Distizym® PROTACID

Thermotolerant, acid stable fungal special enzyme for protein degradation in distilling mashes from farinaceous materials

Product Description

Distizym® PROTACID is a special enzyme which is applied in alcohol production for protein degradation in distilling mashes from farinaceous materials. The enzyme is produced from a specially selected strain of *Aspergillus niger*. The main activity of the enzyme is based on a proteinase (endo-proteinase EC. 3.4.2x.xx).
Distizym® PROTACID is tested by specialized laboratories for purity and quality.

Aim of Treatment

Distizym® PROTACID is used for protein degradation in distilling mashes from farinaceous materials to reduce foam formation or layer formation in fermenting mashes and to improve the nitrogen supply of the yeasts. Improved nutrient supply leads to higher alcohol yield.

Product and Effect

Distizym® PROTACID converts proteins into peptides and amino acids by hydrolysis. The enzyme is active in a broad temperature range of 20-75 °C (optimum: 60 °C) and at pH-values of pH 1.5-6.5 (optimum: 3.0).

Dosage

The following standard dosages are recommended:

30 mL Distizym® PROTACID/tonne corn, rye,
50 mL Distizym® PROTACID/tonne barley, wheat.

In case of a deviation from standard conditions a higher or lower dosage might be required.

Application

Distizym® PROTACID is diluted with cold water. The enzyme dilution is dosed either as first component into the fermentation tank or continuously into the mash pipe to the fermentation tank. Alternatively the required enzyme dosage is added into the yeast propagation tank during yeast pre-propagation.

Storage

Optimum storage conditions at 0-10 °C. Higher storage temperatures result in a shorter shelf life. Temperatures above 25 °C must be avoided. Reseal opened packagings tightly and use up as soon as possible.

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General Characteristics

Enzyme characteristics: the activity range of the enzyme is between pH 1.5 and 6.5, the optimum is at pH 3.0. The temperature range is between 20 °C and 75 °C, the optimum is at 60 °C.
The diagrammes 1 and 2 show the influence of temperature and pH-value on the enzyme activity of Distizym® PROTACID.

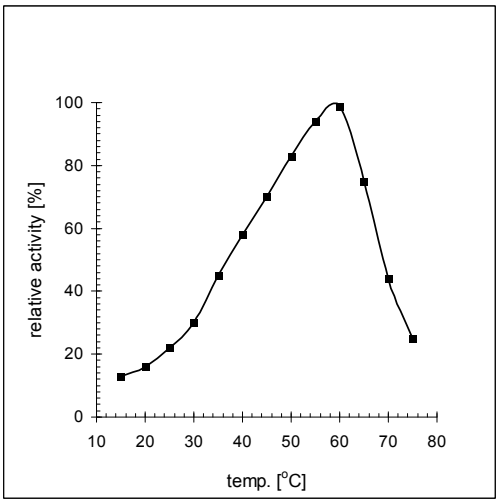

Fig 1: Influence of temperature on activity (0.5 % casein solution; pH 3.0).

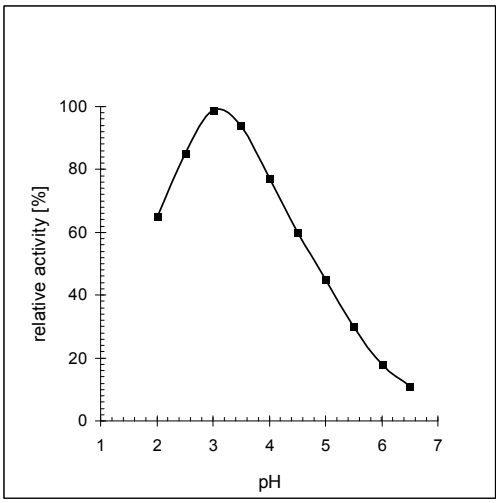

Fig 2: Influence of pH-value on activity (0.5 % casein solution; 60 °C).

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