Elastic, Aorta Control Slides – Technical Memo

CONTROL SLIDES:  Part 4194A 10 Slide/Set  Part 4194B 98 Slide/Set

PRODUCT SPECIFICATIONS:
Tissue: Positive staining aorta.
Fixation: Formalin 10%, Phosphate Buffered (Part 1090).
Section/Glass: Paraffin sections cut at 4 microns on Superfrost™ Plus slides.
Quality Control Stain: Verhoeff-Van Gieson Elastic 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 Elastic, Verhoeff Stain Kit: Part 9116A/B
Solution A: Hematoxylin 5%, Alcoholic 125/250 ml
Solution B: Ferric Chloride 10%, Aqueous 125/250 ml
Solution C: Iodine, Lugol's, Aqueous 75/150 ml
Solution D: Sodium Thiosulfate 5%, Aqueous 250/500 ml
Solution E: Van Gieson Stain 250/500 ml

Individual Stain Solution
Part 11623
Part 10856
Part 12092
Part 1389
Part 1404

APPLICATION:
Newcomer Supply Elastic, Aorta Control Slides are for the positive histochemical staining of elastic fibers in artery.

PRESTAINING PREPARATION:
1. Heat dry sections in oven according to your laboratory protocol.
2. Prepare fresh Verhoeff Working Solution by combining in the exact order listed, mixing well after each addition. Save for Step #5.
   a. Solution A: Hematoxylin 5%, Alcoholic 20 ml
   b. Solution B: Ferric Chloride 10%, Aqueous 8 ml
   c. Solution C: Iodine, Lugol's, Aqueous 8 ml
3. Prepare fresh Ferric Chloride 2%, Aqueous Solution for Step #7.
   a. Solution B: Ferric Chloride 10%, Aqueous 10 ml
   b. Distilled water 40 ml

STAINING PROCEDURE:
4. Deparaffinize sections thoroughly in three changes of xylene, 3 minutes each. Hydrate through two changes each of 100% and 95% ethyl alcohol, 10 dips each. Wash well with distilled water.
   a. See Procedure Notes #1 and #2.
5. Stain in fresh Verhoeff Working Solution (Step #2) for 20 minutes.
6. Rinse in several changes of tap water.
7. Differentiate each slide individually in fresh Ferric Chloride 2%, Aqueous Solution (Step #3) with agitation; approximately 20 dips.
8. Check differentiation: rinse well in tap water and check microscopically for black elastic staining with gray background.
   a. If necessary, return to Ferric Chloride 2%, Aqueous Solution until desired elastic differentiation is achieved.
   b. See Procedure Notes #3 and #4.
9. Wash well in tap water.
10. Place in Solution D: Sodium Thiosulfate 5%, Aqueous for 1 minute.
11. Wash well in running tap water for 5 minutes.
12. Counterstain in Solution E: Van Gieson Stain for 3 to 5 minutes.
13. Dehydrate in two changes each of 95% and 100% ethyl alcohol. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

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. If background is colorless, the section has been over-differentiated. 
   a. Over-differentiated sections may be re-stained in Step #5 provided sections have not been treated with alcohol.
4. Differentiation can vary between slides dependent upon the amount of elastic present in sections.
5. If using a xylene substitute, closely follow the manufacturer’s recommendations for deparaffinization and clearing steps.

REFERENCES:
3. Modifications developed by Newcomer Supply Laboratory.

RESULTS:
Elastic fibers/tissue/nuclei Blue-black to black
Collagen Red
Other tissue elements Yellow

SUPPORT/WARRANTY: For assistance regarding this product contact Newcomer Supply at 800-383-7799 or info@newcomersupply.com. The information presented in this technical memo is to the best of our knowledge accurate. No warranty is expressed or implied. The user is responsible for determining the suitability of this product for their use and upon receipt assumes all liability for its use and responsibility for compliance with any laws or regulations. Please refer to www.newcomersupply.com for complete warranty information. © Newcomer Supply, Inc., 2020.