

INTENDED USE

Alcian blue is used to stain acidic mucopolysaccharides.

PRODUCT SUMMARY

Alcian blue binds specifically to carboxyl and sulfate groups, provided both types of acids are ionized as they are at pH 2.4 and above. When the stain is made up at pH 1.0, only sulfonated mucosubstances stain. Once bound to tissue, Alcian blue is very difficult to remove and can be followed with any other staining procedure. Neither DNA nor RNA will stain with Alcian blue, presumably because of steric hindrance. The dye molecule is very large and flat, and cannot fit within the coils of nucleoproteins.

Alcian Blue, Certified is a water soluble dye; it is insoluble in 95% alcohol.

INGREDIENTS

Alcian blue (C.I. 74240), certified by the Biological Stain Commission

WARNING

Mild irritant. Alcian blue is a dye of untested toxicity.

For In Vitro Diagnostic Use.

STORAGE

Store at room temperature, away from direct sunlight. Keep containers tightly closed when not in use.

DIRECTIONS FOR USE

1. Solution preparations

Alcian Blue, pH 2.5

Anatech Alcian Blue, Certified 1.0 g

3% acetic acid 100 ml

Dissolve dye powder into the 3% acetic acid. The pH should be approximately 2.5 ± 0.1. Filter before use.

Alcian Blue, pH 1.0 (for sulfonated mucosubstances)

Anatech Alcian Blue, Certified 1.0 g

0.1 N (0.82%) hydrochloric acid 100 ml

Dissolve dye powder into the 0.1 N hydrochloric acid. The pH should be approximately 1.0. Filter before use.

2. Staining

- a. Filter before use.
- b. Staining time depends upon section thickness and desired effects.
- c. When combined with other procedures like nuclear staining or the PAS procedure, always stain with Alcian blue first.
- d. A red nuclear stain contrasts well with Alcian blue. Brazilliant! (ANATECH Catalog #861) is recommended.
 - i. Alcian blue solution may deionize nucleic acids, thereby decreasing red nuclear stain intensity.
 - ii. Bluing reagent (e.g., Scott's tap water) followed by a tap water rinse prior to nuclear staining will re-set the charge.

- e. Alcian Blue, pH 2.5 may produce pale blue background staining in the cytoplasm and collagen if not destained with 3% aqueous acetic acid.

RECOMMENDED STAINING SCHEDULE

- 1. Clearant x 33 minutes each
- 2. 100% alcohol x 21 minute each
- 3. 95% alcohol1 minute
- 4. 50% alcohol1 minute
- 5. Distilled or deionized water x 230 seconds each
- 6. 3% acetic acid (fresh)rinse
- 7. Alcian blue, pH 2.510 minutes
- 8. 3% acetic acid (fresh)rinse
- 9. Secondary stain
 - a. Brazilliant!
 - i. Tap waterrinse thoroughly
 - ii. Bluing reagent 30 seconds
 - iii. Tap waterrinse thoroughly
 - iv. Brazilliant! 6 minutes
 - b. PAS procedure, or other special stain
- 10. Distilled or deionized water1 minute
- 11. 70% alcohol1 minute
- 12. 95% alcohol1 minute
- 13. 100% alcohol x 31 minute each
- 14. Clearant x 31 minute each

Results: Acidic mucin (pH 2.5) or sulfonated mucin (pH 1.0)–blue; Nuclei–red; Collagen, cytoplasm and muscle–dependent on counterstain

DISPOSAL

- 1. Use a licensed waste hauler.
- 2. Discard into the sanitary sewer system with the approval of local wastewater officials.

MSDS

MSDS are available online at www.anatechltdusa.com.

ORDERING INFORMATION FOR ALCIAN BLUE, CERTIFIED

<u>Cat#</u>	<u>Packaging</u>
862	Alcian Blue, Certified, 25 g jar
864	Alcian Blue, Certified, bulk, kg
867	Alcian Blue, pH 2.5, 1 quart
880	Alcian Blue, pH 2.5 Stain Kit