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Preparation of herbal Shrikhand with incorporation of Tulsa and turmeric powder

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Abstract

Shrikhand is a traditional fermented and sweetened milk product of Indian origin. Starter culture plays a vital role in process up gradation in fermented milk product. The present fact finding was carried out to valuation by the adding Tulsian and turmeric powder into Shrikhand honey used as sweetener. Ratio of Tulsi and turmeric powder @ 0.3, 0.4, 0.5 and 0.3, 0.5, 0.7 and 35 honey used as sweetener. The sensory evaluation revealed that 70% of the panelist extremely like T₂ combination as compared T₃ and T₄. The samples were stored at 7 degree Celsius and sensory and microbiological activity evaluated at regular interval.

Keywords: Chakka, Shrikhand, shelf life

Introduction

In India, almost 50-55% of milk is converted to variety of milk products using any of the following processes such as coagulation, desiccation and fermentation. Fermented milk products occupies a good place in Indian diet such products may include products like dahi, lassi, Shrikhand etc. Shrikhand is prepared by fermentation of milk by using few known strains of lactic acid bacteria. It is used as a sweet dish. Honey is used as a sweetening agent and few additives to enhance its flavours and medicinal properties like Tulsi, turmeric. Lactic acid bacteria acts as a probiotic, are widespread in nature and are also found in our digestive system. Milk is an excellent medium to carry live and active cultured dairy products. The aim of carrying probiotic organisms in dairy products is to provide a nutritionally healthy and desirable product for the consumers. The reason to add herbs like Tulsi in Shrikhand that it can address physical, chemical, metabolic and psychological stress through a unique combination of pharmacological actions. It works to counter metabolic stress through normalization of blood glucose levels and psychological stress through positive effect on memory and cognitive function through its anti-depressant properties. Ingredient Turmeric is one of the cheapest spice and has antiseptic properties. It is used to treat digestive problems, fighting infections and some cancers (Ammon; 1991) [1]. Tulsi has been found to be mounted evidence that it can address physical, chemical, metabolic and psychological stress through a unique combination of pharmacological action and broad spectrum antimicrobial activity ('). Honey has been known to possess anti-microbial and wound healing properties. It has been used as a natural sweetener. The antimicrobial activity in most honeys is due to the enzymatic production of hydrogen peroxide (levy SB, marshall 2004) [4].

Material and method

Fresh cow milk was taken for curd preparation and fresh culture taken from Daver Research dairy section was stored at 5°C in a refrigerator and all work that should have done to prevent contamination was complete. Tulsi powder was obtained from selected Tulsi leaves blanchdried and grinded properly. Turmeric powder was obtained from turmeric plantdried and grinded, honey of PATANJLI brand is taken for prepared Shrikhand



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Preliminary trials

The preliminary trials were completed with 4 levels of Tulsi powder and turmeric powder. Tulsi powder is added 0.2%, 0.4%, 0.6%, 0.8% By weight of Chakka. Turmeric powder is added 0.3%, 0.4%, 0.7%, 0.9% by weight of Chakka. Honey percentage was taken constant at 25% by weight of Chakka. Honey was added before mix Tulsi powder and turmeric powder. It was obtained that 0.8% turmeric powder and 0.6% Tulsi powder gives suitable test. 0.2% Tulsi powder does not give any change in Test. 0.4% gives low change in test and color. 0.6% Tulsi powder gives desirable and acceptable test and appearance. Turmeric powder with 0.2%, 0.4% gives lead change is color and taste. 0.8% quantity of turmeric powder gives suitable color.

Details of Treatment

After preparing different trial formulation percentage of chakka and honey will be same only changes with tulsi and turmeric. As per previous trial these formulation is acceptable T₁, T₂ and T₃

Table 1: Sample Trial Formulation

S. No.	Ingredient	Trial 1 T ₁	Trial 2 T ₂	Trial 3 T ₃
1	Curd(chakka)	64 gm	64 gm	64 gm
2	Honey	35 ml	35 ml	35 ml
3	Tulsi	0.3 gm	0.4 gm	0.5 gm
4	Turmeric	0.3 gm	0.5 gm	0.7 gm

Manufacture of Shrikhand

Manufacturing of Shrikhand to drained whey from curd properly and formed chakka mixed honey as sweetener with

two other ingredient tulsi and turmeric. Ingredients used in Shrikhand manufacturing with 65gm chakka, Honey 35ml and different ratio of tulsi and turmeric

