

## Alcian Blue/PAS Control Slides – Technical Memo

<b><u>CONTROL SLIDES:</u></b>	<b>Part 4022A</b>	<b>Part 4022B</b>
	10 Slide/Set	98 Slide/Set

### **PRODUCT SPECIFICATIONS:**

**Tissue:** Positive staining small intestine.

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

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

**Quality Control Stain:** Alcian Blue/PAS 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:**

<b>With Alcian Blue/PAS Stain Kit:</b>	<b>Part 91022A/B</b>	<b>Individual Stain Solution</b>
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

### **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.

### **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.
- 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 slides after each step to prevent solution carry over.
- Do not allow sections to dry out at any point during procedure.
- 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.

