

## **J-604, LILLIE'S METHOD FOR FERRIC AND FERROUS IRON**

**Fixation:** **10% Buffered Neutral Formalin** (F-113)

**Sections:** Paraffin @ 6 microns.

**Preparation of Potassium Ferrocyanide Solution:**

Potassium Ferrocyanide (J-604-1) 0.4 gm.  
Hydrochloric Acid (J-604-2) 40 ml.  
Prepare fresh, just before use.

**Preparation of Potassium Ferricyanide Solution:**

Potassium Ferricyanide (J-604-1A) 0.4 gm.  
Hydrochloric Acid (J-604-2) 40 ml.  
Prepare fresh, just before use.

**Staining:** (Use control slide. Use chemically clean glassware)

1. Deparaffinize and hydrate to distilled water.
2. For Ferric Iron, place in Potassium Ferrocyanide Solution for 1 hour. For Ferrous Iron, place in Potassium Ferricyanide Solution for 1 hour.
3. Wash well in **Acetic Acid, 1%** (J-604-4).
4. Stain for 10 minutes in **Basic Fuchsin Solution** (J-604-3). Rinse in distilled water. (For critical work, omit this step.)
5. Dehydrate in 95% alcohol, absolute alcohol and clear in xylene two changes each.
6. Mount with **Permount** (M-18).

**Stain Results:**

Ferric iron	Dark Prussian , blue
Ferrous iron	Dark turnbull's blue
Background	Light Red

**References:**

Lillie, R.D. , Histopathologic Technic and Practical Histo-chemistry, 3<sup>rd</sup> edition, McGraw-Hill, N.Y., p.407., c 1965.

Luna, .G., (ed.) Manual of Histologic Staining Methods of the AFIP, 3<sup>rd</sup> edition, McGraw-Hill, N.Y., p.182., c, 1968