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Optimization of Upstream Conditions for Preparing Cost Effective Probiotics

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Incorporation of probiotic organisms into dairy food items to increase the nutritional status with the added therapeutic characteristics is practiced worldwide. Yogurts, milk, frozen yogurts and ice cream are enriched by adding probiotic organisms in countries like Japan, USA, Australia and Europe. Probiotics are generally mono or mixed cultures of live microorganisms which form the major component of the gut flora (e.g., *Lactobacilli*, *Bifidobacteria*). Probiotics, when ingested beneficially, affect the host by replenishing the depleted gut microflora, which may have occurred due to the use of antibiotics, illness and stress, travel or lifestyle changes and also by improving the properties of the indigenous microflora of the host. Microbial strains for probiotic use must be representative of microorganisms that are generally recognized as safe microbes. In the present study, efforts were made for preparing *Lactobacillus* biomass using cheese whey as nutrient medium for generating the probiotic culture. Efforts have been made to replace MRS medium with cheese whey powder for growing *Lactobacillus* culture. Using 30% (w/v) cheese whey powder as nutrient medium, we are able to obtain 0.1 kg *Lactobacillus* biomass per litre of nutrient medium.

Biography

Sourish Bhattacharya has completed his B. Tech in Biotechnology from West Bengal University of Technology and M.Tech in Fermentation Technology from Institute of Chemical Technology, Mumbai and PhD from AcSIR-CSMCRI. Presently he is working as a Scientist at CSIR-Central Salt and Marine Chemicals Research Institute, India. He is having a strong background in the area of biopolymers for therapeutic applications and nutraceuticals. He has published 17 papers, 2 book chapters and 2 patents to his credit.

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