

GRIMELIUS SILVER METHOD FOR ARGYROPHIL CELLS

PURPOSE:	For In Vitro Diagnostic Use: Intended for the qualitative demonstration of argyrophil cells.
PRINCIPLE:	Argyrophil cells are capable of absorbing Silver but cannot reduce it on their own. Hydroquinone acts as the reducing agent and Sodium Thiosulfate removes any unbound Silver.
CONTROL:	Pancreas, argyrophil positive carcinoid tumor
SPECIMEN PREPARATION:	Bouin's Fixative or Formaldehyde fixed, paraffin embedded sections cut at 6 micrometers Secondary fixation in Bouin's is advised
SOLUTIONS:	1. Silver Solution for Grimelius Method Item# s2053 2. Fast Green Substitute for Light Green 2% Aqueous Item# s231 3. Sodium Thiosulfate 5% Aqueous Item# s1895 <i>Solutions can be purchased separately from Poly Scientific.</i>
NOTES:	If a weak positive reaction is obtained, the result can be improved by double impregnation. After the reducing stage the sections are treated with 5% Sodium Thiosulfate for 2 minutes, rinsed in distilled water and placed in Silver Solution at room temperature for 10 minutes. This is followed by Reducing Solution for 1 minute at 45°C. Counterstains are not normally used.
REFERENCE:	Bancroft, John D & Gamble, Marilyn. <u>Theory and Practice of Histological Techniques</u> . 5th Ed. Churchill Livingstone. New York. p. 367.

STAINING PROCEDURE:

1. Deparaffinize and hydrate to distilled water.
2. Transfer sections to Silver Solution at 60°C for 3 hours.
3. Drain Silver Solution from slides.
4. Place sections in Reducing Solution at 45°C for 1 minute.
Reducing Solution: Prepare fresh solution.
Hydroquinone.....1 g
Sodium Sulfite.....5 g
Distilled Water.....100 mL
5. Rinse sections in distilled water.
6. Counterstain if required in Fast Green Substitute for Light Green 2% Aqueous for 3 minutes.
7. Wash in tap water.
8. Dehydrate in graded Alcohols.
9. Clear in Xylene.
10. Mount with Poly Mount (Item# s2153) or any other acceptable mounting medium.

RESULTS:

Argyrophil Islet Cells (A Cells)Positive (Black-Brown)
B and D CellsNegative

Poly Scientific R&D Corp.

Revision: B-18

