

## Product Data Sheet

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Product Name:  $\alpha$ -Amylase

Cat. No.: GC30203

### Chemical Properties

Cas. No. 9000-90-2

SMILES [a-Amylase]

Formula M.Wt

Solubility DMSO : < 1 mg/mL (insoluble or slightly soluble); Water : < 0.1 mg/mL (insoluble) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

# a-Amylase

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Background

$\alpha$ -Amylase is a hydrolase enzyme that catalyses the hydrolysis of internal  $\alpha$ -1, 4-glycosidic linkages in starch to yield products like glucose and maltose.

$\alpha$ -Amylase is produced by several bacteria, fungi and genetically modified species of microbes.  $\alpha$ -Amylase is a calcium metalloenzyme i.e. it depends on the presence of a metal co factor for its activity.  $\alpha$ -Amylase has become an enzyme of crucial importance due to its starch hydrolysis activity and the activities that can be carried out owing to the hydrolysis. One such activity is the production of glucose and fructose syrup from starch.  $\alpha$ -Amylase catalyses the first step in this process. Previously, starch was hydrolyzed into glucose by acid hydrolysis.  $\alpha$ -Amylase can be isolated from plants, animals or microorganisms. The enzyme has been isolated from barley and rice plants. It has been found that cassava mash waste water is a source of  $\alpha$ -Amylase which is active in wide range of pH and temperature[1].

[1]. Ajita Sundarram, et al.  $\alpha$ -Amylase Production and Applications: A Review. Journal of Applied & Environmental Microbiology 2, no. 4 (2014): 166-175.

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