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Unlocking The Cosmetic Potential Of *Carica Papaya*, It's Phytochemical And Pharmacological Review

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Abstract : *Carica papaya*, also known as papaya, is a plant that belongs to the Caricaceae family. It has a wide range of compounds and biomolecules that have important industrial, medicinal, and cosmetic uses. It has been utilized for centuries in traditional medicine and skincare rituals. The fruit's pulp, seeds, and extracts possess a rich composition of vitamins, minerals, and enzymes, making it a valuable ingredient in cosmetic applications. The antioxidant, antiacne, and anti-aging properties of *Carica papaya* make it an excellent addition to skincare products, face masks, hair care treatments, and other cosmetic formulations. This review aims to explore the potential of *Carica papaya* in the cosmetic industry, emphasizing its natural, sustainable, and effective uses for achieving healthy and radiant skin and hair. This review carefully emphasised the morphology, microscopy, phytochemistry, and pharmacological significance of *Carica papaya*. A large amount of research data was carefully examined from reliable sources like Google Scholar, PubMed, Scopus, and Web of Science in order to compile relevant information about the plant.

Index Terms - carica papaya, cosmetic, skincare, herbal formulation, market study

I. INTRODUCTION

Genus *Carica* comprises almost 21 species amongst them *Carica papaya* belongs to family Caricaceae. The *Carica papaya* is thought to be indigenous to tropical America, most likely from southern Mexico and neighboring Central America. It was brought to South East Asia and the Caribbean by Spanish explorers in the sixteenth century. In Southeast Asia the row as well as cooked leaves of papaya were and eaten like spinach Although in Myanmar the unripe fruit of papaya were eaten in salad or used in Thai cuisine while added into sour, spicy or fermented seasoning. The pickle of unripe fruit which is served with salty dishes is a part of Filipino cuisine. Buntil an Indonesian Javanese cuisine and in South America the small fish naming anchovy was prepared while wrapping in papaya leaves. Northern Philippines island cuisine unripe papaya is most common ingredient used as filling in various savoury along with fishes, rice etc. In Indonesian cuisine, unripe fruit and young leaves were served as salad after boiling additionally the cooked flower buds were served with fried chillies and tomatoes. Different plant parts of *C. papaya* such as leaves, roots, streams, ripe and unripe fruits, and seeds were used to treat numerous diseases (1). Papaya leaves have been used in traditional medicine as a purgative, an abortifacient, a malaria therapy, and a smoking remedy for asthma (2, 3). Papain and chymopapain are two significant substances that are thought to help in digestion. Arthritis can also be treated with papain. The fruit, latex, leaves, and roots all have different concentrations of the chemicals. Because every component of the papaya tree has a marketable value, it is farmed commercially (4).

History

According to historical narratives from explorers and botanists of the 18th century, papaya seeds were brought from the Caribbean to Malacca and then to India. Papaya originated in Malacca, Philippines, and expanded across Asia and the South Pacific. Francisco de Paula Marín, a Spanish horticulturist and adventurer, is frequently credited with bringing papaya to Hawaii from the Marquesas Islands in the early 1800s. Subtropical and tropical places around the world have since adopted papaya farming. Due to its resilience to a variety of climes and its widespread popularity as a tropical fruit, papaya is now produced extensively over the world (5).

Taxonomical Classification

Kingdom : Plantae
Subkingdom : Tracheobionta
Division : Magnoliophyta
Class : Magnoliospida
Family : Caricaceae
Genus : Carica L.
Species : *Carica papaya L.*
Varnacular Names
Hindi : Papita
English : Papaya
Eclectics : Papaw
Brazil : Mamao
Caribbean : Ababai
Cuba : Fruta de bomba.

