

Transglutaminase(FE-001)



Cat. No. FE-001

Lot. No. (See product label)

Product Name

Transglutaminase(FE-001)

Product Overview

Transglutaminase is a naturally occurring enzyme found in plants, animals, and bacteria. It catalyzes cross linking reactions between wheat and other proteins.

In weak gluten or gluten-free systems it is used to increase volume and improve the structure of bread. In frozen dough, it increases dough stability and protects it from damage.

Description

Transglutaminase can function as a dough conditioner and can overcome the deficiencies in the quality of wheat gluten used in breadmaking. It is an enzyme alternative to chemical oxidizing agents and catalyzes cross-linking bonds both within protein molecules and between molecules of different proteins.

Besides improving the baking quality of wheat flour, it enhances the rheological properties of the dough by stabilizing pore size and elasticity. Other benefits of TG-ase include its positive impact on the sensory properties of bread, texture and loaf volume.

Applications

- Pastry Products: Improved preservation and lift of puffed pastry.
- Frozen, laminated dough: Improved stability, texture and volume.
- Low quality flour baking: Rebuilds the structure of dough.
- Gluten free baking: Formation of protein network, increased volume.
- Frozen dough: Stabilizes the gluten structure embedded by starch granules.
- Dough improvers: Improved volume, texture and shelf life.

Production Process

The selected strain of microorganism is nurtured and fed in a seed fermenter until it is multiplied thousands of times. After the seed fermentation, cells are transferred to a larger tank where fermentation time, temperature, pH and air are optimized for growth. When fermentation is complete, the broth (mixture of cells, nutrients and enzymes) is filtered, purified and dried.

Parameters of Reaction

Favorable dough conditions for catalytic activity of transglutaminase include a temperature of 40 °C and pH 5.5.

Storage

Stored in vacuum packaging and under refrigeration.

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