

# Development of Technology for Manufacture of Probiotic *Shrikhand*

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## Introduction

*Shrikhand* is an indigenous fermented and sweetened milk product having a typical pleasant sweet-sour taste. It is prepared by blending chakka, a semi-solid mass obtained after draining whey from dahi, with sugar, cream and other ingredients. Now a day, the market trend of Probiotics products is increasing very fast due to awareness in consumers about the benefits of the products for healthfulness. It is estimated that around 30% of the global population buys probiotic dairy foods on regular basis.

## Objective

The objective of the study was to use different probiotic cultures in manufacture of *Shrikhand* and evaluate the performance of cultures and quality of resultant product for its sensory attributes, physico-chemical properties, rheological characteristics and microbial counts.

## Methodology

*Shrikhand* was made using different combination of probiotic starter culture viz., *Streptococcus thermophilus* (NPC), *Acidophilus Bifidobacterium* yoghurt culture (PC 1), Yo-flex + *Lactobacillus helveticus* (PC 2), Yo-flex + *Lactobacillus rhamnosus* (PC 3), *Streptococcus thermophilus* + *Lactobacillus helveticus* (PC 4) and *Streptococcus thermophilus* + *Lactobacillus rhamnosus* (PC 5). The culture *Streptococcus thermophilus* (NPC) was used for control-*Shrikhand*.

## Result and Discussion

The moisture, fat, protein, sucrose and ash per cent of all experimental *Shrikhand* samples ranged from 40.02 to 42.42, 6.24 to 6.30, 9.43 to 10.24, 40.97 to 42.96 and 0.473 to 0.517 respectively. While the probiotic count, Standard Plate count and Yeast & Mold count measured in term of log cfu/g, among all experimental *Shrikhand* samples ranged from 7.445 to 9.428, 7.265 to 7.326 and 1.550 to 1.621 respectively. The coliform count was absent among all experimental *Shrikhand* samples. The overall acceptability score of *Shrikhand* ranged from 75.04 to 85.12 out of 100. Among all experimental *Shrikhand* samples, PC 3 had significantly ( $P < 0.05$ ) higher Overall acceptability score (85.12) indicating superior acceptability among experimental samples.

## Conclusion

Based on the physico-chemical, rheological, sensory and microbiological qualities, the performance of different probiotic cultures on quality of the fresh *Shrikhand* was obtained in order of PC 3 > PC 2 > PC 1 > PC 4 > PC 5.

