

Papain S-500

Description

Papain S-500 is a purified proteolytic enzyme preparation that is obtained from the fruit 'Papaya carica'. Papain S-500 is an endo-peptidase that degrades high molecular proteins into low molecular peptides and amino acids.

- IUB-No.: 3.4.22.2
- CAS-No.: 9001-73-4

Properties

Papain S-500 has the following characteristics:

- a) powdered product
- b) light yellow colour with characteristic smell

pH and temperature optimum:

pH optimum 6.0-8.0 (range 5.0-9.0)

Temperature optimum 55-70°C (range 45-75°C)

Activity

Papain S-500 contains a declared minimum activity of 500 TU/mg.
A description of the analysis method is available on request.

Application

Due to the botanical origin and to its activity over a wide pH range, Papain S-500 is used extensively in the industry to produce highly soluble proteins and flavoured protein hydrolysates:

- Yeast extract autolysis
- Chill proofing of beer
- Meat tenderizing, marinades
- Peptone production for production of fermentation media
- Degradation of fish protein
- Pet food

Dosage

The dosage depends on the reaction conditions such as substrate, pH, temperature and requested degree of hydrolysis.

Typical dosages are:

- Chill proofing of beer: 1 g / hl beer
- Degradation of fish protein: 50 – 75 g / t fish by-products
- Meat tenderizing: 5 – 7.5 g / 100 kg meat.
- Pepton production: 0.1 – 1 g / kg based on protein content

Specification

The product complies with the recommended specifications of the FAO/WHO's Joint Expert Committee on Food Additives (JECFA) and the Food Chemicals Codex (FCC) for food-grade enzymes.

The total viable counts are within the upper limit of 5×10^4 / g.

Packaging

Papain S-500 is available in 30-kg drums.

Storage

Papain S-500 can be stored at cool and dry conditions (6 – 10°C) in original packaging for 12 months.

Safety Handling

Avoid the formation of aerosol and dust of the product. Repeated inhalation of enzyme aerosol or dust may cause sensitisation and may cause allergic type reactions in sensitised individuals. Proteases are irritating to eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. For detailed information please refer to the Material Safety Data Sheet (MSDS).

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