Aum Enzymes
India's #1 Speciality Enzyme Products

Brewzyme AH

Heat stable specialty alpha amylase

BENEFITS

For all types of adjuncts use in the brewhouse.
Ensures starch liquefaction when using adjuncts in the mash bill.
Extract yield is improved
Risk of starch retrogradation is prevented.
No pH adjustment
Stabilization of the enzyme with calcium ions not require

DESCRIPTION

Brewzyme AH is a heat stable bacterial alpha amylase enzyme preparation produced from thermophilic strain of *Bacillus species*. The enzyme will randomly hydrolyzed 1, 4 alpha-D – glucosidic linkages in gelatinized starch into soluble dextrin's and oligosaccharides. Brewzyme AH is high performance starch liquefaction enzyme.

Different adjuncts such as maize, rice, wheat and sorghum are used in brewing. The starch of these grains can have gelatinization temperature at minimum 76-78°C, the temperature at which amylases from barley are inactivated. In addition, the milling of adjuncts and malt results in different sizes of flour and grist particles, the largest of which may not be completely solubilized below this temperature.

Brewzyme AH is heat stable bacterial alpha-amylase high temperature starch liquefaction enzyme to be used for brewing industry.

PRODUCT SPECIFICATION:

Parameters	Operational range	Optimal range
Temperature	**75^0C to 110^0C**	**85^0C to 105^0C**
pH	5.0 to 7.5	5.0 to 7.5
Form & appearance	Liquid ,Brown colour	
Enzyme type	Heat stable alpha amylase	
Enzyme Activity	**120000 IU/ml**	
Microbial source	*Bacillus species*	

PAKAGING:

Fermentzyme-AH available in 5/35/50 kilogram jerry can. Special packaging is also available on request.

SAFETY

The product is produced under hygienic condition and is subject to stringent quality control.

Toxicology

The product produced by GRAS microorganism and is classified as non toxic.

Biodegradability

Product is Biodegradable.

Handling precaution
Enzymes are proteins and inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Some enzymes may irritate the skin, eyes and mucous membranes upon prolonged contact.
Liquid enzyme products may create inhalable aerosols if splashed or vigorously stirred. Spilled product material should therefore be flushed away with water.

STORAGE:
Enzyme products should be stored in a cool dry place. When stored below 35°C products will maintain its declared activity for at least 24 months. The enzyme preparation should not be left in direct sunlight for extended periods. Liquid preparation should not be frozen.

REGULATORY INFORMATION:

EEC Classification
In concentration form, the liquid enzymes products are classified as "sensitizers by inhalation" under the terms of EEC directive 88/379.

TECHNICAL DATASHEET

There are many factors that influence liquefaction with Brewzyme AH, such as:	
Type of raw material	
Type of process and equipment	
Temperature and pH of the process	
Process time	
Dry substance (DS)	
Product	**Dosage**
Brewzyme AH for brewing industry	
Malt is used to liquefy the starch in the cereal cooker	250-350 grams per ton of adjunct.
For, other adjuncts such as maize, rice, wheat or sorghum	500-600 grams per ton of adjunct

Mix Brewzyme AH with brewing water prior to use to facilitate mixing in the adjunct cooker.
Add at the beginning of adjunct cooking. It will be inactivated during the boiling.
Technical datasheet given with each product are only given as usage guidelines, but tests should be carried out under local conditions to **fix the optimum dosage.**

TECHNICAL SERVICE:
Aum Enzymes technical service laboratory shall be pleased to provide more information covering specific applications for all products or discuss any practical problem which many occur in the industry.

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