

GOMORI'S METHOD FOR IRON PIGMENT

Purpose The detection of ferrous iron in tissue sections.

Principle Sections are treated with an acidic solution of potassium ferrocyanide and hydrochloric acid to form an insoluble bright blue pigment.

Fixative 10% neutral buffered formalin.

Reagents

% Hydrochloric Acid Solution (stock)

Hydrochloric acid, concentrated ... 5.0 ml

Distilled water ... 95.0 ml

2% Potassium Ferrocyanide Solution (stock)

Potassium ferrocyanide ... 2.0 g

Distilled water ... 100.0 ml

Working Solution Hydrochloric acid-Potassium ferrocyanide

Mix together, just before use, equal parts of the two stock solutions from above.

Nuclear Fast Red (Kernechtrot) solution

Dissolve 0.1 g nuclear fast red in 100.0 ml of 5% aqueous aluminum sulfate with the aid of heat. Cool, filter, and add a grain of thymol as a preservative.

Quality Control Use a control slide with tissue known for iron deposits.

Procedure

1. Deparaffinize and hydrate slides to water.
2. Place in working solution of hydrochloric acid-potassium ferrocyanide for 10 minutes.
3. Rinse thoroughly in tap water.
4. Counterstain in nuclear fast red (Kernechtrot) for 5 minutes.
5. Rinse in tap water.
6. Dehydrate in 95% alcohol, absolute alcohol, and clear in xylene, two changes each.
7. Mount in synthetic resin.

Results

Iron pigments ... blue

Nuclei ... red

Cytoplasm ... light pink

References

Histotechnology: A Self-Instructional Text, Freida L. Carson, 1990, pp. 214-216.