

STABILITY OF NISIN

**NISIN IS MOST STABLE UNDER ACIDIC CONDITONS.
THE ACTIVITY IS LOST IN HIGHLY ALKALINE CONDITIONS.**

Refer the Table below

MEDIUM	REMARK
pH = 2.0	It can keep the activity intact after the treatment at 121 °C temp. for 30 Min. at pH = 2.0
pH = 3.0	Nisin is dissolved in HCL by 121 °C to sterilize for 15 Minutes. No activity is lost.
pH = 5.0	At 115.6 °C temp. to Sterilize. 40% activity is lost.
pH = 6.5	Nisin is dissolved in skimmed milk by 85° C temp. to pasteurize for 15 Minutes. 15 % Activity is lost.
pH = 7.0	At this period , 90 % activity is lost.
pH = 11.0	Activity is lost completely in 30 Minutes at 63 °C temp. in pH = 11.0

SOLUBILITY AND ACTIVITY

SOLVENT	SOLUBILITY	ACTIVITY
Distilled Water (pH = 5.9)	50.0 (mg. / ml.)	2.0×10^6
Domestic Water (pH = 7.10)	49.0 (mg. / ml.)	1.96×10^6
HCL Solution (0.02 N)	118.0 (mg. / ml.)	4.72×10^6
NaCl Solution (2%)	47.9 (mg. / ml.)	1.91×10^6
Non – Fat Milk	87.5 (mg. / ml.)	3.5×10^6

- NOTES :**
1. Nisin can be dissolved in Aqueous solution.
 2. It is Insoluble in non-polar solvents.
 3. The solubility decreases with in increase of pH , and it increases with the rise of temp.