

Iron Stain Kit

Description:

The Iron Stain Kit is intended for use in the detection of ferric iron in tissues, blood smears, or bone marrow smears. Ferric iron is normally found in small amounts in bone marrow and the spleen. Abnormally large deposits may be seen in hemochromatosis and hemosiderosis. This product is based on the Prussian Blue reaction in which ionic iron reacts with acid ferrocyanide producing a blue color.

Tissue Sections

| | |
|-------------|-------------|
| Iron: | Bright Blue |
| Nuclei: | Red |
| Background: | Pink |

Bone or Blood Smears

Sideroblasts: These are nucleated erythrocytes containing at least one small blue granule. If the blue granules surround the nucleus, the cell is a ringed sideroblast.

Siderocytes: These are non-nucleated erythrocytes containing at least one blue granule.

Reticuloendothelial Iron: Usually seen as blue particles on the marrow smear or as blue particles in the cytoplasm or phagocytic cells.

Uses/Limitations:

For In-Vitro Diagnostic use only.
Histological applications.
Do not use past expiration date.
Use caution when handling these reagents.

Control Tissue:


Spleen
Bone Marrow

Availability/Contents:

| <u>Kit Contents</u> | <u>Volume</u> | <u>Storage</u> |
|---------------------------------|---------------|------------------|
| Potassium Ferrocyanide Solution | 500 ml | Room Temperature |
| Hydrochloric Acid Solution (2%) | 500 ml | Room Temperature |
| Nuclear Fast Red Solution | 125 ml | Room Temperature |

Precautions:

Avoid contact with skin and eyes.
May cause burns.
Harmful if swallowed.
Follow all Federal, State, and local regulations regarding disposal.
Use in chemical fume hood whenever possible.

Storage: 18° C  25° C

Store Components at Room Temperature.

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Procedure (Standard):

Note: Use acid-washed or bleach-washed glassware.
Rinse all glassware with distilled water prior to use.
Do not use metal forceps to transfer slide during staining procedure.

1. Deparaffinize sections if necessary and hydrate to distilled water.
2. Mix equal volumes of Potassium Ferrocyanide Solution and Hydrochloric Acid Solution to make a working Iron Stain Solution. Use once and discard.
3. Incubate slide in working Iron Stain Solution for 3 minutes.
4. Rinse thoroughly in distilled water.
5. Stain slide in Nuclear Fast Red Solution for 5 minutes.
6. Rinse in 4 changes of distilled water.
7. Dehydrate in 95% alcohol followed by absolute alcohol.
8. Clear, and mount in synthetic resin.

References:

1. Sheenan, D.C., Hrapchak, B.B. Theory and Practice of Histotechnology, 2nd Edition. Battelle Press, Columbus, OH. Page 217. 1980
2. Carson, F.L., Histotechnology; A Self-Instructional Text, ASCP Press, Chicago, IL. Pages 214-215. 1990

Storage: 18° C  25° C

**Store Components at Room
Temperature.**