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Process standardization of lassi using Jamun powder

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Abstract

Lassi is a traditional cooling drink used to slake thirst. The level of quality varies greatly. Lassi is also known as butter milk in rural India. Lassi is a little acidic, creamy, thick liquid with a strong scent. Lassi has paramount therapeutic properties and helps in recovery from gastro intestinal disorders. For the further improvement in therapeutic and nutritional importance of Lassi, it is necessary to value addition of natural and innovative ingredients such as vegetable products, fruits, cereals, spices and dietary fiber etc. Lassi is one of the popular traditional fermented milk product having benefits of fermented milk. Lassi popularity has been growing daily due to its nutritive and thirst-quenching qualities in addition to its delicious and revitalising flavor.

Jamun (*Syzygium cumini* L.) is commonly known as Indian Blackberry, Jambul, Black Plum and Java Plum and it belongs to the family Myriaceae. Large trees cultivated in India for the edible fruits that are reported to contain huge amount of vitamin C, gallic acid, tannins and anthocyanins includes cyanidin, petunidin and malvidin glucoside. This fruit offers significant potential for the creation of value-added dairy products due to its distinctive flavour as well as its medicinal and nutraceutical benefits. Thus, turning jamun fruit into products with value-added results in a wide range of exotically flavoured goods with higher nutritional and sensory properties, which can open up a new international market.

It is a good source of mineral salts, calcium, potassium, magnesium, phosphorus, sodium, and vitamin C. It offers 62 Kcal of energy. The most acceptable product in the present study was observed to be the lassi prepared by 1 per cent jamun powder (T3) with overall acceptable score of followed by lassi while the lowest score was obtained by lassi with 1.5 per cent jamun powder (T4). From the result of the present study, it may be concluded that the jamun powder 1 part could be used to improve sensory quality of lassi and provides more nutritious, better quality product as compared to normal lassi and can be acceptable for all types of consumer.

Keywords: Lassi, jamun powder and consumer response

Introduction

Lassi is fermented milk product under the category of traditional milk products among the various milk products available in India. Lassi is one of the thirst-quenching drinks that is frequently consumed in the summer since it is cooling and refreshing. Lassi is a traditional cooling drink used to slake thirst. The level of quality varies greatly. Lassi is also known as butter milk in rural India. Lassi is a little acidic, creamy, thick liquid with a strong scent. Lassi is primarily composed of water, with 3% fat, 2.8% protein, 4.5% lactose, and 12.15% sugar. Lassi is typically made in Maharashtra from buffalo milk curd, which has a rich scent, a creamy look, and a flavour that is gently acidic and sweet. (Mule *et al.*, 2018) [3].

Lassi has paramount therapeutic properties and helps in recovery from gastro intestinal disorders. For the further improvement in therapeutic and nutritional importance of Lassi, it is necessary to value addition of natural and innovative ingredients such as vegetable products, fruits, cereals, spices and dietary fiber etc. Lassi is one of the popular traditional fermented milk product having benefits of fermented milk. Lassi popularity has been growing daily due to its nutritive and thirst-quenching qualities in addition to its delicious and revitalizing flavor. Jamun (*Syzygium cumini* L.) is commonly known as Indian Blackberry, Jambul, Black Plum and Java Plum and it belongs to the family Myriaceae. The fruit's high anthocyanin content gives it a flavour that is a combination of sweet, moderately acidic, and astringent, and it tends to turn the tongue purple. When compared to other common fruits like the guava, papaya, banana, and sapota, jamun fruits have a higher amount of antioxidant activity. The inclusion of vitamins, tannin, and anthocyanins is credited with the greater antioxidant activity. This fruit offers significant potential for the creation of value-added dairy products due to its distinctive flavour as well as its medicinal and nutraceutical benefits. Thus, turning jamun fruit into products with value-added results in a wide range of exotically flavoured goods with higher

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nutritional and sensory properties, which can open up a new international market. (Singh and Paswan 2015)^[6]. The jamun fruit is effective in lowering the risk of spleen enlargement and has a number of medical qualities, including stomachic, astringent, anti-scorbutic, diuretic, anti-diabetic, antioxidant, and anti-proliferative. The use of fruit concentrate to treat chronic diarrhea has a very long history. (Sadawarte *et al.* 2015)^[5].

