

GUMINASE

(see Enzymes CBS, Why and when to use enzymes)

GUMINASE is a mixture of fungal carbohydrases including β -glucanases (β 1-3 and β 1-4 endo-glucanases) xylanases and hemicellulases. This well balanced mixture of carbohydrases is free of proteases to avoid the increase of wort coloration and to preserve the beer pro-foam proteins.

TEMPERATURE

GUMINASE can be used to 75°C and is quickly inactivated above this temperature. The usual temperatures used during mashing coincide with GUMINASE's optimum activity.

pH EFFECT

Optimum pH between 4.5 and 6.5.

PURPOSES

To decrease the wort β -glucan and pentosane content and the wort viscosity and to make easier the mash filtration as well as the beer filtration mainly when brewing with high levels of raw grains as barley or wheat.

EXAMPLES

Effects of the addition of GUMINASE to a sample of GATINAIS malt and to a mixture of 75% malt and 25% raw wheat (EBC conventional mash)

A=addition of 1 kg per 10 tons of malt
B=addition of 3 kg per 10 tons of malt
C=addition of 1 kg per 1 ton of raw wheat
D=addition of 2 kg per 1 ton of raw wheat

| | EXTRACT (dry matter) | β -GLUCAN ppm | VISCOSITY (cp) |
|--------------------------|-------------------------|------------------------|-------------------|
| MALT | 81,0% | 400 | 1,54 |
| MALT + A | 81,1% | 150 | 1,47 |
| MALT + B | 81,2% | 30 | 1,43 |
| 75% MALT + 25% WHEAT | 81,7% | 350 | 1,64 |
| 75% MALT + 25% WHEAT + C | 81,7% | 125 | 1,57 |
| 75% MALT + 25% WHEAT + D | 81,8% | 25 | 1,51 |

RATE

- 1 to 3 kg of GUMINASE per 10 tons of grists.
- 1 to 3 kg of GUMINASE per 1 ton of raw wheat or barley.

APPLICATION

- In the brewhouse : at the start of the mash.
- In the malthouse GUMINASE should be finely sprayed on cold clean malt disposed as a thin layer to ensure homogeneous spraying (for example on a malt transporter). The quantity of water involved in the spraying should not affect noticeably the dryness of the malt.

AVAILABILITY

- GUMINASE is available in liquid form in blue dark polyethylene drums of 25 liters. The drums are packed in thermal isolated wooden boxes containing 20 drums.

Our technical advice on the uses of our materials is given without obligation. The buyer is responsible for the application and processing of our products, and he is also liable for observing any third party rights.