

COLLOIDAL IRON METHOD FOR ACID MUCOPOLYSACCHARIDES (MOWRY)

PURPOSE:	For In Vitro Diagnostic Use: Intended for the qualitative demonstration of sulfated and carboxylated mucopolysaccharides.
PRINCIPLE:	Ferric ions from the acidified Colloidal Iron Solution bind to the free carboxyl groups in acid mucins. Excess Colloidal Iron Solution is washed away. Treatment with acidified Potassium Ferrocyanide yields Ferric Ferrocyanide, or Prussian blue. A counterstain is optional.
CONTROL:	Small intestine Control Slides can be purchased from Histology Control Systems. See inside back cover, Item# cs018.
SPECIMEN PREPARATION:	Formalin fixed, paraffin embedded sections cut at 6 micrometers
SOLUTIONS:	1. Muller's Colloidal Iron Oxide Stock Solution Item# s2050 2. Acetic Acid 12% Aqueous Item# s2009 3. Potassium Ferrocyanide 5% Aqueous Item# s262D 4. Hydrochloric Acid 5% Item# s2008 5. Van Gieson's Solution Item# s289 Solutions can be purchased separately from Poly Scientific.
NOTES:	Make just before use: <u>Working Colloidal Iron Solution:</u> Colloidal Iron Stock s2050.....25 mL Distilled Water.....15 mL Acetic Acid 12% Aqueous s2009..... 25 mL <u>Hydrochloric Acid Potassium Ferrocyanide Solution:</u> Potassium Ferrocyanide 5% Aqueous s262D.....25 mL Hydrochloric Acid 5% Aqueous s2008.....25 mL
REFERENCE:	Luna, <u>Lee G. Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology.</u> 3rd Ed McGraw-Hill Book Co. New York. 1968. pp. 167-168.

STAINING PROCEDURE:

1. Deparaffinize and hydrate to distilled water.
2. Rinse in Acetic Acid 12% Aqueous for 3 minutes.
3. Place in Working Colloidal Iron Solution for 1 hour.
4. Rinse in Acetic Acid 12% Aqueous for 4 changes, 3 minutes each.
5. Place in Hydrochloric Acid Potassium Ferrocyanide Solution for 20 minutes.
6. Wash in tap water for 5 minutes.
7. Rinse in distilled water.
8. Place in Van Gieson's Solution for 3-5 minutes.
9. Dehydrate quickly in 95% Alcohol, Absolute Alcohol and clear in Xylene.
10. Mount with Poly Mount (Item# s2153) or any other acceptable mounting medium.

RESULTS:

Acidic Mucopolysaccharides and Acidic Epithelial Mucins Deep Blue

Poly Scientific R&D Corp.

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