

WEIL'S METHOD FOR MYELIN SHEATH

PURPOSE:	For In Vitro Diagnostic Use: Intended for the qualitative demonstration of myelin sheath.
PRINCIPLE:	The iron hematoxylin lake stains all tissue components. Differentiation is more easily carried out in other tissue components leaving the myelin stained. Ammonia raises the pH of the hematein, bluing it.
CONTROL:	Cerebrum <i>Control Slides can be purchased from Histology Control Systems. See inside back cover, Item# cs001.</i>
SPECIMEN PREPARATION:	Formalin or Zenker's Solution fixed, paraffin embedded sections cut at 10-15 micrometers
SOLUTIONS:	1. Ferric Ammonium Sulfate 4% Aqueous Item# s2254 2. Hematoxylin Ferric Ammonium Sulfate Item# s2399 3. Sodium Borate Potassium Ferricyanide Solution Item# s2400 4. Ammonia Water Item# s113F <i>Solutions can be purchased separately from Poly Scientific.</i>
NOTES:	1. Gray matter and demyelinated white matter should be light brown and contrast sharply with the blue to blue black myelinated white matter. 2. The quality of a myelin stain can be determined macroscopically, with both gray and white matter easily distinguished; on a good myelin stain, the areas of demyelination frequently are more easily identified macroscopically than microscopically.
REFERENCE:	Bancroft, J. D. & Stevens, A. <u>Theory and Practice of Histological Techniques</u> . 4th Ed. Churchill Livingstone. New York. 1996. pp. 352-353.

STAINING PROCEDURE:

1. Deparaffinize sections and hydrate to distilled water.
2. Stain in Hematoxylin Ferric Ammonium Sulfate Solution for 30 minutes at 54-56°C.
3. Wash in 2 changes of water.
4. Differentiate in Ferric Ammonium Sulfate 4% Aqueous until the gray matter can just be distinguished from the white matter and the stain is removed from the slides.
5. Wash in 3 changes of water.
6. Complete differentiation of the sections in Sodium Borate Potassium Ferricyanide Solution. This differentiation should be controlled microscopically until the gray and white matter is sharply defined.
7. Wash sections in 2 changes of water.
8. Treat sections with diluted Ammonia Water.
9. Wash in distilled water.
10. Dehydrate in 2 changes each of 95% Alcohol and Absolute Alcohol.
11. Clear in Xylene and mount with Poly Mount (Item# s2153) or any other acceptable mounting medium.

RESULTS:

Myelin Sheath..... Blue to Blue Black

Poly Scientific R&D Corp.

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