

A Review Study on Medicinal Properties of Psidium Guajava

Dinesh Verma

Assistant Professor, Department of Agriculture, Vivekananda Global University, Jaipur, India

Correspondence should be addressed to Dinesh Verma; dinesh.verma@vgu.ac.in

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ABSTRACT- Guava is a plant local to Tropical America and one of the most well-known in the Myrtaceae family. In contrast with different organic products, guava is untreated with synthetic compounds, making it a better choice. It has for quite some time been utilized as a homeopathic spice to treat an assortment of illnesses all over the planet. Oleanolic corrosive, tannins, quercetin, triterpenes, ursolic corrosive, a pentacyclic triterpenoid, saponins, carotenoids, amritoside, lectins, guajanoic corrosive, leucocyanidin, beta-sitosterol, and avil are among the dynamic fixings. Guava has antibacterial, hostile to malarial, against diarrheal, calming, against malignant growth, against hyperglycemic, and cell reinforcement properties, among others. A few examinations have uncovered that guava contains various pharmacological dynamic parts that are liable for an assortment of biochemical exercises, including antidiabetic, antimicrobial, antidiarrheal, against oxidant, hostile to pyretic, cardioactive, hepatoprotective, immunomodulatory, spasmolytic, and contractile impacts, which are talked about further in the survey. This paper was assembled to bring issues to light with regards to pharmacological exercises and how they can be utilized to treat an assortment of problems and infections. Guava has a wide scope of healthful and therapeutic properties. Contingent upon the species, the natural products are 4-12 cm long and have a round or oval shape (red, strawberry, and grayish). The tree, which has a place with the Myrtaceae family, is essentially filled in tropical and subtropical environments. Whenever analyzed, the pink assortment of guava has the most elevated restorative worth. Antidiarrheal, antihypertensive, antilipidemic, anticancer, and other medical advantages can be found in both foods grown from the ground leaves.

KEYWORDS- Fruits, Guava, Herb, Medicinal, Psidium guajava, Tree.

I. INTRODUCTION

Numerous fundamental supplements have been offered to Guava (*Psidium guajava*) essentially. All things considered, Guava is accepted to be filled in South Africa for business reasons and has been acquainted with country India by the Portuguese. Guava is a natural product that is very predominant in Asian countries, even though it is more well known in Western nations because of its helpful

characteristics. It is a little tree in the Myrtaceae family [1–3]. The tree might be filled in any dirt that has a tropical or subtropical climate. India is currently the world's greatest maker of guava, trailed by China. Contingent upon the species, guava natural products are regularly 4 to 12 centimeters (1.6 to 4.7 in) long, round or oval. The natural product is at the first green in shading, however as it ages, it becomes yellow [4]–[9]. Apple guava is the most widely available guava on the market (Table 1).

Table 1: The Below Table shows the botanical classifications of *Psidium guajava*

Botanical classifications	
Kingdom	Plantae - Plants
Subkingdom	Tracheobionta Vascular plant
Superdivision	Spermatophyta Seed plant
Division	Magnoliophyta Flowers plant
Class	Magnoliopsida Dicotyledonous
Subclass	Rosidae
Order	Myrtales
Family	Myrtaceae
Subfamily	Myrtoideae
Tribe	Myrteae
Gender	<i>Psidium</i>
Species	<i>Psidium guajava</i>

Aside from the natural product, guava leaves have various medical advantages, including disease avoidance, pulse guideline, the runs therapy, and entrail issues alleviation, to give some examples. It additionally supports weight reduction, skin constitution, and the treatment of hacks, colds, blockage, diarrhea, and scurvy. Apple guava, cherry guava, and strawberry guava are generally normal guava assortments all over the planet. Normally polished off as juices or eaten crude in the aged or semi-aged structure. This notable natural product is an authentic manufacturing plant of supplements, as displayed in Table 2. Guava and its leaves might have medical advantages, as per this audit [8], [10-13].

Table 2: The Below Table Shows the Nutritional Value per 100 G of Guava Fruit

Nutritional Value Per 100 G Of Guava Fruit	
Energy	285 kJ (68 kcal)
Sugars	8.92 g

Carbohydrates	14.32 g
Dietary fiber	5.4 g
Fat	0.95 g
Vitamin A Equiv.	31 µg
Protein	2.55 g
beta-Carotene	374 µg
Niacin (B3)	1.084 mg
Riboflavin (B2)	0.04 mg
Thiamine (B1)	0.068 mg
Pantothenic acids	0.451 mg
Vitamins B6	0.11 mg
Folate (B9)	49 µg
Vitamins C	228.4 mg
Vitamins K	2.2.001 µg
Sodium	2.001 mg
Magnesium	22 mg
Phosphorus	40.00 mg
Manganese	0.15 mg
Potassium	417 mg
Iron	0.28 mg
Zinc	0.23 mg
Lycopene	5204 µg

A. Laxatives

Guava, both the leafy foods leaves, give a critical amount of dietary fiber to assist with the stoppage. The fiber and roughage content of the fresher delicate leaves is particularly high, which is significant for the avoidance and treatment of stoppage and hemorrhoids. As per a few sources, 100 grams of guava natural product has 36 grams of dietary strands. Aside from that, Guava seeds are successful purgatives that guide in the help of persistent clogging and colon cleaning. The natural product is perhaps the most extravagant wellspring of dietary fiber and Vitamin C, which is very high in contrast with different organic products, and only one guava gives around 12% of the day by day suggested fiber consumption, making it incredibly useful for stomach related wellbeing [14-16].

