

Effect of Pine-apple Pulp on Sensory and Chemical Properties of Burfi

Kapila Kamble, P.A.Kahate*, S.D.Chavan and V.M. Thakare

Department of Animal Husbandry and Dairying,
Dr. P.D.K.V., Akola -444 104 (M.S.), India.

* Corresponding author email : pakahate@rediffmail.com

Abstract

Burfi is a popular khoa based confection and it's contain considerable amount of milk solids. The manufacture of value added products by using seasonal fruit like pineapple. The present investigation shows that, the overall acceptability of the pineapple pulp Burfi prepared with 15 per cent pineapple pulp in treatment T4 (93.53) was highest and superior. Treatment T4 was more acceptable than all treatments in flavor, body texture and colour and appearance. The chemical composition of Burfi was affected due to addition of pineapple pulp to the fat, protein, total solids, moisture and ash.

Key words: Pineapple pulp, Burfi, Sensory quality, Milk Product.

Introduction

Milk is the traditional diet has varied greatly in different region of the world. Milk is regarded as a complete food in a human diet. Milk is provided all the nutrients essential for the nourishment of the human body. Milk is consume as a whole or by converting it into various milk products such as fermented milk product, coagulated and concentrated milk product. Milk sweets have been an inseparable part of the socio-cultural life in the Indian sub-continent. The reflect wealth and status of the people. In India khoa is widely as a base material for the preparation of variety of popular indigenous sweets. It contains fairly large quantities of muscle building protein, bone farming minerals and energy giving fat and lactose.

Burfi has been flavoured as one of the most popular khoa based sweet all over India. The unique adaptability of khoa in terms of its flavour, body and texture to blend with a wide range of food adjust had permitted development of an impressive array of Burfi varieties. In India for all the classes of people the fruits like papaya, orange, pineapple, guava etc are popular and regular consumed fruits. The manufacture of value added products like filled dairy products could be a better alternative. From the nutritional point of view pineapple fruit is a good source of sugar and various vitamins like A, B and C. it also contains calcium, phosphorus, iron, enzymes and bromine. Now-a-day local producers are using orange, mango, coconut etc in preparation of Burfi. In present study the pineapple

used for the Burfi. The product may have longer keeping quality due to high total solids and slight acidic nature of the product.

Materials and Methods

The present research work was undertaken at Department of Animal Husbandry and Dairying, Dr.PDKV., Akola during the year 2005-2006. The experiment was planned with six level of pineapple pulp by weight of khoa. 0% pineapple pulp (T1), 5% pineapple (T2), 10% pineapple pulp (T3), 15% pineapple pulp (T4), 20% pineapple pulp (T5) and 25% pineapple pulp (T6). Method of preparation of Burfi suggested by De (1980) was used with slight modification. The cow milk was concentrated to a pasty consistently by evaporating in open pan on gentle fire. The sugar at the rate of 30 per cent was added and heated gently till pot formation. When the product started to leave the sides of Karahi within 5 to 8 min. The pineapple pulp was added and further heated on low flame till the product again started to leave the side of Karahi. The product was taken off the flame and transferred into greasy tray and was allowed to cool and cut into desirable size.

Burfi was analyzed for fat, protein, total solids, moisture and ash as per BIS standard specifications. Sensory evaluation of Burfi was done by offering the product to the team of five judges to put the scale by modified 100 points numeric score card of khoa (Pal and Gupta, 1985) was used for judging different quality attributes of Burfi.

Table-1. Effect of pineapple pulp on sensory evaluation of Burfi

Treatment (% Pineapple pulp)	Flavor	Body and texture	Colour and appearance	Overall acceptability
T1 (0%)	41.12	31.88	16.84	89.84
T2 (5%)	41.40	31.44	17.40	90.00
T3 (10%)	41.84	32.44	18.40	91.85
T4 (15%)	42.16	32.52	18.72	93.52
T5 (20%)	40.12	31.20	17.84	89.00
T6 (25%)	39.68	31.16	17.56	88.40
SE (D)±	0.497	0.293	0.295	0.501
CD at 5%	1.036	0.611	0.615	1.045
'F' test	Sig.	Sig.	Sig.	Sig.

Results and Discussion

A) Sensory evaluation of pineapple Burfi

a) Flavour:

From the Table 1, it was observed that the flavour score was highest by treatment T4 (42.16) with 15 per cent pineapple pulp and significantly superior than T5 (40.12) and T6 (39.68) at par with T1 (41.12), T2 (41.40), T3 (41.84). The present investigations are agreement with similar attributes by Gargade (2004).

b) Body and texture:

According to body and texture concern the highest score obtained in treatment T3 (32.44) and T4 (32.52). The lowest score was obtained in T6 (31.15) contains moist, sticky and loose body.

c) Colour and appearance:

Colour and appearance of Burfi was significantly superior in treatment T4 (18.72) at par with treatments T3 (18.40). The present investigations are agreement with Kolhe (2003) indicate that increasing the level of papaya pulp 50 to 60 per cent affects the colour of the finished product.

d) Overall acceptability:

The overall acceptability of Burfi was significantly affected by addition of pineapple pulp. Burfi with treatment T4 (93.52) was significantly superior over rest of the treatment. Treatment T4 (93.52) has obtained highest score due to its flavour, body and texture and colour and appearance. The results of the present study are agreement with Kolhe (2003) and Wankhede (2005).

