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**ALCIAN BLUE-PAS (PAB)**

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**PURPOSE:** To differentiate between neutral and acetic mucosubstances.  
Routine stain for G.I. biopsies.

**CONTROL:** Use a mucin control.

**FIXATIVE:** 10% formalin or Hollande's fixative.

**TECHNIQUE:** Cut paraffin sections 4-5 microns thick.

**EQUIPMENT:** Rinse glassware in DI water. Coplin jar, microwave oven.

**REAGENTS:**

**Alcian Blue, pH2.5:**  
See Alcian Blue

**Schiff's Reagent:**  
See PAS

**0.5% Periodic Acid:**  
See PAS

**Hematoxylin Gill - 3:**  
Purchased through Baxter

**SAFETY:** Wear gloves, goggles, particle mask and lab coat, avoid contact and inhalation. Work under the hood, keep hot, uncapped, solutions under the hood.

Schiff's Reagent: Use extreme caution, Basic fuchsin (pararosaniline) is a known carcinogen.

**PROCEDURE:**

1. Deparaffinize and hydrate to distilled water.
2. \*Alcian blue pH2.5, microwave Hi power, 45 seconds, let stand for 2-5 minutes.
3. Wash in running tap water, 5 minutes, rinse in distilled.
4. 0.5% Periodic acid, 5 minutes.
5. Rinse in distilled water.
6. \*Schiff's reagent, microwave Hi power, 45 seconds, allow to stand for 2-5 minutes.
7. Wash in running tap water for 5 minutes, rinse in distilled.

## CARBOHYDRATES

### ALCIAN BLUE-PAS

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8. Hematoxylin, 1-3 minutes, wash in water.
9. Acid rinse, 10 dips, wash, bluing solution, 10 dips.
10. Wash in running tap water for 5 minutes.
11. Dehydrate, clear, and coverslip.

\*Conventional Method: Alcian blue, 30 minutes, room temperature.

\*Schiff's reagent, 30 minutes, room temperature.

### RESULTS:

Acid mucosubstances	blue
Neutral polysaccharides	magenta

### REFERENCES:

- Sheehan D, Hrapchak B, Theory and practice of Histotechnology, 2nd Ed, 1980, pp 163,173-174, Battelle Press, Ohio
- Bancroft J, Stevens A, Theory and Practice of Histological Techniques, 2nd Ed, 1982,pp194-98,Churchill Livingstone, NY.
- Carson F, Histotechnology A Self-Instructional Text, 1st Ed, 1990,pp130-131, ASCP, III
- Crookham, J, Dapson, R, Hazardous Chemicals in the Histopathology Laboratory, 2nd ED, 1991, Anatech LTD

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## PROCEDURE CARD

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#### RESULTS:

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Neutral polysaccharides	magenta

**SAFETY:** Keep opened hot solutions in hood.

#### REAGENTS:

Alcian Blue, pH2.5:  
See Alcian Blue

Schiff's Reagent:  
See PAS

0.5% Periodic Acid:  
See PAS

**CAUTION:** Carcinogenic.

Hematoxylin Gill-3:  
Purchased through Baxter

**ALCIAN BLUE pH2.5**

DATE: \_\_\_\_\_

TECH: \_\_\_\_\_

**O.5% PERIODIC ACID**

DATE: \_\_\_\_\_

TECH: \_\_\_\_\_

**SCHIFF'S SOLUTION**

DATE: \_\_\_\_\_

TECH: \_\_\_\_\_