Morphology

The plant is polygamous nature along with male, female, and hermaphrodite types. Looks like palm tree which reaches height up to 10 meters. A terminal panache of leaves with five to seven lobes linked to long petioles tops its strong stem, which is pocked with scars from falling leaves. The papaya yields fragrant, trimorphous, usually unisexual, dioecious flowers. The male flowers are loose while the female flowers are large, solitary, or in few-flowered racemes with a short, thick rachis. A translucent aril envelops the enormous, variably sized papaya fruit, which can be stretched to globose. The tuberculous, black seeds have a sizable hollow in the middle. The immature fruit and leaves have a milky fluid that includes the fermented papain protein, while the fruit itself is no older than eighteen months. The fruit is borne in the axils of the leaves and grows to be a huge fruit measuring between 15 to 45 cm in length and 10 to 30 cm in diameter (6).

Fig 1.1 *C.papaya* flower

Fig 1.2 *C.papaya* leaf

Fig 1.3 *C.papaya* unripe fruits

Microscopy

Leaf

The T.S of leaf was carried out by researcher and finding clarifies that both male and female plant have well defined upper and lower epidermis. The female leaf (powder) shows xylem is spiral, annular and reticulate while male xylem is annular with 5-7 well-defined layers of collenchyma and sclerenchyma. Large rounded cell and wavy and refractive walls are observed in epidermis while parenchymatous cells are observed in endodermis. stalk is hollow inside hence pith is absent and xylem and phloem surrounded by parenchymatous cell were observed in middle region. In female leaves sphaeraphides are observed in abundance. Talking about stomatal index it is 32.57+3.21 and 34.46+3.41 percent for male and female plant respectively (7).

Petiole

A well-defined epidermis, a few layers of collenchyma, and chlorenchyma are seen in the transverse slice of the petiole. In male plants, vascular bundles are aggregated, while in female plants, they are dispersed. While in Longitudinal section the male plants exhibits spiral xylem, while the female petiole exhibits annular,

scalariform, and spiral xylem. Phaeraphides are also abundantly present in the female petiole observed in both T.S and L.S (7).

Seed

The Transverse section of seed was divided into four parts Epicarp, mesocarp, testa and endocarp. The epicarp was singe Layered and was surrounded by thin smooth cuticle layer. The epicarp cells were polygonal parenchymatous type; testa was 3-4 layered, thick walled with cellulosic parenchymatous cells. Endocarp consisted of sclerenchyma cells with oil globules. The plasmodesma was yellowish in colour, and consisted of radially elongated thick walled mucilaginous cells. The polygonal-shaped parenchymatous tissue that covered the endocarp's top surface was single-layered. The endocarp featured a dicotyle structure, pitted aleuronic grain cells, and cellulose sclrenchymatous cells with thick walls. Endocarpic cells had several square crystals of calcium oxalate. Every character was identical in their immature state (8).

While the powder microscopy of ripe and unripe seed were observed by researcher and stated that the crude powder made from unripe papaya seeds had a fine texture, a creamy white hue, a distinct smell, and a bitter flavour. Oil granules, sclerenchyma cells, mesocarp, square crystals of calcium oxalate, and vittae were among the distinct features identified from the powder studies under microscopic examination. The coarsely ground papaya ripe seed powder had a fine texture, a dark black hue, a distinct smell, and a salty flavour. Under a microscope, the powder examination revealed certain features such as sclerenchyma cells, oil granules, mesocarp, endosperm with aleurone grains, vittae, and square calcium oxalate crystals (8).

Adulteration

Papaya seed are most common adulterant found in black pepper as it is cheap compared to black pepper. They can be detected by microscopic examination. Another way to found adulteration in black paper is to observe the staining ability when treated with potassium iodide solutions where papaya seeds stain pale red and black pepper gives blue colour (9). With the help of gas chromatography the amount of glucotropaeolin in black pepper were estimated and the technique enables the detection of adulteration of papaya seeds 0.1% in black pepper (10).

Allied species

Co-1 to Co-8, Coorge Honey Dew, Washington, Solo variants, Pusa Majesty, Pusa Delicious, Pusa Nanha, Pusa Dwarf, Pusa Giant, Surya, Arka Prabhat, Coorge Honey Dew, and Red Lady are a few papaya kinds (11).

