

## From Exotic to Essential: The Rise of Soursop

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Many studies on plants, their contents, and the pharmacological activities of their constituents have been conducted. *Annona muricata* Lin., commonly called soursop, is part of the Annonaceae family, which comprises more than 130 genera and 2300 species. *A. muricata* L. contains various compounds with pharmacological activity. This plant is widely grown in tropical and subtropical areas, such as Southeast Asia, South America, and the rainforests of Africa. The plant produces edible fruit all year round and is widely used as a traditional medicine for skin disease, respiratory disease, fever, bacterial infections, diabetes, hypertension, and cancer. Different parts of *A. muricata* have different activities. The seeds combat parasitic infections; the fruit is used for the treatment of arthritis, nervous disorders, and diarrhoea; and the leaves are used to treat cystitis, headaches, insomnia, and Cancer. The main active components of *A. muricata* are acetogenin, alkaloids, and flavonoids. Analysis of the compounds in *A. muricata* leaf extract revealed secondary metabolites such as flavonoids, terpenoids, saponins, coumarins, lactones, anthraquinones, glycosides, tannins, and phytosterols. (Igiehon *et al.*, 2025)



### Application of Soursop Pulp, Seeds, Oils and Other Constituents in Food Products

Soursop is attractive to consumers due to the pleasant and distinct flavour of the fruit and its white pulp. The pulp has been marketed in Brazil, North America and Europe with its application ranging from manufacturing of food products such as ice-cream, puree, jams, shakes, jellies, yoghurt, syrups and juice blends. Presently, the use of natural ingredients as treatments for various diseases is increasing. Plants are a source of natural ingredients that are widely used as medicines. The compounds present in plants are responsible for their activities against various diseases, and studies can be performed to identify the active compounds in plants and determine their pharmacological activities against diseases.

**Table 1: Soursop Pulp, Seeds, Oils and other Constituents in Different Food Products**  
Source: Igiehon *et al.*, 2025

Material source	Products	Inference
Soursop pulp	Soursop yoghurt and frozen dessert	Improvement in dietary Fiber, vitamin C, And total polyphenol
Soursop, milk and honey	Dietary soursop milkshake	Ascorbic acid, antioxidant activity and acceptable sensory characteristics
Soursop with moringa leaf powder	Ice cream	Antioxidant, low glycaemic index and sensory attributes
Soursop pulp	Beer(beverage)	Nutritive and sensory quality

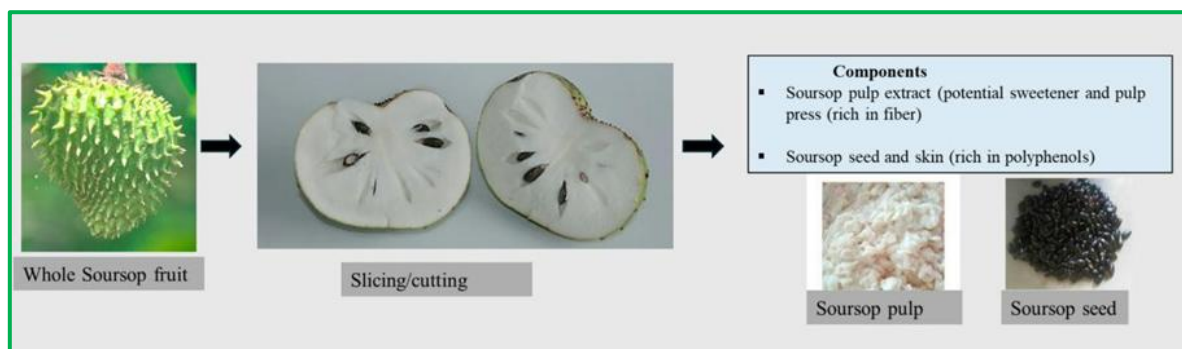
Soursop	Cream	Sensory attribute maintained
Soursop pulp	Juice	Good sensory attribute
Soursop residue (leftover of peels, seeds, and squeezed pulp) four with wheat flour	Bread	Good sensory attribute
Yoghurt blackberry and soursop	Developed formulated beverage	Antioxidant properties

### Benefits of Soursop

- ❖ One of the major benefits of soursop is its strong antioxidant activity, which helps protect body cells from oxidative stress and free radical damage.
- ❖ Studies have also highlighted its potential anticancer properties, as certain compounds in soursop may inhibit the growth and spread of cancer cells and promote apoptosis (programmed cell death).
- ❖ Soursop may help regulate blood glucose levels, making it beneficial in diabetes management. Soursop possesses anti-inflammatory, antibacterial, antifungal, and antiviral properties that may help the body fight infections and reduce inflammation-related disorders.
- ❖ The fruit is also rich in dietary fibre, which supports digestion, improves bowel movement, and promotes gut health.
- ❖ Vitamin C and mineral content help strengthen the immune system and support overall health.
- ❖ Soursop may also contribute to cardiovascular health by helping reduce blood pressure and cholesterol levels due to its potassium and antioxidant content. Traditional medicine has long used soursop for treating fever, pain, ulcers, and respiratory problems.

### Disadvantages of Soursop

- ❖ High intake of soursop, especially its seeds and leaf extracts, may affect nerve cells because of compounds called annonaceous acetogenins.
- ❖ Long-term excessive use has been linked to neurological problems like Parkinson's disease in some regions.
- ❖ Soursop may also lower blood pressure and blood sugar levels excessively, which can be risky for people already taking medications for hypertension or diabetes.
- ❖ Scientific evidence supporting its anticancer effects is still limited to laboratory and animal studies, and there is not enough clinical proof in humans. Soursop should be consumed in moderation and should not be considered a replacement for medical treatment.



### Future Outlook of Soursop

Soursop has promising future potential in food, pharmaceutical, cosmetic, agricultural, and industrial applications due to its rich nutritional and bioactive composition. Different parts of the fruit, including the pulp, peel, and seeds, can be utilized for producing essential oils, natural flavouring agents, animal feed, bioplastics and biodiesel.

## Conclusion

Soursop (*Annona muricata*) is a valuable tropical fruit with remarkable nutritional, medicinal, and industrial potential. Rich in antioxidants, vitamins, dietary fibre, and bioactive compounds, it offers numerous health benefits, including antioxidant, antimicrobial, anti-inflammatory, and potential anticancer activities. Its pulp, seeds, peel, and other constituents have been successfully incorporated into a variety of food products, enhancing their nutritional and sensory qualities. Despite its promising benefits, excessive consumption should be avoided due to potential neurological risks associated with certain compounds. Further clinical studies are needed to confirm its therapeutic effects in humans. Overall, soursop represents a promising functional food and natural resource with significant potential for future applications in the food, pharmaceutical, and nutraceutical industries.

## References

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