

DISTILAZYME® GA

Gluco-amylase enzyme selected for its high ability of saccharification
in grain spirits production

Technical Data Sheet

APPLICATIONS:

- DistilaZyme® GA is a selected gluco amylase (amyloglucosidase) enzyme capable of hydrolyzing glucosidic linkages of short chain dextrans to fermentable sugars to be up-taken by the yeast during the fermentation process.
- DistilaZyme GA is used in distilleries for saccharification, and for simultaneous saccharification and fermentation (SSF) of whole grain mashes and starch substrates to fermentable sugars.
- In the SSF process, DistilaZyme® GA provides to the yeast the necessary quantity of dextrose during fermentation avoiding the stress due to high level of sugars as well as mitigating contamination during the yeast lag phase.
- DistilaZyme GA optimizes the conversion of starch to fermentable sugars and reduces the risk of residual sugars at the end of fermentation. DistilaZyme GA contributes to the optimization of yield.

RESULTS WITH DISTILAZYME GA:

DistilaZyme GA under similar conditions has a similar finishing fermentation profile as current distilling GA enzymes on the market as shown in Figure 1. Fermentation kinetics, as demonstrated in Figure 2, show that DistilaZyme GA also allows for rapid sugar conversion and uptake by the yeast for excellent fermentation results.

Fermentation comparison (72 hours)

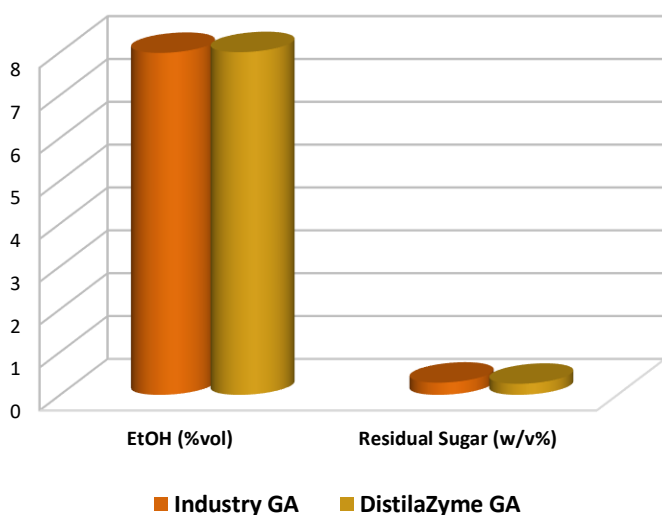


Figure 1: Final Fermentation results using DistilaZyme GA compared to industry GA in 100% corn mash.

Fermentation trend of simple sugars

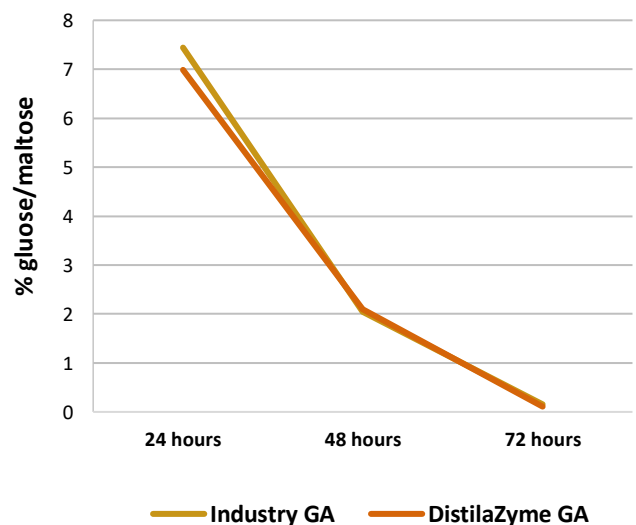


Figure 2: DistilaZyme GA compared to industry GA regarding glucose/maltose consumption through fermentation.



DISTILAZYME® GA

Gluco-amylase enzyme selected for its high ability of saccharification
in grain spirits production

Technical Data Sheet

CHARACTERISTICS:

- Specific Gravity: 1.10 – 1.20
- Colour: Brown (however colour can vary slightly from batch to batch)

DistilaZyme GA is food grade.

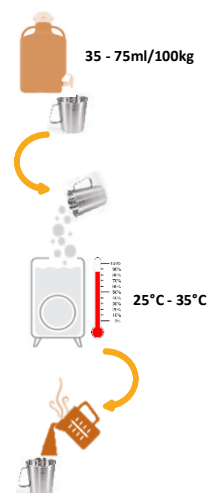
DOSAGE:

- Fermentation of grain/starch - Dependent on amount of grain/starch liquefied in mash and fermentation conditions, recommended dose is 35– 75 millilitres /100 kilograms of grain.
- The optimal enzyme dosage is variable according to individual distillery production processes and goals.

INSTRUCTIONS OF USE:

Lallemand Biofuels & Distilled Spirits recommends to use DistilaZyme GA as follows:

1. Using a clean, sanitised and rinsed graduated container, fill with the required amount of DistilaZyme GA (35 – 75ml per 100kg of grain).
2. Add the measured DistilaZyme GA to the fermentation about 30 minutes after the addition of yeast at a temperature of 25°C - 35°C and pH range of 4.5 - 5.5.
3. Ensure that the fermentation tank is then agitated or gently stirred to make sure DistilaZyme GA is dispersed to ensure performance.
4. After addition, ensure that the graduated container used to dose DistilaZyme GA is thoroughly rinsed with hot water and soaked in a sterilant (e.g. bleach) until next use.



STORAGE, HANDLING & PACKAGING:

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

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.



Milwaukee, USA. Montreal, Canada. Fredericia, Denmark. Bangkok, Thailand.
distilledspirits@lallemand.com, www.lallemanddistilling.com

V4 December 2023