II. GEOGRAPHIC DISTRIBUTION

Carica papaya L. is often referred to as "pawpaw" in Australia and "tree melon" in other regions (2). The fruit's extensive geographical distribution is believed to have been influenced by a variety of characteristics, including its enormous quantity of seeds and lengthy viability (12). Southern Mexico, the Philippines, and Central America are the original origin of *Carica papaya* L. (13, 14). Originating in tropical America, the papaya tree is grown all over the world, with 13.9 million tons being produced yearly in India, the world's largest producer. The greatest market for papayas is the United States. The Caricaceae family, which comprises 35 latex-producing species grouped into four genera—Carica, Jarillaand, Jacaratia, and Cyclicomorpha—is where *Carica papaya* L. is classified. Carica was once divided into several families (15).

III. COLLECTION AND CULTIVATION

Around the world, papayas are now grown in all tropical and many subtropical nations. Because papaya is a popular tropical fruit and can withstand a variety of temperatures, it is now widely farmed across the world (16).

Nowadays, most tropical nations grow papayas. It develops quickly under cultivation and bears fruit in three years. However, because of its extreme sensitivity to cold, only tropical climes can produce it. Below −2 °C (29 °F), temperatures can be extremely dangerous, even lethal. Growth is mostly confined to the southern regions of Florida, California, and Texas. Because standing water can destroy a plant in as little as 24 hours, it prefers sandy, well-drained soil. In Australia, two varieties were cultivated these are known as "red papaya" and "yellow papaw," respectively (17). Northern South America, Central America, and southern Mexico are the origins of papaya. Nowadays, most tropical nations cultivate it. It is extremely vulnerable to water logging and frost. States like Orissa, West Bengal, Kerala, Karnataka, Madhya Pradesh, Tamil Nadu, and Gujarat are among those in India where papaya is grown. It's a fruit crop that could be grown commercially in Goa. Recently, a small number of forward-thinking farmers have expressed interest in growing papayas that are native to the area and have been released (11).

IV. PHYTOCONSTITUENTS

Table 1.1 Phytoconstituents present in *Carica papaya*

Parts	Constituents	Pharmacological action	Reference
Unripe fruit	Papain and chymopapain enzymes	Reduce inflammation and accelerate burn healing and digestion	18
Fruit	Vitamin C, thiamine, riboflavin, niacin, carotene, fibers, sugar, protein, fiber, mineral (calcium, phosphorous, iron), amino acid, citric acid, and malic acid (green fruit), volatile compound: benzyl isothiocynate, cis and trans 2,6-dimethyl-3, 6 epoxy-7 octen2-ol.	Antitumor, antifertility, wound healing, antiviral, hypo-lipidemic, diuretic, anthelminthic, antibacterial, free radical scavenging, anti-sickling, antifungal, antihypertensive, antiulcer, blood cholesterol control, and neuro-protective. Anti-oxidative capacity.	19, 20
Leaves	Tocopherol, alkaloid carpain, dihydrocarpain I and II, cystatin, papain, chymopapain, carposide, and vitamins C and E. Phenolic substances like protocatechuic acid, p-coumaric acid, 5,7-dimethoxycoumarin, caffeic acid, kaempferol, quercetin, and chlorogenic acid are present in papaya leaf extracts.	Proliferative, anticancer, antimetastatic, gonorrhea, yellow fever, tonsillitis, ulcerative, stomatitis, gingivitis, constipation, fracture healing, sickle cell anemia, jaundice, malaria, antidengue, antibacterial, hypoglycemic, antiviral, anti-inflammatory, antitumor, and chikungunya.	21- 27
Root	Caproside and myrosin	antiulcer, dyspepsia, urinary issues, and anticancer	28-30
Seeds	carcaine, fibers, protein, myrosin enzymes, fatty acids, carpain, and benzoyl isothiocyanate.	Kidney protector, anthelminthic, antiparasitic action, diabetes mellitus, analgesic, nephron protecting activity, antifertility, contraceptive, anti-inflammatory, antioxidant, sickle cell disease, typhoid	19, 21, 31-33
Flower	Flavonoids and phalobatanine	anti-inflammatory, anticoagulant effect, antioxidant, cytotoxic, chemopreventive, vital lipolytic activity, anti-helminthic, dyspepsia, diarrhea, bleeding hemorrhoids, whooping cough, antioxidant, antiviral, antibacterial, and anticancer	34-36, 38-40
Peel	minerals, fiber, folate, pantothenic acid, vitamins A, B, and C	antitumor, wound-healing ability, antioxidant, muscle relaxant, and caused apoptosis	19, 22
Latex	Papain, chemo-papain, papaya proteinase III	proteolytic activity	40

