PURIFICATION OF GALACTOSIDASE FROM COCONUT KERNEL

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Two α -Galactosidase isoenzymes have been isolated from coconut kernel and characterized using sephadex column chromotography. The elution had been done using McIlvaine buffer (pH 5.5) containing KCl (Balasubramaniam *et al.* 1974). The purity of these enzymes have not been tested. In this study α -Galactosidase was eluted from the sephadex column using McIlvaine buffer (pH 5.5) without KCl. All the α -Galactosidase were eluted out in the low molecular weight isoenzyme form. α -Galactosidase recovery from the column was 23.6 percent of the original extract, the purity of the enzyme increasing 171 fold. The enzyme thus obtained was further purified by concentration using ultrafiltration and ultracentrifugation. At this stage 11.5 percent of the original enzyme was recovered while the purity increased to 512. This enzyme preparation when tested by polyachrylamide gel electrophoresis showed a single protein band which corresponded to the fluorescent band obtained by the action of α-Galactosidase on umbelliferyl α -D Galactoside. On cellulose acetate paper electrophoresis a single enzyme activity band was again obtained. As the protein concentration was too low, the corresponding protein band could not be detected.

References:

Balasubramaniam, K., Dey, P. M. & Pridham, S. B. (1974) Biochem. Soc. Trans. 2, 1128.