

APPLICATIONS OF NATAMYCIN

Natamycin possesses Antifungal activity to most all Moulds and Yeasts.

The Activity of Natamycin is **500 times higher** than that of Sorbic Acid, very little amount of Natamycin shows the Antifungal activity.

Generally, the growth of most moulds and yeasts could be inhibited by 1.0 ppm to 6.0 ppm of Natamycin, only few Moulds are inhibited by 0.10 to 25 ppm of Natamycin.

The appropriate pH value for the activity of Natamycin is pH, 3.0 to 9.0. and it does not change the Nutritional value, Appearance, Flavor and Texture of Foods.

It is very adaptable to use as Food preservative. But note that, Natamycin could not inhibit the growth of Bacteria.

Some of the applications of NATAMYCIN are listed as follows:

1. Cheese, Surface treatment of Cheese.
2. Guangdong-flavor-moon Cakes
3. Bread and Cakes, baked Foods .
4. Meat products, Jam , Jelly , Marinated Food , Fish , Chicken
5. Salad Sauce
6. Soy Sauce
7. Fruit Juice, Drinks

1. CHEESE :

Natamycin could inhibit the growth of Moulds at mature stage of Cheese and inhibit the production of Toxins by the Moulds.

Natamycin could only distribute the surface of the Cheese, it has advantage to control the growth of Moulds on the surface and has not affect the maturation of Cheese.

Three Methods could be used as follow:

- a) Spraying the suspension of Natamycin with 0.05 % to 0.28 % on the surface of Cheese.
- b) Dipping the salted Cheese in the suspension of Natamycin with 0.05 % to 0.28% for 2.0 to 4.0 minutes.
- c) Mixing the coat of Cheese with 0.05% Natamycin.

2. GUANGDONG-FLAVOR-MOON CAKES:

The moon cakes is rich in Nutrient, its Hull, Stuffing and Salted Vitellus is easy to go Mouldy.

Natamycin has excellent effect to inhibit the growth of moulds: Spraying the suspension of Natamycin with 0.02 % to 0.04% on the surface of moon cakes to inhibit the growth of Moulds on surface.

The crude salted vitellus is cooked to 70.0 % to 80.0 % maturity, and dipped in the suspension of Natamycin for 2 minutes after cooled.

3. BREAD AND CAKES (Baked Foods) :

Spraying the suspension of Natamycin with 100 ppm to 500 ppm on the surface of Cake, Challah, Vol-au-vent or Pre-roasted dough, which prevents and inhibit the growth of Moulds and Yeasts effectively.

4. MEAT PRODUCTS :

Spraying or dipping the products in the suspension of Natamycin to 4 $\mu\text{g} / \text{cm}^2$, the Moulds and Yeasts could be inhibited effectively.

Spraying (or dipping) the casing or sausage with 0.05 % to 0.20 % (w/v) suspension of Natamycin, the shelf life can be extended effectively. Natamycin could be also used for the other meat products, such as Grilled-meat, Grilled-duck, Dried Fish products etc.

5. SALAD SAUCE:

It is a fat-rich food and easy to go Mouldy in summer. Adding of 10 ppm Natamycin can inhibit the growth of related microbes.

6. SOY SAUCE:

Adding of 15 ppm Natamycin can inhibit the growth of Moulds. The effect will be better by using of the mixture of **Natamycin and Nisin**.

7. FRUIT JUICE:

Various fruit juices are rich in Sugar and Organic acids, and Yeasts are easy to grow. The application of Natamycin can increase the stability of products in storage.

Grape juice: 20 ppm Natamycin could inhibit the fermentation of juice caused by Yeasts, 100 ppm Natamycin could inhibit the fermentation completely.

Orange juice: It will be rotten within one week at natural condition, the addition of Natamycin to 1.25 ppm could prolong the quality-safety to 8 weeks at 20 °C temp. to 40° C temp.

10 ppm Natamycin can inhibit the growth of Yeasts in concentrated Orange juice at 10 ° C, but the dosage of Natamycin could increase to 20 ppm to inhibit the growth of Yeasts at Room Temp.

Apple juice: 30 ppm Natamycin can inhibit the fermentation for 6 weeks, and the flavor and texture of Apple juice does not change.

Tomato juice: 70 ppm Natamycin can inhibit the Moulds and Yeasts effectively.

Others: The application of Natamycin on Rice cake, Steamed Bread, Dressings as Vinegar, Beer, and Wine etc. could inhibit the growth of Moulds and Yeasts effectively.

The addition of 5.0 ppm to 10.0 ppm Natamycin in Acidophilus Milk could prolong the shelf-time for more than 4 weeks.