



Distizym® GL

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 β-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 β-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 β-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.