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Product Information

α -Amylase from porcine pancreas

Product Number **A3176**
Storage Temperature 2–8 °C

CAS RN 9000-90-2
E.C. 3.2.1.1

Product Description

α -Amylase isolated from porcine pancreas is a glycoprotein.¹ It is a single polypeptide chain of ~475 residues containing 2 SH groups and four disulfide bridges and a tightly bound Ca^{2+} necessary for stability.^{2,3} Chloride ions are necessary for activity and stability.⁴ The pH range for activity is 5.5 to 8.0, with the pH optimum at 7.⁵

α -Amylase hydrolyzes the $\alpha(1\rightarrow4)$ glucan linkages in polysaccharides of three or more $\alpha(1\rightarrow4)$ linked D-glucose units. The $\alpha(1\rightarrow6)$ bond is not hydrolyzed. Starch or glycogen, the "natural" substrates, can be replaced to a limited extent by low molecular weight compounds.⁶

Molecular Weight: 51–54 kDa.⁷

Unit Definition: One unit will liberate 1.0 mg of maltose from starch in 3 minutes at pH 6.9 at 20 °C.

This product contains ~90% lactose by weight.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

The product is soluble in water (1 mg/ml).

Storage/Stability

Store the product at 2–8 °C.

An α -amylase solution (25 mM Tris-HCl, pH 7.5, with 100 mM KCl) is stable at 0 °C or –20 °C for at least 9 days. Another recommended storage condition is in 1 mM phosphate, pH 7.3, with 30 mM CaCl_2 at –15 °C.⁸

References

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MES,RXR,RBG,MAM 01/06-1

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