

**A-107 MacCALLUM-GOODPASTURE METHOD
FOR GRAM POSITIVE AND
GRAM NEGATIVE BACTERIA**

FIXATION: Any well-fixed tissue.

TECHNIQUE: Cut paraffin sections at 6 microns.

STAINING PROCEDURE: (use control slide).

1. Deparaffinize and hydrate to distilled water.
2. Stain for 10 minutes in **Goodpastures Solution** (A-107-1).
3. Rinse in distilled water.
4. Differentiate in **Formaldehyde, 37-40 %** (A-107-5), for a few minutes (this fixes the Goodpasture Stain).
5. Wash in running water for 3 minutes.
6. Place in **Picric Acid Saturated, Aqueous** (A-107-4), for 3 to 5 minutes.
7. Rinse in distilled water.
8. Differentiate in 95% alcohol for 30 seconds.
9. Rinse in distilled water.
10. Stain with **Crystal Violet, Stirling** (A-107-3), for 3 minutes.
11. Rinse in distilled water.
12. Place for 1 minute in **Gram's Iodine** (A-107-2).
13. Rinse in distilled water and blot, but leave moist.
14. Differentiate in **Xylene-Aniline, 1:1** (A-107-7), for several changes until section appears light purplish-red.
15. Dip slides in **Xylene** (C-120), for two changes.
16. Mount with **Permunt** (M-18).

RESULTS:

Gram positive organisms	blue
Gram negative organisms	red
Other elements	various shades of red to purple

REFERENCES:

MacCallum, W.G., JAMA, 72:193, 1919

Luna, L.G. (ed.) Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology, 3rd ed., McGraw-Hill Book Co., N.Y., c. 1968, p. 225.

