

# To study the effect of chicory root extract on physico-chemical properties of synbiotic yoghurt-ice cream

D. Kumar<sup>1</sup>, D.C. Rai<sup>1</sup>, T. Alam<sup>4</sup>, D. Rai<sup>2</sup>, A. Bhardwaj<sup>3</sup>

<sup>1</sup> Department of Animal Husbandry and Dairying, Banaras Hindu University, Varanasi, U.P., India

<sup>2</sup> Centre of Food Science and Technology, Banaras Hindu University, Varanasi, U.P., India

<sup>3</sup> Jamia Hamdard, Delhi, India

<sup>4</sup> Indian Institute of Packaging, New Delhi

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## Abstract

The study was designed to examine the effect of addition of chicory root extract on physico-chemical properties of multifunctional synbiotic yoghurt-ice cream. The probiotic *Lactobacillus acidophilus* (NCDC-195) cells were used in free as well as encapsulated form and chicory root extract was used as a prebiotic in three proportions (0, 3 and 6 % w/w) in this experimental study. Higher concentrations of chicory root (3 % and 6 %) significantly increased the overrun, first dripping time and complete melting time in all samples containing encapsulated cells ( $p < 0.05$ ). Supplementing with free/encapsulated form did not significantly ( $p < 0.05$ ) influence the acidity value of the samples. A significant difference ( $p < 0.05$ ) was observed in thiobarbituric acid (TBA) values too. The major component of chicory root extract in synbiotic yoghurt ice cream inhibits fat oxidation during storage, due to its anti-oxidant properties.

**Keywords:** Encapsulation, chicory root, yoghurt, ice cream, synbiotic