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Utilization of fruit wastes for the production of Single Cell Protein from Yeast

• **Aparajita** • **Iti** • **Saumya**
• **Jaya Philip**

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Corresponding Author : Jaya Philip

Abstract : *In the present study, yeast was grown on various fruit wastes such as banana peel, pineapple peel, orange peel, and sugarcane bagasse for the production of single cell protein. The utilization of fruit wastes for SCP production from Yeast is economical, easy to obtain in crude form, nutritive and can be made available as a food or feed additive to increase the nutritional value. A comparative study of SCP from fruit wastes revealed that orange peel generates highest amount of protein, followed by that of pineapple peel, sugarcane bagasse and banana peel respectively with 23.9%, 22.5%, 21.2% and 16.2% crude protein. Since disposal of wastes is a serious problem and their deposition poses health hazard for all living beings, utilization of these wastes will help in waste management. Besides this SCP may to some extent solve the problem of shortage of protein rich food.*

Key words: *Saccharomyces cerevisiae, Single Cell Protein, Fruit wastes, Food and feed additive.*

Aparajita
B.Sc. III year, Industrial Microbiology (Hons.),
Session: 2011-2014, Patna Women's College,
Patna University, Patna, Bihar, India

Iti
B.Sc. III year, Industrial Microbiology (Hons.),
Session: 2011-2014, Patna Women's College,
Patna University, Patna, Bihar, India

Saumya
B.Sc. III year, Industrial Microbiology (Hons.),
Session: 2011-2014, Patna Women's College,
Patna University, Patna, Bihar, India

Jaya Philip
Assistant Professor, Deptt. of Industrial Microbiology,
Patna Women's College, Bailey Road,
Patna–800 001, Bihar, India
E-mail : jayaphilipmicrobio@gmail.com

Introduction :

The increasing demand for food and feed protein spurred the search for non-conventional protein sources to supplement the available protein source thereby a great deal of interest has been focused on the potential agricultural wastes to microbial protein or SCP. Single Cell Protein is a dehydrated cell consisting of mixture of proteins (50%), lipids, carbohydrates, nucleic acids, inorganic compounds and a variety of other non protein nitrogenous compounds such as vitamins. SCP refers to the total protein content from dried microbial cultures. The term was coined in 1966 by Carol L Wilson.