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Manufacturing technology and production cost of chhana podo by incorporation of mango (*Mangifera indica* L.) Pulp Cv. Alphonso

Snehal Kadam, Sachin Mule, Shamika Surve, Meenal Parhad and VS Dandekar

Abstract

A study on “Manufacture technology and production cost of chhana podo by incorporation of mango (*Mangifera indica* L.) Pulp Cv. Alphonso” was carried out by using cow milk. The attempts have been made to study effect of different levels of mango pulp (0, 10, 20, 30 and 40 %) on manufacture technology and production cost of chhana podo. Chhana podo prepared with 20 per cent mango pulp was found superior over rest of the treatments.

From the result of present investigation, it may be concluded that mango pulp could be successfully utilized for preparation of chhana podo. The most acceptable quality chhana podo can be prepared by using 20 per cent mango pulp and having production cost of ₹ 187.50/kg. Such flavoring did not appreciably affect the composition of chhana podo.

Keywords: Chhana podo, mango pulp, production cost

Introduction

Chhana Podo is an indigenous dairy product of eastern region of India which is known for special chhana-based delicacies. In eastern India, Orissa is the state where chhana podo is popular and is commonly prepared throughout the state.

It is a unique product of light brown colour with characteristic cooked flavour and rich taste. It has moderately spongy cake-like texture and soft body. The product is sweetish due to the addition of sugar and has rich fat taste and flavour. (Ghosh *et al.* 1998)^[2]

Chhana podo has been served to lord Jagannath in Puri as offering ‘Prasad’ for hundreds of years. Mr. Kelu Behera in Pahel and Pratihari family in Puri were the first to prepare podo delicacy (Ghosh *et al.* 2002)^[1]

Mango (*Mangifera indica* L.) is the most popular and choicest fruit of the tropics. It is also known as ‘King of fruits’ due to its high palatability, excellent taste, flavour and nutritive values. It is good source of vitamin A and C. In India more than thousand mango varieties are grown on commercial scale. Alphonso is one of the leading commercial cultivars of mango. It is the best variety for table as well as for processing purpose and is known as the “Pride of the Konkan”. Thus, for producing novelty milk product, the present investigation was undertaken to standardize the manufacturing technology of chhana podo by incorporation of alphonso mango pulp.

Material and Methods

For preparation of chhana podo, cow milk was received from Dairy farm, College of Agriculture, Dapoli, whereas alphonso mango pulp, baking powder, maida, ghee and sugar were purchased from the local market.

The chhana podo was prepared as per the procedure given by Ghosh (1998)^[2] with slight modifications. Some preliminary trials were conducted to determine the range and appropriate stage of mango pulp for incorporation in chhana podo. The trials with four levels of mango pulp (10, 20, 30 and 40 %) were selected on the basis of preliminary trials for further studies in six replications.

