

RESEARCH PAPER

Microencapsulation of micro-organisms and ginger extract

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Micro-organisms *Lactobacillus* sp. were encapsulated in 3 per cent sodium alginate solution and 0.2M calcium chloride solution. The capsules formed were hardened in calcium chloride solution. To determine the efficiency of bacteria they are released in phosphate buffer. Encapsulation efficiency of *Lactobacillus* was 91 per cent. This shows amount of ethanol production do not vary with encapsulation. Further the immobilization of lactic acid bacteria also shows that *Lactobacillus*, isolated from curd, encapsulated in alginate was further lyophilized for its storage. The ginger juice was also encapsulated. The wet and dry weight of the capsules produced in 100 rpm at 0.2 bar pressure was 53.71g and 4.63g, respectively whereas the wet weight and dry weight of capsules produced in 60 rpm and at 0.2bar pressure was 74.10g and 6.93g. Sensory analysis was done which shows that the capsules retained their odour and flavour. Thus, this study revealed that the encapsulation method helps in the preservation of microorganisms and other flavouring compound.

Key words : Micro-organisms, Lactobacillus, Encapsulation, Ginger

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