2505 Parview Road • Middleton, WI 53562-2579 • 800-383-7799 • www.newcomersupply.com • info@newcomersupply.com

Part 4278
Revised January 2020

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

CONTROL SLIDES:

Part 4278A	**Part 4278B**
10 Slide/Set	98 Slide/Set

PRODUCT SPECIFICATIONS:
Tissue: Positive staining small intestine.
Fixation: Formalin 10%, Phosphate Buffered (Part 1090).
Section/Glass: Paraffin sections cut at 4 microns on Superfrost™ Plus slides.
Quality Control Stain: H&E quality control stained slide(s) included.
Reactivity: Guaranteed product specific reactivity for one year from date of receipt. Revalidate after one year to verify continued reactivity.
Storage: 15-30°C in a light deprived and humidity controlled environment.
Intended Use: To verify histological techniques and reagent reactivity.

Before using unstained control slides, review the enclosed stained slide(s) to ensure that this tissue source is acceptable for testing needs.

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			

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.

NEWCOMER SUPPLY VALIDATION PROCEDURE:

1. Heat dry sections in oven according to your laboratory protocol.
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 Notes #1 and #2.*
3. Stain with Hematoxylin Stain, Harris Modified or Hematoxylin Stain, Harris for 1 to 5 minutes, depending on preference of nuclear stain intensity.
4. Wash well in three changes of tap water.
5. Differentiate quickly in Acid Alcohol 1%.
    a. *See Procedure Note #3.*
6. Rinse immediately in three changes of tap water.
7. Blue slides in Lithium Carbonate, Saturated Aqueous or Scott Tap Water Substitute for 10 dips.
8. Wash in three changes of tap water; rinse in distilled water.
9. Drain excess water from slides; proceed to 70% alcohol for 10 dips.
10. Counterstain in Eosin Y Working Solution for 30 seconds to 3 minutes, depending on preference of intensity.
11. 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:

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

REFERENCES:

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