

All Over Potential Profile of Pomelo Fruit: A Fruit That Boon An Individual Health

(*Lipika Moi, Leena Priti Lakra and Er. Yashwant Kumar Patel)

Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur, Chhattisgarh, India

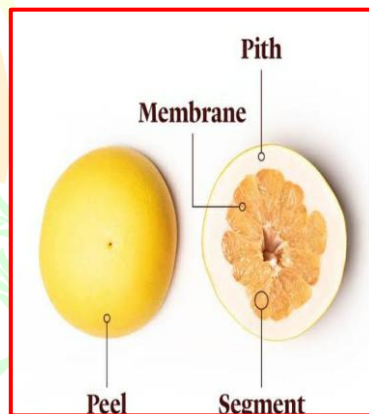
*Corresponding Author's email: mrityunjoymoi5@gmail.com

Pomelo fruit (*C. grandiso/ C. maxima*) grows primarily in southeast Asia in countries such as Malaysia, Thailand, Fiji, Southern China. Pomelo, the largest member of the citrus fruit family, is not only delightful in taste but also offer a numerous health benefits. Pomelo is slightly differ from grape fruit by its taste, among them pomelo fruit is more sweeter. This fruit is consumed raw or to make fruit salad for the burst of citrus flavour. Besides the leaf and flower exact are widely utilized in ancient Indian medicinal system of Ayurveda to cure various diseases. But too much consumption can cause potential side effects.



Introduction

Pomelo scientifically known as *Citrus maxima* belongs to the Rutaceae family, is the largest one among citrus varieties. Pomelo is good for human consumption ,as they are free from cholesterol,rich in vitamin C ,folic acid ,Antioxidants, dietary fibre. The yield of pomelo fruit were 3-7×100000h. The fruit spreads up to 10-30cm.in width and weighs around 1-3 kg. This fruit contains high amount of citric acid, so it gives a sharp taste and flavour. It contains a significant amount of naringin ,a wide variety of polyphenolic substances including caffeic acid, vanilla acid. Pomelo is a fruit that not only have health benefits but also have the benefits of their waste products that shows popularity in making food products.



- The peels are regarded as waste part of pomelo.It is made up of a cuticle on the exterior covered by thin epidermal layer and oil sacs.
- The oil sacs contain essential oil and pectin also.
- During processing and raw fruit consumption a lot of waste from pomelo are cut out including peel,seed,albedo. The pomelo waste includes cellulose, water, hemicellulose, sugar and active constituents such as phenolics and flavonoids.

Nutrition Profile of Pomelo Fruit

Nutritional Aspects

- ENERGY: 231 Kcal in whole fruit, 188 in peel and 159 in juice.
- Moisture: 81.94% in fruit, 78%in peel and 79.57 %in juice.
- Vitamin C: 30-43 mg in fruit, 19.34 in peel and 26.34 mg in juice.
- Potassium: 150 -225 mg in whole fruit, 127 mg in peel and 98.32 in juice.
- Iron: 0.49 mg in whole fruit, 0.52mg in peel ,0.38 mg in juice.

The Multisides Potential of Pomelo Fruit

- Potential of health benefits : Phytology, Therapeutic and Hydration action.
- Potential of side effects : Drug interactions, Allergic reactions and gastrointestinal.

Potential benefits

Phytology: The pomelo fruit is acclaimed of its different properties such as anti diabetic, anti inflammatory, antimicrobial. This properties shows in presence of phenolic acid, flavonoids, polyphenol and other .

- **Polyphenols:** Pomelo fruit contains different polyphenolic compounds including flavonoids ,phenolic acids , all are present in different range. Some of are present in higher concentrations and other in lower .For extraction of polyphenol different techniques use like soxhlet methods, ultra high pressure extraction, accelerated solvent extraction.
- **Flavonoids:** It is an important class of polyphenolic secondary metabolites with significant antioxidants component in human diet. Flavonoids are present in different percentage range includes -10% dried pomelo fruit. Pomelo fruit composed of 75 -90% of total flavonoids as compared Naringin makes up roughly 90% of peel ,juice and pulp.
- **Phenolic acid:** Next to flavonoids, the other main class is phenolic acid. The different phenolic acid comes from pomelo peel and segment peel are chlorogenic ,frolic, vaillic acid ,for extraction vortexing, centrifugation, sonication etc are utilized.

Therapeutic Potential

- Pomelo fruit contains high amount of vitamin c ,a powerful antioxidant that supply immune function, good for skin also.
- Pomelo fruit is rich in insoluble fibre,which helps to increase the stool volume to prevent constipation and showing the other benefits like consuming fiber rich food like lower cholesterol and reduce the risk of heart disease.
- This fruit keeps the body hydrated maintaining the electrolytes balance.

Potential side effects

- Some of individual may experience allergic reactions to pomelo, symptoms of citrus allergies may include - itching, swelling, difficulty breathing.
- Gastrointestinal upset - Consuming pomelo on an empty stomach can cause gastrointestinal discomfort.
- Drug interactions – it can cause drug interactions, if any individual may take drug like (coreg ,Buspirone, antemeter)can interfere with the metabolism of some medications, so it can cause adverse effects.

Application of Pomelo Fruit in Food Industries

Pomelo processing in industrial areas possesses a lot of waste in form of press cake like albedo, juices and seeds. The different products developed from pomelo fruit are squash, jam,bread, beverage, wine.The pomelo juice is consumed in fresh form and as processed products it can available in form of cordial, syrup. Besides pomelo seeds are used as livestock feed ,additives and flavoring agents. Pomelo fruit oils are byproducts of pomelo fruit have a popularity due to its antimicrobial, inflammatory activity.

Conclusion

Pomelo offers excellent benefits such as better heart health, high immunity etc. Besides it is rich in L ascorbic acid,potassium, iron. In conclusion pomelo is an exceptionally nutritious fruit low in calories and brimming with nutrients minerals and cell reinforcement. The therapeutic potential and nutrition value of pomelo fruit can be explored further for products of health, which provides greater benefit for income and lower post harvest losses