

MagiZyme® ZAC

Brewing Enzyme

MagiZyme® ZAC is a designed specifically for use in the Brewing process. Predominantly being beta-Glucanase/ Xylanase complex formulation derived from a traditional strain of *Trichoderma reesei*, with high activities including β -Glucanase, Endo-1,3(4)-beta-D-glucanase, Xylanase, hemicellulase, Endo-1,4-beta-D-xylan, xylohydrolase and other cellulase properties

Description

Typical brewing applications for MagiZyme® ZAC include improved mash filtration, carbohydrate haze removal, wort viscosity reduction, increase yield extract, and for significant reduction of residual β -Glucans.

Regulatory Status

MagiZyme® ZAC enzyme complies with the current FAO/SHO and Food Chemical recommended specifications for food-grade enzyme.

This enzyme is permitted for general use as a processing aid under FSANZ Standard 1.3.3 clause 17 E.C. 3.2.1.4, EC. 3.2.1.8

Typical Characteristics

MagiZyme® ZAC is a complex enzyme formulation containing high concentrations of β -Glucanase and Xylanase activities.

Appearance: Brown/ Amber liquid
(appearance may vary from batch to batch)

Dissolubility: Dissolves in water completely

Specific gravity: 1.00 – 1.30 g/mL

pH Dependency

The pH range for the activity of MagiZyme® ZAC is approximately 4.0 to 6.5, with an optimum performance at pH 5.5. The exact pH optimum will depend on process variables, including temperature, time, substrate and concentration.

Temperature Dependency

The activity of MagiZyme® ZAC enzyme is effective in the temperature range of 50°C to 70°C, with an optimum performance at 60°C. The exact temperature optimum will depend upon process parameters, such as pH, time, and substrate concentration.

Features

- High activity, low dose rates.
- Significant decrease of β -glucans and xylans.
- A marked improvement in filterability of wort and beer.
- Dramatic increase in extract yield.

Application Recommendations

MagiZyme® ZAC can breakdown β -glucans, pentosans and related carbohydrates. In the brewing process, the enzymatic action improves filtration rates and centrifuge/decanter efficiency. Enzyme performance demonstrates highly effective in the reduction of residual β -Glucans.



Dosage

The optimum dose rate of MagiZyme® ZAC is achieved through performance assessment based upon processing conditions, mash profiles, malted barley varieties, pH, temperature and so on. We offer our BrewLab® technical services to obtain indication of the optimum dosage. The starting points for the optimization of the enzyme dosage is 0.06 - 0.09% w/w.

Storage Conditions

MagiZyme® ZAC recommended storage conditions is in refrigerated temperatures, stored in (unopened) sealed original containers away from direct sunlight.

Packaging

MagiZyme® ZAC is available in 28 Kg pails and customised packaging sizes are available.

Safety and Handling

All enzymes should be handled with care to avoid inhalation as dusts, mists or aerosols. In case of contact with eyes or skin, promptly rinse with water for 15 minutes.

Technical Services

ZYMUS welcomes the opportunity to work with customers offering technical services in application, process development and enzymatic optimisation.

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