V. PHARMACOLOGICAL USES

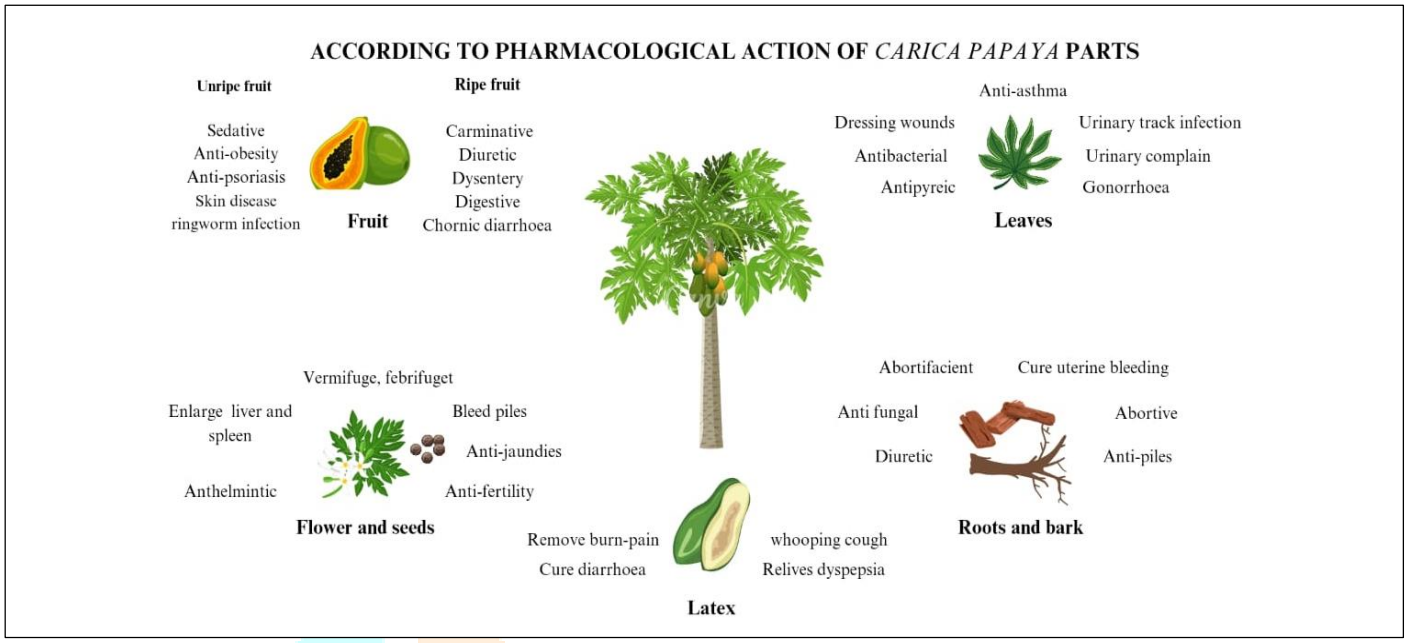

Fig 1.4 Pharmacological uses of *Carica papaya*

Table 1.2 Pharmacological uses of papaya

Parts	Pharmacological action	Mechanism	Reference
Leaves	70 patients with dengue fever	Improvement in platelets and white blood cells, restores liver health, and normalizes clotting.	[42]
	Inhibition of cancer cell proliferation.	Increase the synthesis of Th1-type cytokines, important signaling molecules that aid in immune system regulation.	
	Antiplasmodial and antimalarial properties	Certain plant preparations have been shown to have antiplasmodial and antimalarial action, although the mechanism is unclear and lacks scientific validation.	
Fruit	Anti-fungal effects.	Within the papaya fruit contains a phytoalexin called diadone. against the Papaya pathogenic fungus Colletotrichum gloesporioides.	[42]
	Eliminate the Stroke or Heart Attack	Blood vessel walls can be directly harmed by homocysteine	
	Immunomodulatory effects.	TNFα activity is inhibited in acute inflammatory situations.	[47]
	The anti-fertility action	The findings indicated that papaya fruit that wasn't ripe interfered with the estrous cycle and led to miscarriages. It was also observed that the fruit's influence on the estrous cycle diminished as it became overripe. It has an anti-implantation effect as well.	[45],[46]
Seed	The antibacterial activity	effective in preventing infections with Salmonella, E. Coli, and Staphylococcus.	[42]

	The anti-helminthic	Low-toxicity proteolytic enzymes have been used medicinally to treat gastrointestinal nematodes in the past.	[44]
	Antifungal	About 20% of mycelial development is inhibited. They come to the conclusion that papaya leaf extract contains secondary metabolites and antifungal qualities.	[43]
Peel	Sunscreen and soothing Slave	Vitamin A aids in the healing and reconstruction of damaged skin. Papaya peel applied as a skin-lightening treatment. Applying a peel mixture with honey might help to calm and hydrate the skin.	[42]
	Treat dandruff	To combat dandruff, apply the papaya vinegar and lemon juice mixture to the scalp 20 minutes before showering.	
	Relaxant for muscles	In addition to adding vinegar and papaya oil to bath water, essential oils like orange, lavender, and rosemary may also be used to treat pain and relax muscles. These mixtures can be nutritious, revitalizing, and calming.	
