



# Enerzym® Amyl

Bacterial  $\alpha$ -amylase for starch liquefaction

## Product description

Enerzym® Amyl is a special enzyme for liquefaction and dextrinisation of starch in all kind of mashes from farinaceous raw materials. The enzyme is obtained from a specially selected strain of *Bacillus stearothermophilus*. The principal enzyme activity is based on thermostable, acid-tolerant  $\alpha$ -amylase (1.4- $\alpha$ -D-glucan-glucanohydrolase: EC.3.2.1.1).

Enerzym® Amyl liquefies and dextrinises gelatinised, digested starches in farinaceous mashes at a temperature range of 50 - 95 °C, e. g.:

- 50 - 70 °C at pH values of 4.8 - 5.5
- 70 - 95 °C at pH values of 5.5 - 7.0
- Under ideal pH conditions, Enerzym® Amyl even briefly tolerates temperatures up to 100 °C
- The enzyme optimum is around pH 6.5 and 90 °C in the presence of a substrate and calcium

Inactivation of Enerzym® Amyl:

- 100 °C: 15 mins
- 105 °C: 5 mins
- 110 °C: 2 mins

## Dosage

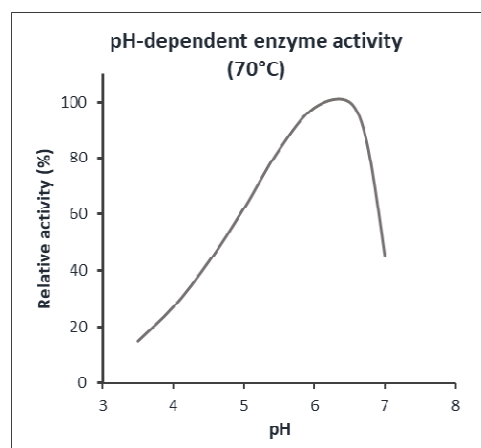
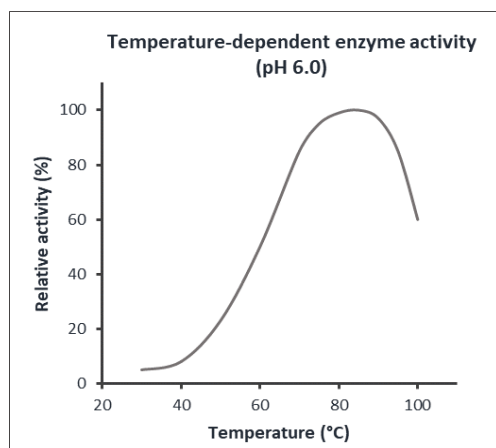
The required enzyme dosage depends on starch content, pH, temperature and reaction time.

Process example	
Mash from cereals issued for fermentation	200 - 400 mL per t of starch
Mash for cereal drinks (e.g. oat)	100 - 300 mL per t of adjunct (t= 75 - 90 °C)

Enerzym® Amyl is added to the mash tun after the raw material has been doughed or ground in.

The enzyme should be diluted with cold water at a ratio of 1 : 1 before addition.

If the enzyme is to be added to the hot mash, first dilute the enzyme 10 or 20-fold in cool tap water.



## Storage

Best storage conditions are 0 - 10 °C. Higher temperatures will reduce product shelf life.

Avoid temperatures above 25 °C. Reseal open packages tightly and use up as soon as possible.

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