

## Product Specification

**[Product Name]**  $\epsilon$ -Polylysine

**[Model]** PL

**[Color]** Light yellow powder, no agglomeration.

**[Aroma]** Has the characteristic odor of  $\epsilon$ -Polylysine.

**[Flavor]** Odorless.

**[Ingredients]**  $\epsilon$ -Polylysine

**[Technological Characteristics]** Food additive  $\epsilon$ -Polylysine prepared by deep aerobic fermentation of *Streptomyces albulus* PD-1.

**[Product Features]** (1)  $\epsilon$ -Polylysine is a kind of polypeptide with antibacterial effect, which can be decomposed into lysine in the human body. Lysine is one of the 8 kinds of essential amino acids in the human body and it is an amino acid that is allowed to fortify in the food products by the worldwide. Therefore,  $\epsilon$ -Polylysine is a nutritional antibacterial agent with higher safety than other chemical preservatives. (2)  $\epsilon$ -Polylysine has a broad spectrum of inhibition.  $\epsilon$ -Polylysine not only inhibits micrococcus of G+ with high heat resistance, but also has excellent antibacterial effect against *Escherichia coli* and *Salmonella*, which are not easily inhibited by other natural preservatives such as Nisin. (3)  $\epsilon$ -Polylysine is a light yellow powder with strong hygroscopicity and slightly bitter taste. It is a linear polymer of lysine. It is not affected by pH, is heat-stable (120°C, 20min), and it can inhibit heat-resistant bacteria, so it can be heat-treated after adding.

**[Product Application]**  $\epsilon$ -Polylysine can be used to improve the shelf life of baked goods, cooked meat products, fruit and vegetable juices, and beverages, etc.

**[Dosage]** According to the characteristics of food technology, the quantity should be added in accordance with the provisions of GB2760.

**[Caution]** If product comes in contact with sensitive skin or eyes, flush thoroughly and repeatedly with water.

**[Quality Index]**

Test items	Standard range	Test method
Appearance	Light yellow powder, no agglomeration	Visual inspection
$\epsilon$ -Polylysine content, w/%	$\geq 94$	The A.4 in Appendix A of the Notice No. 5 of 2014 of the Health and Family Planning Commission
Loss on drying (w/%)	$\leq 5.0$	GB 5009.3 Direct drying method
Lead (Pb)/(mg/kg)	$\leq 1$	GB5009.12
Total arsenic (calculated as As)/(mg/kg)	$\leq 0.5$	GB/T5009.11
Colonies number(CFU/g or CFU/ml)	$\leq 50000$	GB4789.2
Ash, w/%	$\leq 3.0$	GB 5009.4

The drying temperature and time were  $105\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$  and 2h.

**[Packaging & Storage]** Inner packing: 1kg aluminum foil bag packing. Outer packing: 1kg\*10 bags or 1kg\*20 bags carton packing. This product should be stored in a cool, dark, and dry place.

**[Shelf life]** 12 months from manufacture date with the original unopened package.