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Cost of production of designed colostrum cake blended with coconut milk

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Abstract

A study on Process standardization for designed colostrum cake blended with coconut (*Cocos nucifera* L.) milk was carried out by using buffalo milk. Different combinations of colostrum mix ingredients were tried. The attempts have been made to study effect of different levels of coconut milk on colostrum cake. After organoleptic evaluation highest score was recorded by T₂ i.e. at 35 percent level of buffalo milk and 20 percent level of coconut milk. Lowest score was observed by T₅ i.e. 50 percent buffalo milk and 5 percent coconut milk. The cost of production for T₂ was 191.2 ₹ and for T₅ was 178.0 ₹.

Keywords: Designed colostrum cake, coconut milk, sensory evaluation, cost of production

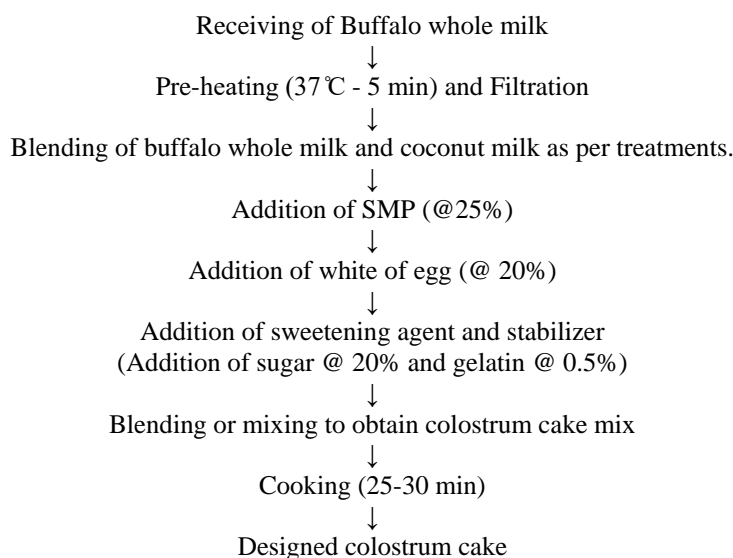
Introduction

The kharvas or colostrum cake is an indigenous milk product prepared from colostrum milk. Since many years ago it is prepared by adopting local procedure or recipe. i. e., by steam cooking of the mixture of colostrum milk admixed with normal milk, sugar and condiments such as cardamom, nutmeg. Thus, a smooth junket is formed which is then cut into pieces of desirable sizes and served as delicacy, either in hot or cold state.

Coconut is commonly known as “tree of life”. Coconut milk is an opaque, milky-white liquid extracted from the grated pulp of mature coconuts. Coconut milk obtained from the fresh coconut kernel had low protein and high fat content. The opacity and rich taste of coconut milk due to its high oil content, most of which is saturated fat. Now a days coconut milk becomes very popular. Coconut milk is valued both for its sweetness and its nutritious value. Its cultivation is largely confined to the coastal region of the country. Coconut production is 198.85 million nut in Maharashtra.

Extraction of coconut milk

Matured coconut was collected from instructional farm of Department of Horticulture, College of Agriculture, Dapoli and were cracked manually, black skin of wet coconut fruits was taken out, followed by granting of coconut. A small quantity of water was added in grated coconut and it was allowed to soak for 20 minutes. Water soaked grated coconut was blended with the help of mixer for 1 minute. Afterwards 100 ml of water was added and again it was blended into mixer for 1 minute. Finally the entire mixture was squeezed and was strained through the muslin cloths. (Mahale *et al.* 2011) ^[1].

Preparation of designed colostrum cake**Diagram 1:** Flow Diagram for Phase I

Sensory evaluation of any consumable product is best method of judging the acceptability of the product by the consumers. Designed colostrum cake prepared by using various combinations of buffalo milk and coconut milk was subjected to sensory evaluation for studying the characteristics like, colour and appearance, flavour, body and texture and overall

acceptability of the product by the panel of not less than eight semi trained judges by using "Nine Point Hedonic Scale". Each sample was bearing a code number so as to avoid its identity and have impartial results. The data pertaining to sensory evaluation of designed colostrum cake is given in Table.

