M/S. BIMAL PHARMA PVT. LTD.

(29 years quite Young & AEO T1 Certified Company)

Application of e Polylysine

- With features of solubility in water,
  Good Heat Tolerance and;
  Extensive Antimicrobial against fungi,
  e- Polylysine can be used under various conditions.
  See the effects of temp. and pH on the activity of e-Polylysine as under: (Table 1 and Table 2)

Table- 1

Effect of Temp. on the Activity of e Polylysine

Temp. & Duration	MIC (mg/Ltr)
Untreated (Room Temp.)	50
80℃,for 60 minutes	50
100 ℃, for 30 min	50
120 ℃, for 20 min	50

MIC = Minimum Inhibition Concentration

Table- 2

Effect of pH on the Activity of e Polylysine

Bacteria for Test	MIC (mg/Ltr)			
	pH =5.0	pH =6.0	pH =7.0	pH =8.0
Bacillus Subtilis	3.0	3.0	3.0	3.0
Bacillus Cereus	25.0	100.0	50.0	12.5
Escherichia coli	25.0	25.0	50.0	50.0
Staphylococcus aureus	12.5	25.0	12.5	< 6.3

- e-Polylysine was generally recognized as a safe food preservative by FDA in October,2003.

- It is widely used in food preservation.

Food Safety and Standards Authority of India
FSSAI License No.: 10012022000599

- In food application, it is usually applied with alcohol, organic acids, or glyceride, etc...

APPLICATIONS IN

- **Foods**
- **Cosmetics**
- **Daily Chemical Products**
- **Medical Products**

• FOODS

➢ Nutrient water

Safe for 1 Year

➢ Starters

- **Vegetables**
- **Soup**
- **Tortillas**
- **Steamed Buns**
- **Rice**
- **Noodles**

Safe for 40 / 45 Days

➢ Main Courses

- **Pasta**
- **Fried Noodles**
- **Sushi**
- **Steaks**
- **Fish**

Safe for 4 days

Safe for 48 Hrs.

Safe for 48 Hrs.

➢ Desserts

- **Mousse**

- **Doughnuts**

• Daily Chemical Products

- **Toothpaste**
- **Mouthwash**
- **Soap**
- **Hand Washing**
- **Wet Wipes**
- **Baby Diapers**
- **Sanitary Napkins**
- **Kitchen Detergent.**

Soap

Toothpaste

Handwash

➢ In Cosmetics Products

- Cosmetics are very easily deteriorated due to microbial contamination in the process of Production, Storage and Using. Spoiled cosmetics are especially harmful to human skin. E-Polylysine has Broad Antibacterial Spectrum and it can effectively inhibit the growth of Microbes & ensure the good Quality of Cosmetics.

- Various Functions: E-polylysine molecules are cationic, surface active agents in water due to their positively charged Amino Groups. This property imparts many benefits when used as an Ingredient in Cosmetics & is acting as Preservative and Surfactant.

- Since E –polylysine is a polymer of Amino Acids, to be known as Nutritional Preservative, so it is much more Environmentally-Friendly, safe and efficient.

➢ Application : In Skin Care (Emulsions) & Lotions

Skin Care Emulsions

Skin Care Lotion

Wet Napkins

- e Polylysine is dissolved in cold boiled water or distilled water to 5-10%, then put it into the food according to the recommended dosage and mix fully. If it is used together with other food preservatives, it will can affect better.

- No Influence on Food Flavor.

Member of FIEO
FEDERATION OF INDIAN EXPORT ORGANISATIONS
Setup By Ministry of Commerce, Government of India

(FSC, Issued by)

AEO
भारतीय सीमा शुल्क
INDIAN CUSTOMS
Cert. No. : INAABCB9186E1F180

AEO T1 Certified

Member of
INDIAN MERCHANTS' CHAMBER
EST. 1907

(COO, Issued by)