STABILITY OF NATAMYCIN

MANY FACTORS CAN INFLUENCE THE STABILITY OF NATAMYCIN, AS UNDER

1. pH VALUE
2. TEMP.
3. LIGHT
4. OXIDANTS
5. HEAVY METALS etc.

1. pH VALUE :

Natamycin is Most Stable Under Acidic Conditons, preferably between pH Range of 4.0 To 7.0 The activity is lost in highly Alkaline conditions.

Refer the Table below

MEDIUM	REMARK
pH, Less than 3.0	30% activity is lost .
pH = 3.0 to 5.0	10% activity is lost.
pH = 5.0 to 7.0	No activity is lost .
pH More than 9.0	30% activity is lost.

2. TEMPRETURE :

Natamycin is **stable** at Room Temp., **more stable** under dry condition. The desiccated Natamycin could endure 100°C in short-time. But the activity will be decreased when it is kept for more than 24 hours at more than 50 °C temp. .

3. LIGHT :

Natamycin in powder or solution is sensitive to UV (Ultra Violate) or (Gamma Rays) Ỳ Rays, which will cause the lose of activity. So, the direct sunlight exposure should be avoided.

4. OXIDANTS :

Natamycin is sensitive to oxidants, such as Peroxide, Chlorine Dioxide, and Bleaching powder etc, which will decrease the activity of Natamycin.
The use of antioxidants, e.g. Vitamin C, could prevent it.

5. HEAVE METALS :

The Pb (Lead), Hg (Mercury), Fe (Iron) , and Ni (Nickle) etc. could affect the stability of Natamycin. So, Natamycin or its solution should be stored in container made of Glass, Plastic or Stainless Steel.
The EDTA could also be mixed with it to prevent the lose of activity.

SOLUBILITY OF NATAMYCIN

SOLVENT	**SOLUBILITY**
Distilled Water . [(pH) = 4.0 to 8.0] pH More than 9.0 / Less than 3.0	Practically Insoluble . Very low soluble. 0.005 gm – 0.01 gm /100 ml. water. (30 mg. to 100 mg. / lit. water at RT). Solubility increases, but it decreases the Anti fungal activity .
High Alcohols, Ether and Ester	Very low soluble .
Methanol	Very slightly soluble.
Glacial Acetic Acid and DMSO	Completely soluble. 18.50 gm – 100 ml. Glacial Acetic Acid.