes of distilled water.
8. Place slides in Phosphotungstic/Phosphomolybdic Acid for 10 minutes.
9. Drain slide and transfer to Aniline Blue Solution for 5 minutes.
10. Rinse in 3 changes of distilled water.
11. Differentiate in 1% Acetic Acid for 1-2 minutes.
12. Rinse in 2 changes of distilled water.
13. Dehydrate in 95% ethanol, then 100% ethanol for 1-2 minutes each.
15. Mount with a xylene based mounting medium, Poly-Mount (Cat. # 08381).

RESULTS

Collagen Fibers · · · · · · · · · Blue
Nuclei · · · · · · · · · · · · · · · · Black
Muscle · · · · · · · · · · · · · · · Red
Cytoplasm · · · · · · · · · · · · · Red

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NOTES
1. Light green may be substituted for Aniline blue.
2. 5% phosphotungstic acid for 5 minutes, must be substituted when using Light green.
3. When staining liver biopsies, the collagen is better light blue than dark blue.

SAFETY
Work in a well ventilated area, wear gloves (nitrile), lab coat and goggles. Avoid contact and inhalation. Picric acid: can become explosive if allowed to dry out. Toxic through skin exposure.

STORAGE AND HANDLING
Store at room temperature
Use with Gloves, chemical goggles & fume hood

REFERENCES
5. Ruegg M, Meinen S, Histopathology in Masson Trichrome stained muscle sections, V 1.0, MDC1A_M.1.2.003. Basel, Switzerland.
6. Saxena R, Special Stains in Interpretation of Liver Biopsies, pp 94, Connection 2010¹

ORDERING INFORMATION

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<th>Cat. #</th>
<th>Description</th>
<th>Size</th>
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<td>25088-1</td>
<td>Masson’s Trichrome Stain Kit</td>
<td>500 ml Kit</td>
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