

**G-452      PHOSPHOTUNGSTIC ACID  
HEMATOXYLIN (PTAH)**

**Fixation:**    **Bouin's Fluid** (F-40), **Formalin-Acetic Acid** (F-121)

**Sections:**    Paraffin @ 3-5 microns

**Staining:**

1. Deparaffinize and hydrate to distilled water.
2. Oxidize in freshly prepared acidified-permanganate for 5-40 seconds.  
\*Prepare oxidizing solution by adding 0.16 ml **Sulfuric Acid, concentrated** (G-452-2) to 100 ml of **Potassium Permanganate, 0.3%** (G-452-1).
3. Rinse in water.
4. Decolorize in **Potassium Metabisulfite, 4%** (G-452-3) for 5-10 seconds or until sections are colorless. Wash in running tap water for 5 minutes. Rinse in distilled water.
5. Mordant in **Ferric Ammonium Sulfate, 4%** (G-452-4) for two minutes to two hours. Rinse in distilled water.
6. Stain in **PTAH Solution** (G-452-5) for 16-48 hours.
7. Pass slides quickly through graded alcohols to 95% alcohol or blot and take directly to 95% alcohol.
8. Rinse slides in 95% alcohol until no more stain runs from the tissue, about 10 seconds to 2 minutes.
9. Dehydrate in absolute alcohol, clear and mount.

**Stain Results:**

Alpha cell granules	Deep blue
RBC' s	Deep blue black
Background	Pale pink or colorless

Nuclei of all cells are distinctly, but lightly stained.

**References:**

- Clark, G.: Staining Procedures, Williams and Wilkins Co., Baltimore, 3rd Ed., c. 1973, p. 173.  
Levene, C. & Feng, P., Stain Techn., 39:39—44, 1964.  
Mallory, F.B., Pathological Technique, W. B. Saunders Co., Philadelphia, 1938.