

Hematoxylin and Eosin (H&E) Control Slides – Technical Memo

CONTROL SLIDES:	Part 4278A	Part 4278B
	10 Slide/Set	98 Slide/Set

Hematoxylin and Eosin (H&E) Control Slides contain a section of small intestine.

PRODUCT DESCRIPTION:

The enclosed 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 reactivity, 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 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 Hematoxylin and Eosin (H&E) Stain:	Individual Stain Solution			
Hematoxylin Stain, Harris Modified	Part 1201	or	Hematoxylin Stain, Harris	Part 12013
Acid Alcohol 1%	Part 10011			
Lithium Carbonate, Saturated Aqueous	Part 12215	or	Scott Tap Water Substitute	Part 1380
Eosin Y Working Solution	Part 1072			

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

APPLICATION:

Newcomer Supply Hematoxylin & Eosin (H&E) Control Slides are for the clear demonstration of nuclei, epithelium, connective tissue and muscle, important tissue elements for documentation of high quality nuclear and cytoplasmic staining. For quality control measures, use H&E Control Slides each day that H&E staining is performed and additionally after any H&E solution change. Run H&E Control Slides prior to staining any diagnostic cases to ensure acceptable H&E staining.

METHOD:

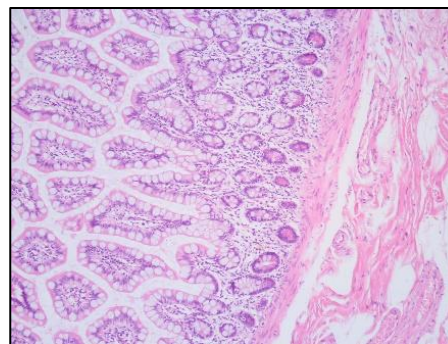
Fixation: Formalin 10%, Phosphate Buffered (Part 1090)
Technique: Paraffin sections cut at 5 microns on Superfrost® Plus
Solutions: All solutions are manufactured by Newcomer Supply, Inc.

NEWCOMER SUPPLY VALIDATION PROCEDURE:

- 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.
 - See Procedure Notes #1 and #2.
- Stain with Hematoxylin Stain, Harris Modified or Hematoxylin Stain, Harris for 1 to 5 minutes, depending on preference of nuclear stain intensity.
- Wash well in three changes of tap water.
- Differentiate quickly in Acid Alcohol 1%.
 - See Procedure Note #3.
- Rinse immediately in three changes of tap water.
- Blue slides in Lithium Carbonate, Saturated Aqueous or Scott Tap Water Substitute for 10 dips.
- Wash in three changes of tap water; rinse in distilled water.
- Drain excess water from rack/slides; proceed to 70% alcohol for 10 dips.
- Counterstain in Eosin Y Working Solution for 30 seconds to 3 minutes, depending on preference of intensity.
- Dehydrate in two changes of 95% ethyl alcohol for 1 minute each and two changes of 100% ethyl alcohol, 10 dips each. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

RESULTS:

Nuclei Blue
 Cytoplasm of epithelium, connective tissue, muscle Shades of pink



PROCEDURE NOTES:

- Drain staining rack/slides after each step to prevent solution carry over.
- Do not allow sections to dry out at any point during staining procedure.
- Differentiate for a length of time to suit preference of nuclear stain intensity. Check slides microscopically to assure hematoxylin intensity is satisfactory. Nuclei should be distinct and the background very light to colorless.
- If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

REFERENCES:

- Carson, Freida L., and Christa Hladik Cappellano. *Histotechnology: A Self-instructional Text*. 4th ed. Chicago: ASCP Press, 2015. 118-120.
- Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 143-144, 153-154.
- Modifications developed by Newcomer Supply Laboratory.