



Thermostable fungal β -glucanase for glucan degradation in brewing mashes

Product description

Beerzym® BG is a special liquid enzyme for glucan degradation in brewing mashes of a temperature up to 90 °C (194 °F). 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).

Glucan degradation in brewing mashes for improvement of lautering and filtration.

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

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

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 and 203 °F), the optimum is at 75 - 85 °C (167 - 185 °F).

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

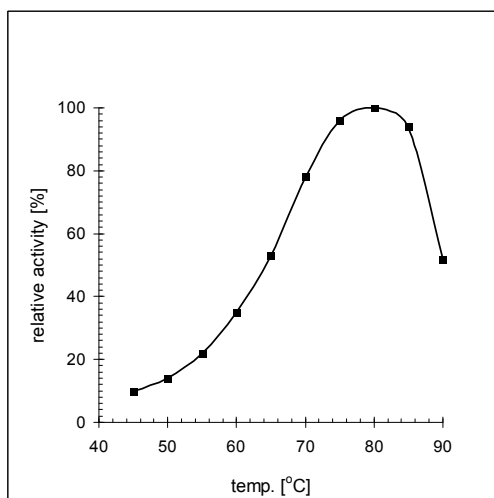


Fig 1: Influence of temperature on activity (barley- β -glucan, pH 4.5).

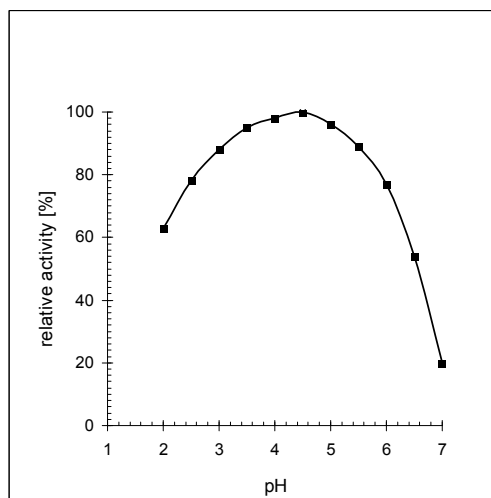


Fig 2: Influence of pH-value on activity (barley- β -glucan, 75 °C/167 °F)

Dosage

Beerzym® BG is necessary in beer brewing when problems in the quality of the beer are to be expected, due to seasonal conditions affecting the malt used, or when part of the malt is replaced by adjunct (e.g. barley). The dosage of the enzyme depends on the quality of the raw material, the temperature and the contact time.

Guide value: 200 - 400 mL/ton malt

Dilute Beerzym® BG with cold water. The enzyme dilution is added directly in the mash-in-water, before addition of the grist. The enzyme is best active within the pH-range of the mash. Beerzym® BG is active from mashing in until wort boiling up to maximally 90 °C (194 °F), in the final phase of 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.