

ALCIAN BLUE PAS METHOD

PURPOSE:	For In Vitro Diagnostic Use: Intended for the qualitative demonstration of acid and neutral mucins.
PRINCIPLE:	Alcian Blue at pH 2.5 binds to the acidic groups of sulfated and carboxylated glycoproteins and mucin by means of salt bridges. Acetic Acid provides the acidic environment necessary to facilitate these bonds. Periodic Acid oxidizes glycols to aldehydes. Schiff Reagent then binds to these aldehydes and sulphur is removed from the Schiff Reagent by washing, thereby revealing the fuchsia color.
CONTROL:	Sublingual, submaxillary glands <i>Control Slides can be purchased from Histology Control Systems. See inside back cover, Item# cs039.</i>
SPECIMEN PREPARATION:	Formalin fixed, paraffin embedded sections cut at 5 micrometers
SOLUTIONS:	1. Alcian Blue 1% in 3% Acetic Acid pH 2.5 Item# s111A 2. Schiff Reagent Item# s272 3. Mayer's Modified Hematoxylin Item# s216 4. Periodic Acid 1% Aqueous Item# s1861 5. Acid Alcohol 0.5% Aqueous Item# s103B <i>Solutions can be purchased separately from Poly Scientific.</i>
NOTES:	Mixtures of different mucins will result in a color mixture of blue and magenta.
REFERENCE:	Luna, Lee G. <u>Histopathologic Methods and Color Atlas of Special Stains and Tissue Artifacts</u> . American Histolabs Inc. Gaithersburg, MD. 1992. pp. 383-384.

STAINING PROCEDURE:

1. Deparaffinize and hydrate to water.
2. Stain in Alcian Blue 1% in 3% Acetic Acid pH 2.5 for 5 minutes.
3. Rinse in distilled water.
4. Dip in Periodic Acid 1% Aqueous for 2 minutes.
5. Rinse in distilled water.
6. Stain in Schiff Reagent for 8 minutes.
7. Rinse in running water for 5-10 minutes.
8. Stain in Mayer's Modified Hematoxylin for 2 minutes.
9. Rinse in distilled water.
10. Differentiate with 3-4 dips in Acid Alcohol 0.5% Aqueous.
11. Rinse well in distilled water.
12. Dehydrate in Absolute Alcohol, clear in Xylene, and mount with Poly Mount (Item# s2153) or any other acceptable mounting medium.

RESULTS:

Acid Mucins..... Blue
 Neutral Mucins..... Magenta
 Nuclei..... Pale Blue

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