

Highly concentrated
thermostable fungal- β -
glucanase for glucan
degradation in brewing
mashes

Product Description

Beerzym BG HK4 is a liquid, highly concentrated special enzyme for glucan degradation in brewing mashes up to 90 °C (194 ° F). The enzyme is produced from a specially selected strain of *Talaromyces emersonii*. The main activity of the enzyme is based on a thermostable β -glucanase (endo-1,3(4)- β -D-glucanase: EC 3.2.1.6 and endo 1,4- β -glucanase: EC 3.2.1.4).

Beerzym BG HK4 is tested by specialized laboratories for purity and quality.

Aim of Treatment

Glucan degradation in brewing mashes for improved lautering and filtration.

Product and Effect

As an endo-enzyme Beerzym BG HK4 hydrolyzes 1,4- β -glycosidic bonds in cellulose, lichenins and other glucans which occur specially in barley. In this process glucose units are split off.

Dosage

Beerzym BG HK4 is necessary in beer brewing when problems in the beer quality are to be expected, due to seasonal conditions affecting the malt (barley/wheat malt) used, or when part of the malt is replaced by adjunct (e.g. barley, wheat). The dosage of the enzyme depends on the quality of the raw material, the temperature and the contact time. Guide value: 50-100 mL/ton malt.

Application

Dilute Beerzym BG HK4 with cold water. The enzyme dilution is added directly after milling and mashing in of the malt and/or the adjuncts into the mash tun or the mash cooper. The enzyme is best activated within the pH-range of the mash. Beerzym BG HK4 is active from mashing in until wort boiling up to maximally 90 °C (194 °F), in the final phase of the wort boiling the enzyme is inactivated.

Storage

Optimal storage is at 0-10 °C/32-50 °F. Higher storage temperatures lead to reduced shelf life. Avoid temperatures above 25 °C (77 °F). Reseal opened packagings tightly and use up soon.

General characteristics

Enzyme characteristics: the activity range of the enzyme is between pH 2.0 and pH 6.5, the optimum is at pH 4.5. The temperature range of the enzyme is between 15 °C and 95 °C (59 °F and 203 °F), the optimum is at 75-85 °C (167-185 °F). The diagrammes 1 and 2 show the influence of temperature and pH value on the enzyme activity of Beerzym BG HK4.

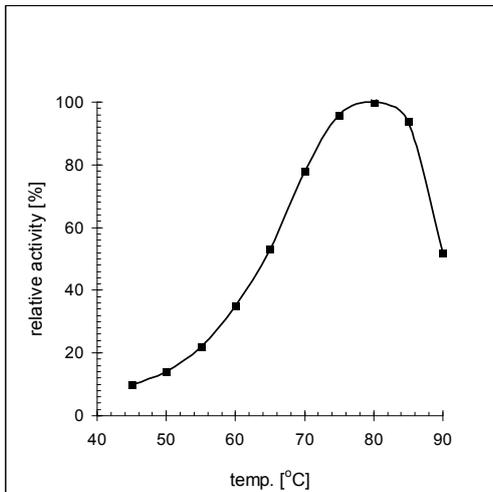


Fig 1: Influence of temperature on β -glucanase activity (barley- β -glucan, pH 4.5).

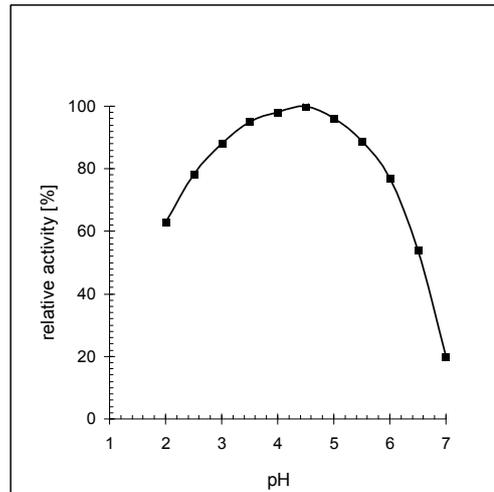


Fig 2: Influence of pH-value on β -glucanase activity (barley- β -glucan, 75 °C/167 °F).

Please note:

When applying Beerzym BG HK4 the food regulations of the individual countries currently in force have to be adhered to.