

# Industry Enzyme



## **THERMO-STABLE ALPHA-AMYLASE AHA-100T**

Angel Thermo-Stable Alpha-Amylase AHA-100T is a food-grade starch hydrolyzing  $\alpha$ -amylase derived from *Bacillus licheniformis*. It is an incision enzyme with the characteristics of high temperature, low pH stability and fast viscosity reduction.



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## CHARACTERISTICS

Name	Thermo-Stable $\alpha$ -Amylase AHA-100T
System name	EC.3.2.1.1, 1,4- $\alpha$ -D-Glucan-glucohydrolase
Activity	100,000U/mL (minimum)
Appearance	brown liquid
pH	4.8 to 6.5
Specific gravity	1.10 to 1.25 g/ml

**Effect of pH** The enzyme is stable in the range of pH5.0 to 8.0, the optimum pH is in the range of 5.4 to 5.8, and it maintains considerable even at pH 5.0.

**Effect of Temperature** The optimum temperature for this product is 80-100°C, with most effective performance in the range of 105°C to 110°C. The enzyme maintains considerable activity at higher temperatures (115°C or above).

## APPLICATION

This product can be widely applied in production of alcohol, beer, Chinese rice wine, vinegar and other fermentation products. The application effective is concerned with raw material type, ratio of material to water, pH, injection/cooking temperature, sustain time and so on. The details of recommended process as below:

Corn as raw material	Workable Range	Optimum Range
Ratio of material to water	1:1.8-1:3	1:2-1:2.7
pH	4.8-6.5	5.0-6.0
Precooking (recommended)	80°C 30 min	
Injection/cooking temperature	80-100°C	85-95°C
Cooking time	90-120 min	
Dosage (kg/t dry matter)	0.15-0.40	0.20-0.30

Cassava as raw material	Workable Range	Optimum Range
Ratio of material to water	1:1.8-1:3	1:2-1:2.5
pH	4.8-6.5	5.0-6.0
Injection/cooking temperature	80-100°C	80-95°C
Cooking time	90-120 min	
Dosage (kg/t Dry Matter)	0.12-0.40	0.15-0.25

## SPECIFICATIONS

liquid, 100,000U/mL  
 Sealed in Plastic Bucket or IBC Tank;  
 Net Weight 28kg/bucket or 1000kg/bucket.

## STORAGE

The product if stored at 25°C below, at least 12month shelf life, if under the 4-10°C cold storage, shelf life is 18 months; under warranty, measured activity not less marked activity. Over shelf life, enzymes may decrease, but can still be used, usage should be increased accordingly.

## PRECAUTIONS

- 1) The product is bio-active substances, inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Unnecessary contact with the product and inhalation of dust should be avoided.
- 2) In case of contact with the eyes or skin, promptly rinse with the affected area with plenty of water for at least 15 minutes.