

**RAPID GMS FOR FUNGUS AND PNEUMOCYSTIS CARINII (Microwave)**

<b>PURPOSE:</b>	For In Vitro Diagnostic Use: Intended for the qualitative demonstration of amyloid.
<b>PRINCIPLE:</b>	Chromic Acid oxidizes the polysaccharides contained in the cell walls of fungus and other organisms to aldehydes. These aldehydes then reduce silver from the Methenamine Silver to the invisible metallic form. Gold replaces some of the silver, toning it. A counterstain is applied to the contrast.
<b>CONTROL:</b>	Any tissue known to contain fungi or Pneumocystis Carinii <i>Control Slides can be purchased from Histology Control Systems. See inside back cover, Item# cs013.</i>
<b>SPECIMEN PREPARATION:</b>	Formalin fixed, paraffin embedded sections cut at 6 micrometers
<b>SOLUTIONS:</b>	1. Periodic Acid 1% Aqueous Item# s1861 2. Ammoniacal GMS Solution Item# s2602 3. Gold Chloride 0.5% Aqueous Item# s2364 4. Sodium Thiosulfate 5% Item# s1895 5. Fast Green Substitute For Light Green Working Solution Item# s232B  <i>Solutions can be purchased separately from Poly Scientific.</i>
<b>NOTES:</b>	<i>Variations in timing may occur due to the power wattage of the microwave oven. Provided times and power levels are based on 1000 watt microwave oven.</i>
<b>REFERENCE:</b>	Grocott, R.G. "Grocott's Method For Fungi". <u>Amer. J. Path.</u> 25. 1955. pp. 975-979.

**STAINING PROCEDURE:**

1. Deparaffinize and hydrate slides to distilled water.
2. Microwave Periodic Acid 1% at power 5 for 30 seconds then place slides in it for 5 minutes.
3. Wash in 5 changes of distilled water.
4. Preheat 40 mL of Ammoniacal GMS Solution on high power for 30 seconds. Agitate.
5. Place slides in solution and heat for an additional 30 seconds at power 5.
6. For fungus, let slides stand in solution for 1 minute. For Pneumocystis Carinii, let stand 3-4 minutes. Check slides frequently during this step since variations in timing may occur due to the power wattage of the microwave.
7. Wash in 5 changes of distilled water.
8. Tone in Gold Chloride 0.5% for 1 minute. Rinse in distilled water.
9. Place in Sodium Thiosulfate for 2 minutes. Rinse in distilled water.
10. Counterstain in Fast Green Substitute For Light Green Working Solution for 1 minute. Rinse quickly.
11. Dehydrate in 95% Alcohol, Absolute Alcohol and clear in Xylene, 2 changes each.
12. Mount with Poly Mount (Item# s2153) or any other acceptable mounting medium.

**RESULTS:**

Fungi.....Black  
 Pneumocystis .....Black to Blue Black  
 Mucin.....Taupe to Gray  
 Background.....Green

*Poly Scientific R&D Corp.*

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