

Alcian Blue/PAS Control Slides – Technical Memo

CONTROL SLIDES:	Part 4022A	Part 4022B
	10 Slide/Set	98 Slide/Set

Alcian Blue/PAS Control Slides contain a section of positive staining small intestine.

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 positive control slides were produced from human surgical or autopsy tissues under carefully controlled conditions. 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 Alcian Blue/PAS Stain Kit:	Part 91022A/B	Individual Stain Solution
Solution A: Acetic Acid 3%, Aqueous	250/500 ml	Part 10017
Solution B: Alcian Blue Stain 1%, pH 2.5 Aqueous	250/500 ml	Part 1003
Solution C: Periodic Acid 0.5%, Aqueous	250/500 ml	Part 13308
Solution D: Schiff Reagent, McManus	250/500 ml	Part 1371
Solution E: Hematoxylin Stain, Mayer Modified	250/500 ml	Part 1202

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

APPLICATION:

Newcomer Supply Alcian Blue/PAS Control Slides are for the positive histochemical staining and differentiation of acidic epithelial mucins (sialomucin, sulfomucin), stromal (mesenchymal) mucin, neutral mucins and glycogen.

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: Acetic Acid 3%, Aqueous for 3 minutes.
- Place slides directly into Solution B: Alcian Blue Stain 1%, pH 2.5 Aqueous for 15 minutes.
- Wash slides in gently running tap water for 1-2 minutes; rinse in distilled water.
- Place in Solution C: Periodic Acid 0.5%, Aqueous for 5 minutes.
- Wash in running tap water for 1-2 minutes; rinse in distilled water.
- Place in Solution D: Schiff Reagent, McManus for 10 minutes.
- Wash in lukewarm tap water for 5-10 minutes.
- Stain lightly in Solution E: Hematoxylin Stain, Mayer Modified for 1 minute.
- Rinse in running tap water for 1-2 minutes.
- 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:

Acid epithelial mucins	Violet
Neutral epithelial mucin	Magenta
Glycogen	Magenta
Stromal (mesenchymal) mucin	Blue
Nuclei	Pale blue

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.
- 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. 173-174.
- Carson, Freida L., and Christa Hladik Cappellano. *Histotechnology: A Self-instructional Text*. 4th ed. Chicago: ASCP Press, 2015. 150-151
- Modifications developed by Newcomer Supply Laboratory.

