

Development and physio-chemical evaluation of fermented fruit pulp

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Introduction: Nutrients especially water-soluble vitamins are vital for health and the requirements can be only met by oral or intramuscular route. Diet plays an essential role in fulfilling daily vitamin dose; however, lack of awareness, poor nutrient absorption and indigestibility leads to deficiency of water-soluble vitamins. The microbial production of vitamins provides a naturally and economically interesting approach to improve the nutrient content in fermented foods. The benefit of fermented foods for consumer is not only limited to enhance B12 vitamins but also a good source of antioxidants and improved antimicrobial, probiotic and organoleptic qualities.

Materials and methods: Pineapple pulp was fermented with *Lactobacillus plantarum* and produce nutrient rich fruit probiotic. Different sucrose concentration was checked for different parameters such as duration, acidity and viable cell count. After 48 hrs of incubation at 37°C, the viable cell count was measured. Physico-chemical analysis was done for analysis of Protein, sugars and Titable acidity using standard protocols.

Results: Fermentation was done for 48 hrs and the CFU was observed 6.0 ± 0.1 to 8.10 ± 0.38 log CFU/mL, at the same, pH decreased to acidic (3.4-3.5). Phytochemical analysis showed that, the protein content 2.84 gm per 100 gm, reducing sugar 17.5%, Nonreducing sugar 5.83%, Total Sugar 23.5%, titrable acidity 0.373%.

Conclusion: It is possible to ferment pineapple pulp with *Lactobacillus plantarum* and create a delightful jelly. The entire product is formed by microbial fermentation, using Generally Recognized as Safe (GRAS) bacterium.

Keywords: Bio absorption, Microbial fermentation, Nutritional quality, *Lactobacilli*.

Biography

Mayuri Rastogi, BSc, MSc (Food and Nutrition, 2007) and pursuing PhD. She is working as assistant Professor in Sharda University from last 5 years. Prior to this she worked for 7 years in multispecialty hospitals as clinical Dietician. Her area of interest is micronutrients role and intervention studies.

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