Table 1: Mean score of designed colostrum cake (Phase I)

Treatments	Colour and appearance	Flavour	Body and texture	Overall acceptability
T ₁	7.24	7.08	7.33	7.29
T ₂	7.49	7.58	7.44	7.55
T ₃	7.25	6.96	7.41	7.46
T ₄	7.37	7.15	7.28	7.28
T ₅	7.24	6.99	7.15	7.43

Table 2: Production cost of designed colostrum cake

Treatments		T ₁	T ₂	T ₃	T ₄	T ₅
Buffalo Milk	Qty. (gm)	30	35	40	45	50
	Cost (₹)	1.56	1.82	2.08	2.34	2.6
Coconut milk	Qty. (g)	25	20	15	10	05
	Cost (₹)	3.5	2.8	2.1	1.4	0.7
White of egg	Qty. (g)	20	20	20	20	20
	Cost (₹)	4	4	4	4	4
Skim milk powder	Qty. (g)	25	25	25	25	25
	Cost (₹)	10	10	10	10	10
Gelatin	Qty. (g)	0.5	0.5	0.5	0.5	0.5
	Cost (₹)	0.5	0.5	0.5	0.5	0.5
Total qty. colostrum cake prepared (gm)		100	100	100	100	100
Total cost of colostrum cake (₹)		19.56	19.12	18.68	18.24	17.8
Production cost of colostrum cake per kg. (₹)		195.6	191.2	186.8	182.4	178.0

Rate of ingredients

1	Buffalo Milk: ₹ 52/lit	2	Coconut milk: ₹140/kg
3	White of egg: 5 ₹/egg	4	Gelatin: ₹ 1000/kg
5	Skim milk powder: ₹ 400/kg		

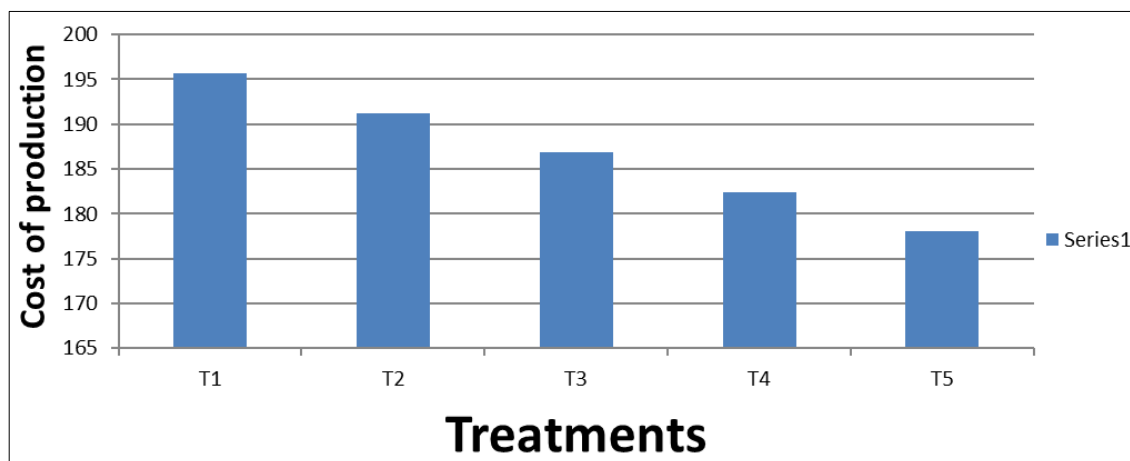


Fig 1: Cost of production of design colostrum cake blended with coconut milk

While calculating the cost of designed colostrum cake production, the cost of material, based on added ingredients only was considered. From above table it can be said that the cost of designed colostrum cake prepared by using different levels of buffalo milk and coconut milk was different from treatment to treatment.

The highest cost (195.6 ₹/kg) was recorded in case of designed colostrum cake prepared with 25 percent coconut milk and 30 percent buffalo (T₁) while lowest cost (178.0 ₹/kg) was recorded in case of designed colostrum cake prepared with 50 percent buffalo milk and 5 percent coconut milk (T₅). Cost recorded by most acceptable treatment (T₂) *i.e.* 35 percent buffalo milk and 20 percent coconut milk was (191.2 ₹/kg). It was observed that the cost of designed colostrum cake was increased with the increased in coconut milk.

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