

Haupt Gelatin Adhesive - Technical Memo

SOLUTIONS:

Haupt Gelatin Adhesive

500 ml

Part 1151A

For storage requirements and expiration date refer to individual bottle label.

APPLICATION:

Newcomer Supply Haupt Gelatin Adhesive is a blended solution of high quality gelatin, glycerin and phenol with a wide variety of procedural uses including subbed slide/direct slide coating applications. Haupt Gelatin Adhesive works to create a strong adhesive bond between tissue sections and microscopic slides to prevent or reduce the loss of sections due to the nature of the tissue and tissue treatments, such as:

- Thick sections
- Harsh staining procedures
- Animal tissues
- Plant preparations
- Bone specimens
- Resin, plastic/methyl methacrylate (MMA) sections

METHOD:

Technique: Frozen, paraffin or resin, plastic/MMA sections

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

PROCEDURES:**Haupt Gelatin Adhesive Subbed Slide Preparation:**

1. Use only clean and dry microscopic slides.
2. Place a large drop of Haupt Gelatin Adhesive on slides, spread evenly over surface creating a thin film.
 - a. Allow a minimum of 30 minutes drying time.
 - b. Background staining may occur with thicker films.
 - c. See Procedure Notes #1 and #2.

Water Bath Method for Sections on Subbed Slides:

3. Fill water bath/floatation bath with distilled or deionized water with temperature set and maintained at 5°C-10°C below the melting point of embedding medium or according to laboratory protocol.
 - a. See Procedure Note #3.
4. Float paraffin tissue sections onto Haupt subbed slides.
5. Warm slide slightly on top edge of water bath to straighten section.
6. Drain and dry per laboratory protocol.

Vapor Fixation Method for Sections on Subbed Slides:

7. Mount paraffin or frozen sections on Haupt subbed slides; dry 1 minute.
8. Under fume hood, add 2-4 ml of concentrated formaldehyde to the bottom of a Coplin jar.
9. Place slides in Coplin jar; formaldehyde should not be in direct contact with tissue sections.
 - a. See Procedure Note #4.
10. Tightly cover and place in 60°C oven for 30 minutes to 1 hour.
11. Remove slides from Coplin jar; dry according to laboratory protocol.

Method for Resin, Plastic/MMA Sections on Subbed Slides:

12. Place droplets of filtered/processed water on Haupt subbed slides.
13. Transfer resin or plastic/MMA sections to water droplets.
14. Dry, press and/or proceed according to laboratory protocol.

Method for Resin, Plastic/MMA Sections on Non-Subbed Slides:

15. Place droplets of Haupt Gelatin Adhesive on clean, dry slides.
16. Transfer resin or plastic/MMA sections directly to Haupt droplets.
17. Add 1-2 drops of 50% ethanol atop sections.
18. Manipulate sections if necessary, for up to 5 minutes, by teasing or stretching to remove any wrinkles/folds.
19. Dry, press and/or proceed according to laboratory protocol.

PROCEDURE NOTES:

1. Dry slides in as "dust-free" an environment as possible.
2. Store dried subbed slides indefinitely in a clean slide box at room temperature in a humidity/temperature controlled environment.
 - a. If slides are not thoroughly dried before storing they will adhere together.
3. Thoroughly clean interior/exterior of water bath/floatation bath on a daily basis to deter contaminants and the possibility of any residual adhesive build-up.
4. Formalin vapor renders gelatin insoluble, affixing tissue sections to subbed slides.

REFERENCES:

1. Haupt, Arthur W. "A Gelatin Fixative for Paraffin Sections." *Stain Technology* 5.3 (1930): 97-98.
2. Huang, Bing Quan., Michael John. Sumner, Claudio Stasolla, and Edward C. Yeung. *Plant Microtechniques and Protocols*. Springer, 2015. 88, 94.
3. Luna, Lee G. *Histopathologic Methods and Color Atlas of Special Stains and Tissue Artifacts*. Gaithersburg, MD: American Histolabs, 1992. 581.
4. Presnell, Janice, Martin Schreiber, and Gretchen Humason. *Humason's Animal Tissue Techniques*. 5th ed. Baltimore: Johns Hopkins University Press, 1997. 468.
5. Skinner, Robert A. "Practical Approaches to Processing Bone: A Clinical/Research Comparative Overview." Lecture, Annual NSH Symposium/Convention, Cincinnati, Ohio. September 20, 2011.
6. Modifications developed by Newcomer Supply Laboratory.