

Microbial production of glutaminase enzyme

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ABSTRACT:

Enzymes are proteins highly specific in their actions on substrates and serve as biocatalysts. They are produced by cells in order to accelerate both the rate and specificity of metabolic reactions. Microbial enzymes are known for their unique characteristics over other sources due to their easy production on a commercial scale and stability. Different microorganisms are known to produce various enzymes such as bacteria, fungi and actinomycetes which produce a variety of extra-cellular and endo-cellular enzymes. Some of these actinomycetes enzymes have been isolated from the culture filtrates or the mycelium, concentrated and purified. Others have only been demonstrated in the mycelium of the organism. However, the ability to produce a variety of enzymes may be an attractive phenomenon in these microorganisms since they are nutritionally quite versatile. Microbial L-glutaminase has recently gained more attention due to its anticancer properties, in addition to its use as a flavor enhancer in food industry by increasing the amount of glutamic acid content in the fermented food .

Keywords:

Actinomycetes, Anticancer properties, Enzymes, Glutamic acid and L-Glutaminase.