



Product Information

Poly-L-lysine solution Cell Culture Tested

Product Number **P 4707**
Storage Temperature 2-8 °C

Product Description

CAS Number: 25988-63-0
Molecular weight range: 70 - 150 kDa

This product is supplied as a 0.01% sterile-filtered solution in water and is tested for use in cell culture applications.

Poly-L-Lysine is a charge enhancer, therefore, it can be used for coating many surfaces. When used to coat ELISA plates, it tends to improve binding of IgG. High pH will aid binding to the plates.

Certain cells can digest poly-L-lysine, in which case the poly-D-lysine should be used. The lower molecular weight poly-L-lysine (30-70 kDa) is easier to use because it is less viscous in solution, but the higher molecular weight poly-L-lysine (>300 kDa) provides more attachment sites per molecule. The mid-range product has a MW range of 70-150 kDa.

There might be a small amount of product in the β structure, but very little. This is because the HBr interferes with hydrogen bonding between the amino and carboxyl groups, or between the amino group and other N or O containing moieties. The secondary structures of polyamino acids have never been extensively studied, but it is known that the degree of secondary conformational regularity depends on the amino acid in the polymer.

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Storage/Stability

Transition of a high molecular weight poly-L-lysine (degree of polymerization 1,500) in aqueous solution from a helical to a random coiled conformation occurs under the influence of decreasing pH or increasing temperature.¹

Procedure

For coating slides with poly-L-lysine, in general, it is recommended to use a 0.01% (w/v) solution. After a 5 minute incubation, the excess solution is removed and the slides are dried at room temperature or in an oven at gentle heat. Coated slides should be stable for one year if protected from dust. There is no need to sterilize slides coated with poly-L-lysine by autoclaving; simply expose the slides to UV light overnight.

If uneven coating occurs, the glass slides may be pretreated with 1 mM magnesium acetate for 2-3 hours and then rinsed well before coating. Alternatively, they may be acid washed (hydrochloric acid or sulfuric acid). This treatment should allow for an even coating with the poly-L-lysine solution.

This product can also be used to coat tissue culture plasticware. A solution of 0.1 mg/ml is prepared and 0.5 ml is aseptically transferred to a non-tissue culture treated 25 cm² flask. The flask is gently rocked to evenly coat the surface. After five minutes, the excess solution is removed and the surface is thoroughly rinsed with sterile water and allowed to dry for several hours.

References

1. The Merck Index, 11th ed., Entry# 7549.

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