

Processing of Antioxidant Rich Fizzy Aloe Vera Soda

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Abstract: - Aloe Vera, a succulent perennial and drought resisting plant, is well known for its therapeutic potential. A number of beneficial effects of aloe vera have been reported, including immunomodulatory, wound and burn healing, hypoglycemic, anticancer, gastro-protective, anti-fungal, and anti-inflammatory properties. The present review provides its application in foods as medicinal. There is number of products using aloe vera but in this present we used it for Aloe vera soda. In addition, with variety of flavours. Also adding a rose essence as smell enhancers. It gives a better response in public. Especially children are don't like bitter taste mostly. But they will like that taste by this soda.

Key Words: — *Aloe Vera, Gastro-Protective, Vera Soda, Antioxidant.*

I. INTRODUCTION

Aloe vera is a succulent plant species of the genus *Aloe*. An evergreen perennial, it originates from the Arabian Peninsula, but grows wild in tropical, semi-tropical, and arid climates around the world. It is cultivated for agricultural and medicinal uses. The species is also used for decorative purposes and grows successfully indoors as a potted plant.

It is found in many consumer products including beverages, skin lotion, cosmetics, and ointments or in the form of gel for minor burns and sunburns. There is little clinical evidence for the effectiveness or safety of Aloe vera extract as a cosmetic or medicine.

Aloe vera is a stemless or very short-stemmed plant growing to 60–100 cm (24–39 in) tall, spreading by offsets. The leaves are thick and fleshy, green to grey-green, with some varieties showing white flecks on their upper and lower stem surfaces. The margin of the leaf is serrated and has small white teeth. The flowers are produced in summer on a spike up to 90 cm (35 in) tall, each flower being pendulous, with a yellow tubular corolla 2–3 cm (0.8–1.2 in) long. Like other *Aloe* species, *Aloe vera* forms arbuscular mycorrhiza, a symbiosis that allows the plant better access to mineral nutrients in soil.

Aloe vera leaves contain phytochemicals under study for possible bioactivity, such as acetylated mannans, polymannans, anthraquinone C-glycosides, anthrones, and other anthraquinones, such as emodin and various lectins.



Fig.1. Aloe Vera Plant

A. Cultivation:

Aloe vera has been widely grown as an ornamental plant. The species is popular with modern gardeners as a putatively medicinal plant and for its interesting flowers, form, and succulence. This succulence enables the species to survive in areas of low natural rainfall, making it ideal for rockeries and other low water-use gardens. The species is hardy in zones 8–11, and is intolerant of heavy frost and snow.



Fig.2. Aloe Vera Plantation

The species is relatively resistant to most insect pests, though spider mites, mealy bugs, scale insects, and aphid species may cause a decline in plant health. This plant has gained the Royal Horticultural Society's Award of Garden Merit.

II. NUTRITIONAL CHART OF ALOE VERA

NUTRIENTS	AMOUNT (100 g)
CARBOHYDRATE	3.75 g
SUGAR	3.75 g
CALCIUM	8 mg
IRON	0.15 mg
SODIUM	8 mg
VITAMIN C	3.8 mg

A. Benefits of Aloe Vera

Aloe vera for dry skin: - Take some aloe vera, a pinch of turmeric, a teaspoon of honey, a teaspoon of milk and a few drops of rose water. Blend this mix till you get a paste. Apply it and leave in for about 20 minutes or so.

Aloe vera scrub: - Grab half a cup of fresh aloe vera gel, a cup of sugar and two tablespoons of lemon juice. The sugar will help exfoliate and scrub off dead skin, the aloe vera will deep clean the skin and the lemon will help fade out scars and tan. Stir the three ingredients together and use it to scrub both face and body.

Aloe vera for acne: - Take some aloe vera gel, blended walnuts with flour like consistency and honey. Aloe Vera's healing properties coupled with the anti-oxidants from honey will leave you with smooth and clear skin.

Aloe vera for sensitive skin: - Grab some aloe vera gel, cucumber juice, yogurt and rose oil and blend them to a paste. Apply and leave for around 20 minutes, then rinse it off.

B. Ingredients Needed:

- Aloe vera gel
- Sweetener- sugar or high fructose corn syrup
- Flavor essences as powdery or liquid
- Carbonated water
- Phosphoric acid
- Natural preservatives (citric acid)

III. PROCESS: ALOE VERA GEL PREPARATION

The outer leaves are more likely to be mature. They'll contain plenty of fresh, healthy gel. Look for leaves around the outside of the plant, with bases growing close to the ground. Use a sharp knife to make a clean cut near the base.

