

## Mucin Mucicarmine Control Slides – Technical Memo

<b>CONTROL SLIDES:</b>	<b>Part 4455A</b>	<b>Part 4455B</b>
	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:

- Heat dry sections in oven according to your laboratory protocol.
- 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.
  - See Procedure Notes #1 and #2.
- Prepare **fresh** Weigert Iron Hematoxylin Working Solution directly before use; combine and mix well:
  - Solution A: Ferric Chloride, Aqueous 20 ml
  - Solution B: Hematoxylin 1%, Alcoholic 20 ml
- Stain in **fresh** Weigert Iron Hematoxylin Working Solution for 7 minutes.
- Rinse in running tap water for 10 minutes.
- Prepare **fresh** Mayer Mucicarmine Working Solution; combine and mix well:
  - Solution C: Mucicarmine Stock Stain, Mayer 10 ml
  - Tap Water (do not use distilled water) 30 ml
- 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.

  - Place slides in a **plastic** Coplin jar containing **fresh** Mayer Mucicarmine Working Solution and microwave at 70°C for 10 minutes.
- Rinse in several changes of tap water.
- Counterstain in Solution D: Metanil Yellow Stain, Aqueous for 30 to 60 seconds.
- 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:

- Drain slides after each step to prevent solution carry over.
- Do not allow sections to dry out at any point during procedure.
- 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.
- 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. 174-175.
- Carson, Freida L., and Christa Hladik. *Histotechnology: A Self-Instructional Text*. 3rd ed. Chicago, Ill.: American Society of Clinical Pathologists, 2009. 142-144.
- Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 168-169.
- Modifications developed by Newcomer Supply Laboratory.

