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Biopolymer production and its application in the field of aquaculture

D Latha

CMS College of Science and Commerce, India

Biodegradable plastics derived from biomass have recently gained much attention from the public because they are synthesized from renewable raw materials. PHB is one such biopolymer. The objective of this study was to isolate highest amount of PHB accumulating *Bacillus* sp. and to check its application in aquaculture field. Among 10 soil isolates, only one isolate showed positive result for PHB accumulation by rapid screening method using Sudan black B stain. The soil isolate was identified as *Bacillus subtilis* by morphological, biochemical, physiological and molecular characterization, which was deposited in the Genbank with accession number JQ360585. Various agro-industrial residues, forest residues and industrial wastes were used as a carbon source in the production medium and the maximum PHB accumulation was observed in industrial waste (activated sludge). The extracted PHB was used to protect the aquacultures (*Catla catla* and *Scomber japonicus*) against the infection caused by *Aeromonas* sp. and *Vibrio* sp. by *in vivo* challenge test.

Biography

D Latha, M Sc, M-Phil, PGDBI, PhD is working as an Associate Professor at CMS College of Science and Commerce, Coimbatore. She worked as a Production-in-charge and Quality Controller in tetanus vaccine production under WHO consultant, Dr. G V J A Harshavardhan in Vaccine Institute, Wellington, Coonoor, from 1990-1995. She is a Member of Board of studies in Karpagam College of Arts and Science, Sri Krishna College of Arts and Science and RVS college of Arts and Science. She is presently guiding 8 M-Phil and 2 PhD scholars in Microbiology. She has published 15 research articles in both national and international journals. A UGC minor project was sanctioned in 2012, titled "Biopolymer production in *Actinomycetes* sp. and its application in aquaculture". She delivered a guest lecture; "Bio-plastic production from *Bacillus* sp" in 2013 at RVS college of Arts and Science, Coimbatore, India.

lathagangolly@rediffmail.com

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