RESEARCH PAPER

Preparation of *Kulfi* from buffalo milk blended with pineapple pulp

S.G. GUBBAWAR, R.R. SHELKE AND V. M. THAKRE

ABSTRACT

In the present investigation the attempts were made to prepare *Kulfi* from buffalo milk blended with pineapple pulp. *Kulfi* was prepared with addition of various levels of pineapple pulp as T_1 (2/3 concentrated buffalo milk), T_2 (2/3 concentrated buffalo milk + 5 per cent pineapple pulp) , T_3 (2/3 concentrated buffalo milk +10 per cent pineapple pulp) and T_4 (2/3 concentrated buffalo milk +15 per cent pineapple pulp). Samples were examined by a panel of 6 judges for colour and appearance, flavour, body and texture , overall acceptability to assess their sensory quality. From the investigation it was found that *Kulfi* prepared from 2/3 concentrated buffalo milk blended with 10 per cent pineapple pulp gave an acceptable quality.

KEY WORDS : *Kulfi* , Buffalo milk, Pineapple, Nutrition , Sensory attributes

INTRODUCTION

Kulfi is an indigenous frozen milk product. The product is well known from all ages in our country and is very popular in the Northern parts of India. It is generally prepared and sold on small and scattered scale by halwai and street vendors by conventional practices. *Kulfi* contains approximately 8.53 per cent fat, 34.18 per cent TS, 3.43 per cent protein, 11.02 per cent SNF, 6.17 lactose, 0.84 per cent ash. Char and Lee (1983) stated that the commercial Icecream can be prepared from formulation.

In the recent few years, pineapple has been one of the most important tropical fruits grown on large scale and consumed by the people as a nutritious and better flavouring agent in various sweetmeats and foods. Still, despite of good nutritional and medicinal significance, some deep-rooted vegetable based milk delicacies remain confined to the domestic kitchen segment. This has the potential to alleviate the persistent malnutrition and unemployment problem in India. Vegetables and fruits have been probably of more important nutritive and medicinal value than any other group of foods for Indians. Additionally fruits add appetize, colour, texture and flavour to the daily food. From the nutritional point of view pineapple fruit is good source of protein (0.6 per cent), vitamin A- (0.6 per cent) and rich in vitamin (C- 120 mg). It also contains calcium- 0.02 per cent, phosphorus- 0.01 per cent, iron- 0.09 per cent (Bose *et al* ,2002). Salooja and Balchandran (1987) observed that the *Kulfi* prepared from mixed milk was adjudged the best followed by one prepared from cow milk for their overall acceptability. Use of vegetable / fruit in frozen desserts was reported by El- Sayed (1995).

Objectives:

–To study the effect of pineapple pulp on quality of Kulfi prepared from buffalo milk and to study the acceptable level of pineapple pulp blending in buffalo milk by sensory evaluation.

MATERIALS AND METHODS

Buffalo milk was concentrated in open pan over a fire, 2/3 concentrated milk cooled, sugar was added and the pineapple pulp as per treatments was blended thoroughly with stirring. The mixture was filled into aluminum cones and after leading / sealing, the cones were immersed in salt – ice mixture in an earthen pot (matka). Method given by Aneja *et al.* (2001) for preparation of *Kulfi* and BIS, 10501 (1983) for specification of *Kulfi* mix was adopted.

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Details of treatments :-

T_1- 2/3 concentrated buffalo milk

T_2- 2/3 concentrated buffalo milk + 5% pineapple pulp

T_3- 2/3 concentrated buffalo milk +10 % pineapple pulp

T_4- 2/3 concentrated buffalo milk +15 % pineapple pulp

No. of replications : 05

Design : RBD

Sensory quality : *Kulfi* samples were examined by a panel of 6 judges for colour and appearance, flavour, body and texture, overall acceptability to assess their sensory quality.

RESULTS AND DISCUSSION

The results of the present study as well as relevant discussions have been presented under following sub heads:

Sensory evaluation for colour and appearance :

It is evident from Table 1 that *Kulfi* prepared from buffalo milk blended with 10 per cent pineapple pulp (T_3) obtained maximum score for colour and appearance (9.60).which was significantly superior over T_2 and T_1 and T_4 with score 9.0, 8.0 and 7.0, respectively.

Sensory evaluation for favour :

*Kulf*i prepared from buffalo milk blended with 10 per cent pineapple pulp (T_3) obtained maximum score for flavour (44), which was significantly superior over T_2, T_1 and T_4 with score 42, 41 and 38, respectively (Table 1).

Sensory evaluation for body and texture:

Kulfi prepared from buffalo milk blended with 10 per cent pineapple pulp (T_3) got maximum score for body and texture (34), which was superior over T_2, T_1, and T_4 with score 31, 30 and 28, respectively.

Sensory evaluation for acidity of *Kulfi* :

As per liking of judges of panel, the score obtained for acidity of *Kulfi* prepared from buffalo milk blended with 10 per cent pineapple pulp, T_3 obtained maximum score for acidity (9.016),which was significantly superior over T_2, T_1 and T_4 with score 8.502, 8.006 and 6.032, respectively. It mean increase in acidity due to addition of pineapple up to certain level was liked and gave acceptable sensory quality (Table 1).

Sensory score of overall acceptability of Kulfi :

Kulfi prepared from buffalo milk blended with 10 per cent pineapple pulp (T_3)has obtained maximum score

for overall acceptability (96.616), which was significantly superior over T_2, T_1 and T_4 with score 90.502, 87.006 and 79.032, respectively (Table 1).

Conclusion:

Kulfi prepared from 2/3 concentrated buffalo milk blended with 10 per cent pineapple pulp give an acceptable quality.

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