

SEVIER-MUNGER METHOD FOR NEURAL TISSUE

PURPOSE:	For In Vitro Diagnostic Use: Intended for the qualitative demonstration of neurons.
PRINCIPLE:	Neurons are able to absorb Silver. This deposited Silver acts as a catalyst, facilitating the reduction of Silver ions in the developer by Formalin to the visible form. Sodium Thiosulfate removes any non bound silver.
CONTROL:	Brain <i>Control Slides can be purchased from Histology Control Systems. See inside back cover, Item# cs031.</i>
SPECIMEN PREPARATION:	Formalin fixed, paraffin embedded or Formalin fixed frozen sections cut at 6 micrometers
SOLUTIONS:	1. Silver Nitrate 20% Aqueous Item# s2003 2. Formalin 2% Aqueous Item# s2001 3. Sodium Thiosulfate 5% Aqueous Item# s1895 4. Ammoniacal Silver Nitrate Sol-Sevier Munger Item# s114A <i>Solutions can be purchased separately from Poly Scientific.</i>
NOTES:	Avoid chromate fixatives.
REFERENCE:	Luna, Lee G. <u>Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology</u> . 3rd Ed. McGraw-Hill Book Co. New York. 1968. pp. 216-217.

STAINING PROCEDURE:

1. Deparaffinize and hydrate to distilled water.
2. Preheat Silver Nitrate 20% Aqueous to 60°C for 15 minutes. Add slides to warm silver solution and let them remain in oven for 15 minutes.
3. Rinse one slide at a time in distilled water then place in a clean coplin jar.
4. To Ammoniacal Silver Nitrate (Sevier-Munger) add 10 drops of Formalin 2% Aqueous shaking gently while adding. Pour quickly over slides, let develop for 5-30 minutes until golden brown. Keep in motion to avoid precipitate.
5. Examine microscopically. DO NOT WASH. Developing should be neither too fast nor too slow.
6. Rinse well in fresh tap water, 3 changes.
7. Place in Sodium Thiosulfate 5% Aqueous for 2 minutes.
8. Wash in water.
9. Dehydrate in 95% Alcohol, Absolute Alcohol and clear in Xylene, 2 changes each.
10. Mount with Poly Mount (Item# s2153) or any other acceptable mounting medium.

RESULTS:

- Large and Small Peripheral Neurites Black
- Axons Black
- Myelin Sheath Light Brown
- Collagen and Muscle Brown
- Argentaffin Granules Black

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