Root	Treatment for dyspepsia	Young, fresh papayas are also used to treat cramps and a special type of gastrointestinal ailment called colic. a concoction made by boiling the papaya tree's external roots.	[42]
latex	Colon cancer	Papaya fiber has the ability to bind chemicals that cause cancer in the colon and keep them away from healthy colon cells	[42]
	Rheumatoid arthritis	Papaya is one of the foods high in vitamin C that protects people against inflammatory polyarthritis, a kind of rheumatoid arthritis that affects two or more joints.	
	Male prostate cancer	Prostate cancer was 82% less common in those who ate lycopene-rich fruits and vegetables such papaya, tomatoes, apricots, pink grapefruit, watermelon, and guava than in people who consumed the least amount of these nutrients.	

VI. COSMETIC USES

Anti-aging

Antiaging papain linked formulation was developed which have anti-aging properties along with exfoliating enzymes [48]. *C. papaya* pulp and seeds extracts were used to examine the antiaging properties of brain where D-galactose-induced aging rats' model were employed. 150 mg/kg papaya pulp extract and seed extract were given to animals and finding suggested that both part shows good antiaging properties additionally pulp shows higher antiaging properties compared to seeds [49]. The researcher demonstrates the anti-aging properties of papaya extracts. *In vitro* investigation was carried out utilising extract from unripe *Carica papaya* fruit to combat endothelial oxidative stress that is linked to skin ageing [50]. Another study confirmed that at doses ranging from 100 to 1000 µg/mL, the study showed that unripe *Carica papaya* fruit extract inhibited H2O2-induced endothelial cell mortality. It was discovered that endothelial cells' intracellular stress and antioxidant

defences are modulated by it. A human trial that included people treated with rutin-containing cream demonstrated improved skin elasticity and fewer wrinkles, supporting rutin's potential anti-aging properties. The results of strong ROS scavenging and increased type I collagen via decreased MMP production in human dermal fibroblast cells provided additional evidence for the anti-aging properties of *Carica papaya* chemical components [51-52].

