Cellulase, Pectinase and Tannase Production from Cashew By-Products

Background

All the 3 enzymes Cellulase, Pectinase and Tannase are being produced from various resources and are commercially available. Most of this technology uses either sophisticated Fermentors or are time consuming methods. The resources for production could also be costly. These enzymes can be purchased by less cost compared to the existing market price. The newly invented method is cost effective and environmental friendly. The waste raw material from cashew industry can lead to a new source of income.

Benefits / Utility

This technology of production of enzymes from cashew by-products uses the very cheap SSF (solid state fermentation) technique; but at the same time highly productive and hence profitable. Hence no such big sophisticated fermentors will be required for the production. The technology finds its application in Food industry, Textile industry, Pharmaceuticals, Paper Industry etc; and hence marketing of the products will be much easier.

Country Context India

Scalability Pilot Scale Studies have been carried out. Small Scale as well as large scale up of the technologies is possible.

Business and Commercial Potential

Business and Market Potential: An estimated 8.5 lakh tonne of cashew shell are being generated annually in India. Most of it wasted away after extraction of CNSL. These Cashew Shell and Testa can be utilized for enzyme production. Hence large scale of enzyme production can be possible. The technology developed is cheaper and can easily be adapted. The Enzyme market for all the 3 enzymes are always emerging and hence business potential is huge. The technology finds its application in Food industry, Textile industry, Pharmaceuticals, Paper Industry etc; and hence marketing of the products will be much easier.

Limiting factors for large scale commercialization

The only limiting factor is that since the enzymes are already available in the market; the technology novelty is limited to its cheapness in production of enzymes and large scale production capabilities.

Potential investors to this technical innovation

Chemical Companies; that are interested in enzyme production and marketing. The technology finds its application in Food industry, Textile industry, Pharmaceuticals, Paper Industry etc; and hence marketing of the products will be much easier.

Social impact of the technology

This technology will help various industries to procure enzymes by less cost compared to the existing market price. The newly invented method is cost effective and environmental friendly. The waste raw material from cashew industry can lead to a foreign exchange earner.

Any other relevant information

Techno Economic Aspects

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