



International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Dosage Forms Based on Carica Papaya

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ABS TRACT:

This review provides a comprehensive analysis of Carica papaya's use in various dosage forms, exploring formulation principles, therapeutic uses, and practical directions for administration.

The paper addresses each dosage form—traditional, modern oral, advanced delivery systems, and topical applications—highlighting bioavailability, stability, compliance, and therapeutic value. Representative formulations and synergistic effects with excipients are discussed as a resource for researchers and healthcare practitioners.

Keyword: Dosage forms based on Carica Papaya , Carica Capaya Extract , Carica Papaya (papaya) FruitExtract, CaricaPapaya Dosage, Carica Papaya Extract Benefits, Carica Papaya Tablet Dosage, Dosage of Carica Papaya.

INTRODUCTION:

Carica papaya L. (papaya), widely used in traditional medicine, is valued for its rich phytochemical profile, including papain, chymopapain, flavonoids, alkaloids, and phenolic acids.



Its therapeutic benefits span immune modulation, anti-inflammatory, anticancer, and digestive properties. Papaya leaves and seeds are traditionally used for fevers, digestive ailments, dengue fever support, and wound healing.

Types of Formulation

Traditional Dosage Forms

Papaya Leaf Juice/Extract

Fresh leaves are washed, crushed, and filtered to obtain juice, often consumed for fever and platelet support.

Preparation: 10–30ml, 2–3 times daily, traditionally taken on an empty stomach.

Papaya Leaf Tea/ Decoction

Dried leaves are boiled to yield a tea used for digestion, fever, and general wellness.

Preparation: 2–5g leaves in one cup boiling water



Papaya Leaf Juice/Extract



Papaya Leaf Tea

Oral Dosage Forms

- Tablets and Capsules

Formulated using papaya leaf extract (commonly 250–500 mg per tablet or capsule). Used for immune support and platelet elevation.

Preparation: Blend extract with excipients (cellulose, magnesium stearate), encapsulate or compress into tablets.

Example Brand: Caripill (Carica papaya extract tablet).



- Syrups

Papaya seed extract formulated with syrup base, stabilized with preservatives such as sodium benzoate.

Preparation: Mix fluid extract (4 g/20 ml honey), or 15.15% w/w fluid extract in syrup. Used as an anthelmintic and immune booster.



Chewable Tablets and Effervescent Forms

- Chewable formats can be prepared using papaya dry extract, bulking agents (sorbitol, mannitol), binders, and natural flavors for children or geriatric use.

Advanced Delivery Systems

- Phytosomes/ Nanoparticles

Papaya leaf extract encapsulated in lipid or polymer nanoparticles to improve absorption and bioavailability; under research for anticancer and advanced therapies.

Preparation: Solvent injection or homogenization techniques to form stable disperse systems.

- **Lozenges/Pastilles**

Incorporate papaya extract in sugar/polyol base, suited for oral and throat administration for localized relief.

Topical and Transdermal Dosage Forms

- **Papaya Gel/Cream**

Papaya leaf extract (2%) or latex incorporated with carbopol (1%), propylene glycol, and minor preservatives for anti-inflammatory and wound healing purposes.

Preparation: Blend extract in aqueous carbopol base, adjust pH, and add preservatives



- **Ointments/Balms**

Papaya latex or oil blended with beeswax/paraffin for analgesic and skin applications.



Emerging and Specialized Forms

- **Mouthwash/Gargle**

Papaya extract in hydroalcoholic base with surfactants and flavoring for oral health applications.



Representative Formulations Table

DosageForm	Core Ingredient	Use	Example Dose
LeafJuice	Leafextract	Plateletsupport	10–30ml2–3/day
Tablet/Capsule	Extract(250–500 mg)	Immune, platelets	1-2tabs2–3/day
Syrup	Seedfluid extract	Anthelmintic, immune	5–10ml2/day
Gel	Leafextract(2%)	Wound, inflammation	Apply twice/day
Phytosome/Nano	Extract,carrier	Anticancer, research	Asper protocol

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