B. Oral Cavity-Related Issues

Periodontitis is brought about by dental plaque, which, whenever left untreated, advances to gum disease and periodontitis. *Aggregatibacter actinomyces temcomitans*, *Porphyromonas gingivalis*, *Fusobacterium nucleatum*, and *Prevotella intermedia* are probably the most successive microorganisms that cause periodontitis. Guava has a high substance of quercetin, which has been demonstrated to have astounding antibacterial activity against diseases like these. In delicate microscopic organisms, Quercetin might cause periodontitis by disturbing cell layers and inactivating basic proteins by making irreversible buildings with the protein. Guava extricates battles oral diseases without upsetting oral depression homeostasis. It additionally keeps microorganisms from sticking to the oral hole, consequently forestalling the spread of plague. Gum draining is the second most successive issue related to the buccal hole (scurvy). Guava has a high L-ascorbic acid fixation, for certain reports guaranteeing that it has multiple times the L-ascorbic acid of

an orange, making it a superb choice for relieving scurvy. Due to its astringent properties, it might likewise be utilized to treat toothaches and ulcers. To acquire prompt toothache alleviation, eat the leaves right away. Due to the folate level in guava leaves, they may likewise assist with terrible breath. Thus, guava is an incredible treatment for relieving oral pit issues [15], [17], [18].

C. Antidiabetic

Guava leaves are stripped and consumed on a vacant stomach in China to battle diabetes. Guava foods grown from the ground can diminish glucose levels when eaten without the skin, as indicated by an examination performed by the Medicinal Research Laboratory in Allahabad on mice. A few creators have explored the impacts of *Psidium guajava* passes on digestive glycosidases comparable to postprandial hyperglycemia, showing a forward leap in the treatment of diabetes (type II). Besides, the high fiber content of guava postpones the assimilation of glucose from the stomach, forestalling a fast expansion in glucose levels after supper. Individuals who drank guava tea in the wake of eating white packets of rice had altogether lower blood glucose levels than the people who drank plain water as a control. Guava (both the products of the soil leaves) likewise appears to diminish fasting glucose. Individuals with Type 2 diabetes who drank guava leaf decoction with each feast for a long time had lower fasting blood glucose levels than before the preliminary, as indicated by an exploration [19].

D. Guava is good for colds and coughs

Guava leaves are useful in the treatment of colds and coughs. Guava is high in ascorbic acid and iron, which helps to decrease bronchial congestion and mucus production while also keeping the respiratory system clear of pathogens. According to reports, the components in Guava work like a miracle in the treatment of influenza. Natural products, particularly crude natural products, or a decoction arranged from fragile youthful leaves, may assist with mitigating colds and hacks. It works by dissolving bodily fluid polymers, facilitating hack and bringing down bodily fluid creation. It additionally keeps the respiratory framework, throat, and lungs liberated from microorganisms and smothers existing microbial movement on account of its astringent characteristics. Guava has a high quantity of vitamin C, which helps cure colds and coughs caused by germs or viruses. In many Indian communities, roasted ripe guava is used as a home treatment for severe coughs, colds, and congestion. Another investigation discovered that a hydro concentrate of *Psidium guajava* leaves significantly decreased hacking recurrence brought about by capsaicin spray following 15 minutes of treatment when contrasted with a benchmark group [20-22].

E. Antibacterial

Antibacterial action has been displayed in guava extricates against both Gram-positive and Gram-negative microorganisms. Watery blend and water-solvent methanol remove from guava leaves and bark was tried in vitro against multidrug-safe *Vibrio cholera* and displayed to have huge antibacterial movement. They resolved that this plant can

decrease cholera flare-ups. Residents commonly evade market drugs in the treatment of sicknesses in youngsters, leaning toward elective therapies, for example, bit and ingested guava leaves (youthful and delicate ones). Guava separate has been demonstrated to be viable against *E. coli*, a microorganism that is impervious to most of the current anti-toxins available. Guava leaves separate has a ton of activity against digestive microbes like *Vibrio cholera*, which is the causative life form for cholera, thusly it very well might be used in regions where the medications of decision are difficult to find.

The antimicrobial action of natural ointments and methanol, hexane, and ethyl acetic acid derivation extricate from guava leaves was explored, with the concentrates being tried against *Staphylococcus aureus*, *Salmonella* spp., and *Escherichia coli* microscopic organisms. The concentrate had the most elevated effect against *Staphylococcus aureus* of the multitude of microorganisms inspected, and the methanolic removal had the best concealment of bacterial development [23].

