

E-polylysine, Effective pH Range & MIC (Minimum Inhibition Concentration)

Microorganisms Category	Name of Bacteria	MIC mg/Ltr	pH
Fungi	Aspergillus Niger IFO4416	250	5.6
	Trichophyton Mentagrophytes IFO7522	60	5.6
Yeast	Candida Acutus IFO1912	6	5.0
	Phaffia Rhodozyma IFO10129	12	5.0
	Pichia Anomala IFO0146	150	5.0
	Pichia Membranaefaciens IFO0577	< 3	5.0
	Rhodotorula Lactase IFO1423	25	5.6
	Sporobolomyces Roseus IFO1037	< 3	5.0
	Saccharomyces Cerevisiae	50	5.0
	Zygosaccharomyces Rouxii IFO1130	150	5.6
Gram + Bacteria	Geobacillus Stearothermophilus IFO12550	5	7.0
	Bacillus Coagulans IFO12583	10	7.0
	Bacillus Subtilis IAM1069	< 3	7.3
	Clostridium Acetobutylicum IFO13948	32	7.1
	Leuconostoc Mesenteroides	50	6.0
	Lactobacillus Brevis IFO3960	10	6.0
	L1 Plantarum IFO12519	5	6.0
	Micrococcus Luteus IFO12708	16	7.0
	Staphylococcus Aureus IFO13276	12	7.0
	Streptococcus Lactis IFO12546	100	6.0
Gram - Bacteria	Raoultella Planticola IFO3317	8	7.0
	Campylobacter Jejuni	100	7.0
	Escherichia Coli IFO13500	50	7.0
	Pseudomonas Aeruginosa IFO3923	3	7.0

Remarks :

1. As can be seen from above Table, E-polylysine has wide range of Antimicrobial Spectrum with Minimum Inhibitory Concentration (MIC) of Bacteria, less than 100µg / ml, and to Fungi, the MIC is higher.
2. E-Polylysine is found in nature, a material produced by Microbial Fermentation like Miso (Soybean Paste) and Soy (Soy Sauce), Yoghurt or the like, and combined to a straight chain of Lysine which is one of an essential Amino Acid.
3. The activity of E- Polylysine is not affected by pH basically, which is a great advantage comparing to other natural preservatives.
4. E- Polylysine is effective over a wide range of pH values (4.0 to 10.0). However, above Table shows the most effective pH Range against particular Bacteria.
5. It can be used before or after heat treatment of the product, due to excellent Temp. stability.
6. E-Polylysine can be used in Food, Cosmeceutical & Pharmaceutical applications.