

Mucin Mucicarmine Control Slides – Technical Memo

CONTROL SLIDES:	Part 4455A	Part 4455B
	10 Slide/Set	98 Slide/Set

PRODUCT SPECIFICATIONS:

Tissue: Positive staining colon.

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

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

Quality Control Stain: Mayer Mucicarmine 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 Mucin, Mayer Mucicarmine Stain Kit:	Part 9151A/B	Individual Stain Solution
Solution A: Ferric Chloride, Aqueous	125/250 ml	Part 1409
Solution B: Hematoxylin 1%, Alcoholic	125/250 ml	Part 1409
Solution C: Mucicarmine Stock Stain, Mayer	125/125 ml	Part 1250
Solution D: Metanil Yellow Stain, Aqueous	250/500 ml	Part 12235

APPLICATION:

Newcomer Supply Mucin Mucicarmine Control Slides are for the positive histochemical staining of acid epithelial mucins (sialomucin, sulfomucin).

NEWCOMER SUPPLY VALIDATION PROCEDURE:

1. Heat dry sections in oven according to your laboratory protocol.
2. 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 #1 and #2.
3. Prepare **fresh** Weigert Iron Hematoxylin Working Solution directly before use; combine and mix well:

a. Solution A: Ferric Chloride, Aqueous	20 ml
b. Solution B: Hematoxylin 1%, Alcoholic	20 ml
4. Stain in **fresh** Weigert Iron Hematoxylin Working Solution for 7 minutes.
5. Rinse in running tap water for 10 minutes.
6. Prepare **fresh** Mayer Mucicarmine Working Solution; combine and mix well:

a. Solution C: Mucicarmine Stock Stain, Mayer	10 ml
b. Tap Water (do not use distilled water)	30 ml
7. Stain in **fresh** Mayer Mucicarmine Working Solution for 60 minutes or longer if a more intense stain is desired.

Microwave Modification: See Procedure Note #3.

 - a. Place slides in a plastic Coplin jar containing **fresh** Mayer Mucicarmine Working Solution and microwave at 70°C for 10 minutes.
8. Rinse in several changes of tap water.
9. Counterstain in Solution D: Metanil Yellow Stain, Aqueous for 30 to 60 seconds.
10. Dehydrate quickly through 95% and 100% ethyl alcohols. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

RESULTS:

Acid epithelial mucins	Deep rose to red
Nuclei	Black
Other tissue elements	Yellow

PROCEDURE NOTES:

1. Drain slides after each step to prevent solution carry over.
2. Do not allow sections to dry out at any point during procedure.
3. The suggested microwave procedure has been tested at Newcomer Supply. This procedure is a guideline and techniques should be developed for use in your laboratory.
4. If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

REFERENCES:

1. Bancroft, John D., and Marilyn Gamble. *Theory and Practice of Histological Techniques*. 6th ed. Oxford: Churchill Livingstone Elsevier, 2008. 174-175.
2. Carson, Freida L., and Christa Hladik. *Histotechnology: A Self-Instructional Text*. 3rd ed. Chicago, Ill.: American Society of Clinical Pathologists, 2009. 142-144.
3. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 168-169.
4. Modifications developed by Newcomer Supply Laboratory.

