

Iron Control Slides – Technical Memo

<u>CONTROL SLIDES:</u>	Part 4320A	Part 4320B
	10 Slide/Set	98 Slide/Set

PRODUCT SPECIFICATIONS:

Tissue: Positive staining liver or spleen.

Fixation: Formalin 10%, Phosphate Buffered (Part 1090).

Section/Glass: Paraffin sections cut at 4 microns on Superfrost™ Plus slides.

Quality Control Stain: Gomori Prussian Blue quality control stained slide(s) included.

Reactivity: Guaranteed product specific reactivity for one year from date of receipt. Revalidate after one year to verify continued reactivity.

Storage: 15-30°C in a light deprived and humidity controlled environment.

Intended Use: To verify histological techniques and reagent reactivity.

Before using unstained control slides, review the enclosed stained slide(s) to ensure that this tissue source is acceptable for testing needs.

CONTROL SLIDE VALIDATION:

With Iron, Gomori Prussian Blue Stain Kit:

Solution A: Hydrochloric Acid 20%, Aqueous

Solution B: Potassium Ferrocyanide 10%, Aqueous

Solution C: Nuclear Fast Red Stain, Kernechtrot

Part 9136A/B

125/250 ml

125/250 ml

250/500 ml

Individual Stain Solution

Part 12087

Part 13392

Part 1255

APPLICATION:

Newcomer Supply Iron Control Slides are for the positive histochemical staining of ferric iron deposits in tissue sections.

PRESTAINING PREPARATION:

1. Heat dry sections in oven according to your laboratory protocol.
2. Acid clean glassware prior to use to avoid residual iron staining.
 - a. See Procedure Note #1.

NEWCOMER SUPPLY VALIDATION PROCEDURE:

3. Deparaffinize sections thoroughly in three changes of xylene, 3 minutes each. Hydrate through two changes each of 100% and 95% ethyl alcohols, 10 dips each. Wash well with distilled water.
 - a. See Procedure Notes #2 and #3.
4. Prepare fresh Ferrocyanide Working Solution directly before use; combine and mix well.
 - a. Solution A: Hydrochloric Acid 20%, Aqueous 20 ml
 - b. Solution B: Potassium Ferrocyanide 10%, Aqueous 20 ml
5. Place slides in fresh Ferrocyanide Working Solution for 20 minutes.
6. Rinse in three changes of tap water; rinse in distilled water.
7. Place in Solution C: Nuclear Fast Red Stain, Kernechtrot for 5 minutes.
 - a. Shake solution well before use; do not filter.
8. Rinse well in distilled water.
 - a. See Procedure Note #4.
9. Dehydrate in two changes each of 95% and 100% ethyl alcohol. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

RESULTS:

Ferric iron deposits	Bright blue
Nuclei	Red
Cytoplasm	Pink

PROCEDURE NOTES:

1. Acid clean all glassware/plasticware (12086) and rinse thoroughly in several changes of distilled water.
2. Drain slides after each step to prevent solution carry over.
3. Do not allow sections to dry out at any point during procedure.
4. Wash well after Nuclear Fast Red Stain, Kernechtrot to avoid cloudiness in dehydration steps.
5. If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps

REFERENCES:

1. Luna, Lee G. *Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology*. 3rd ed. New York: Blakiston Division, McGraw-Hill, 1968. 179-184.
2. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 217-218.
3. Modifications developed by Newcomer Supply Laboratory.

