

# DISTILAZYME® BG

$\beta$ -glucanase enzyme selected for its ability to break down  $\beta$ -glucans in grain spirits production

Technical Data Sheet

## APPLICATIONS:

- DistilaZyme® BG is a liquid  $\beta$ -glucanase enzyme complex, derived from fermentation of *Trichoderma reesei*.
- DistilaZyme BG mainly consists of an endo- $\beta$ -glucanase that hydrolyzes (1-3) or (1-4) linkages in  $\beta$ -d-glucans.
- DistilaZyme BG has been selected especially for its ability to break down  $\beta$ -glucans, that is present in rye, barley, wheat and other cereals, resulting in reduced viscosity, making pumping easier after mashing.
- DistilaZyme BG and DistilaZyme AA activities synergize during mashing.
- DistilaZyme BG displays an optimum activity at a pH range of 4.5 - 6.0 and at a temperature range of 55 – 65°C (130 -150°F).

## RESULTS WITH DISTILAZYME BG:

DistilaZyme BG has a working temperature and pH range that complies with standard industry cooking parameters.

Figure 1 allows you to easily see where your process fits and if any adjustments need to be made.

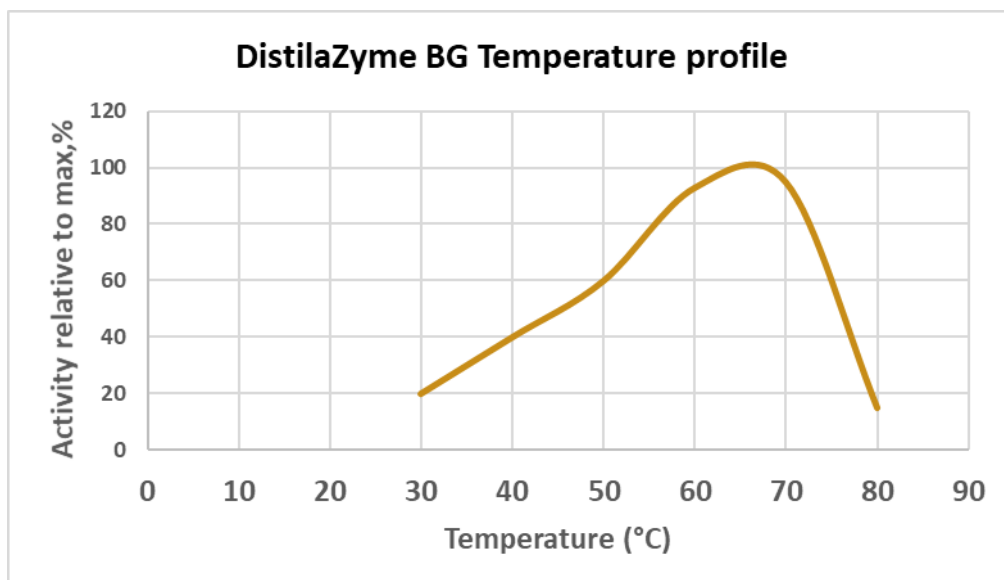


Figure 1: Temperature activity curve for DistilaZyme BG.



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## CHARACTERISTICS:

- Specific Gravity: 1.15 – 1.25
- Colour: Amber (however colour can vary slightly from batch to batch)

DistilaZyme BG is of food grade and produced from a non-GMO culture.

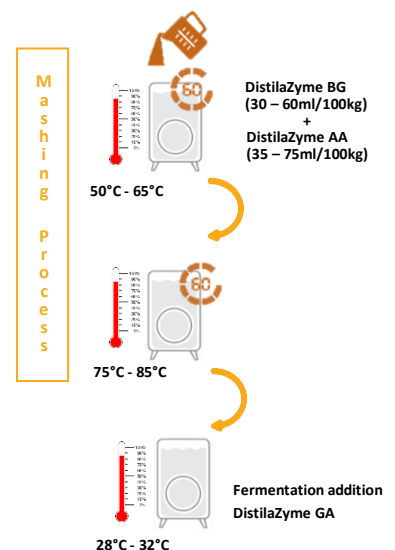
## DOSAGE:

- For mashing, the recommended dose is 30 – 60 millilitres per 100 kilograms of grain added to the mash/cook tank. We recommend a high dosage when a high proportion of rye is used.
- The optimal enzyme dosage is variable according to individual distillery production processes and goals.

## INSTRUCTIONS OF USE:

Lallemand Biofuels & Distilled Spirits recommends using DistilaZyme BG as follows:

1. These instructions of use are intended as a guide for general procedures; however, it is likely that temperature, dosage and timing will need to be tailored to your specific process.
2. Start the mashing process with the addition of grain to cool water (< 35°C). While mixing, increase the temperature to 55-65°C and add DistilaZyme BG and DistilaZyme AA.
3. A hold time of 60 minutes at 55-65°C is recommended to complete the breakdown of the  $\beta$ -glucans by DistilaZyme BG (within these temperatures, DistilaZyme AA will start to work).
4. After 1 hour, increase the temperature to 75-85°C to allow DistilaZyme AA to complete the breakdown of the starch into dextrins. Again, a hold time of 1 hour is recommended. The temperature of mashing will depend on the grain used.
5. After mashing is complete, cool to 28-32°C and pump the mash into the fermentation tank. Add DistilaZyme GA to convert the dextrins into fermentable sugars (*please see the TDS of DistilaZyme GA for further information*).



## STORAGE, HANDLING & PACKAGING:

- DistilaZyme BG should be stored in a cool (5°C) and dry area away from heat and direct sunlight for maximum stability.
- Shelf Life: 24 months if stored < 5°C.
- Packaging: DistilaZyme BG is available in 1kg bottle and 20kg or 25kg canister.

To the best of our knowledge, the information contained here is true and accurate.

However, any recommendations or suggestions are made without any warranty or guarantee since conditions and methods of use are beyond our control. This information should not be considered as a recommendation that our products be used in violation of any patents.



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