Jamun is regarded as a conventional treatment for diabetes management. Jamun specifically affects the pancreas, which is the main organ responsible for creating diabetes. The jamun seeds contain a kind of glucose called jamboline, which prevents starch from turning into sugar when the production of glucose, the primary cause of your high sugar levels, is raised. (Bhowmik *et al.* 2013)^[1].

Materials and Methodology

The current research on “Studies on preparation of lassi blended with jamun powder (*syzygium cumini*)” was carried out at the Department of Animal Husbandry and Dairy Science, College of Agriculture, Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani. For this study, the following materials and techniques were used to verify them.

1. Material

The following materials were used for the successful completion of present research study.

1.1 Collection of buffalo milk

The Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani College of Agriculture's Department of Animal Husbandry and Dairy Science provided the complete, fresh, clean buffalo milk.

1.2 Microbial cultures

The standard *dahi* culture was used for the preparation of

curd.

1.3 Chemicals and glassware

Appliance and utensil cleaning and sterilizing Test tubes, beakers, measuring cylinders, pipettes, spoons, and stainless steel cutlery were among the glass items cleaned in water with detergent powder. Washing under running water helped to get rid of any remaining solution. For six hours, the test tubes and flasks were sterilized in a hot air oven at 100 °C.

1.4 Sugar powder

Sugar powder was used for the preparation of lassi obtained from local market.

1.5 Collection of Jamun powder

Good quality Jamun powder was purchased from local market source of buying.

1.6 Mixer cum grinder

The electric mixer cum grinder was used for the preparation of Jamun powder, available in the PG laboratory.

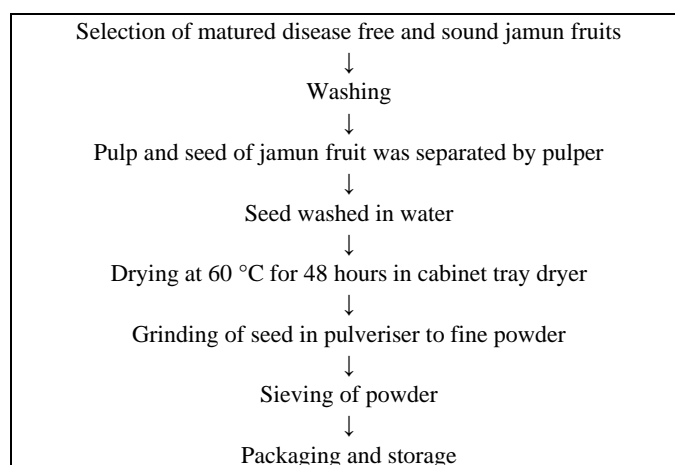
1.7 water

Clean, potable water was used to make the lassi for the manufacture of the product.

2 Methods

2.1 Jamun powder

Jamun fruits must be chosen that are evenly ripened, disease-free, and healthy. A pulper was used to separate the jamun fruit's pulp and seed. The seed was rinsed in water, dried in a tray dryer at 60 °C for 48 hours to finish drying, and was then ground into a fine powder in a pulverizer.

