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## Effect of khajur (*Phoenix dactylifera*) crush on acceptability of rabri

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**Abstract**

Present investigation was carried out with five treatments and five replications. The treatment details were T1 control sample, T2 (97 per cent rabri + 3 per cent khajur crush), T3 (94 per cent rabri + 6 per cent khajur crush), T4 (91 per cent rabri + 9 per cent khajur crush), and T5 (88 per cent rabri + 12 per cent khajur crush). For overall acceptability scores obtained were 7.11, 7.52, 7.89, 7.14, and 6.76 for the treatment T1, T2, T3, T4 and T5 respectively. The treatment T3 scored significantly highest scores for flavour, color and appearance, consistency and overall acceptability which were found superior amongst all the treatments.

**Keywords:** khajur crush, milk, blending, rabri, acceptability

**Introduction**

The fruits which are popular among the Indians, if added to the milk shake, not only improve the acceptability among average Indian people but also improve its nutritional quality with the addition of essential vitamin and mineral. At the same time, it will give good market to the preserved food product which is ultimately going to help the farming community engaged in fruit production, preservation and also dairy production. Rabri is popular milk product used commonly in north part of India. Shahib *et al.* (2003)<sup>[8]</sup> reported that fruits (dates) of the date palm (*Phoenix dactylifera* L.) contain a high percentage of carbohydrate (total sugars, 44-88%), fat (0.2-0.5%), 15% salts and minerals, protein (2.3-5.6%), vitamins and a high percentage of dietary fibre (6.4-11.5%).

**Material and Methods**

Clean Fresh, whole buffalo milk was procured from Livestock Instructional Farm of Department of Animal Husbandry and Dairy science, Dr. PDKV, Akola was standardized at 6% fat and utilized for preparation of rabri blended with khajur crush. Good quality branded khajur (Lion) was purchased from the local market and used for the experimental purpose as per treatment. Uniform quality and brand was maintained for all replication. Approximately the required amount of khajur was cleaned and washed with clean water. The seeds were removed and Pulp was extracted manually from well ripe fruits. The pulp extracted was converted into homogenous mass with the help of mixer. Clean crystalline cane sugar was purchased from local market and used @ 6% by weight of milk.

**Treatment detail**

T1 control sample, T2 (97 per cent rabri + 3 per cent khajur crush), T3 (94 per cent rabri + 6 per cent khajur crush), T4 (91 per cent rabri + 9 per cent khajur crush), and T5 (88 per cent rabri + 12 per cent khajur crush) with five replications.

**Preparation of rabri**

For preparation of rabri method prescribed by De (2015)<sup>[2]</sup>, Gayen and Pal (1991)<sup>[5]</sup> and Singh *et al.*, 2014<sup>[9]</sup> was followed with certain modifications in the process as Gaikwad (2014)<sup>[4]</sup> used for preparation of custard apple pulp blended rabri.

**Results and Discussion**

**Sensory Evaluation of Rabri:** In order to evaluate a good quality rabri the panel of judges was selected and product was judged with the help of 9 point hedonic scale score cards and data generated were statistically processed and the results obtained.

**Colour and appearance of rabri:** In respect to colour and appearance it was revealed that addition of khajur crush up to 6 per cent level, increases the colour and appearance score of

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khajur rabri, however addition of khajur crush beyond 6 per cent level there was decrease in the colour and appearance score of rabri. There were significant differences amongst all the treatments for colour and appearance score. This result are in agreement with the research works carried by Gaikwad *et al.* (2015) used date fruit powder in preparation of basundi and noted that the score for colour and appearance is improved due to addition of date fruit powder upto 6%. Surve (2017) <sup>[10]</sup> reported that addition of date upto 10% increased the score for colour and appearance in milk shake, Mete *et al.* (2017) <sup>[6]</sup> used 20% khajur with honey in burfi and reported that score for colour and appearance of burfi was increased due to addition of khajur and honey.