B) Effect of pineapple on chemical composition of Burfi

Table-1. Effect of pineapple pulp on sensory evaluation of Burfi

Treatment	Fat	Protein	Total solids	Moisture	Ash
T1 (0%)	21.95	14.91	83.53	16.85	3.02
T2 (5%)	18.92	14.39	82.44	17.55	2.92
T3 (10%)	18.15	13.69	82.05	17.96	2.85
T4 (15%)	17.13	13.09	81.57	18.42	2.77
T5 (20%)	16.45	12.61	81.15	18.84	2.60
T6 (25%)	15.81	12.10	80.73	19.26	2.50
SE (D)±	0.132	0.098	0.035	0.043	0.020
CD at 5%	0.276	0.204	0.073	0.091	0.041
'F' test	Sig.	Sig.	Sig.	Sig.	Sig.

Fat:

The data presented in Table 2 indicates that the average fat content in the Burfi was significantly affected due to addition of pineapple pulp. Fat content in Burfi was highest in T1 (21.95). Fat was decreased as the preparation of pineapple pulp in Burfi increased. This is might be due to low fat content in pineapple (0.14%). This investigation are agree with results obtained by Verma and De (1978) as 16.83 to 18.73, Wankhede (2005) in mango burfi.

Protein:

Protein content of Burfi by the different levels of pineapple pulp Burfi ranges from 14.91 to 12.10 per cent. The control plain Burfi T1 had highest protein content (14.91%). While pineapple Burfi prepared with 25 per cent pineapple pulp had lowest (12.10) per cent protein content i.e. T6. Protein content in pineapple was 0.44 per cent due to low protein in Burfi recorded less protein per cent with an increase in the level of pineapple pulp. The findings are closed agreement with Gargade (2004) in orange concentrate the protein decreases with increase in orange concentrate.

Total solids:

Total solids content in Burfi was affected by addition of different levels of pineapple pulp in the proportion. Highest level of total solids was noticed in control Burfi T1 (83.53 %) and the lowest level of total solids was in T6 (80.73 %).

Results obtained are agreement with Sakate (2000) It might be due to high moisture content and low total solids in the wood apple pulp.

Moisture:

The highest moisture was noticed in treatment T6

(19.26%) and lowest moisture was in T1 (16.85%). The moisture content in Burfi significantly increases in the different levels of pineapple pulp. This might be due to pineapple pulp content more moisture (84.00%). These findings are agreement with Sachadeva and Rajorhia (1982) found the moisture content in Burfi 12.71 to 18.96 per cent.

Ash:

The ash content was highest in treatment T1 (3.02%) and lowest in treatment T6 (2.50%). It indicates that as the level of pineapple pulp increases in Burfi ash content decreases. This was because of less per cent of ash in pineapple (0.3%). Above findings are contradictory with the results obtained by Rao et al. (1993) on the development of cashewnut Burfi they observed that ash content as 1.13 per cent.

References

1. Gargade, D.A. (2004): Use of orange concentrate in the proportion of burfi. M.Sc. (Agri.) Thesis submitted to Dr. PDKV., Akola (M.S.) India.
2. Kolhe, P.Y. (2003): Utilization of papaya pulp in preparation of burfi. M.Sc. (Agri.) Thesis submitted to College of Agril. Nagpur, Dr.PDKV., Akola (M.S.) India.
3. Pal, D. and S.K.Gupta (1985): Sensory evaluation of Indian milk products. *Indian Dairyman*, 37 (10): 465-475.
4. Rao, T.S.S., T.Hemprakash Reddy and K.S.Jayaraman (1993): Studies on development of cashewnut burfi. *J. Food. Sci. Technol.*, 90 (6): 462-464.
5. Sachdeva, S. and G.S.Rajorhia (1982): Technology and self life of burfi. *Indian J. Dairy Sci.*, 35 (4): 518.
6. Sakate, R.J. (2000): Studies on preparation of wood apple burfi. M.Sc. (Agri.) Thesis submitted to MPKV., Rahuri (M.S.) India.
7. Verma, B.B. and S.De (1978): Preparation of chocsidu burfi from ghee residues. *Indian J. Dairy Sci.* 81 (4): 370.
8. Wankhede, S.K. (2005): Use of mango pulp in the preparation of burfi. M.Sc. (Agri.) Thesis submitted to College of Agril. Nagpur, Dr.PDKV., Akola (M.S.) India.

* * * * *