Preparation of functional paneer from buffalo milk blended with coconut milk

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ABSTRACT : With the current upward trend in national and international health awareness among the consumers, the demand for functional food has increased. This has forced the food industry for launching indigenous dairy products in the market with acceptable sensory characteristics. The present study was undertaken with different levels (95:05, 90:10, 85:15) of buffalo milk and coconut milk. The product was analyzed for organoleptic attributes (taste and flavour, colour and appearance, body and texture) by trained panelist using 9 point hedonic scale. Chemical quality (moisture, fat, protein, total solids, yield) and microbial quality (SPC, yeast and mould, coliform) were also analyzed. The coconut paneer with 90:10 ratio of buffalo milk and coconut milk was found to be best among others. Thus as far as product acceptability judged by organoleptic evaluation the treatment can be rated as $T_0 > T_1 > T_2 > T_3$.

KEY WORDS : Paneer, Buffalo milk, Coconut milk, Functional paneer

INTRODUCTION

Paneer is highly popular traditional Indian Dairy product which is obtained by acid and heat coagulation of milk. Good quality paneer is characterized by a white colour, sweetish mildly acidic and nutty flavour, spongy body and a close knit structure. Paneer is highly nutritious since it remains about 90 per cent fat and protein, 50 per cent minerals and 10 per cent lactose of the original milk. About 5 per cent of the total milk produced in India is converted to paneer (Mathur, 1995). Paneer is nutritious and wholesome food. It provides one of the methods of conserving, preserving and prolonging shelf-life of milk solids in highly concentrated form.

Coconut is an indispensible ingredient in many of the traditional cuisines of Southeast Asian countries including India. Fat in coconut is similar to fat in mother's milk and have similar nutritional effects. Coconut fat helps to maintain a healthy ratio of omega-6 (w-6) and omega-3 (w-3) fatty acids, when consumed as a part of a diet. In the present study, coconut milk was used for the preparation of Paneer in various combinations with buffalo milk for making value added product using the technique of manufacture as recommended by Venketeshwaria *et al.* (2003).

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MATERIALS AND METHODS

First of all coconut milk was prepared from fresh coconut kernels. It was then standardized to 6 per cent fat and 9 per cent SNF. Now blending of buffalo milk and coconut milk was done in 95:05 (T_1), 90:10 (T_2) and 85:15 (T_3) ratio. The blended milk was then heated at 82°C and cooled at 72°C. It was then coagulated with 2 per cent citric acid. Whey was then drained off from the curd and sent for hooping and pressing. After taking it out, the product was dipped in chilled water (4-5°C) for 2-3 hours. Thus, the product was ready to serve. The samples were analyzed for physio-chemical, microbial and organoleptic qualities as per procedure laid down by Manual in Dairy Chemistry (1972) and Dairy Microbiology (1972).

RESULTS AND DISCUSSION

The data collected on different aspects as per plan were tabulated and statistically analyzed as per Chandel (1991). Table 1 shows the average data obtained on different parameters.

Physico-chemical properties:

The highest mean for fat content in coconut milk blended with paneer was found in T_3-27.64, followed by T_2(26.78), T_1(26.32) and T_0(26.04). The treatments varied significantly due to the addition of coconut milk. The highest mean for total solid content was found in T_0=48.06, followed by T_1(47.31),