Anti- acne

An anti-acne gel using papaya leaf extract was prepared and evaluated against microbial species *Propionibacterium acnes* and finding confirmed the inhibition in bacterial growth [53]. 5 to 20 percent concentraction of papaya leaf extract were screened against *Staphylococcus epidermidis* bacteria and finding suggested remarkable anti-bacterial effect [54]. Anti-acne face wash using papaya seeds extract (ethanolic) were prepared and screened against *P. acnes* and *S. epidermidis* bacteria. Papaya seeds also contain secondary metabolite compounds class of alkaloids, saponins, flavonoids, and triterpenoid aldehydes that have antibacterial potency. The finding suggested that the papaya seed ethanol extract has an effective antibacterial activity in acne-causing bacteria [55].

Skin whitening

tyrosinase inhibition from extracts was carried out and used the compound as skin-whitening agent in cosmetic industry. The finding suggested that the tyrosinase inhibitory was higher in the ethanol-extracted products. Meanwhile, *Carica papaya* had high inhibitory 54.5 ± 2.97%. In this study, chemicals found in the pulp of green papaya fruit must be isolated and Identified in order to obtain more effective tyrosinase inhibition. Additionally, research is required on the Use of a green papaya fruit extract in skin-whitening cosmetics. [56] Papaya is a rich source of nutrients such as vitamin C. carotene and flavonoid. Papaya is commonly added as whitening agent in various beauty and cosmetic products.

Wound healing

Papain is a proteolytic enzyme, endopeptidase, found in a concentration of about 8% in papaya fruits (*Carica papaya*). In dermal use, its main application is in the medical field for the debridement of devitalised tissues, accelerating the healing process of wounds and burns [57]. Recent studies have stated that fresh Papaya has a wound healing property. One of the most important ingredients in papaya is the enzyme papain. Papain is a product used in treating wounds, which can be extracted from the latex of papaya tree [58].

