

Development of Blended Milk Based Desert

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Abstract: Shrikhand is one of the popular milk based desert. Many vegetarian preparations are made from it. Groundnut Milk Shrikhand prepared with the contribution of groundnut milk is rich in minerals and fats. It improves the energy supplement in anaemic patient and quality is nearly same to the standard one and is suitable to health conscious peoples. The Shrikhand was prepared by blending Chakka with sugar, cream and other ingredients like nut, flavour, colour etc to achieve the finished product of desired consistency and sensory attributes. The present study concluded that the desert prepared from Groundnut Milk was found to be best as compared to various combinations with respect to physico-chemical composition and sensory attributes.

Keywords : Chakka, Groundnut, Shrikhand, Sensory Attributes, Total Solid.

I. INTRODUCTION

Shrikhand is a semi soft sweetish sour, whole milk product prepared from lactic fermented curd. The curd is partially strained through a cloth to remove the whey & thus produce a solid mass called chakka. This chakka is mixed with the required amount of sugar & flavouring agents to yield Shrikhand. It is popular dessert because of its characteristics flavour, taste, palatability and possible therapeutic value (patil etal, 2003). It is popular Indian dairy product which is preferred to be served as chilled. All the Indigenous dairy products are very much tasty and rich in whey protein (Aneja etal 2002). Groundnut (*Arachis hypogaea*) is a crop of global importance for culinary purposes and in common English language usage. Peanuts are usually referred to as nuts (Patil etal 2006). Milk is a pale liquid produced by the mammary glands of mammals. It is a primary source of nutrition for infant before they are able to digest other types of foods. It has most of the health benefits such as Heart health, Healthy Bones & Teeth, Skin care etc. (Rathore etal 2007).

Sugar is sucrose, a carbohydrate found in every fruit and

vegetable and are the abundant bio-molecule on the planet. They are the major component of our diet and structural component of nucleic acid (Gavane,etal 2010). Cardamom is the queen of spices. Ground cardamom seed mixed with ginger (Adark), clove and coriander is an effective remedy for indigestion, In India cardamom is usually used to treat infection in teeth and gums and to prevent and treat throat troubles, inflammation of eyelids & digestive disorders (Hinds etal 2013).

Materials& Methods

Following raw materials were used in the manufacture of Shrikand, Groundnut, Cow milk, Sugar, cardamom, stabilizer, sweetners and flavouring agents etc. All these raw materials were purchased from the local market of Amravati City. Chemicals and Reagents were of AR standard grades.

Methods

a) Standard methods were used for the determination of acidity (Patil etal 2005), Total solids (Holzapfel etal 1998), moisture & proteins (Harrigan & Cance 2006), Fat (Jogdand etal 1991) etc.

b) Preparation of Shrikand

Shrikand was manufactured from cow- Groundnut milk blend & standardized at 4 % fat & 8% SNF. Milk was heated at 85°C, for 30 minutes, cooled to 28°C and inoculated by starter culture. (at the rate of 1.5%) & incubated at 28°C -30°C for 10-12 hour until firm coagulum was formed. It was then crushed and transferred to muslin cloth & pressed in hoop for expulsion of whey, 4-6 hour. The semi solid mass left after the drainage of Whey is called Chakka, the base for Shrikand (Desai etal 1987). Samples A, B, C were prepared by using peanut milk chakka as 40%,50% & 70 % and cow milk chakka as 60%, 50% and 30% respectively. Other ingredients were kept constant (Table 1). It was packed in preformed polystyrene cups of 100 gm each and kept for sensory evaluation.

Table No.1 Shrikand with various blends of chakka.

Contents	Quantity (g.)		
	A	B	C
Samples			
Groundnut milk chakka	40.00	50.00	70.00
Cow milk chakka	60.00	50.00	30.00
Sugar	50.00	50.00	50.00
Cardamom	2.00	2.00	2.00