Procedure for Shrikhand

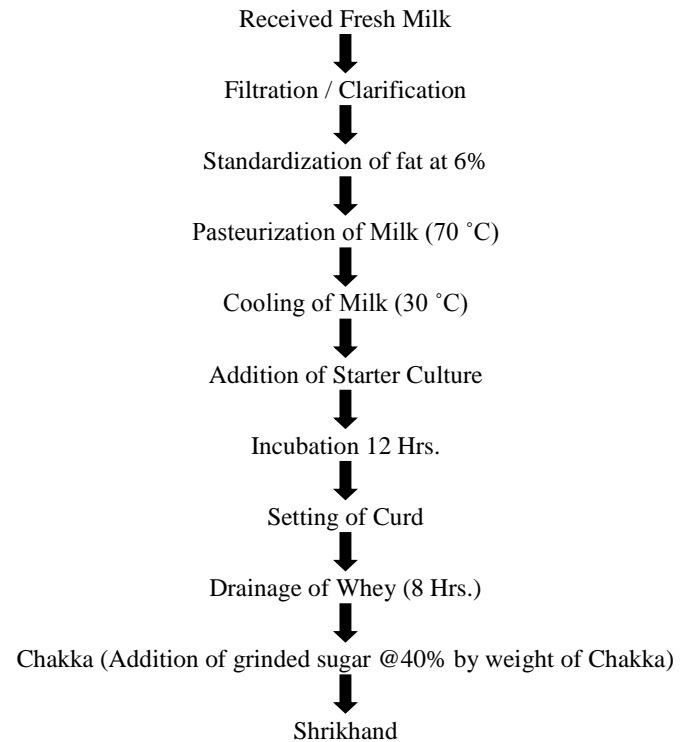


Table 2: Sensory Analysis Summary

Sample	Sensory Evaluation of Herbal Shrikhand					
	Appearance	Color	Taste	After Taste	Mouth Feel	Overall Acceptability
Control Sample	9	9	9	9	9	9
Trial T ₁	3	4	3	3	4	4
Trial T ₂	8	8	9	9	9	8
Trial T ₃	4	5	3	6	4	4

Result and Discussion

Shrikhand was prepared using different blend of tulsi powder and turmeric powder. The acceptability of shrikhand was judged by a panel of semi trained members. Sensory evaluation using 9 point of hedonic scale was done. Several trials were done with slight changes in formulations and with the help of sensory evaluations these results were obtained, Trial 1 was not so acceptable because of very less taste of tulsi and turmeric instead trial 2 was most liked as the

flavours needed were present in a perfect quantity which imparts a good appearance and a perfect taste to shrikhand while in trial 3 because of high particle size and over enhanced flavors it was also not as much acceptable. The sensory evaluation revealed that 70% of the panelist extremely liked T₂ combination as compared to T₁ and T₃ which states that sensory evaluation with regards to colour, flavor, and consistency and after taste was much more acceptable in T₂

Table 3: Summary - Different Formulations of Ingredients & Outcome

Treatment	Formulation	Outcome	Remark
T ₀ = Shrikhand prepared from Chakka + 40% Sugar	A ₀ + B ₀ (Control Samples)	Acceptable	
T ₁ = Shrikhand prepared from Chakka + 40% Sugar	A ₁ + B ₁ = (0.3% Turmeric Powder + 0.3% Tulsi Powder)	Lower Acceptability	Very less taste of Turmeric and Tulsi
	A ₂ + B ₂ = (0.5% Turmeric Powder + 0.4% Tulsi Powder)	Acceptable	
	A ₃ + B ₃ = (0.7% Turmeric Powder + 0.5% Tulsi Powder)	Lower Acceptability	High Particle size in mouth

Conclusion

Medicinal herbs are indispensable part of traditional medicine practiced all over the world due to easy access, low cost, least risk and low side effect profile. The Present work was undertaken to provide Low calorie Shrikhand with Herbal

treatment which will help the person from Diabetes & High Blood Pressure. In this work Tulsi and Turmeric herbal ingredients are used due to their Anti-oxidant & Anti-fungal properties along with Honey as a replacement of sugar with Shrikhand to prepare Herbal Shrikhand. Different formulations

were prepared and tested to assess the most effective formulation which will give the desired outcome of the product i.e. Shrikhand. This Product ie Herbal Shrikhand can be used and effective in all seasons due to the properties and characteristics of its ingredients ie Tulsi and Turmeric. Apart from these benefits, commercially this product has huge potential of getting successful as it is simple in treatment and ease of availability of ingredients and comparatively cheaper than pharmaceutical treatments & medicines.

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