

Technical Information



abv Alphamylase LT30 (AML 511) Bacterial amylolytic enzyme

Description

abv Alphamylase LT30 is a Food Grade bacterial alpha-amylase derived from a selected non-GMO strain of *Bacillus subtilis*.

abv Alphamylase LT30 is a liquefying enzyme. Its action on starch substrates produces a decrease of viscosity.

Benefits

Liquefies starch substrates and facilitates the use of starches with higher temperature gelatinisation. abv Alphamylase LT 30 allows the use of high levels of adjunct and increases the level of attenuation and at the same time reduces the potential for starch positive worts.

Dose rate

Typical dose rates are as follows:

Cereal cooker	0.4-0.8 kg/t cereal
Mashing	0.01-0.05 kg/t of grist

Application

abv Alphamylase LT30 can be added to the cereal cooker to liquefy starch substrates before adding to the mash.

abv Alphamylase LT30 can also be added to the mash vessel in the brewhouse to increase the level of fermentable sugars and also to reduce the occurrence of starch positive worts.

Activity

abv Alphamylase LT30 is standardised at minimum 1000 LAU per gram.

One LAU is defined as the amount of enzyme which hydrolyses 1g starch per hour at 30°C and pH 6.60.

Properties

abv Alphamylase LT30 is a brown liquid with a specific gravity of 1.0-1.2 (Colour may vary from batch to batch)

Optimum temperature varies between 77°C-90°C depending on the starch concentration. Optimum pH is between pH 5.8-6.6

Stabilisers and inactivators

Calcium ions enhance the stability of abv Alphamylase LT30. When the hardness of water is greater than 20dH (80 mg/l Ca⁺⁺), the addition of calcium ions is not necessary. Consequently EDTA or other calcium chelating agents can reduce the activity of the enzyme.

Microbiological specification

Total Viable Count	< 50000/g
Salmonella sp.	absent in 25g
Coliforms	< 30/g
Staphylococcus aureus	absent in 25g
Anaerobic sulphate reducers	absent in 1g
Antibacterial activity	negative by test
Mycotoxins	negative by test

Heavy metals specification

Cadmium	< 0.5 mg/kg
Mercury	< 0.5 mg/kg
Arsenic	< 3 mg/kg
Lead	< 5 mg/kg

Conformity to standards

abv Alphamylase LT30 conforms to the specifications laid down by the joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Food Chemicals Codex (FCC)

Packaging and storage

abv Alphamylase LT30 is available in 25 kg or 1000 kg containers and should be stored in a dry cool area (max.10°C) and not exposed to direct sunlight. Under these storage conditions the product is stable for up to 12 months.

Safety and handling

Avoid unnecessary contact with enzyme preparations during handling. In the event of spillage, rinse with water. Additional information can be found in the MSDS.