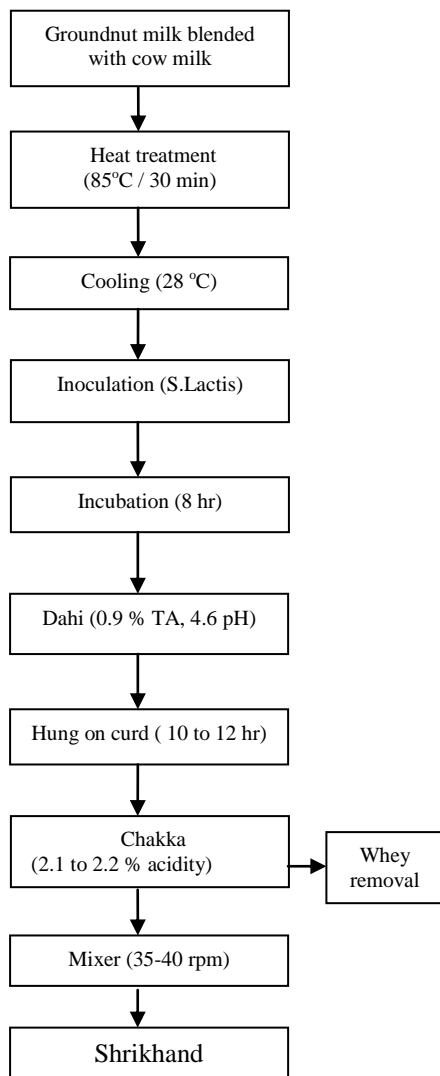


Figure 1: Preparation of Shrikand

Sensory Analysis

The blends were tasted by panel of Six semi trained Judges from students and teachers of Department of Chemical Technology. Samples were tasted for color, flavour, sweetness, texture, mouthfeel & overall acceptability by 9-point hedonic rating test in which 9 = liked extremely and 1 = disliked extremely (Patel & Chakraborty 2007).

Results

Table No.2 Physico-chemical characterization of raw material

Parameters (%)	Groundnut milk	Cow milk
Acidity	0.67	0.24
Moisture	88.00	87.00
Total Solids	14.00	11.40
Ash content	0.16	0.40
Fat	1.65	3.50

Table No.3 Physico-chemical characterization of Shrikhand

Parameters (%)	A	B	C	Standard Shrikand	Specification (FSSAI)
Acidity	1.11	1.08	1.06	1.10	1.05 to 1.10
Moisture	55.50	52.00	49.00	52.50	45.00 to 55.00
Total Solids	50.00	54.00	57.00	48.00	57.00 to 60.00
Ash content	0.47	0.52	0.68	0.53	0.49 to 0.55
Reducing Sugar	2.71	2.11	2.35	1.65	1.60 to 1.70
Fat	5.70	5.90	5.00	5.60	5.00 to 6.00
pH	3.82	3.90	3.89	4.50	4.40 to 4.60

Table No. 4 Sensory Evaluation of Shrikhand

Parameters	A	B	C	Standard Sample
Colour	8.00	8.00	7.00	9.00
Flavour	8.00	9.00	6.00	9.00
Texture	7.00	7.00	6.00	8.00
Sweetness	6.00	8.00	7.00	8.00
Mouth Feel	7.00	8.00	7.00	9.00
Overall acceptability	7.00	8.00	6.00	8.00

Discussion

Shrikand was prepared by blending Chakka with sugar, cream and other flavouring agent etc for desired composition, consistency and sensory qualities. Physico-chemical analysis showed that Groundnut shrikand have low pH due to lactic acid fermentation (Boghra and Mathur 2000) compared to Natural Shrikand Formulation containing 50% peanut chakka was found to be better as compared to other formulation. Addition of Groundnut milk decreases acidity due to decreased in lactic acid formation during fermentation. Sample 'B' had acidity near to standard sample. Total solid of sample was increased with Groundnut milk concentration in Shrikhand due to increased concentration of monosaccharides & oligosaccharides, due to hydrolysis of poly saccharides. (David and dauas 1991). Sensory analysis showed that Sample 'B' was similar in sensory attributes compared to standard one. The little differences were observed due to variations in the raw materials and methods of preparation (Isanga & Zhang, 2009).

Conclusion

Thus the Groundnut milk shrikhand prepared with contribution of Groundnut milk is rich in minerals & fat. Nutritional addition of Groundnut milk to the shrikhand proved to be superior in quality. Groundnut milk shrikhand improves the energy supplement in anaemic patient. The Groundnut milk is more stable, more palatable, nutritious and more appealing to consumers all over the world.

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