Technical Data Sheet

Poly L Lysine Solution

#19320-A /19320-B

Intended Use:

Poly-L-Lysine solution is intended for use as an adhesive subbing solution for immunoperoxidase and routine Histologic staining preparations.

Backgroung & Principle:

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 adhesive 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.

Reagent:

Poly-L-Lysine Solution. Poly-L-Lysine, 0.1% (w/v), in deionized water. Preservative added.

Precautions:

Poly-L-Lysine solution is for "In Vitro Diagnostic Use". Normal precautions exercised in handling laboratory reagents should be followed. Observe all local, state and Federal laws when disposing of waste. Refer to Material Safety Data Sheet for any updated risk, hazard or safety information. When diluted Poly-L-Lysine solution is prepared according to instructions, the maximum number of slides that can be coated is 900 per liter of diluted solution. Exceeding 900 slides per liter will affect the performance of the product.

Preparation:

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 solution.

Storage & Stability:

Dilute Poly-L-Lysine solution at room temperature (18-26°C). Reagent is stable until expiration date shown on label. Store diluted Poly-L-Lysine solution in refrigerator (2-8°C). The diluted solution is stable for at least three months. Filter diluted solution after use.

Deteriotation:

Discard solutions if turbidity or bacterial growth develops.

Procedure:

Material required but not provided: Microscope slides, slide rack, plastic containers & graduated cylinder, drying oven (optional)

Notes:

1. Total slides coated should not exceed 900 per liter diluted solution.
2. Do not add fresh solution to sued diluted solution.
3. Slides must be clean before attempting this procedure. Clean with acid alcohol (i.e. 1% HCI in 70% ethanol) if necessary.

Coating Procedure:

1. Allow diluted 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 Poly-L-Lysine solution for 5 minutes. Increasing incubation time does not improve performance.
3. Drain slides and dry in 60°C oven for one hour or at room temperature (18-26°C) overnight.

References:

1. Culling CFA, Allison RT, Bair WT: Cellular Pathology Technique, 4 th ed. Butterworth & Co., Ltd Boston , 1985, p98
2. Theory and Practice of Histological Techniques, JD Bancroft, A Stevens, Editors, Churchill Livingston, New York , 1982, pp 75-76
3. Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology, 3 rd ed., LG Luna, Editor, McGraw-Hill, New York, 1968, p 28
4. Mazia D. Schatten G, Sale W: Adhesion of cells to surfaces coated with Poly-L-Lysine. J Cell Biol 66:198, 1975
5. Huang Wm., Gibson SJ, Facer P, Gu J, Polak JM: Improved section adhesion for Immunocytochemistry using high molecular weight polymers of L-Lysine as a slide coating. Histochem 77:275, 1983