

## Alcian Blue Stain 1%, pH 1.0 - Technical Memo

**SOLUTION:**

Alcian Blue Stain 1%, pH 1.0 Aqueous

**250 ml**

Part 1005A

**500 ml**

Part 1005B

**Additionally Needed:**

Hydrochloric Acid 0.1N, Aqueous

Part 1207

Nuclear Fast Red Stain, Kernechtrot

Part 1255

Xylene, ACS

Part 1445

Alcohol, Ethyl Denatured, 100%

Part 10841

Alcohol, Ethyl Denatured, 95%

Part 10842

**For storage requirements and expiration date refer to individual bottle labels.**

**APPLICATION:**

Newcomer Supply Alcian Blue Stain 1%, pH 1.0 Aqueous is for the specific staining of sulfated acid epithelial mucins in the Alcian Blue 1%, pH 1.0 procedure.

**METHOD:****Fixation:** Formalin 10%, Phosphate Buffered (Part 1090)**Technique:** Paraffin sections cut at 4 microns**Solutions:** All solutions manufactured by Newcomer Supply, Inc.

All Newcomer Supply stain procedures are designed to be used with Coplin jars filled to 40 ml following the provided staining procedure.

**STAINING PROCEDURE:**

1. If necessary, heat dry tissue sections/slides in oven.
2. 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.
  - a. See procedure note #1.
3. Rinse briefly in Hydrochloric Acid 0.1N, Aqueous (1207).
  - a. Save Hydrochloric Acid 0.1N, Aqueous for Step #5.
4. Stain in Alcian Blue Stain 1%, pH 1.0 Aqueous for 30 minutes at room temperature.
5. Rinse briefly in Hydrochloric Acid 0.1N, Aqueous.
  - a. Do not wash in water.
  - b. A water wash may alter pH level resulting in nonspecific staining.
6. Blot slide(s) dry with filter paper.
7. Counterstain dried slide(s) with Nuclear Fast Red Stain, Kernechtrot (1255) for 5 minutes.
  - a. Shake solution well before use; do not filter.
8. Rinse well in distilled water.
  - a. See Procedure Note #2.
9. Dehydrate quickly 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:**

Sulfated acid epithelial mucin	Blue
Cytoplasm and background	Pink
Nuclei	Pink to red

**PROCEDURE NOTES:**

1. Drain slides after each step to prevent solution carry over.
2. Wash well after Nuclear Fast Red Stain, Kernechtrot to avoid cloudiness in dehydration steps.
3. If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

**REFERENCES:**

1. Carson, Freida L., and Christa Hladik. *Histotechnology: A Self-Instructional Text*. 3rd ed. Chicago, Ill.: American Society of Clinical Pathologists, 2009.146-147.
2. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 173.
3. Modifications developed by Newcomer Supply Laboratory.