



Probiotics: natural preservatives to ensure food safety in processed food industry

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Abstract:

Food processing industry increasingly recognise that ingredient lists must be cleansed of chemical preservatives to ensure “food safety”, and as a result many are investing heavily in innovation towards simpler, more natural methods of extending shelf-life and safeguarding against food pathogens. This has led to a dramatic rise in demand for organic means or bio-preservatives, natural microbiota and antimicrobials that extend the shelf-life and safety of foods without the use of chemical ingredients. In recent years, multiple approaches have emerged and use of probiotics is one among these. Probiotic bacteria are a natural control, and are incapable of harming humans. Some bio-preservation methods use yeasts to compete for nutrients or produce bacteriocins—proteinaceous toxins that can prevent the growth of other bacterial strains. Probiotics also occur naturally in many food products, and can allow for years of storage without refrigeration. Still, probiotics are novel as a functional additive to some foods. Other bio-preservatives use live microorganisms to create antibiotics that destroy pathogens. Also known as probiotics, these tend to be highly specific. For example, a bio-preservation agent that uses a lactic acid bacterial culture will create bacteriocins exclusively targeting listeria. These microorganism (probiotics) also produces Different compounds, such as organic acid, ethanol, hydrogen peroxide, bacteriocin and short antimicrobial peptides secreted by LAB found application in increasing shelf life of food. Apart from preservation of the food, they also provide many health benefits. Probiotics have been used for centuries in fermented dairy products but



now they are recognised gradually in agricultural produce, animal, fish, and plants production. Use of probiotic not only decrease the load of undesirable and pathogenic organism but they provide additional health benefits to the consumer.

Biography:

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Publication of speakers:

1. Samlesh Kumari and Ajay Yadav, An Emerging Technique for Shelf life Extension of Fresh Produce in India: Edible Coating, 2020 July
2. Samlesh Kumari and Rajeev Ranjan Thakur's, Edible Coating- To enhance shelf life and safety of fruits and vegetables
3. Samlesh Kumari and Rekha Rani's, Formulation of nutritional food products by utilizing Indian paneer whey, 2020 May

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