

Exploration of microbial biodiversity for Pectinase production

Vibha Bhardwaj, Mayank Dave and Neelam Garg

Department of Microbiology, Kurukshetra University, India

The variety of life forms and its many processes constitute biodiversity. Humanity is dependent on biodiversity for all its requirements. Presently great concern has been voiced for the present state of biodiversity. Though the concept of biodiversity has been known to man since times he observed the living beings around him. Most people appreciate the beauty of natural world, but awareness of Biodiversity, how seriously it is threatened, and the implications for human well being, is alarmingly low. The Microbial Biodiversity include bacteria, protozoan, fungi, unicellular algae and constitute the most extraordinary reservoir of life in biosphere. The microbial biodiversity is important on many grounds ranging from aesthetic considerations to its usefulness, particularly for biotechnology. The fastest growing segments are enzymes for feed and fuel production. Vast varieties of micro-organisms are present in the environment which can be exploited for the utilization of waste material. For example in the processing of citrus fruits, a large proportion of the produce goes waste in the form of peel, pulp and seeds. Citrus peel is rich in carbohydrate, protein and pectin. Pectin, a major component of citrus peel, is a polymer of galacturonic acid residues connected by α -1, 4 glycosidic linkages. Pectin is hydrolysed by Pectinase enzymes produced extracellularly by micro flora available in our natural environment. With the help of these pectinases enzyme, micro-organisms can convert citrus wastes into sugars which can be used for food and value added products. These micro-organisms can also be exploited for production of pectinases which is an industrially important enzyme and have potential applications in fruit, paper, textile, coffee and tea fermentation industries. In order to isolate a potential Pectinase producer we are screening the microbial biodiversity. From time immemorial, nature has feed us, cured us, and protected us. But today the role have switched. We need to feed nature, we need to cure it and protect it, if we want to secure a healthy and prosperous future for our children.

Biography

Vibha bhardwaj is a research scholar in microbiology from Kurukshetra University Haryana, India. She is the member of Indian Women Scientist Association, National Environmentalists Association, Sustainable Development and Environment Protection. She has published 10 papers in reputed journals and also chapters in International books. She got Mahila Gaurav Puraskar {Women's pride Award} from Government of India. She has presented papers in International conferences and got prizes. She had worked in Forensic Department, Hospitals & Pharmaceuticals

vibha.bhardwaj1612@yahoo.com