

Production and Partial Purification of Protease by Actinomycetes sp.

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Enzymes are biocatalysts obtained from plants, animals and microorganisms. Microbial enzymes are becoming important for its technical and economical advantages. Various kinds of microorganisms in nature degrade different type of proteins indicating the proteolytic capabilities of microorganisms.

About 80% of enzymes produced annually are simple hydrolytic enzymes, of which 60% are proteases. Different bacteria, fungi and actinomycetes are the major sources of microbial proteases. Extracellular proteases have high commercial value and multiple application in detergent, food, dairy, pharmaceutical, leather, diagnostic, waste management and silver recovery industries.

Here we consider the extra cellular protease which is secreted by Actinomycetes sp. This enzyme is free from most of the toxic agents, and it is considered as a safe/suitable protease for oral medication purposes. This study was aimed at selecting a Actinomycetes strain which yield high protease, a suitable pH and the medium (Plate assay method). High protease production was tested using different SSFs and LSFs. Protease isolation methods, conformation and their application in the medical and industrial fields are discussed.

Key words: Actinomycetes sp., Protease