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Sanzyme Biologics

Fermentation & Biotechnology Since 1969

PIONEERS IN FERMENTATION TECHNOLOGY

## Bacillus subtilis- SNZ 1972

**Strain Deposition :** MTCC 5981

**Strain Description :**

An ideal probiotic- it is a normal gut commensal in humans and has ability to tolerate extreme conditions.

A tough probiotic- forms a protective endospore to keep itself alive in stressful conditions.

A widely used, well documented, safe and stable spore forming bacteria that promotes gastrointestinal health.

### Physical features

- High tolerance to Acid, Sugar and Salinity
- High thermal stability
- Good preservation in foods
- Stability in formulations
- Good dispersion
- Survive desiccation & challenging storage/ manufacturing conditions
- Does not require cold chain
- Shelf stable for 3 years

### Physiological benefits

- Survives gastric acid barrier & bile
- Enhances immune system.
- Confers immunity, fights pathogen & supports a healthy gut.

### Applications

#### Food

- As a nutraceutical/ Dietary supplement in health food products
- Supplemented/ Fortified in foods like breakfast cereals, granola bars, candies, chocolates, gummies & straws
- Tablets, Sachets, Capsules

#### Pharmaceutical formulations

#### Feed

- Used as feed supplement in poultry, aqua culture, cattle, swine & other vet segments

Bacillus subtilis with **unique encapsulation technology** was developed which would be of interest to companies wishing to incorporate Bacillus subtilis into their products food/feed processed at high temperature and moisture.

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#### Specifications :

Product name	Bacillus subtilis
Source of origin	Soil
Ingredient	Spore forming bacteria with excipients
Appearance	Beige color, Hygroscopic, Granular powder with characteristic odor
Morphology	Rods, occurring singly, rarely in short chains forms endospores after 24- 36hr of incubation
Gram staining	Positive
Storage/ Shelf life	Store in cool & dry place away from sunlight. Shelf life is 36 months from date of manufacturing.
Availability	Bulk powder from 50- 100 billion cfu/g Encapsulated powder
*Documentation	<b>Regulatory assessments</b> Sanzyme Biologics offers the following regulatory certificates for its clientele's requirements in regulatory filings.  Genetically characterized Bacillus subtilis Certificate of Analysis Method of Analysis Stability data GMP certification Material Safety Data Sheet Antibiotic resistance profile testing Allergen certificates BSE TSE free certificates GMO free certificates Irradiation free certificate Halal & Kosher certification

*\*Further details available on request*

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