

STUDIES ON CURD TENSION OF DAHI PREPARED FROM COW AND BUFFALO MILK

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ABSTRACT

The present investigation entitled "Studies on curd tension of dahi prepared from cow and buffalo milk" was undertaken in the laboratory of the Department of Animal Science and Dairy Science, Post Graduate Institute, M.P.K.V., Rahuri. A composite sample of homogenized milk of cow and buffalo were collected from private milk producers. Three levels of sodium alginate viz; control, 0.1% and 0.2% were included in the study. Two strains of pure culture viz; LF-40 and *Lactobacillus acidophilus* and two types of packaging viz., plastic cups and earthen pots were used in the study. Dahi was prepared using the standard method under laboratory condition. Curd tension of each sample was determined as per procedure described by Chandrashekhar *et al.* (1957). The average curd tension in dahi prepared from buffalo milk was higher (43.44 g) than that prepared from cow milk (34.94 g). There was significant effect of starter culture on curd tension of dahi. The dahi obtained from milk inoculated with LF-40 has significantly higher curd tension than that of milk inoculated with *Lactobacillus acidophilus* culture. The highest value of curd tension was observed in dahi prepared by addition of 0.2% sodium alginate, followed by addition of 0.1% sodium alginate and sample without sodium alginate. The samples prepared in earthen pots had significantly higher curd tension than that prepared in plastic cups.

Key words : Dahi, Sodium alginate, Curd tension.

The production of fermented milk products is rapidly increasing in all major countries of the world. The fermented milk products like yoghurt, cultured buttermilks, acidophilus milk, kefir etc. are known throughout the world for their taste, nutritive value and therapeutic properties. Dahi is one of the important milk product. Its importance in daily diet of Indian people has been well recognized from vedic times. Dahi has been recommended for curing dyspepsia and dysentery and also has anticholesterolenic, anticarcinogenic value.

In India, 7.1 per cent of the total annual milk production is utilized for dahi making (Shreshtra and Gupta, 2001) but it is mostly conceived to individual household and sweets shops without paying much attention on its quality. Now a days with fast commercialization of food processing unit, large dairy farm and small as well as big manufactures in the country have started production of fermented milk products specially dahi and youghurt. In order to have a production of uniform quality, all factors of production are required to be standardized (i.e. binding, gelling, thickening) by using cheap stabilizer like gelatine, sodium alginate, hydrocolloids, gums, starches and other derivatives have been tried for preparing fermented milk

products to improve their body and texture characteristics and reduce wheying off (curd tension). The purpose to add stabilizer is to improve the body consistency and viscosity of dahi. The present investigation is therefore, was attempted to study the effect of various treatments on curd tension of dahi to overcome wheying off of dahi with improvement in its viscosity and consistency with selecting its packaging material.

MATERIALS AND METHODS

The present investigation was carried out in the laboratory of Department of Animal Science and Dairy Science, Post Graduate Institute, Mahatma Phule Krishi Vidyapeeth, Rahuri during the year 2001-02. The composite samples of cow and buffalo milk were procured separately from private dairy producers. For each trial, 200 g of cow and buffalo milk was used separately for dahi preparation. Milk samples were kept in convient sized stainless steel vessels for boiling.

For preparation of dahi, the procedure given by De (1985) and Gupta (2000) were modified and adopted. However, already homogenized milk samples were preheated to 30 ± 1 °C before addition of stabilizer. Three levels of stabilizer i.e. Control (S_1), 0.1% (S_2) and 0.2% (S_3) were included in the experimental trials. The treated