

## TECHNICAL SHEET

### Think natural.® NISEEN®-S

#### Description

Nisin, the active ingredient in Niseen®-S, is a natural protective ingredient consists of several closely related polypeptides used to prevent spoilage and extend shelf life of various foods by inhibiting Gram-positive spoilage and pathogens.

#### Functional uses

Natural antimicrobial preservative, against Gram-positive bacteria

#### Physical properties

#### Specifications\*

Synonyms

Nisin, E 234

Appearance

White to creamy crystalline powder

Storage

Product should be stored in cool (<20°C) and dry conditions (<65% RH).

Shelf life

24 months from date of production

Package

10 kg per carton / 20 x 500 gram jars

#### Chemical properties

#### Specifications\*

Potency

Min. 1000 IU/mg

Sodium chloride

Min. 50%

Loss on drying

Max. 3%

Arsenic

Max. 1 mg/kg

Lead

Max. 1 mg/kg

Mercury

Max. 1 mg/kg

#### Microbiological properties

#### Specifications\*

Total plate count

Max. 10 cfu/g

Salmonella in 25 g

Absent

Coliform bacteria

Max. 30 MPN/100g

E.coli in 25 g

Absent

\*Accordingly to Commission Regulation (EU) No 231/2012, 9 March 2012.

ANTIBACTERIAL SPECTRUM	
Microorganisms	Bacteriostatic Effect**
<i>Bacillus pumilus</i> TISTR 061	++
<i>Bacillus subtilis</i> A-48	++
<i>B. cereus</i> IFRPD 2037	++
<i>B. cereus</i> ATCC 11778	++
<i>Lactobacillus</i> sp. A28	+++
<i>Lb. plantarum</i> TISTR 850	+++
<i>Lactobacillus sake</i> TISTR 911	+++
<i>Lactobacillus pentosus</i> LP-711	+++
<i>Lb. curvatus</i> ATCC 25601	+++
<i>Leuconostoc cremoris</i> ATCC 19254	++
<i>Leuconostoc mesenteroides</i> ATCC 10830	++
<i>Lis. monocytogenes</i> IFRPD 2068	++
<i>Lis. monocytogenes</i> DMST 7995	++
<i>Lis. monocytogenes</i> DMST 2871	++
<i>Listeria innocua</i> IFRPD 2071	++
<i>Micrococcus luteus</i> TISTR 884	+++
<i>Pediococcus acidilactici</i> ATCC 8081	+++
<i>P. pentosaceus</i> TISTR 374	+++
<i>Pr. freudenreichii</i> TISTR 446	++
<i>Staphylococcus aureus</i> TISTR 118	++
<i>Staphylococcus aureus</i> IFRPD 2034	++
<i>Enterococcus faecalis</i> TISTR 927	++
<i>Enterococcus faecium</i> TISTR 928	+
<i>Clostridium butyricum</i> A-4	+
<i>Clostridium perfringens</i> DMST 11147	++
<i>Salmonella</i> sp. TISTR 101	—
<i>Salmonella derby</i> A-2	—
<i>Escherichia coli</i> ATCC 25922	—
<i>E. coli</i> ATCC 43895	—

\*\*Inhibitory zone diameter: +++ 10–15 mm; ++ 5–9 mm; + 1–4 mm; — no bacteriostatic effect