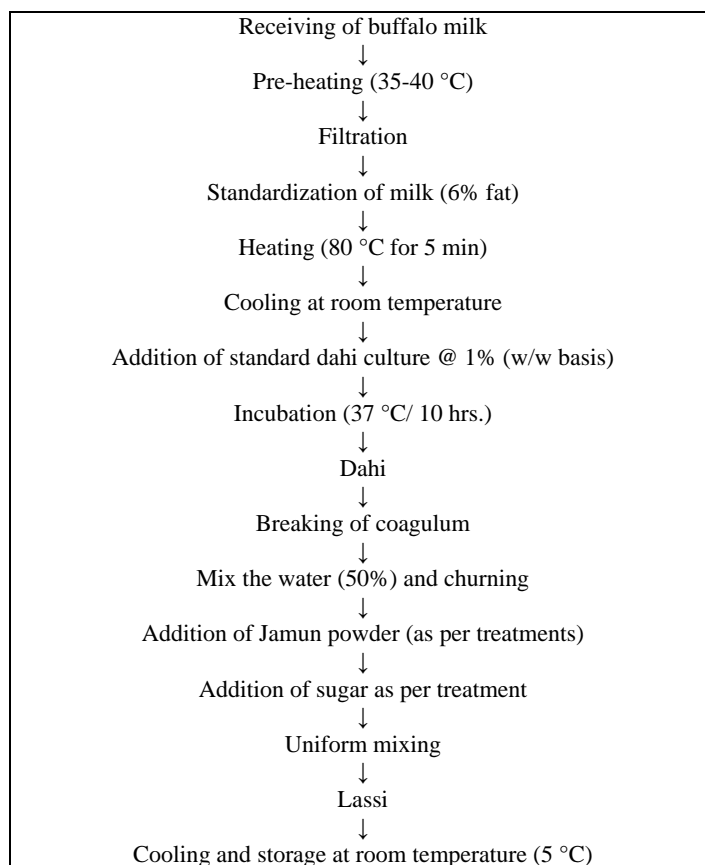


Flow chart 1: Flow chart for preparation of jamun

2.2 Preparation of Jamun powder lassi

Jamun powder lassi was prepared as per the procedure

followed by Gupta and Kulkarni (1983)^[2] with slight modification.



Flow chart 1: Flow chart for preparation of Jamun powder lassi

Two liters of fresh, clean and dust free buffalo milk was received for each of the treatment, pre-heated milk is at 35-40°C and standardized the milk at 6% fat. After standardization the milk heated at 80 °C for 5 min and subsequently milk was cooled at room temperature. After cooling 1% standard *dahi* culture was added in it and kept it for incubation at 37 °C for 10 hrs. After getting the *dahi*, it was broken up and equal parts clean, potable water were added. The mixture was then churned. After that Jamun powder added as per treatments combination. Then 10% sugar was added total weight of product then the prepared lassi was mixed uniformly. Then the prepared Jamun lassi was kept at 5 °C.

2.3 Treatment combinations

For preparation of lassi by using jamun powder and adding sugar 10% by weight of lassi and jamun powder as per the treatment combinations was finalized on weight basis as follows: The different levels were tried and compared with control (T₁).

T₁ - control.

T₂ - 99.5 parts of curd + 0.5 parts jamun powder.

T₃ - 99 parts of curd + 1 parts of jamun powder.

T₄ - 98.5 parts of curd + 1.5 parts of jamun powder.

Sensory evaluation

A panel of six semi-trained judges chosen based on their evaluating skills evaluated the organoleptic quality of lassi samples of the fresh items. To eliminate the chance of variance, the same judges assessed the samples from each trial throughout the experiment. The sensory evaluation of lassi samples was carried out by using 9-point Hedonic scale

described by Gupta (1985)^[7].

Preparation of jamun powder Lassi

Two liter of fresh buffalo milk was taken for every treatment, pre- heated at 35-40 °C standardized milk at 6% fat. Then the milk was heated and subsequently cooled at room temperature and 1% standard *dahi* culture was added in it and kept it for incubation at 37 °C for 10 hrs. After incubation the prepared *dahi* was break and add the equal quantity of clean potable water was added, churned it by using churner. Thereafter jamun powder was mixed as per treatments combination and 10% sugar was mixed in it. The prepared lassi was blended with blender for uniform mix and smooth consistency. Then the prepared lassi was stored at 5 °C or at refrigeration temperature until further study.

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