



Beerzym[®] AMYL HT

Product Description

Beerzym AMYL HT is a liquid special enzyme for the liquefaction of starch in beer production with malt and adjuncts in starch degradation by decoction mashing method or in starch degradation with a cereal cooker at temperatures up to 95 °C (203 °F). The enzyme is produced from a specially selected strain of *Bacillus licheniformis*. The main activity of the enzyme is based on a thermostable α -amylase (1,4- α -D-glucan-glucanohydrolase: EC 3.2.1.1).

Beerzym AMYL HT is tested by specialized laboratories for purity and quality.

Aim of Treatment

Liquefaction of the gelatinized, broken down starch in brewing mashes at temperatures up to 95 °C (203 °F).

Product and Effect

As an endo-enzyme Beerzym AMYL HT hydrolyzes 1,4- α -D-glycosidic bonds within the starch molecule. Products formed hereby are α -limit dextrines and oligosaccharides.

Dosage

Beerzym AMYL HT is needed in the brewing process when, due to the utilization of adjuncts (barley, rice, corn) the activity of the α -amylase of the malt portion is not sufficient to liquefy the starch. The dosage of the enzyme depends on the quality of the raw material, the temperature and the reaction time.

Guide value: 80-240 ml/ton adjunct.

Application

Dilute Beerzym AMYL HT with cold water. In case of the decoction mashing method the enzyme dilution is dosed into the mash tun or into the mash copper or, when using a cereal cooker, it is added to the already refined adjunct. The enzyme is active within the pH-range of the mash up to 95 °C (203 °F).

Storage

Beerzym AMYL HT keeps its declared activity up to 36 months if stored optimally (0-10 °C/32-50 °F). Higher storage temperatures result in a shorter shelf life. Temperatures above 25 °C (77 °F) are to be avoided. Reseal opened packagings tightly and use up as soon as possible.

**Thermostable
bacterial α -amylase
for starch
liquefaction in beer
production with
malt and adjuncts**

- please turn over -

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Our technical product leaflets and the treatment recommendations they contain, are based on our current knowledge and experience and we make all reasonable efforts to ensure the accuracy of the information it provides. But since pre-treatment is mostly unknown to us and moreover imponderabilities with regard to the natural products to treat have to be taken into consideration, the advice given provides general information and serves for your consultation. Without a separate, written statement from our side on a defined matter or problem, the information provided should not be relied upon as legal advice or regarded as a substitute for legal advice and is without liability. The information provided is in accordance with the law in force of the Federal Republic of Germany and the EU. In addition, our general terms of business apply.
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General Characteristics

Enzyme characteristics: the activity range of the enzyme is between pH 5.0-9.0, the optimum is at pH 6.5 in the presence of substrate and calcium. The temperature range reaches from 30 °C (86 °F) to 100 °C (212 °F), max. 105 °C(221 °F), the optimal temperature is within the range of 90-95 °C (194-203 °F) in the presence of substrate, calcium and optimal pH-value.

The diagrammes 1 and 2 show the influence of temperature and pH-value on the enzyme activity of Beerzym AMYL HT.

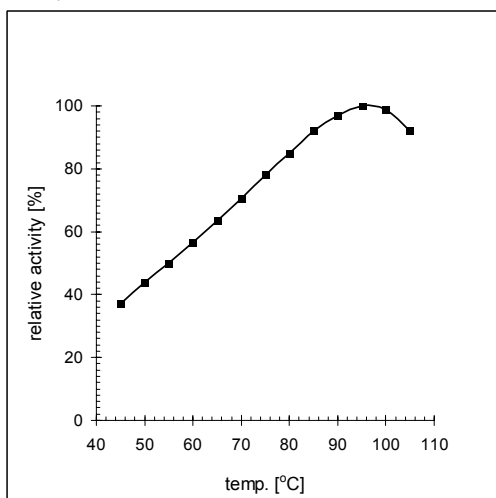


Fig 1: Influence of temperature on activity
(10% soluble starch; pH 6.5).

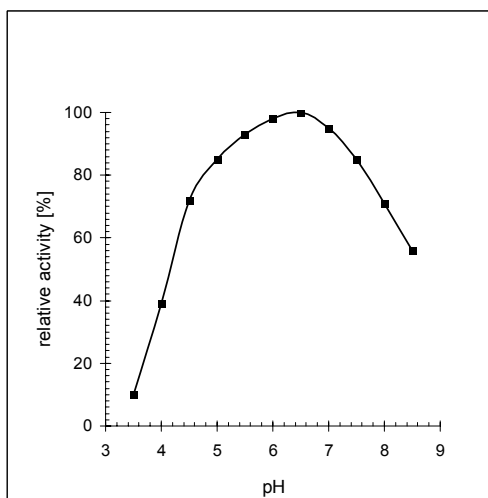


Fig 2: Influence of pH-value on activity
(10% soluble starch; 90 °C/194 °F).

Please note: When applying Beerzym AMYL HT the food regulations of the individual countries currently in force have to be adhered to.