Beerzym® Crystal

Special enzyme for the increase of α-amylase activity in malting and the removal of starch haze (glycogen) in green beer

Product description

Beerzym®Crystal is a special liquid enzyme which increases diastatic power and shortens germination time in malt, and which removes colloidal haze caused by starch (glycogen) in beer. The main activity of the enzyme is based on an α-amylase (1,4-α-D-glucan-glucanohydrolase: EC 3.2.1.1) effective in the pH range of barley and beer (between pH 3.5 - 5.5). It also remains active at low temperatures (0 - 25 °C/32 - 77 °F). Beerzym®Crystal is tested by specialized laboratories for purity and quality.

Please follow all federal, state, and local rules, and regulations when applying Beerzym®Crystal.

Dosage

The dosage of Beerzym®Crystal depends on the quality of the raw barley or other grain, the malt, the mashing process, the course of fermentation, the temperature, the contact time, and the initial degree of haze.

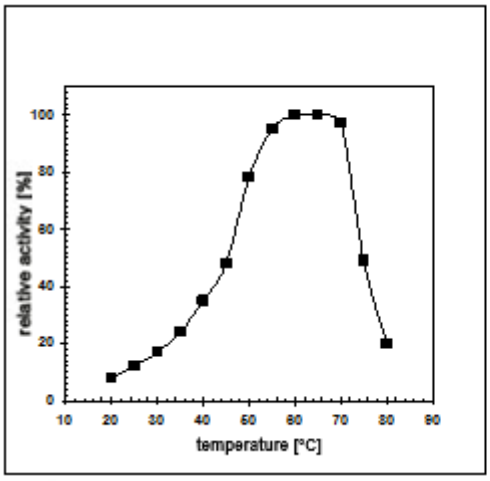
Recommended Dosage:
30 - 40 mL/MT in germination
110 - 130 mL/MT malt in brewhouse for Brut IPA production
0.2 - 10 mL/hL (0.2 - 12 mL/Bbl) in green beer during lagering
0.2 - 0.5 mL/hL (0.2 - 0.6 mL/Bbl) in finished beer in the bright beer tank

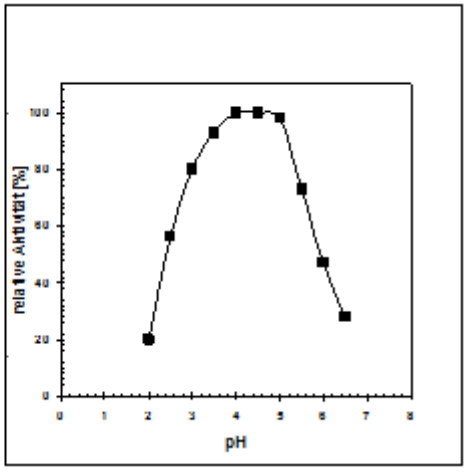
Our recommendation: Please do preliminary tests on laboratory scale, to see the influence (quality) on the final beer.

Dilute Beerzym®Crystal with cold water. The enzyme dilution is added to the water used in germination. When used in beer, the dilution is blended into the green beer during lagering or to the finished beer in the bright beer tank. At temperatures above 50 °C (122 °F) Beerzym®Crystal is most active. The lower activity due to temperature is compensated for in the above dosages.

Enzyme characteristics: The activity range of the enzyme is between pH 2.0 and pH 7.0, with the optimum at pH 4.0 to 5.0. The temperature range of the enzyme is between 10 °C and 80 °C (50 °F and 176 °F), with the optimum at 60 - 70 °C (140 - 158 °F). Enzyme stability is within a pH range of pH 1.5 to pH 6.5 with an optimum at pH 4.0 - 4.5. The temperature is stable up to 65 °C (149 °F), steadily decreasing towards zero until 85 °C (185 °F).

Diagrams 1 and 2 show the influence of temperature and pH on the enzymatic activity of Beerzym®Crystal.





Diagrams 3 and 4 show the influence of temperature and pH on the enzymatic stability of Beerzym®Crystal.

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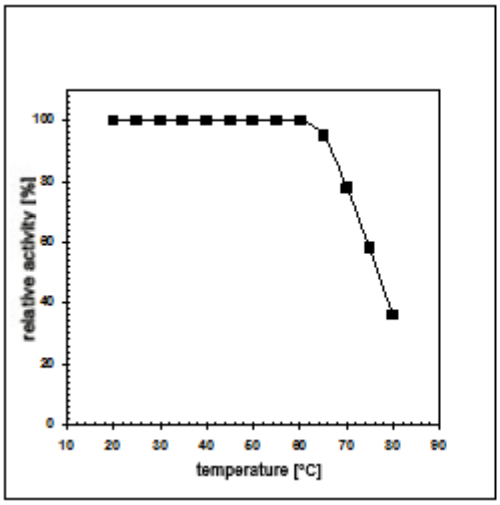

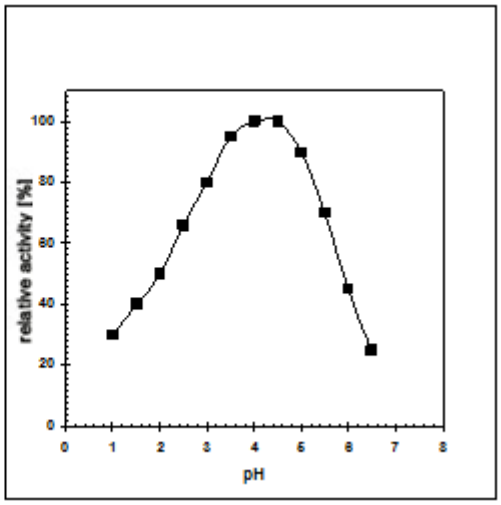

Storage

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 packages tightly and use up as soon as possible.

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