

DISTILAZYME[®] AA

Alpha Amylase enzyme selected for its high ability to break viscosity in grain spirits production

Technical Data Sheet

APPLICATIONS:

- DistilaZyme[®] AA is an alpha amylase enzyme selected especially for its ability to break mash viscosity caused by gelatinization of starch and converting it to dextrin chains. This step is the first key point in the cooking / mashing process for the quality of fermentation.
- DistilaZyme AA can be used on whole grain mashes and starch substrates.
- DistilaZyme AA, through the hydrolysis of starch, displays a good viscosity reduction which results in easier agitation and pumping.

RESULTS WITH DISTILAZYME AA:

DistilaZyme AA has a working temperature and pH range that fits well with standard industry cooking parameters.

Figure 1 allows you to easily see where your process fits and if any adjustments need to be made. Whole grain mash that has been cooked using DistilaZyme AA when compared with three other enzymes in the craft distilling industry, displays excellent viscosity reduction abilities during the cooking process, as demonstrated in Figure 2.

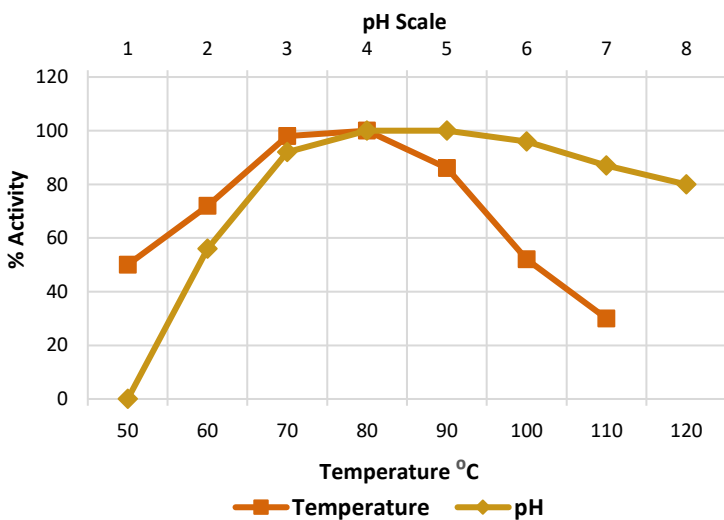


Figure 1: pH and temperature activity curve for DistilaZyme AA.

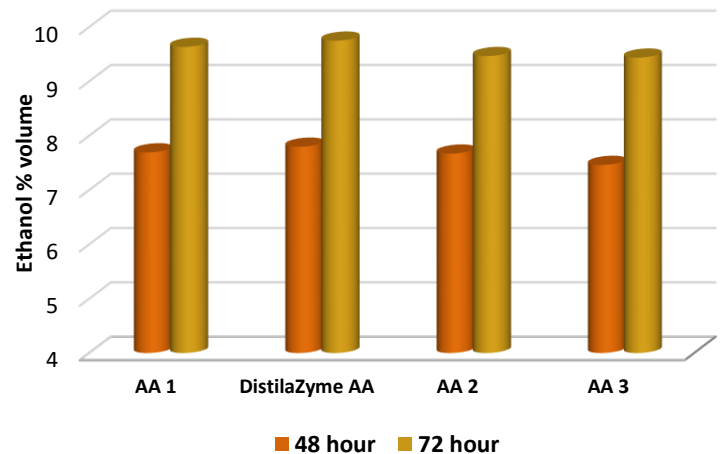


Figure 2: DistilaZyme AA compared to 3 industry standard AA enzymes in 100% corn mash.



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CHARACTERISTICS:

- Specific Gravity: 1.15 – 1.19
- Colour: Brown (however colour can vary slightly from batch to batch)

DistilaZyme AA is of food grade.

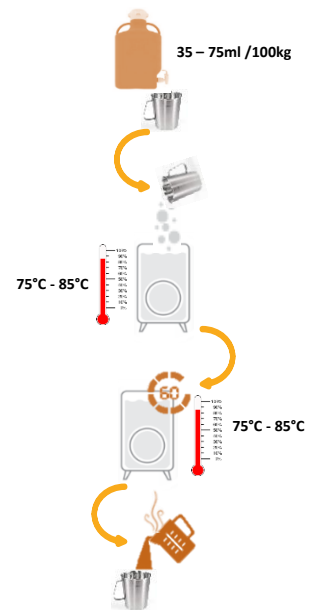
DOSAGE:

- For gelatinisation of grain/starch, the recommended dose is 35 – 75 millilitres per 100 kilograms of grain added to the mash/cook tank.
- 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 AA as follows:

1. Using a clean, sanitised and rinsed graduated container, fill with the required amount of DistilaZyme AA (35 – 75ml per 100kg of grain added to the mash tank).
2. Add the measured DistilaZyme AA to the mash tank at a temperature of 75°C - 85°C and pH range of 4.5 - 5.5. Dosing can be split if viscosity break is needed prior to optimal cook temperature to aide agitation.
3. After the DistilaZyme AA is added to the mash/cook tank, a hold time of 60 minutes is recommended at 75 - 85°C to complete the breakdown to dextrins (dependent on grain/starch type and amount in recipe).
4. After addition, ensure that the graduated container used to dose DistilaZyme AA is thoroughly rinsed with hot water and soaked in a sterilant (e.g. bleach) until next use.



STORAGE, HANDLING & PACKAGING:

- DistilaZyme AA should be stored in a cool (5°C - 10°C) and dry area away from heat and direct sunlight for maximum stability.
- Shelf Life: 12 months if stored <10°C. Storage approaching 12 months above this temperature may result in decreased activity where additional products may need to be dosed.
- Packaging: DistilaZyme AA is available in 1kg, pack of 6x1kg. In North America DistilaZyme AA is available in 20kg.

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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