Quality, Consistency & Support

TECHNICAL INFORMATION SHEET: AMYLOGLUCOSIDASE 300 (AMG)—ENZYMES

PRODUCT NAME:
AMYLOGLUCOSIDASE 300

PRODUCT CODE:
AMY

COMMODITY CODE:
35079090

PACKAGING:
1 and 5 KG

Description

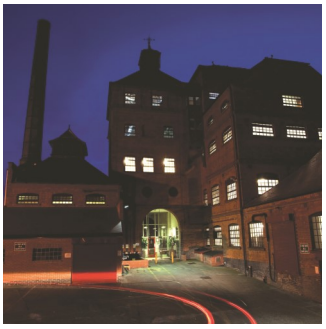
Amyloglucosidase 300 is an enzyme that helps to increase the fermentability of wort. This product is ideal to use for the production of highly attenuated low carbohydrate beers. It is derived from a selected strain of an *Aspergillus sp*.

Benefits

- Increases attenuation
- Improved fermentability of worts
- 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
- Care should be taken to avoid unnecessary skin contact during handling



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)**

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Registered in England No. 106442
VAT No. 196 8782 88

bsi. ISO 9001 Quality Management

Principle

This enzyme is used to produce glucose, starting from the non-reducing ends of starch chains and dextrins. In brewing the result of enzymic action is the increase of the fermentability of wort. α-Amylase side activity in this product will also very slowly hydrolyse 1,6 α-glucosidic linkages. There are also very small quantities present of transglucosidase and acid protease (hemicellulase).

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

Amyloglucosidase 300 can be added to the kettle or fermenter to create low carbohydrate super-attenuated beers. Alternatively, it can be added to the mash converter to improve fermentability or to change the sugar spectrum of the resultant wort.

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

Application and rates of use

Where to add the product

To mash conversion vessel, fermenter, or post-fermentation, depending on application.

The pH range for the activity of the product is between 3.0 and 5.0, with optimum performance at pH 4.2. The optimum pH will depend upon process variables, including time, temperature, substrate nature and concentration.

The enzymic activity of the product is effective in the temperature range between 40°C and 65°C, with optimum performance at 60°C. The optimum temperature will depend upon process variables including time, pH, substrate nature and concentration.

The product can be inactivated by holding at a pH of between 4.0 and 5.0 for 10 minutes at a temperature of 95°C or for between 30 and 60 minutes at a temperature of 80°C.

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How much of the product to add

For the production of low carbohydrate beers, 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

PRODUCT	AMYLOGLUCOSIDASE 300	**PRODUCT CODE**	AMY
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