



Development, Standardization and Nutritional Analysis of Jaggery Aloe Vera Burfi

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ABSTRACT:

Burfi is the most popular sweet in India, and Aloe vera (Aloe barbadensis Miller) is well known as a medicinal plant from ancient times, and it is also considered a panacea. The preparation of burfi was done with the incorporation of healthy and nutritive aloe vera juice. Sugar was replaced with jaggery as it contains more vitamins and minerals and has a lower sucrose content than sugar. Desiccated coconut was added to increase the cohesiveness of the burfi. Aloe vera burfi can be consumed by individuals of all ages as it is rich in nutrition. Jaggery helps in cleansing the liver, relieves constipation, boosts energy, and purifies the blood, and aloe vera juice helps with digestion and boosts the immune system as poor digestion is the cause of many diseases.

Key words: *Aloe vera juice, Burfi, nutrition, jaggery, Desiccated coconut, sweet*

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INTRODUCTION:

Since ancient times, people have known and used aloe vera for its benefits to their health, appearance, and skin (1). Aloe vera's name comes from the Arabic word "alloe," which means "shining bitter substance," and the Latin word "vera," which means "truth." (1) Greek scientists believed that aloe vera was a universal cure-all 2,000 years ago (1). The "plant of immortality" was aloe, according to the Egyptians (1). Currently, dermatology uses the aloe vera plant for a variety of things. The whole leaves, exudates, and fresh gel of aloe are used in India as a stomachic, emmenagogue, and anthelmintic (1).

It is now a widely used household cure for a number of ailments in China, Mexico, and the West Indies (2). It can be found in Rajasthan, Andhra Pradesh, Gujarat, Maharashtra, and Tamil Nadu in India (2). It is grown for sale in Aruba, Bonaire, Haiti, India, South Africa, and the United States of America (2).

Aloe vera is rich in vitamins and minerals. Vitamins A, B, B2, B3 (niacin), B6, C, E, folic acid, and choline are all on the list of vitamins. Minerals including calcium, chromium, magnesium, zinc, sodium, selenium, iron, copper, manganese, and potassium are also present. Aloe-Vera Facilitates Digestion We are all aware that poor digestion is a major contributor to many illnesses. The immune system is strengthened by aloe vera. High levels of antioxidants found in aloe vera aid to fend off the unstable substances known as free radicals that speed up ageing. Aloe vera possesses several antiviral, antifungal, antibacterial, antimicrobial, and antiseptic properties.

One of the most well-liked milk-based desserts in India is milk burfi (5). When making burfi, concentrated milk solids (khoa) and sugar are heated until nearly homogeneous, then the mixture is cooled and cut into tiny cuboids (5).

The market offers many different types of burfi, including plain or mawa/khoa burfi, fruit and nut, cashew, chocolate, saffron, and rava burfi (5). There is a need for data generation on improving the processing and quality of milk burfi, even though the Bureau of Indian Standards has established a standard for the chemical and microbiological quality of milk burfi (ISI 1970) (5).

Demand for low-sugar or sugar-free products has increased as a result of public knowledge of the health hazards associated with intake of sugar and sugar-rich foods (5). A variety of sugar-free or low-sugar products have been created as a result of the recent discovery of numerous new sweeteners, especially for diabetics, people on special diets, and people who are prone to obesity (5). With the addition of jaggery and nourishing aloe vera juice, burfi is a highly nutrient-dense food (3). A mixture of milk and jaggery powder is heated until the desired firm texture and flavor are developed to create this heat-desiccated

indigenous milk sweet. Burfi is manufactured in greater quantities than any other native milk-based sweet in India, and it plays a specific role in a number of annual festivals (weddings, inaugural functions, etc.) (3).

The idea of functional foods was born from consumers' growing knowledge of the importance of maintaining good health and from lifestyle changes. Thus, the creation of functional foods presents a singular opportunity to increase both the nutritional value of food and the health and wellbeing of consumers.

