

TECHNICAL INFORMATION SHEET: AMYLOGLUCOSIDASE 300 (AMG)–ENZYMES

PRODUCT NAME:
AMYLOGLUCOSIDAS
E 300

PRODUCT CODE:
AMY

COMMODITY CODE:
35079090

PACKAGING:
1 and 5 KG

Description

Amyloglucosidase 300 is an enzyme that helps to increase the fermentability of wort. This product is ideal to use for the production of low carbohydrate beers and boosting alcohol yield in distilling applications. It is derived from a selected strain of an *Aspergillus sp.*

Benefits

- Increases attenuation and alcohol yield.
- Improved wort fermentability (RDF >83% depending on processing).
- An alternative to priming sugar
- Increases filterability
- Improves beer shelf life
- Ideal for use in packaged beers
- Reduces process time

Guidelines for use

- Check that the product is within its shelf life before use
- Experiment with additions to determine the minimum effective rates
- Read the Safety Data sheet prior to use



TECHNICAL SUPPORT

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REGULATORY COMPLIANCE INFORMATION

Refer to the **Product Specification Sheet** or contact us on
tel: +44 (0) 115 978 5494 | e: compliance@murphyandson.co.uk

HEALTH & SAFETY INFORMATION

Refer to the **Safety Data Sheet (SDS)**

- Care should be taken to avoid skin contact when handling

Principle

This enzyme is used to produce glucose, starting from the non-reducing ends of starch chains and dextrans. In brewing the result of enzymic action is the increase of the fermentability of wort.

The enzyme is active at normal wort and beer/ wash pH values, although it is rapidly inactivated at temperatures above 80°C.

Amyloglucosidase 300 can be added to create low carbohydrate super-attenuated beers and in distilling applications, optimise alcohol yield from malt and adjuncts.

Another use for this enzyme is the replacement of priming sugar additions to bottled beers. Glucose is produced from dextrans which is then available for fermentation by the yeast.

Application and rates of use

Where to add the product

This product can be added to one or more of the following: mash conversion vessel, kettle, fermenter, or post-fermentation, depending on application.

The pH range for the activity of the product is between 3.5 and 5.5, with optimum performance at pH 4.5. The optimum pH will depend upon process variables, including time, temperature, substrate nature and concentration.

This product is effective at fermentation temperatures but its optimum range lies between 40°C and 65°C, with optimum performance at 60°C. Achieving optimum activity will depend upon process variables including time, pH, substrate nature and concentration.

Where the pH is between 4 and 5 the product can be deactivated by heating to 95°C for 10 seconds or in 30 to 60 seconds at 80°C.

How much of the product to add

When added to the mash typical addition rates are 0.3 to 0.6 kg per tonne of dry grist dependent on required outcome and application.

For the production of low carbohydrate beers for addition in the fermenting vessel, typical rates of addition are between 3 and 8 g per hectolitre of wort; dependent upon temperature, time, desired attenuation and sugar spectrum.

The activity of Amyloglucosidase 300 is expressed as GAU/ml. One GAU produces 1 gram of reducing sugars per hour from 4% soluble starch, under assay conditions of pH 4.2, and a temperature of 60°C for 60 minutes.

Storage and shelf life

- Store in cool conditions, away from direct sunlight
- Keep containers sealed when not in use
- Recommended storage temperature: 1 to 5°C
- Minimum storage temperature is 1°C, the maximum is 10°C
- Do not allow the product to freeze
- The shelf life at the recommended storage temperature is 3 months from date of manufacture
- Under ideal conditions, 95% of enzyme activity will be retained for a period of at least six months, after which time a loss may be expected of ca. 1 - 2% per month

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