**Flavour of rabri:** Table 1 showed mean score for flavour ranged from 7.08 to 7.42. The treatment T1 scored lowest score followed by T2, T3, T4 and T5. All the treatments were ranked in between like very much to like extremely. Treatment T3 (8.06) was significantly superior among rest of the treatments. The significant differences was observed between flavour score of treatment T2, T3, T4 and T5. It was observed from above findings that as the level of khajur crush increased in the blend, the flavour score of the product also increased up to the level of 6% khajur crush in the rabri. This might be due to pleasant flavour of khajur crush which of preferably enhanced its flavour of khajur crush rabri. This results were also supported by Chopde *et al.* (2016) <sup>[1]</sup> reported average flavour score of rabri varied from 6.2 to 8.3. Gaikwad *et al.* (2015) used date fruit powder in preparation of basundi and noted that the score for flavour is improved due to addition of date fruit powder upto 6%. Surve (2017) <sup>[10]</sup> reported that addition of date upto 10% increased the score for flavour in milk shake. Mete *et al.* (2017) <sup>[6]</sup> used 20% khajur with honey in burfi and reported that score for flavour of burfi was increased due to addition of khajur and honey.

**Body and texture of rabri:** The mean score of body and texture for treatment T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub>, T<sub>4</sub> and T<sub>5</sub> was 6.88, 7.57, 7.89, 6.58 and 6.29 respectively. Treatment T<sub>2</sub> and T<sub>3</sub> were

significantly superior over rest of the treatments T<sub>1</sub>, T<sub>2</sub> and T<sub>3</sub>. Treatments T<sub>2</sub> (7.57), T<sub>3</sub> (7.89) and T<sub>4</sub> (6.58) ranked in between like very much to like extremely. Treatment T<sub>5</sub> (6.29) scored in between like moderately to like very much. Addition of khajur crush in the blend beyond 6 per cent reduced the score for body and texture of the rabri. This results are in agreement with the results of, Gaikwad *et al.* (2015) used date fruit powder in preparation of basundi and noted that the score for texture is improved due to addition of date fruit powder upto 6%. Surve (2017) <sup>[10]</sup> reported that addition of date up to 10% increased the score for texture in milk shake. Mete *et al.* (2017) <sup>[6]</sup> used 20% khajoor with honey in burfi and reported that score for texture of burfi was increased due to addition of khajoor and honey.

**Overall acceptability:** It is evident from Table 1 that the overall acceptability score of khajur rabri for various treatments ranging from 7.11, 7.52, 7.89, 7.14 and 6.76 respectively. Highest score 7.89 was observed for treatment T<sub>3</sub> and lowest score was observed as 6.76 for treatment T<sub>5</sub>. The treatment T<sub>2</sub> (7.52), T<sub>3</sub> (7.89) and T<sub>4</sub> (7.14) ranked between like very much to like extremely. Treatment T<sub>4</sub> (7.14) ranked between like moderately to like very much. The treatment T<sub>3</sub> was statistically significant over rest of the treatments in the Table. Therefore treatment combination of rabri and khajur crush (94:6) was more acceptable over other treatments. The overall acceptability of khajur crush rabri could be attributed to the different characters of colour and appearance, flavour, body and texture of the final product. There seemed to be a direct relation with the level of khajur crush. The findings reported by various researchers were supports the present trend as, Gaikwad *et al.* (2015) used date fruit powder in preparation of basundi and noted that the score for overall acceptability is improved due to addition of date fruit powder upto 6%. Surve (2017) <sup>[10]</sup> reported that addition of date upto 10% increased the score for overall acceptability in milk shake. Mete *et al.* (2017) <sup>[6]</sup> used 20% khajur with honey in burfi and reported that score for overall acceptability of burfi was increased due to addition of khajur and honey.

**Table 1:** Sensory evaluation of rabri prepared from buffalo milk blended with khajur crush

Treatments (Part of control rabri: parts of khajur crush)	Mean values of scores obtained for five replications (*P<0.05)			
	Color and Appearance	Flavor	Body and texture	Overall acceptability
T <sub>1</sub> (100)	7.37	7.08	6.88	7.11
T <sub>2</sub> (97:03)	7.67	7.28	7.57	7.52
T <sub>3</sub> (94:06)	7.81	8.06	7.89	7.89
T <sub>4</sub> (91:09)	7.30	7.49	6.58	7.14
T <sub>5</sub> (88:12)	6.95	7.42	6.29	6.76
'F' test	Sig	Sig	Sig	Sig
SE(m)+/-	0.1675	0.1755	0.1045	0.1634
CD at 5%	0.4943	0.5177	0.3083	0.3409

## Conclusion

From the results of present investigation this is concluded that, the khajur rabri prepared from 94 per cent buffalo milk rabri and 6 per cent khajur pulp (T<sub>3</sub>) was most acceptable.

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