

Alcian Blue pH 2.5, Goblet Cell Control Slides – Technical Memo

<u>CONTROL SLIDES:</u>	Part 4051A	Part 4051B
	10 Slide/Set	98 Slide/Set

Alcian Blue pH 2.5, Goblet Cell Control Slides contain a section of positive staining small intestine.

PRODUCT DESCRIPTION:

The enclosed positive control slides are intended to be used to verify histological techniques and reagent reactivity. These slides are to be used for the qualitative purpose of determining positive or negative results, and are not intended to be used for any quantitative purpose. The first serial section within the control box is stained and provided for your reference. **Before using the unstained slides, review the enclosed stained slide with your pathologist to ensure that this tissue source is acceptable. Newcomer Supply will not accept a return with missing slides in the series. Newcomer Supply guarantees reactivity of these control slides for one year from the date of receipt. Revalidate after one year to verify continued reactivity. Store at 15-30°C in a light deprived and humidity controlled environment.**

These positive control slides were produced from human surgical or autopsy tissues under carefully controlled conditions. Reasonable measures are used to deliver quality control slides that are as consistent as possible. However, characteristics of quality control slides may be dissimilar due to variations in the reagents, stains, techniques, laboratory conditions, and tissue sources used. Newcomer Supply Laboratory uses a manual method of performing quality control procedures, specifically avoiding automation, in order to provide reactive control slides for even less aggressive methods of staining that our customers may be using.

CONTROL SLIDE VALIDATION:

With Alcian Blue, 1%, pH 2.5 Stain Kit:	Part 9102A/B	Individual Stain Solution
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: Nuclear Fast Red Stain, Kernechtrot	250/500 ml	Part 1255

For storage requirements and expiration date refer to individual product labels.

APPLICATION:

Newcomer Supply Alcian Blue pH 2.5, Goblet Cell Control Slides are for the positive histochemical staining of goblet cells as well as other acid epithelial mucins (sialomucin, sulfomucin). Goblet cells normally line the small intestine but are an abnormal finding in Barrett's esophagus.

METHOD:

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

Technique: Paraffin sections cut at 5 microns on Superfrost® Plus

Solutions: All solutions are manufactured by Newcomer Supply, Inc.

NEWCOMER SUPPLY VALIDATION PROCEDURE:

1. 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 Notes #1 and #2.
2. Place slides in Solution A: Acetic Acid 3%, Aqueous for 3 minutes.
3. Move slides directly into Solution B: Alcian Blue Stain 1%, pH 2.5 Aqueous. Stain for 30 minutes at room temperature or for 15 minutes in a 37°C water bath.
4. Wash in running tap water for 10 minutes; rinse in distilled water.
 - a. See Procedure Note #3.
5. Counterstain in Solution C: Nuclear Fast Red Stain, Kernechtrot for 5 minutes.
 - a. Shake solution well before use; do not filter.
6. Rinse well in distilled water.
 - a. See Procedure Note #4
7. Dehydrate quickly through two changes of 95% ethyl alcohol and two changes of 100% ethyl alcohol. Clear in three xylene changes, 10 dips each; coverslip with compatible mounting medium.

RESULTS:

Goblet cells	Bright blue
Acid epithelial mucin	Blue
Nuclei	Pink-red
Cytoplasm	Pale pink

PROCEDURE NOTES:

1. Drain staining rack/slides after each step to prevent solution carry over.
2. Do not allow sections to dry out at any point during staining procedure.
3. A brief dip in Solution A: Acetic Acid 3%, Aqueous from Step #2 can be added before water rinses to remove excess Alcian Blue Solution if needed.
4. Wash well after Nuclear Fast Red Stain, Kernechtrot to avoid cloudiness in dehydration steps.
5. 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. 145-148.
2. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 172-175.
3. Modifications developed by Newcomer Supply Laboratory.

