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Development and Characterization of Vitamin-Rich Burfi from Alovera

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ABSTRACT:

Alovera known for its high carbohydrate and nutrient content, it is available in different areas. Alovera has a long history as a medicinal plant with diverse therapeutic properties. The study was conducted with an objective to develop a novel and functional burfi with incorporation of Alovera juice at different levels in burfi the product was selected on the basis of sensory evaluation. Alovera juice incorporation up to 20% did not effect the colour, appearance, texture and sweetness scores but flavor and overall acceptability scores was significantly declined after 15% of Alovera juice addition in burfi. Leaves has been extensively used with pharmacological and cosmetic applications. Traditionally this medicinal plant has been employed to treat skin problems. The developed and finalized product will be evaluated for physico- chemical,Textural, Functional and sensory attributes.

KEYWORDS: Alovera, Pista flavored milk, sugar, ghee.

INTRODUCTION:

Aloe is a succulent plant widely used in alternative medicine. There are at least 420 different plant species of Aloe. Aloe vera specifically refers to the Aloe barbadensis Miller plant, they are lot of research papers on fortification of dairy products(Verma et al., 2018)(11)The Against skin damage from x- rays , lung cancer , intestinal problems, increasing High Density Lipoprotein (HDL) reducing blood sugar in diabetics ,allergies and improved immune system (Pandey and Singh et.al., 2016)(14)It is grown in subtropical and tropical locations, including South Africa, Latin America, and the Caribbean Aloe was one of the most frequently prescribed medicines throughout most of the 18th and 19th centuries and it remains one of the most commonly used herbs in the United States today. However, oral use of aloe for constipation is no longer recommended, as it can have severe side effects. Although aloe is 99 percent water, aloe gel also contains substances known as glycoproteins and

polysaccharides. One more study by (Govindhammal et al., 2017) Pista Flavored Milks are milks to which some flavors / colors and sugar been added.

Some research studies with the effect of fortification of dahi and flavored milk fortified with Aloevera gel (Jothy- lingam & pugazhenthil et al; 2013)(15). 180ml serving of pistachio milk contains 70 calories, 4g of carbohydrates, 5g of fat, and 2g of protein. Pista milk has significantly higher levels of Vitamin E, and pistachios are rich in the B vitamin. Pista flavored milk is also a good source of potassium, magnesium, and calcium and rich in iron and phosphorus and contain about 1-2g of dietary fiber. Ice cream was prepared by (Manoharan and Ramaswamy et al., 2013)(13) beet root and alovera pulp known about pistachio nuts since 6000 bc. Since then, pistachios have been systematically incorporated into the diet of various cultures. Alovera in yoghurt was superior as compared to other experimental samples found in good probiotics drinks with good taste transfer to the customer (Srikanth et. Al., 2017)

This sweet is especially prevalent during festivals, celebrations, and special occasions in India and South Asia. There are various types of burfi, including plain burfi, coconut burfi, chocolate burfi, and pistachio burfi, each offering a unique flavor profile. Its rich taste and simplicity in preparation make it a beloved confection in Indian cuisine. The present study was selected to develop Alovera burfi from Pista flavored milk and to evaluate the sensory and physico-chemical properties of the product. Looking to the functional, therapeutic and its blend flavor in nature, alovera is utilised for development of a novel and functional burfi.

Materials and methods:

The materials needed for the preparation of burfi are alovera juice, Pista flavored milk, coconut powder, sugar, ghee and cardamom powder.

Preparation of alovera gel :

Cut a fresh alovera leaf, wash it thoroughly to remove any dirt peel of the outer green. Skin carefully to reveal the clear gel inside and finally scoop out the gel using a spoon or blend it to get a smooth gel.

Prepare the mixture:

Heat a non-stick pan and prepare the Pista flavored milk. Cook it on medium heat until the mixture thickens. Pour the alovera gel cool well until the raw smell disappears and gel thickens slightly and add the grated coconut and mix well. Add sugar and stir continuously until the sugar dissolves and the mixture starts to thicken. Add ghee gradually while stirring keep stirring until the mixture starts to leave the sides of the pan and becomes a thick mass.



Figure 1 Preparation of burfi

Add cardamom powder or saffron strands mix well to incorporate the flavors evenly and grease a plate or a tray with a little ghee .Pour the cooked mixture into the greased plate and spred it evenly to your desired thickness and allow it to cool slightly, then garnish with chopped nuts. The burfi is transferred into airtight container.

INGREDIENTS	TRAIL -1	TRAIL-2	TRAIL-3
ALOVERA	50ml	60ml	100ml
PISTA FLAVOURED MILK	250ml	500ml	700ml
SUGAR	500gms	500gms	500gms
COCONUT POWDER	20gms	20gms	20gms
CARDAMOM POWDER	4gms	4gms	4gms
GHEE	100ml	100ml	100ml

Table 1 The burfi can be Prepared with three different composition with alovera, Pista flavored milk the ingredients formulated

RESULTS AND DISCUSSION:

Sensory evaluation:

Table 2: The sensory evaluation helps to characterize the sensory attributes of burfi i.e.,senses like colour, taste, appearance, odor, flavor, and overall acceptability.

Sensory attributes	Control	Sample 1	Sample 2	Sample 3
Color	8	8.5	8	7
Taste	8	7	9	7
Appearance	7	9	7	7
Odor	7	7	8.5	8
Flavor	8	8	8	8
Texture	8	8	9	7
Overall acceptability	7	7	9	8

Among the three samples, sample 2 was selected for further analysis. The analysis include

Physio-chemical analysis:

Moisture content:

Moisture content in the product can be determined through the application of microwave moisture analyzer.

PH :

To calculate the alkalinity of the product.

Fat :

Measured using by the solvent extraction methods like the soxhlet extraction method .

Protein:

The Assessed used the kjeldahl method which measures the nitrogen content to estimate protein levels.

Ash:

Represents the total minerals content and is determined burning the sample at high temperature until only ash remains

Carbohydrates:

The carbohydrate content can be determined through Fehling solution.

Table 3: Physico-chemical analysis of protein Rich Burfi

PROXIMATE ANALYSIS	CONTROL	SAMPLE
Moisture	30%	45%
Ash	3%	2.5%
Fat	4.5%	4.5%
Protein	32%	33%
Carbohydrates	11%	12%

CONCLUSION:

The alovera burfi is a unique traditional Indian sweet. The alovera burfi stands out for its innovative and wholesome qualities .It was concluded that sample 2 with alovera and Pista flavored milk was superior in quality at low price with respect to physical and chemical parameters and also providing the required nutrients such as proteins, fats ,minerals, antioxidants.

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