



Fast liquefaction of special grain mashes

Product description

Distizym[®] GL is a special enzyme obtained from a specially selected and optimized strain of *Trichoderma reesei*. The principal enzyme activity is based on various thermo-tolerant hemicellulases (hemicellulase: endo-1,4-β-D-mannanase. EC.3.2.1.78, endo-1,4-β-D-xylanase: EC 3.2.1.8, endo-1,3-β-D-xylanase: EC 3.2.1.32 and exo-1,4-β-D-xylosidase: EC 3.2.1.37) and a thermo-tolerant 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).

Distizym[®] GL is preferred for the production of alcohol from rye with the following objective:

• pentosan- and ß-glucan degradation in order to achieve reduced viscosity during mashing/saccharification.

Dosage

Distizym GL[®] works well in the range of pH 5.0 - 8.0, the optimum being around pH 5.5 - 6.5. The enzyme's temperature range covers 30 - 90 °C, with the optimum temperature being 55 - 70 °C. The values apply to both the pentosanase and ß-glucanase activity.

Viscosity reduction in rye mashes: 50 mL/t

A higher or lower dosage may be necessary in the event of deviations from standard conditions.

Starch digestion method without pressure:

Distizym[®] GL is added to the mash tank after the rye flour has been doughed or ground into it. The enzyme can be diluted with a little cold water at a ratio of 1:1 before addition. It is added before or at the start of the heating phase. Distizym[®] GL can be used at temperatures up to 85 °C and in the pH range of 5.0 - 6.5. The enzyme can also be added during the cooling phase (from 80 °C). The closer the mash's pH value to the optimum (pH 5.0), the better the enzyme's temperature stability (max. 90 °C).

High-pressure steam process and special pressure/thermo process

Distizym[®] GL is diluted with cold water and added after blow-off or during the cooling phase, as soon as the temperature has fallen to below 80 °C. It is best dosed in conjunction with saccharification amylases Enerzym[®] HT or Distizym[®] AG Alpha.

Distizym[®] GL's field of activity extends from pH 5.0 - 8.0, the optimum being around pH 5.5 - 6.5. The enzyme's temperature range covers 30 - 90 °C, with the optimum temperature being 55 - 70 °C. The values apply to both the pentosanase and ß-glucanase activity.

Storage

Optimum storage is at 0 - 10 °C. Higher storage temperatures reduce shelf life. Temperatures above 25 °C should be avoided. Opened containers should be tightly sealed and used as soon as possible.



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The application recommendations given herein describe the intended use of the product as a processing aid or additive as part of a good manufacturing practice. Only this application can lead to a food safety of the final product. However, please note: Our technical product leaflets are based on our current knowledge and experience. They have to be seen as general information on our products only. Due to the imponderabilities of treating natural products and the potential prior treatment we cannot accept any liability. Accordance with all national laws and regulations for use of our products has to be ensured by each user. All data is therefore provided without any warranty. All information is subject to change without prior notice. Our general terms of business apply, please refer to www.erbsloeh.com. Version 006 – 02/2024 FBu – printed 27.02.2024