

**MacCALLUM GOODPASTURE METHOD  
FOR GRAM POSITIVE & NEGATIVE BACTERIA**

<b>PURPOSE:</b>	For In Vitro Diagnostic Use: Intended for the qualitative demonstration of Gram positive and negative bacteria.
<b>PRINCIPLE:</b>	Crystal Violet stains all bacteria. Iodine complexes with Crystal Violet and forms a large complex that is more easily removed by the decolorizer from the lipid rich bacteria leaving the Gram negative bacteria colorless. Basic Fuchsin is taken up by the colorless bacteria.
<b>CONTROL:</b>	Any tissue positive for Gram positive and negative bacteria <i>Control Slides can be purchased from Histology Control Systems. See inside back cover, Item# cs002.</i>
<b>SPECIMEN PREPARATION:</b>	Formalin fixed, paraffin embedded sections cut at 6 micrometers
<b>SOLUTIONS:</b>	1. Goodpasture Stain Aniline Carbol Fuchsin Item# s207 2. Gram's Iodine Item# s204 3. Crystal Violet Stirling Item# s169A 4. Picric Acid Saturated Aqueous Item# s257  <i>Solutions can be purchased separately from Poly Scientific.</i>
<b>NOTES:</b>	Aniline is not included.
<b>REFERENCE:</b>	Luna, Lee G. <u>Histopathologic Methods and Color Atlas of Special Stains and Tissue Artifacts</u> . American Histolabs Inc. Gaithersburg, MD. 1992. pp. 189-190.

**STAINING PROCEDURE:**

1. Deparaffinize and hydrate to distilled water.
2. Place in Goodpasture Stain Aniline Carbol Fuchsin for 10 minutes.
3. Rinse in distilled water.
4. Differentiate in full strength Formalin for a few minutes (fixes Goodpasture Stain).
5. Wash in running water for 3 minutes.
6. Place in Picric Acid Saturated Aqueous for 3-5 minutes.
7. Rinse in distilled water.
8. Differentiate in 95% Alcohol for 30 seconds.
9. Rinse in distilled water.
10. Place in Crystal Violet Stirling for 3 minutes.
11. Rinse in distilled water.
12. Place in Gram's Iodine for 1 minute.
13. Rinse in distilled water. Blot but leave moist.
14. Differentiate in a solution of equal parts of Aniline and Xylene, several changes until section appears light purplish-red.
15. Xylene, 2 changes.
16. Mount with Poly Mount (Item# s2153) or any other acceptable mounting medium.

**RESULTS:**

Gram Positive Organisms..... Blue  
 Gram Negative Organisms ..... Red  
 Other Elements ..... Various shades of Red to Purple

*Poly Scientific R&D Corp.*

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