

Product Information

Poly-L-lysine solution

Catalog Number **P8920**
Store at Room Temperature

TECHNICAL BULLETIN

CAS RN 25988-63-0

Product Description

The loss of paraffin and frozen sections from slides has long been a problem during routine histologic staining procedures. Various adhesives including albumin, gelatin, and chrome alum have been applied to slides to minimize this loss.¹⁻³ Different solutions of poly-L-lysine have been shown to be most effective in promoting adhesion of sections.^{4,5} The polycationic nature of this molecule allows interaction with the anionic sites of tissue sections resulting in strong adhesive properties.⁵ Poly-L-lysine has been demonstrated as an effective tissue adhesive for use in various microwave procedures.

This product contains 0.1% (w/v) poly-L-lysine in deionized water with preservative.

Poly-L-lysine Solution is for use in adhering tissue sections to glass slides, particularly useful with immunohistochemical techniques. It is intended for use as an adhesive subbing solution for immunohistochemistry (IHC) and routine histologic staining preparations. For uses other than IHC or routine histology, the end user must determine if this product is suitable for the intended use.

Equipment Required but Not Provided.

- Microscope slides
- Slide rack
- Plastic containers and graduated cylinder
- Drying oven (optional)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Dilute Poly-L-lysine Solution 1:10 with deionized water prior to coating slides. Use plastic containers and graduated cylinders when mixing or storing solution, and coating slides. Do not add fresh solution to used diluted working solution.

Storage/Stability

Store the product at room temperature. It is stable until expiration date shown on label.

Store the diluted working solution in refrigerator at 2–8 °C. The diluted working solution is stable for at least three months. Filter diluted solution after use.

Discard solutions if turbidity or bacterial growth develops.

Procedure

Notes: Slides must be clean before attempting this procedure. Clean with acidic alcohol (i.e., 1% HCl in 70% ethanol) if necessary.

When diluted according to instructions, the maximum number of slides that can be coated is 900 per liter of diluted working solution. Exceeding 900 slides per liter will affect the performance of the product.

Do not add fresh solution to used diluted solution.

1. Allow diluted working Poly-L-lysine Solution to come to room temperature (18–26 °C) before use.
2. Place clean slides, a rack at a time, in diluted working Poly-L-lysine Solution for 5 minutes. Increasing incubation time does not improve performance.
3. Drain slides and dry in 60 °C oven for 1 hour or at room temperature (18–26 °C) overnight.

Results

Solution promotes adhesion of paraffin and frozen sections to slides for routine histologic procedures.

References

1. Culling, C.F.A. et al., Cellular Pathology Technique, 4th ed. Butterworth & Co. Ltd. (Boston, MA: 1985) p 98.
2. Theory and Practice of Histological Techniques, Bancroft, J.D., and Stevens, A., eds, Churchill Livingstone (New York, NY: 1982) pp 75-76.
3. Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology, 3rd ed., Luna, L.G., ed., McGraw-Hill (New York, NY: 1968) p 28.
4. Mazia, D. et al., Adhesion of cells to surfaces coated with poly-L-lysine. J Cell Biol., **66**,198, 1975.
5. Huang, W.M. et al., Improved section adhesion for immunocytochemistry using high molecular weight polymers of L-lysine as a slide coating. Histochem., **77**, 275, 1983

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