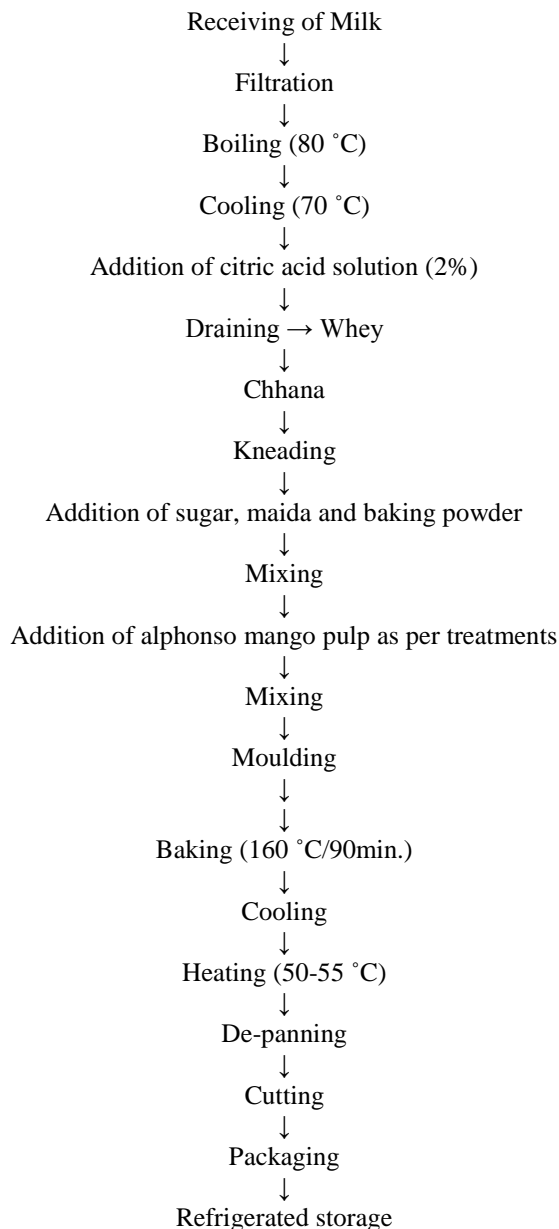


Fig 1: Flow diagram for preparation of chhana podo

Treatment Details

T₀ - No mango pulp (Control)

T₁ - Addition of mango pulp @ 10 per cent of chhana

T₂ - Addition of mango pulp @ 20 per cent of chhana

T₃ - Addition of mango pulp @ 30 per cent of chhana

T₄ - Addition of mango pulp @ 40 per cent of chhana

Results and Discussion

The cost of chhana podo production was worked out by considering the prevailing retail costs of ingredients only. The cost data are presented in Table: 1.

It is pointed out here that the data indicated the cost of

ingredients only, as other cost factors remained constant for all treatments, so those were not accounted for cost estimation. The increase in cost was mainly due to addition of mango pulp which was the costlier ingredient. However, as the improvement in acceptability and nutritional value of the product, its use seems beneficial. The highest cost (₹ 195.8/kg) was recorded in case of chhana podo prepared with 40 per cent mango pulp (T₄) while lowest cost (₹ 171.10/kg) was recorded in case of chhana podo without mango pulp (T₀). It was observed that the cost of chhana podo increased with the increase in the level of mango pulp. The production cost of most acceptable level i.e. T₂ was ₹ 187.50/kg.

Table 1: Cost of chhana podo production (based on cost of ingredients only)

Treatments	Quantity of chhana used (g)	Cost (₹)	Mango pulp		Sugar		Maida		Baking powder		Total qty of chhana podo prepared (g)	Total cost (₹)	Cost of chhana podo per 100 g (₹)	Total cost of chhana podo per kg (₹)
			Qty (g)	Cost (₹)	Qty (g)	Cost (₹)	Qty (g)	Cost (₹)	Qty (g)	Cost (₹)				
T ₀	200	40	-	-	50	1.6	10	0.28	4	1.76	255	43.64	17.11	171.10
T ₁	180	36	20	4.40	50	1.6	10	0.28	4	1.76	239	44.04	18.42	184.20
T ₂	160	32	40	8.80	50	1.6	10	0.28	4	1.76	237	44.44	18.75	187.50
T ₃	140	28	60	13.20	50	1.6	10	0.28	4	1.76	233	44.84	19.24	192.40
T ₄	120	24	80	17.60	50	1.6	10	0.28	4	1.76	231	45.24	19.58	195.80

Conclusion

From the result of present study it may be concluded that the mango pulp could be successfully utilized for preparation of chhana podo. Preparation of chhana podo with mango pulp improved sensory quality and acceptability of the product. The best acceptable quality chhana podo can be prepared by using 20 per cent mango pulp having production cost ₹187.50 per Kg.

References

1. Ghosh BC, Kulkarni S, Rao jK, Balasubramanyam BV. Market survey of *chhana podo* sold in Orissa, its characterization and utilization. *Indian Dairyman*. 2002; 54(6):37-41.
2. Ghosh BC, Rao JK, Kulkarni S. *Chhana podo*-baked indigenous delicacy. *Indian Dairyman*. 1998; 50(1):13.
3. IS: 6273 (Part – II) Guide for sensory evaluation of foods. Methods and Evaluation cards, Indian standards Institution, Manak Bhavan, New Delhi, India, 1971.
4. Patel HG, Upadhyay KG. Standardization of compositional recipe of chhana podo - level of sugar addition. *J of Food Sci. Technol*. 2003; 40(1):89-92.