



Sensory evaluation of newly prepared herbal milk cake

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Abstract

Numerous businesses and cooperative federations have begun their organised manufacture of traditional sweetmeats in an effort to capitalise on the enormous and promising potential for improvement of these products. A classic milk fudge from India called Milk Cake is created with milk, sugar, ghee, and an acidic ingredient like lemon juice. The milk is simmered until it is reduced to 1/3 of its original volume in order to make traditional milk cake. The milk is then added to the acidic substance to curdle it and give it a gritty texture. This study's objectives were to make milk cake using herbal sugar and assess the milk cake's general acceptability. After evaluating overall acceptability, it was discovered that the Milk cake sample T2 treatment combination had the highest mean for overall acceptability score (8.564). In the majority of treatment combinations, the overall acceptability score varied greatly.

Keywords: milk cake, sensory evaluation, cooperative federations

Introduction

Native concentrated milk products from Northern India include Rabri, Khurchan, Khoa, and Milk Cake. Indians love milk-based sweets like gulabjamun, laddoo, burfi, as well as Bengali treats like rasgoolia and Sandesh (Chawla *et al.*, 2014) [1]. A common milk-based food item in northern India is milk cake. Danedar Khoa and sugar are used in its preparation, although some of the mass is caramelised more intensely and sandwiched between the less caramelised portions (Landge *et al.*, 2009) [3]. The product is crucial from a financial and nutritional standpoint. Well-defined grains and a greater caramel flavour describe the product (Chawla *et al.*, 2022) [2].

Dairy communities in India and throughout the world are becoming more and more enamoured with traditional Indian milk products (Oh *et al.*, 2006) [5]. The automated and hygienic distribution of local milk products has been studied by a number of public and commercial entities. Khoa, made from native milk products, is a crucial component of delicious sweets (Liu *et al.*, 2018) [4].

Depending on where in the world you are, milk is typically consumed in very different ways. Milk is viewed as a complete food when consumed by humans. All of the nutrients that the body requires for optimum nourishment are found in milk. Milk can either be consumed raw or processed into a variety of milk products, including condensed milk, coagulated milk, fermented milk, fat-rich milk, and frozen milk. The sociocultural life of the Indian subcontinent is inextricably linked to milk sweets. In a variety of traditional Indian sweets, khoa is frequently used as a basic component in India. It is rich in lactose, which provides energy, bone-building minerals, muscle-building protein, and fat. One of the most well-liked khoa-based desserts in India is burfi (Oh *et al.*, 2006) [5]. India's special adaptability to the khoa-based sweet. A staggering number of burfi variants have emerged as a result of khoa's

exceptional capacity to blend with a wide range of meals in terms of taste, body, and texture. In India, individuals from all social classes frequently eat vegetables like bottle gourd, scarlet pumpkin, elephant foot yam, and others. The elephant foot yam lowers blood pressure and cholesterol levels in the body. Cancer, weight loss, diarrhea, stomach pain, and gas are all treated with it (Tian *et al.*, 2020) [7]. It is a strong antioxidant that aids in the prevention of cardiovascular disease and stroke as well as the slowing of the ageing process. Today, no one utilises vegetables; only fruits are used by local farmers to make burfi. As a result, in this study, burfi was made with veggies like elephant foot yam pulp. Because of the high total solids, the product's shelf life may be extended (Singh *et al.*, 2005) [6]. The present research study was conducted to prepare milk cake by using herbal sugar and to evaluate overall acceptability of milk cake.

Materials and methods

Procurement and collection of ingredients

- **Milk:** Milk was collected from local market.
- **Herbal sugar:** It was procured from the local market.
- **Ghee:** Ghee was collected from local market.
- **Alum:** Alum was collected from local market.

Sensory evaluation was carried out using 9-point hedonic scale

1. Colour and Appearance.
2. Body and Texture.
3. Flavour & Taste.
4. Overall acceptability

Statistical analysis

Analysis of Variance (ANOVA) was used to statistically analyse the data at the 5% level.

Treatment combination

T0 (Control) = Milk Cake from buffalo milk (6% fat & 9% SNF).

T1 = buffalo milk + 3% herbal sugar

T2 = buffalo milk + 5% herbal sugar

T3 = buffalo milk + 10% herbal sugar

T4 = buffalo milk + 15% herbal sugar

Result and discussion

Overall acceptability of milk cake by using herbal sugar.

Table 1: Average of overall acceptability of milk cake by using herbal sugar.

Treatments	R1	R2	R3	R4	R5	Mean
T0	7.00	7.40	7.47	7.30	7.45	7.324
T1	7.69	7.80	7.42	7.82	7.71	7.688
T2	8.79	8.39	8.95	8.40	8.29	8.564
T3	8.40	8.49	8.21	8.39	8.40	8.378
T4	7.91	7.97	7.77	7.54	7.77	7.792

Table 2: ANOVA for overall acceptability of milk cake by using herbal sugar.

ANOVA Table						
Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F Tab	Result
Replications	4	0.039	0.007	1.479	2.53	NS
Treatments	5	2.279	0.437	2.864	1.84	S
Factor A (Sweet Potato)	2	1.958	1.845	21.858	2.76	S
Factor B (Foot Yam)	1	0.357	0.184	2.326	2.76	S
A X B	6	0.335	0.045	1.863	2.04	NS
Error	14	2.675	0.054	-	-	

S- Significant NS- Non-Significant

The significant differences were then statistically analysed to determine the C.D. between and within the various treatment combinations.

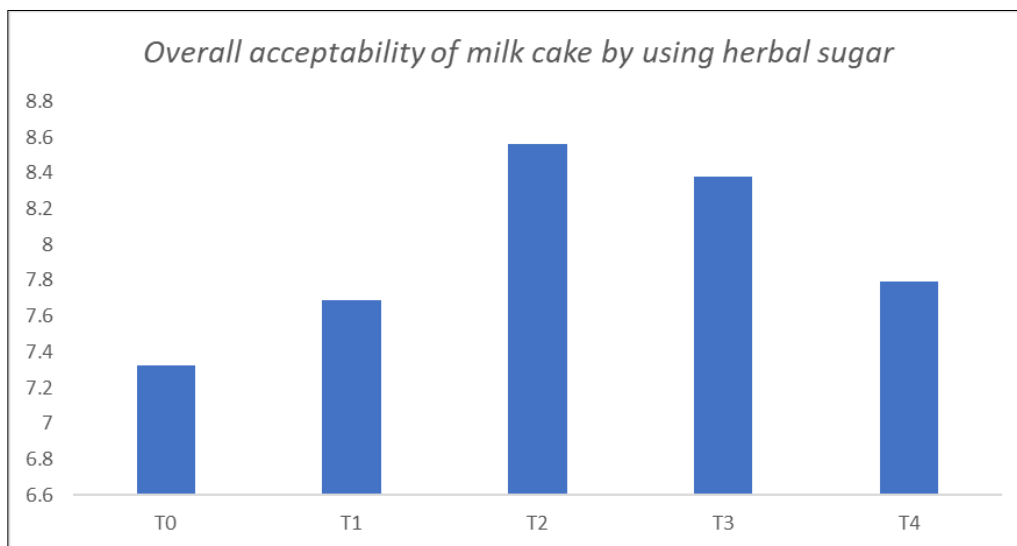


Fig 1: Average of overall acceptability of milk cake by using herbal sugar.

Conclusion

Highest mean for overall acceptability score (8.564) was recorded in the Milk cake sample T2 treatment combination. The overall acceptability score differed considerably in the majority of treatment combinations.

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