Cutting off just a leaf or two, especially if they're large, should be sufficient to make 1/2 to 1 cup of gel.



Drain the resin for 10 minutes: Place the leaves upright in a cup to let the dark yellow resin drain out. The resin contains latex, which can be slightly irritating to skin. It's best to drain it out so it won't get into your gel.



Peel the leaves: Use a vegetable peeler to carefully peel away the green portion of the leaves. Be sure to cut through the inner white layer to the gel underneath.

Peel off all of the skin on one side of the each leaf, leaving a canoe-shaped half filled with gel.



Scoop the gel out with a spoon or knife: The clear, soft gel is easily scoopable. Scoop it all out into a clean bowl until there's nothing left in the leaf half.



Consider mixing the gel with a natural preservative: If you have a lot of gel and you want it to keep for a month or two, mix in 500mg powdered Vitamin C or 400 IU vitamin E for every 1/4 cup of gel you have.

A. Mixing of Ingredients:

Step-1: Adding of high fructose corn syrup to the gel. It is here used as a sweetener as well as we can use normal sugar also.

Step -2: We can use the flavoring essence like any dried fruits to manage the bitterness of the aloe vera. Here we use dry Almond and also use rose essence for smell enhancer.

Step -3: Mix all the above by using blender. Now it is look like a foamy liquid.

Step -4: Then mix it with a carbonated water as all known as soda.



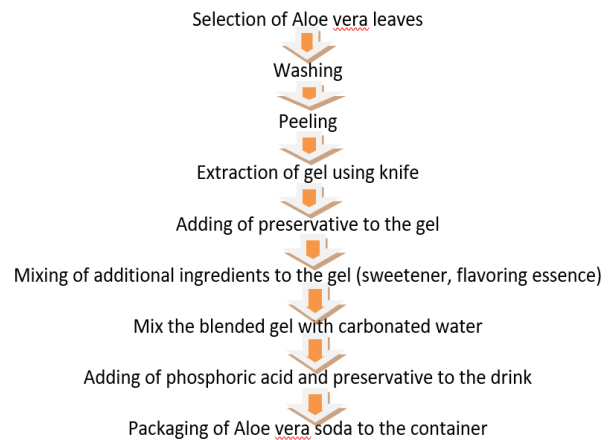
Fig.3. Machinery to make an Aloe Vera soda

Step -5: After adding of phosphoric acid is a colorless, odorless crystalline liquid. It gives soft drinks a tangy flavor and prevent the growth of mold and bacteria, which can multiply easily in a sugar solution. Most of soda's acidity also comes from phosphoric acid.

Step -6: To add preservative for long time storage. Here we use citric acid as a natural preservative and is also used to add acidic (sour) taste to foods and soft drinks.

Step -7: Finally, the product will be packed with the highly protectable materials. To increase and maintain the condition of the soft drinks it will be stored in a metal and glass tins, cans.

B. Overall Diagram:



C. Benefits of Aloe Vera Soda:

- It stimulates the intestinal flora.
- It helps to heal stomach and intestinal ulcers.
- It prevents acidity thanks to its alkaline agents.
- It improves blood oxygenation and circulations, leading to more robust cardiac health.



Fig.4. Aloe vera soda

- It multiplies the effects of vitamins, especially C and E.
- It can help as part of a slimming diet.

- It eliminates toxins and undesirable substances from the organisms.
- It reduces the oxidative stress.

IV. CONCLUSION

Gels made from Aloe are used to treat burns and minor scrapes. Aloe vera benefits range from soothing inflammation, pain relief, and a reduction in the likelihood of infection. Studies have also shown that regular use of an Aloe vera based gel will actually speed the healing process in minor wounds, and even severe burns. It has been used in this capacity for hundreds of years. In industrialized areas, the moisture from the Aloe leaves are extracted and made into the popular gel most people are familiar with. In more recent years, it has become more popular than ever and has found its way into skin lotions, cosmetic products, shampoos, lip balms, soaps and sunscreens. Some Aloe vera benefits include a strong moisturizing capacity, and its extract contains a number of vitamins and minerals that are believed to promote healthy skin. Internal use of Aloe is marketed as a treatment for coughs, ulcers, muscle pain, headaches, and even cancer and HIV. The only proven Aloe Vera benefit in internal use is the relief of constipation.

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