F. Hypolipidemic and antihypertensive drugs

Hypertension, hyperlipidemia, and heart disease may all be treated with guava. It also includes potassium, which aids in blood vessel relaxation and, as a result, blood pressure management. The increased potassium and fiber content of guava fruit has been shown to result in substantial reductions in blood pressure and blood lipids when consumed regularly. Furthermore, Guava has a high concentration of pectin, which produces a substantial decrease in blood lipids by delaying meal absorption, lowering the risk of cardiovascular disease. Gallic corrosive, catechins, epicatechins, rutin, naringenin, and kaempferol in the leaves, as indicated by many creators, are answerable for hindering the protein pancreatic cholesterol esterase, bringing about lower cholesterol in the blood. Catechins are critical as a hypercholesterolemia avoidance treatment. Quercetin has been connected to a lower hazard of death from coronary illness and a lower hazard of stroke in those with hypertension and hyperlipidemia. Guava has an unobtrusive measure of potassium, which assists with upgrading heart wellbeing and forestalling strokes by directing hypertension and diminishing cholesterol [24].

G. Problems with the Gastrointestinal System

The flavonoid and quercetin content of guava leaves has been shown to protect against a variety of gastrointestinal illnesses. The leaves of *Psidium guajava* are an example of a plant that is widely used as a folk remedy for a variety of gastrointestinal problems. The alkalinity of fruits and leaves prevents pathogenic microbes that cause gastroenteritis from growing. Guava is useful in the treatment of diarrhea because it inhibits microbial growth and helps to bind loose stools by releasing excess mucous from the intestine. Guava has a variety of important vitamins and minerals, including carotenoids, vitamin C, and potassium, all of which help to prevent GIT issues. Chewing guava leaves on an empty stomach may help to eliminate excess mucus formation in the large intestine. Drinking modest amounts of guava leaf tea helps to preserve stool consistency. Because of its high

concentration of quercetin and flavonoids, the guava leaf extract is used to treat gastrointestinal problems.

H. Antacid and Ulcer Protectant Activity

Guava leaf's alkaline nature provides a powerful antidote to stomach hyperacidity. Guava tea is still produced in most communities today by boiling 10-15 young Guava leaves in 34 cups of water and drinking the warm mixture to get rid of acidity. In vitro, the methanolic separate had the best acid neutralizer and ulcer mending properties of all the concentrate solvents. The flavonoids and saponins contained in the Guava products of the soil have been demonstrated to be useful in diminishing causticity and resulting in stomach ulcers. The ulcer record of ethanol-actuated ulcer in the stomach of Wister rodents was essentially decreased by a methanolic concentrate of *Psidium guajava* leaves at measurements of 500 and 1000 mg/kg body weight [25].

I. Anti-Allergy

The outcomes showed powerful concealment of receptor discharge from pole cells and repressed IL-10-interceded in vitro initiation of T administrative (Tr) cells from CD4+ splenocytes of C57BL/6 mice utilizing methanol and watery concentrates of *Psidium guajava* leaves. By straightforwardly restraining Tr cell work, the concentrates changed the Th1/Th2 equilibrium to a Th1 prevailing state. In mice, guava leaf separates diminished the unfavorably susceptible reaction intervened by T cells [26].

II. DISCUSSION

Current living has brought about a huge number of sicknesses, including constant degenerative infections like diabetes, hypertension, dyslipidemia, and cardiovascular illness, all of which need expanded medical care spending. Nonetheless, a few normal organic product trees may likewise be utilized. It has a place with the Myrtaceae family and is said to have started in Tropical America, where it is known as sand plum. The high utilization of drug meds requires an examination into elective treatments for the treatment of extreme sicknesses and problems. Broad examination examinations are required in such a manner to endorse the attributes of an assortment of restorative plants. Nutrients, tannins, flavonoids, phenolic compounds, triterpenoid acids, medicinal balms, and sesquiterpene alcohols are the main parts of guava. The reason for this article is to gather the consequences of any examination that have decided the presence of various synthetics in guava natural product as well as their pharmacological impacts.

III. CONCLUSION

Drug resistance has emerged rapidly as a result of the widely utilized of allopathic medicines in the treatment and prevention of illnesses. One of the most common causes of medication treatment failure is drug resistance. Drug resistance is one of the most common problems encountered during antimicrobial treatment. Resistance to natural treatment or Ayurvedic therapy, on the other hand, is very uncommon, which has prompted many individuals to convert

from allopathic to Ayurvedic medicine. However, extracting the active component from the crude natural chemical poses a significant difficulty for researchers, necessitating the development of a simpler technique. Natural therapy is not only safe and easy to get, but it is also cost-effective in the treatment and prevention of illness. Even doctors and practitioners are searching for alternative treatments for different illnesses these days, therefore the development of traditional herbal medicine based on natural resources must be prioritized.

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