ONLINE ISSN : 1880-7291
PRINT ISSN : 1344-7882

Journal of Applied Glycoscience
Vol. 53 (2006) , No. 4 pp.273-275

[PDF (318K)] [References]

Purification and Characterization of Alkali-stable β-Amylase from Chinese Yam (Nagaimo) Tuber

Yogo Chiba[1)] and Takahiro Kuwashima[1)]

1) Faculty of Human Development and Culture, Fukushima University

(Received April 3, 2006)
(Accepted August 2, 2006)

An alkali-stable β-amylase was purified from Nagaimo, a cultivar of yam (*Dioscorea opposita* Thunb.) by hexadecyltrimethylammonium bromide treatment, ammonium sulfate fractionation, and two-step column chromatographic procedures on α-CD-Sepharose CL-4B and DEAE-Sephacel. Analysis by SDS-PAGE revealed the enzyme to be a monomeric protein with a 56 kDa molecular mass. This enzyme was stable for pH 4.0-12.0 at 4°C for 24 h. During two months, its activity remained about 40% at pH 9.5, but it fell below 20% at pH 5.0. Other properties such as optimum pH (5.6), and molecular mass resembled those of previously reported β-amylases. Thermal stability of this enzyme was not very high, either. From these results, this enzyme appears to be a good model for studying β-amylase stability.

Key words: β-Amylase, Chinese yam, alkali-stable

[PDF (318K)] [References]

Download Meta of Article[Help]
RIS
BibTeX

To cite this article:
Yogo Chiba and Takahiro Kuwashima: Purification and Characterization of Alkali-stable β-Amylase from Chinese Yam (Nagaimo) Tuber . *J. Appl. Glycosci.*, **53**, 273-275 (2006) .