

GOAT MILK DAHI

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Traditionally dahi is a naturally fermented milk product obtained from boiled cow or buffalo milk and soured using mixed lactic cultures. Goat milk has appreciably higher proportion of short chain fatty acids especially capric, caproic and caprylic acids and with smaller fat globules making them more easily digestible. Unlike cow milk they do not produce any allergy in children and it has been found that, products obtained from goat milk have higher biological value than from cow milk. Although work has been done on dahi (Lakshminaraya et al 1952, Mohan et al 1985), study on the acceptability of goat milk dahi is found to be lacking. The present communication reports on preparation of dahi from goat milk and its acceptability with regards to its appearance, odour and flavour.

The study was conducted at the Livestock Research Station, Kattupakkam. Fresh goat milk were procured from the farm and was boiled and cooled to room temperature. Mixed lactic cultures were then added at 2 percent level as the culture were non-specific, and was then incubated at 37° C ± 1°C until the acidity reached 0.75 – 0.80 per cent and were then stored in refrigeration temperature until further use. Dahi was also prepared similarly with cow milk as control. The chemical analysis of goat and cow milk used in dahi preparation (table 1) was done as per BIS IS-1479, Part II,

p-12. Sensory analysis of the dahi samples were done by using a 9-point Hedonic scale with scores ranging from 1 to 9. The data collected were then analysed to test the significance in differences as described by Snedecor and Cochran (1968). The results were statistically analyzed as per Snedecor and Cochran(1978) and are given in the table 2. The preferred qualities of dahi are yellowish/creamy white, smooth, glossy surfaced, mildly pleasant with clean acid flavour taste and with firm body (Sukumar De , 1980). As per the observations recorded, the dahi prepared from goat milk had creamy white appearance with clean acid flavour but softer curd. The dahi had scores 8.50 ± 0.036 for appearance, 6.05 ± 0.042 for flavour and odour, 7.50 ± 0.036 for acceptability against the control scores of 7.83 ± 0.005 for appearance, 7.0 ± 0.059 for flavor and odor and 7.50 ± 0.057 for acceptability.

The low scoring of goat milk dahi for flavour and odour compared to the control may be attributed to the actual labeling of the samples which could have influenced the mind set of the consumers while scoring. However, the results showed that the product was free from any objectionable flavour and was well accepted. Thus the present organoleptic study suggests that, goat milk can be used or supplemented in preparation of dahi wherever it is available in surplus considering its precious bio properties.

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REFERENCES

- Indian standard methods of test for Dairy Industry, 1961-IS-1479 Part II, p-12, published by Indian Standard Institution, New Delhi
- Laxinarayana, H, Nambudripad, V.K.N. Lakshmi, N.VAnantharamaiah and V.Srinnivasamurthy, 1952. Quality of yoghurt (Dahi) made in laboratory an available in the market of Mymensingh town in Bangladesh. Ind J.Vet.Sci. 12-13.
- Mohan, K.R. Shankar, P.A. and Laxminarayana ,H 1985. Quality of Dahi (curd) manufactured from buffalo milk. Dairy Science Abstracts. 48: 7390
- Snedecor, G.W and Cochran, W.G (1969). Statistical methods. 8th Ed. Iowa State University Press, Ames, Iowa.
- Sukumar De. 1980. Outlines of Dairy Technology. Published by University Press. Oxford.

Table 1: Mean and SE of composition of Cowand Goat Milk*

VARIABLE	COW MILK	GOAT MILK
pH	6.61 ± 0.02	6.78± 0.003
Fat	4.06 ± 0.001	3.22± 0.003
Titration acidity	0.162 ± 0.006 ^a	0.159 ± 0.003 ^b
Fat	12.72 ± 0.02 ^a	11.25 ± 0.005 ^b
SNF	8.66 ± 0.01 ^a	8.03 ± 0.009 ^b
Ash	0.717 ± 0.007 ^a	0.945 ± 0.009 ^b

* Mean of six trials

*Means bearing different superscripts in each variable differ significantly (p < 0.05)

Table 2: Mean ± SE of sensory scores of Goat and control(Cow) milk Dahi

ATTRIBUTES	GOAT MILK DAHI	CONTROL DAHI
Appearance	8.50 ± 0.036 ^a	7.83 ± 0.005 ^b
Flavour & Odour	6.05 ± 0.042 ^a	7.0 ± 0.057 ^b
Acceptability	7.50 ± 0.036 ^a	7.50 ± 0.057 ^a

* Average of six trials

*Means bearing different superscripts in each variable differ significantly (p < 0.05)