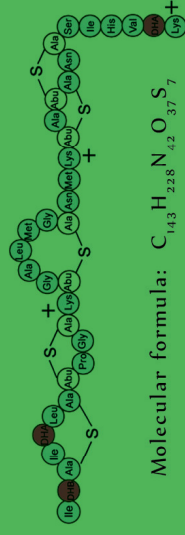


Nisin



Introduction

Nisin is a natural food preservative (Bacteriocin), with high efficiency, high stability, safety, and without side effects. It is regarded as natural because nisin is polypeptide produced naturally by certain strains of the food-grade lactic acid bacterium *Lactococcus lactis*, during fermentation. Nisin has good antibacterial ability against a wide range of Gram positive bacteria and their spores, especially for heat resistant bacilli, such as *B. Stearothermophilus*, *Cl. Butyricum* and *L. Monocytogenes*. It shows little or no activity against Gram negative bacteria, yeasts, and moulds. Nisin was awarded the Generally Regarded as Safe (GRAS) designation in the U.S. Federal Register and is approved as a natural food preservative in the U.S., the FAO/WHO and the E.U.

Advantages

- Extend product shelf-life
- Improve safety a variety of foods by suppressing Gram-positive spoilage and pathogenic bacteria(replace chemical preservatives)
- Cost effective high efficiency at low dosages
- Enable reduced processing timeshare and temperature
- Useable in fermented products (No effect on bacteria)
- Reduced heat treatment and processing time
- Suppresses post-acidification in cheese
- No apparent cross-resistance related to therapeutic antibiotics
- Stable heating at low pH

Application

Typical addition levels of nisin in food applications

Food application	Level of nisin (g/kg or g/L)
Processed cheese	0.2-0.4
Pasteurised milk and milk products	0.01-0.4
Pasteurised chilled soups	0.1-0.2
Crumpets	0.15-0.25
Canned foods (high acid)	0.1-0.2
Ricotta cheese	0.1-0.2
Continental type cooked sausage	0.2-0.5
Dipping sauces	0.05-0.25
Salad dressings	0.05-0.2
Beer: post fermentation	0.01-0.05
Vinegar	0.05-0.15
Soy sauce	0.05-0.2



Direction of Usage: About 5% aqueous solution is prepared firstly with cold boiled water or distilled water (best with pH4 diluted citric acid or acetic acid solution), and then instantly put it into food and stirs well. Or put it directly into food and stirs well.

Safety

Nisin is non-toxic, the producer strains of *L. lactis* are regarded as safe (food-grade); it is not used clinically; there is no apparent cross-resistance in bacteria that may effect antibiotic therapeutics; and it is quickly digested into amino acids by enzymes in human intestines and stomach.

- ADI: 33000 IU/kg (FAO/WHO, 1994)

Quality

- Our product conforms to International specifications for nisin, including FAO/WHO, EU, and US FDA. It is manufactured in accordance with the Chinese Light Industry standard QB2394-2007 and it meets the requirement of the People's Republic of China Agriculture Standard NY/T392-2000 for using additives in producing green foods.
- We offer technical research team to test the efficacy and use of nisin in food products, and assist clients in application development trials.

Packaging and Storage

- 500g 10kg 25kg or packed to customer's requirement.
- Expiration: two years in cool (0°C - 10°C is recommend ed), dry conditions, away from direct sunlight in original unopened packs.

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