

Revised January 2020

Colloidal Iron, Multi-Tissue Control Slides - Technical Memo

CONTROL SLIDES: Part 4128A Part 4128B 10 Slide/Set 98 Slide/Set

PRODUCT SPECIFICATIONS:

Tissue: Positive staining small intestine and positive iron staining animal spleen.

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

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

Quality Control Stain: Müller-Mowry Colloidal Iron 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 Colloidal Iron, Müller-Mowry Stain Kit:	Part 9110A	Individual Stain Solution
Solution A: Acetic Acid 12%, Aqueous	1000 ml	
Solution B: Colloidal Iron Stock	125 ml	Part 10365
Solution C: Acetic Acid, Glacial, ACS	50 ml	Part 10010
Solution D: Potassium Ferrocyanide 2%, Aqueous	125 ml	
Solution E: Hydrochloric Acid 2%, Aqueous	125 ml	
Solution F: Van Gieson Stain	250 ml	Part 1404

APPLICATION:

Newcomer Supply Colloidal Iron, Multi-Tissue Control Slides, use a combination of tissue sources for the positive histochemical staining of acid epithelial mucins (sialomucin, sulfomucin) and stromal (mesenchymal) mucin in small intestine and ferric iron in spleen.

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.
- 3. Prepare Colloidal Iron Working Solution; combine and mix well.

a.	Solution B: Colloidal Iron Stock	20 ml
b.	Solution C: Acetic Acid, Glacial ACS	5 ml
C.	Distilled Water	15 ml

NEWCOMER SUPPLY VALIDATION PROCEDURE:

- 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.
- 5. Place in Solution A: Acetic Acid 12%, Aqueous for 30 seconds.
- 6. Drain Slides. Do not rinse.
- 7. Place in Colloidal Iron Working Solution (Step #2) for 30 minutes.
- 8. Rinse in three changes of Solution A: Acetic Acid 12%, Aqueous; 3 minutes each.
- Prepare <u>fresh</u> Ferrocyanide-Hydrochloric Acid Solution directly before use; combine and mix well.
 - a. Solution D. Potassium Ferrocyanide 2%, Aqueous 20 ml
 - b. Solution E: Hydrochloric Acid 2%, Aqueous 20 ml
- 10. Place in Ferrocyanide-Hydrochloric Acid Solution for 15 minutes.
- 11. Wash in running tap water for 1-5 minutes.
- 12. Counterstain in Solution F: Van Gieson Stain for 3-5 minutes.
 - a. Proceed directly to dehydration step without rinsing.
- Dehydrate in two changes of 100% ethyl alcohol. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

RESULTS:

Acid epithelial mucins
Stromal mucin
Blue
Ferric iron deposits
Collagen
Muscle and cytoplasm
Bright blue
Red
Yellow

PROCEDURE NOTES:

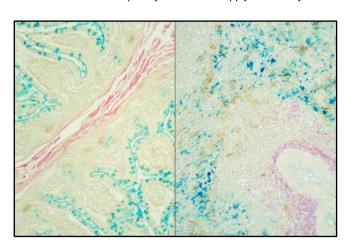
 Acid clean all glassware/plasticware (Part 12086) and rinse thoroughly in several changes of distilled water.

Part 4128

- 2. Drain slides after each step to prevent solution carry over.
- 3. Do not allow sections to dry out at any point during procedure.
- Nuclear Fast Red Stain, Kernechtrot (1255) can be used as an alternative counterstain.
- 5. If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

REFERENCES:

- Bancroft, John D., and Marilyn Gamble. Theory and Practice of Histological Techniques. 6th ed. Oxford: Churchill Livingstone Elsevier, 2008. 175-176.
- Carson, Freida L., and Christa Hladik Cappellano. Histotechnology: A Self-instructional Text. 4th ed. Chicago: ASCP Press, 2015. 151-153.
- Rekhtman, Natasha, and Justin Bishop. Quick Reference Handbook for Surgical Pathologists. Berlin: Springer, 2011. 69.
- 4. Modifications developed by Newcomer Supply Laboratory.



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