MATERIAL AND METHODS

Collection of Raw Material

For the creation of nutrient-rich aloe vera burfi, full-cream milk was acquired from a nearby seller in Satara. Aloe vera was taken from the local nursery of Satara. Jaggery powder was purchased from the local market of Satara as a sweetener, and the binding agent was desiccated coconut. Pista was used as a garnish. (4)

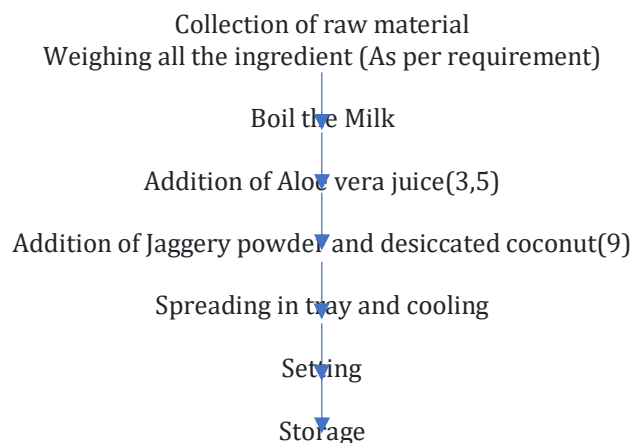
Materials

Milk, Aloe Vera juice, Jaggery Powder, desiccated coconut, Dry Fruits

Methods

1. Raw material collection.
2. Standardization of Healthy Aloe vera burfi
3. Sensory evaluation

Standard Preparation



Process of Burfi Making

Fresh Aloe vera leaves were washed with distilled water, and the lower one-inch leaf base was removed. To create a uniform juice, the pulp was separated using a spatula, then cut into smaller pieces and processed in a blender for juice (4).

The trial of nutritive-rich aloe vera burfi was taken in the laboratory of the Department of Food Processing and Packaging at the Yashavantrao Chavan Institute of Science in Satara. The process includes Measuring the milk and aloe vera juice as per requirement than it was boiled, aloe vera juice was added in it slowly, Jaggery powder was added to it as sweetening agent the color changes to brown than desiccated coconut was added as the cohesiveness of the burfi(8,10). Then the burfi was kept for setting at room temperature.

PROXIMATE EVALUATION OF THE PRODUCT

Equipment's used for Analysis

Moisture, fat, protein, ash was determined using a hot air oven, Soxhlet method, Kjeldhal method and a muffle furnace.

Estimation of Moisture content

Moisture content of the product was estimated by using Oven Drying Method i.e., the conventional method. The Samples were weighted and treated under 100°C for 5 hrs. in the Hot Air Oven.

Estimation of ash content

Ash content of burfi was estimated using Muffle Furnace. Moisture free sample was taken.

The sample was weighed and incinerated to remove carbon molecules from the sample and ignited at 550°C in the Muffle Furnace for 5 hours.

Estimation of fat content:

Fat Content of the product was evaluated by using the Soxhlet Method described in A.O.A.C manual.

Sensory evaluation

The sensory qualities in terms of color, flavor and texture, aroma was assessed by panel of 10 judges with 9-point Hedonic scale score

RESULT AND DISCUSSION

The experiments involved two types of sweeteners: one with sugar (S1) (S2) and another with jaggery (S3) (S4). The sample containing sugar was present in two proportions, 2:1 and 1:1. The sample that contained jaggery also came in two ratios, 2:1 and 1:1. The trials were carried out at the Department of Food Processing and Packaging at the Yashwantrao Chavan Institute of Science in Satara. On the basis of sensory evaluation, the sample (S3) was selected by panel members.

The sample (S3) is rich in nutrition. As per sensory evaluation (S3) is selected because of Health benefits.

Table 1: Sensory evaluation of Aloe vera burfi

Parameter	Samples			
	S1 (2:1)	S2 (1:1)	S3 (2:1)	S4 (1:1)
Color	7.25	7.5	8.75	7.25
Texture	7.5	7.5	8.16	7.25
Flavor	7.41	7.66	8.33	7.66
Taste	7.66	7.33	8.16	7.27
Overall acceptability	7.66	7.75	8.53	7.33

The sample S3 was selected on the basis of sensory evaluations. A panel of 10 judges used the 9-point Hedonic scale to evaluate the sensory attributes of color, flavor, texture, and scent.

Proximate Analysis Of the sample S3:

Table 2: Proximate analysis

Parameters	S3
Energy	200Kcal
Moisture (%)	26.81%
Protein (%)	1.5%
Fat (%)	21.45%
Carbohydrate (%)	43.6%
Ash (%)	3.64%

CONCLUSION

A nutrition rich aloe vera burfi is developed with acceptable quality the final product is rich in carbohydrate, vitamin, and minerals it contains vitamin such as A, C, B12 etc. Without the addition of any synthetic additives, preservatives, or chemicals, jaggery is made naturally. So, it has a lot of proteins, minerals, and vitamins in it. Jaggery helps in weight loss, control blood pressure, relieves menstrual pain and it is good source of potassium which helps to boost metabolism.

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