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Part 4135 Revised January 2025

# Cryptococcus Control Slides – Technical Memo

Part 4135B 98 Slide/Set

## PRODUCT SPECIFICATIONS:

Tissue: Positive staining lung.

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.

Part 4135A 10 Slide/Set

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 *Cryptococcus* Control Slides are for the positive histochemical staining of fungal organisms. The morphology of the organism is consistent with *Cryptococcus sp.* 

## NEWCOMER SUPPLY VALIDATION PROCEDURE:

- 1. 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.
  a. See Procedure Notes #1 and #2.
- 3. Prepare <u>fresh</u> 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 Weigert Iron Hematoxylin Working Solution for 7 minutes.
- 5. Rinse in running tap water for 10 minutes.
- 6. Prepare <u>fresh</u> 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
- Stain slides in <u>fresh</u> 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 <u>plastic</u> Coplin jar (5184) containing <u>fresh</u> Magina Magi
    - Mayer Mucicarmine Working Solution. Microwave for 10 minutes at 70°C.
- 8. Rinse in several changes of tap water.
- 9. Counterstain in Solution D: Metanil Yellow Stain, Aqueous for 30 seconds to 1 minute.
- 10. Dehydrate quickly through 95% and 100% ethyl alcohols. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

## **RESULTS:**

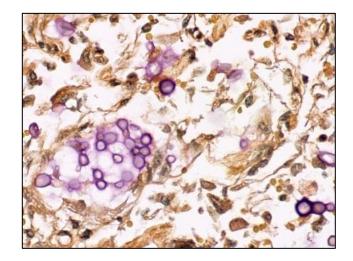
Capsule of *Cryptococcus* Nuclei Other tissue elements Deep rose to red Black Yellow

## PROCEDURE NOTES:

- 1. Drain staining slides after each step to prevent solution carry over.
- 2. Do not allow sections to dry out at any point during procedure.
- 3. The microwave procedure was tested using a laboratory-grade microwave oven. This procedure is a guideline and techniques should be developed for use in your laboratory.
- 4. If using a xylene substitute, follow manufacturer's recommendation for deparaffinization and clearing steps.

# **REFERENCES:**

- 1. Carson, Freida L. and Christa Cappellano. *Histotechnology: A Self-Instructional Text.* 5th ed. Chicago: ASCP Press, 2020. 149-151.
- Luna, Lee G. Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology. 3rd ed. New York: Blakiston Division, McGraw-Hill, 1968. 161-162.
- 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.



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