

Technical Information



abv Alphamylase TS (ATS 511) Heat stable bacterial amyolytic enzyme

Description

abv Alphamylase TS is a food grade liquefying bacterial alpha-amylase enzyme which can be used at higher temperatures than most other bacterial amylases, such as abv Alphamylase LT30. It is derived from a non-GMO strain of *Bacillus licheniformis*.

Benefits

abv Alphamylase TS efficiently liquefies starch substrates, allowing for the use of high temperature gelatinisation starches. This is particularly useful in the starch production industry where Jet Cereal Cookers are employed. Using abv Alphamylase TS accelerates the time to reduce the viscosity and process time.

Dose rate

Typical dose rates are

Cereal cooker	0.2-0.4 kg/t of cereal
In brewhouse mash	0.01-0.05 kg/t of grist

Application

abv Alphamylase TS can be added to the cereal cooker to rapidly and efficiently liquefy starch substrates prior to addition to the mash.

Activity

abv Alphamylase TS is standardised at 500+/- 50 AHTU/g. One AHTU is defined as the amount of enzyme which hydrolyses 1g of starch per hour at 30°C and pH 6.60.

Properties

abv Alphamylase TS is a brown liquid with a specific gravity of 1.10-1.20

Colour may vary from batch to batch.

Stabilisers and inactivators

Calcium ions enhance the stability of abv Alphamylase TS. 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 TS 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 TS is available in 30 kg or 225kg 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.