

Production of New Dairy Product, “*Yogocurd*”: A Development Through Combination of Yoghurt and Curd

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Introduction

Milk is an essential component of the human diet and many dairy products are available in the market with different forms of value addition. Yoghurt is one of the most popular fermented dairy products produced from cow milk which suits for the palate of most consumers due to its unique sensory qualities. Curd is the main fermented product produced from buffalo milk in Sri Lanka with excellent market demand. Both, yoghurt and curd can uplift the shelf life of the milk from one day to approximately one week. Also these products have the ability to attract consumers who do not like to drink fresh milk.

Yoghurt and curd are usually found in the market and consumed as unique products separately. Moreover, the raw materials, fermentative bacteria, incubation time, temperature, storage conditions and the sensory qualities of these two products are far different. The *Yogocurd* is an attempt to develop a dairy product with two layers of yoghurt and curd which are separated by a thick colorful jelly layer within one container. The final product of this research, *Yogocurd* is a new dairy product, which consumers could enjoy the sensory and nutritional qualities of both yoghurt and curd in one cup instead of buying two products separately.

Methodology

A transparent cup was used to prepare *Yogocurd* that could increase the attractiveness by exhibiting all three differently colored layers. First yoghurt mixture was prepared using cow milk and one third of the cup is filled with it. Then it was incubated at 43 °C for 3 hours and kept in a refrigerator until it gains the precise texture and consistency of the yoghurt. Afterwards, a warm colorful jelly liquid layer was poured on to the yoghurt layer and allowed to set in a refrigerator. Finally, a curd mixture which is prepared from buffalo milk was poured on to the jelly layer and it was incubated at room temperature for 4 hours.

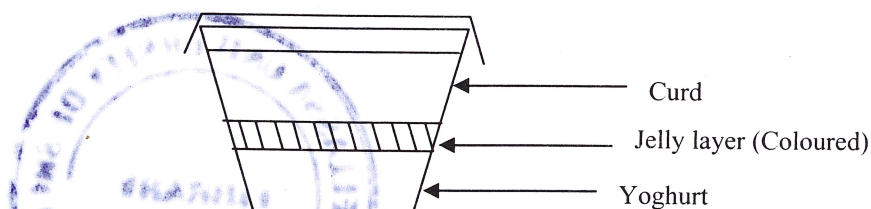


Figure 01: Arrangement of three layers of the *Yogocurd*

The product was evaluated for sensory attributes using a sensory panel of 50 members which represented different age groups. The main sensory attributes used in the evaluation were taste, aroma, colour, texture and appearance of the product. Sensory evaluation was done for each batch of the product and the results were used to improve the quality of the product. According to comments of the sensory panel several changes were done and finally “*yogocurd*” was developed.

The final product was subjected to an evaluation of the shelf life under refrigerated condition and expiry date was decided as two days before the unacceptable point of above sensory qualities.

Results

As a main parameter of the sensory evaluation, data was collected on overall preference of the new product to get an idea about whether this product can be marketed or not. The following results were obtained for overall consumer preference on *Yogocurd* from different age groups.

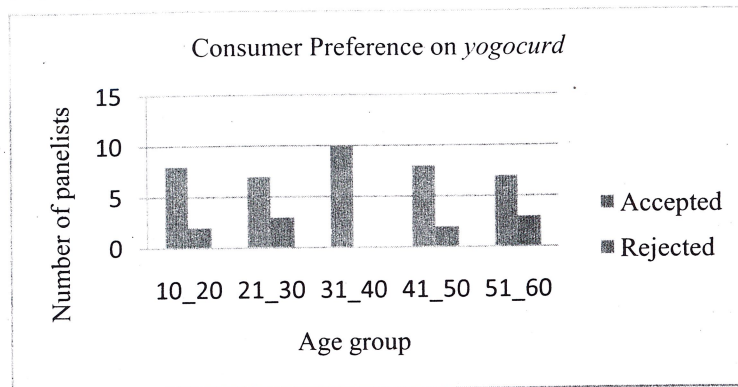


Figure 02: Overall preferences of different sensory attributes according to age

The main selected sensory attributes, taste, texture, colour, aroma and appearance of the final product were evaluated to analyze whether these sensory qualities of the products are in consumer acceptable standard.

