

● **DHK 188P**

Mid-Temperature Alpha-Amylase DHK188P

Description:

The product is obtained by deep fermentation of Bacillus Subtilis. It is widely used in manufacture of starch sugar and alcohol, brewery, textile, dye & printing, papermaking, feed industry etc.

Working Mechanism:

The enzyme hydrolyzes the α -1,4-glucosidic linkages of gelatinized starch randomly to soluble dextrans, reducing the high viscosity of the starch slurry.

Property:

1. Temperature: Effective Temperature Range : 35-90 °C, Optimum 60-70 °C ,
2. pH: Effective Range 4.5-8.0, Optimum pH Range 5.2-6.2 .
3. Effect of Metal Ion on Enzyme activity : Ca^{2+} can improve the stability of the enzyme , Enzyme activity will completely lost without Ca^{2+} , Mn^{2+} and Mg^{2+} also have the obvious improvement on activity besides Ca^{2+} .

Specification:

1. Liquid type: Appearance: light brown liquid .2,000 u/ml ,3,000u/ml,4,000u/ml

Solid powder type: Appearance: Yellow powder. 2,000, 3,000, 4,000u/g and 50,000u/g.

food grade is white powder, We have the specification from 1000 to 10000 u/g (activity vary against thousand unit) according to the customer's requirement.

Liquid Enzyme Ph(25°C): 5.5-7.0, Specific Gravity: 1.10-1.25g/ml;

Solid Enzyme Soundness (0.4 mm mesh screen): $\geq 80\%$.

2. Unit activity definition : The amount of enzyme needed to hydrolyze 1mg of starch in one hour at pH6.0, 60 °C . It is u/g (u/ml).

3. Standard : QB1805.1-93.

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Textile Auxiliaries Division ---2013/08 revised

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Application Guide:

1. In brewing of beer and alcohol, add the enzyme in the rate of 6.0L/t raw material (base on 2000 u/ml), keep at 80-90 °C for 30 minutes.

2. In the starch sugar, monosodium glutamate and the liquefaction of fermentation industry : Starch slurry is 16-18Be' , adjust Ph to 6.2-6.4 , add 0.2% calcium chloride (calculate on weight of raw material) , dosage of alpha amylase as 6.0-8.0L/t raw material (base on 2000 u/ml) , blend well and heat to 85-90°C for 30 minutes .

3. In textile desizing, add the enzyme in the rate of 0.2%(owf) base on 2000 u/ml , keep at 50-80 °C for 20-40 minutes.

4. In feed industry, this enzyme can improve the digest function, adjust immunity, increase the utilization of grain energy .The recommended dosage is 0.02-0.04kg/t raw material . For the best performance , It often blend with pectinase, β -glucanase and xylanase etc.

5. In juice processing , this enzyme can improve transparence and avoid turbid. The commended dosage is 0.02-0.1L/t original juice slurry (base on 2000 u/ml) about temperature 45 °C for 60-120 minutes.

6. In steamed bread and bread fermentation series products, food grade Mid-Temperature Alpha Amylase can improve texture of finished product and extend the shelf life. It often blend with pectinase, cellulase and protease etc.

7. Others: Rate of use is generally 2-4 L/t dry basis, Ca^{2+} concentration 150ppm.

Package and Storage

Plastic drum is used for liquid type: 25kg/drum

Plastic weave bag is used for solid type: 20kg/bag. Further package customizable.

This product is organic biochemical substance, high temperature, strong acid & strong alkaline will cause inactivation of enzyme. So, avoid exposure to sunlight when being transported. Solid enzyme should avoid direct sunlight and rain. It should be kept in clean, cool and dry place, or you need to increase its dosage.

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