



EnerZyme® P7

Neutral bacterial protease

Product description

Concentrated liquid enzyme preparation (EC. 3.4.2x.xx n.v.1) from *Bacillus subtilis* for protein degradation in vegetable raw materials.

Typical applications for EnerZyme P7® are:

- Increase of protein modification during mashing
- Release of amino acids and peptides to improve yeast nutrition during alcoholic fermentations
- Prevention of delayed protein-based reactions in beverages and semi-finished products

Dosage

The enzyme dosage depends on the quality of the raw material, temperature and contact time. The following guide values apply:

Brewing process:	150 - 250 mL/t malt with insufficient degree of protein modification 350 - 700 mL/t malt with raw grain/adjunct
Distilling mashes from cereals or potatoes:	75 mL/t raw material

The activity range of the enzyme is between pH 5.0 and 10.0, the optimum is at pH 7.0 in the presence of calcium (minimum 40 ppm). The temperature range is between 25 °C and 70 °C, the optimum is at 55 °C.

The diagrams 1 and 2 show the influence of temperature and pH-value on the enzyme activity of EnerZyme® P7.

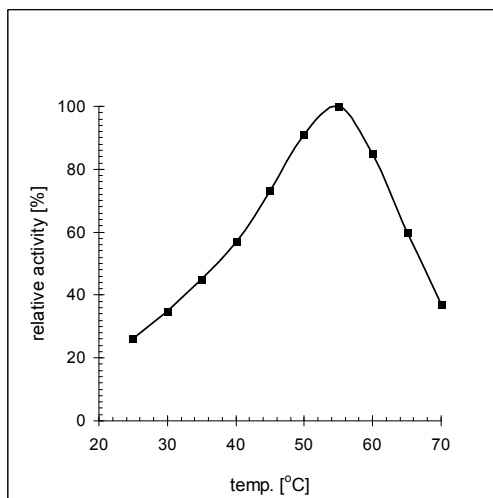


Fig 1: Influence of temperature on activity
(2 % casein solution; pH 7.0)

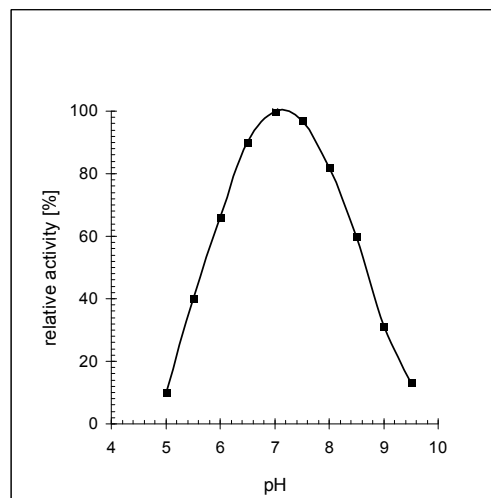


Fig 2: Influence of pH-value on activity
(2 % casein solution; 55 °C)

Storage

Best storage conditions are 0 - 10 °C. Higher temperatures will cause shortage of product shelf life. Avoid temperature above 25 °C. Reseal open packages and use completely on short term.