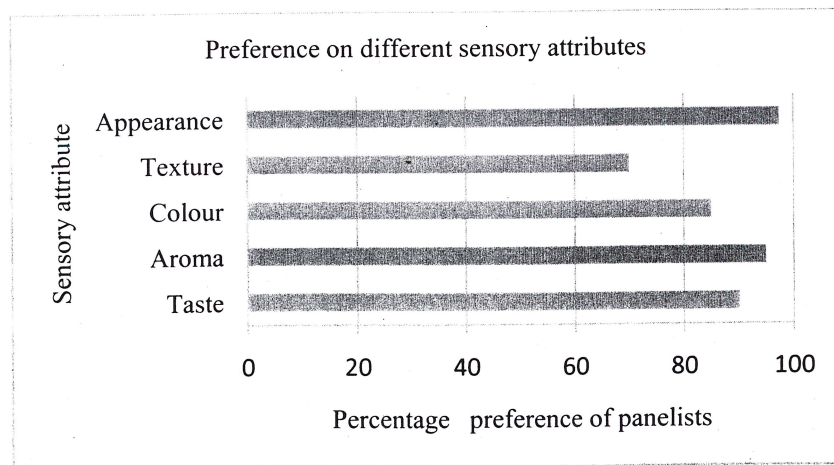


Figure 03: Preferences of panelists on different sensory attributes

The keeping quality of the product was determined by counting the number of days that the product could be kept in refrigerated condition without deterioration of quality.

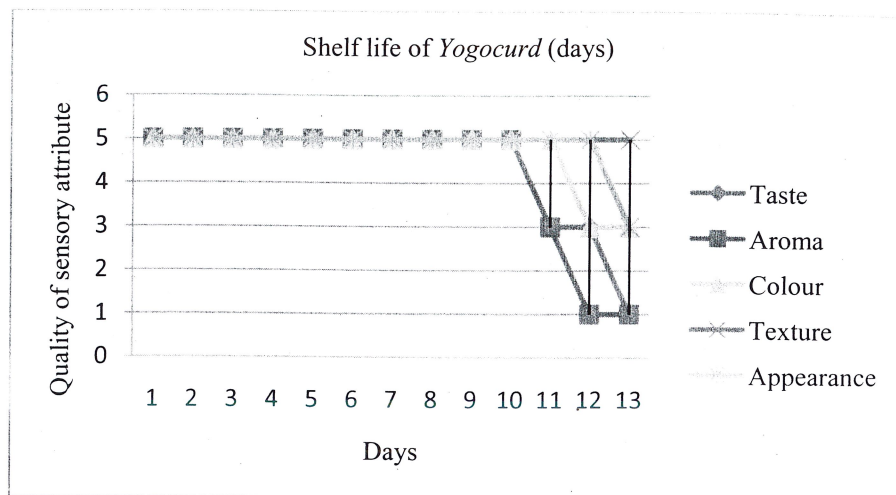


Figure 04: Changing of quality parameters with the time

Discussion

According to the results of the Sensory evaluation, 80% of total panelists preferred to consume *Yogocurd* and accepted it as a marketable dairy product. Majority of preferred panelists represented 31-40 age group and all members in this group have accepted the product. Therefore, marketing of this product could be targeted on the people in this age category.

Preference of each quality parameters varied according to the panelists. Appearance and aroma were highly preferred by the panelists and were 97.5% and 95% respectively. Texture and taste were not preferred but majority has accepted them.

Taste and aroma of the product started to deteriorate after 10th day in storage then colour deteriorated. Appearance and the texture remained without a change until 12th day.

Conclusions

Yogocurd showed that yoghurt and curd could be produced simultaneously in one container by exposing raw materials to required conditions separately and carefully. *Yogocurd* combines three different tastes within one cup and consumers can enjoy yoghurt, curd and jelly as one product without buying those separately. Shelf life of the product is 10 days under refrigerated condition. The estimated market price which is taken from the comments of panelists and cost estimation is Rs. 25 for 80 mL cup. The new dairy product, *Yogocurd* produced through the combination of yoghurt and curd can be produced and marketed as a new product in dairy industry.

References

Potter, N.N. and J. H. Hotchkiss 1996. Fermentation and Other Uses of Microorganisms, Food Science. Fifth Edition. CBS Publishers & Distributers Pvt. Ltd., New Delhi. pages 264-275.