

Fungus, PAS, *Aspergillus sp.*, Artificial Control Slides – Technical Memo

CONTROL SLIDES:	Part 4232A	Part 4232B
	10 Slide/Set	98 Slide/Set

Fungus, PAS, *Aspergillus sp.*, Artificial Control Slides contain sections of positive staining rat lung and negative staining human lung.

PRODUCT DESCRIPTION:

The enclosed positive control slides are intended to be used to verify histological techniques and reagent reactivity. These slides are to be used for the qualitative purpose of determining positive or negative results, and are not intended to be used for any quantitative purpose. The first serial section within the control box is stained and provided for your reference. **Before using the unstained slides, review the enclosed stained slide with your pathologist to ensure that this tissue source is acceptable. Newcomer Supply will not accept a return with missing slides in the series. Newcomer Supply guarantees reactivity of these control slides for one year from the date of receipt. Revalidate after one year to verify continued reactivity. Store at 15-30°C in a light deprived and humidity controlled environment.**

These Fungus, PAS, *Aspergillus sp.*, Artificial Control Slides were produced at the Newcomer Supply Laboratory under carefully controlled conditions. The positive control sections are not human tissue. The microorganisms were grown in pure culture, harvested, formalized and introduced in a freshly harvested rat lung. No infective process occurred. *Aspergillus fumigatus* was used to produce these control slides, and was purchased from Remel Microbiology Products (R4601018). Reasonable measures are used to deliver quality control slides that are as consistent as possible. However, characteristics of quality control slides may be dissimilar due to variations in the reagents, stains, techniques, laboratory conditions, and tissue sources used. Newcomer Supply Laboratory uses a manual method of performing quality control procedures, specifically avoiding automation, in order to provide reactive control slides for even less aggressive methods of staining that our customers may be using.

CONTROL SLIDE VALIDATION:

With Fungus, PAS/Light Green Stain Kit:	Part 9122A	Individual Stain Solution
Solution A: Periodic Acid 0.5%, Aqueous	250 ml	Part 13308
Solution B: Schiff Reagent, McManus	250 ml	Part 1371
Solution C: Light Green SF Yellowish Stain 0.1%, Aqueous	250 ml	Part 12203

For storage requirements and expiration date refer to individual product labels.

APPLICATION:

Newcomer Supply Fungus, PAS, *Aspergillus sp.*, Artificial Control Slides are for the positive histochemical staining of *Aspergillus sp.* in tissue sections.

METHOD:

Fixation: Formalin 10%, Phosphate Buffered (Part 1090)
Technique: Paraffin sections cut at 5 microns on Superfrost® Plus
Solutions: All solutions are manufactured by Newcomer Supply, Inc.

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.
 - See Procedure Notes #1 and #2.
- Place slides in Solution A: Periodic Acid 0.5%, Aqueous for 5 minutes.
- Wash in three changes of tap water; rinse in distilled water.
- Drain slides of excess water and stain in Solution B: Schiff Reagent, McManus for 20 minutes.
- Wash gently in lukewarm tap water for 10 minutes to allow pink color to develop.
- Counterstain in Solution C: Light Green SF Yellowish Stain 0.1%, Aqueous for 5 seconds.
 - See Procedure Note #3.
- 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:

<i>Aspergillus sp.</i>	Red to magenta
Background	Pale green
Negative lung	Negative for fungus

PROCEDURE NOTES:

- Drain staining rack/slides after each step to prevent solution carry over.
- Do not allow sections to dry out at any point during staining procedure.
- Increase or decrease staining time in Light Green SF Yellowish Stain 0.1%, Aqueous for a length of time to suit your preference of counterstain intensity.
- Newcomer Supply Schiff Reagent, McManus is stored at room temperature. There is no benefit to store this product at 4°C.
- 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. 321-323.
- Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 245.
- Modifications developed by Newcomer Supply Laboratory.