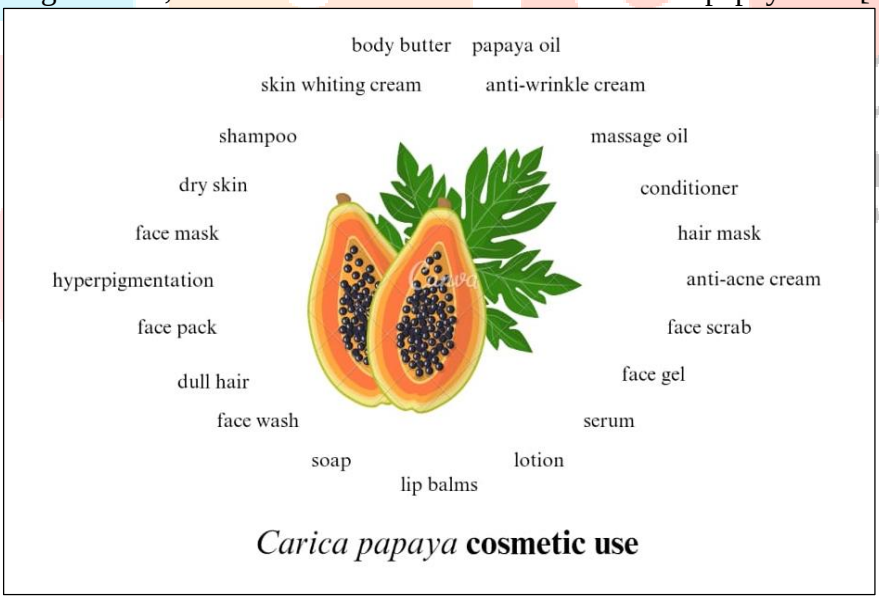

Fig 1.5 Cosmatic uses and formulation of *Carica papaya*

VII. ADVERSE EFFECTS

The fruit papaya, which is frequently used as a hair conditioner, might irritate certain people and trigger allergic responses. When its latex fluid is not mature, it might induce contractions in the uterus, which may result in miscarriage. Papaya seed extracts have no impact on unborn animals when taken in modest amounts, but in big concentrations, they can be contraceptive. The yellowing of the palms and soles, or carotenemia, can result from consuming too many papayas. In addition to causing internal gastritis and skin irritation on the outside, papaya latex can trigger allergies in certain individuals to certain portions of the fruit. The most noticeable regions of carotenemia, which is a benign kind of skin pigmentation brought on by consuming an excessive amount of food containing beta carotene, are the palms of the hands and the soles of the feet. Papaya's aqueous extract has antioxidant activity and contains many phenolic groups that can scavenge free radicals. Similar to the symptoms of hay fever or asthma, high papain levels can induce respiratory discomfort.

Papain, when consumed in excess, can upset the stomach, and papaya's high fiber content can also lead to digestive system disturbances [59].

VIII. MARKETED FORMULATION

Table 1.3 Marketed formulation of *Carica papaya*

Type	Brand name	Company name	Dose	Prize
Bathing soap bar	Morvin papaya soap	Morvin India	75 grams / soap	306
Skin toner	Pure sense	Cosmic nutracos solution	100 ml /bottle	500
Lotion	Queue	Silka	200 ml /bottle	1200
Face wash	Lotus botanicals	Insta glow Exfoliating	100 ml / tube	245
Face wash gel	Lotus herbals	Safe sun	100 g /tube	230
Body lotion	Odeon	Meso pvt ltd	400 ml / bottle	295
Face pack	Oshea herbals	Ojb herbals pvt Ltd	300 grams /jar	380
Moisturizer	Alna	Alna biotech Pvt Ltd	100 ml / bottle	180
Facial kit	Papaya facial kit	Nutriglow naturals	60 g / kit	150
Body butter	Oshea herbals	Ojb herbals pvt ltd	200 g /bottle	325
Glow face cream	Papaya glow face cream	nivea	50 g/tube	1499
Moisturizer	Mirabelle Papaya moisturizer	Mirabelle Cosmetics Korea	80ml	219
Cream (Dark spot correction)	Keya seth	Keya Seth Aromatherapy, India	50ml	449
Facial kit	oxyglow papaya facial kit	oxyglow herbals	-	1025
Face Wash	Biotique	Biotique India	100ml	120
Gel Face Cream	Pappaya gal face cream	Ballazy	100mg	169
serum	Pappya &Niacinamide Brightn & glow skin clarifying	Lotus Botaicals	-	1125
Sunscreen	Lotus herbals Safe sun	Lotus Botaicals	100g	315
Papaya mask	Feelhigh	Feelhigh china	100g	299
Gel Anti-wrinkle	Feelhigh	Feelhigh china	100ml	649
Face scrub	Biotique	Biotique India	100g	180
Aging Papaya Gel for Skin	Raquitys	Raquitys	220g	98

Face Scrub	panchvati Papaya Scrub	Panchvati Herbals	800ml	400
Face Wash	Plantscare	Plantscare India	65ml	70
Papaya Plush Cleansing Balm	Papaya Plush	Dreamy atoms	50g	538
Papaya Gel	Raquitys alo papaya gel	Raquitys	300ml	599
lotion	Raquitys papaya lotion	Raquitys	300ml	599
Gel	Avon	Avon	50g	299
Gel	panchvati Papaya Massage	panchvati	100ml	500
Soap	Pure Herbal Papaya Fruity Soap	Pure	135g	400
Mosturizer	Papaya Radiant Glow Moisturizer	Mirabelle Cosmetics Korea	80ml	219
Facial Mask	Papaya Fairness Facial Mask	Mirabelle Papaya Fairness Facial Mask	25ml	297
Face Mask	Face Mask	Beaucode BioCare	250gm	275
FACE SHEET MASK	PAPAYA ELITE	HERBANY KOREA	25ml	447
Face Cream	Papaya Face Cream	Beaucode BioCare	250gm	275
Gel	Papaya Face Gel	Beaucode BioCare	250gm	275
Face Wash	Seed Cosmetics Papaya Face Wash	Seed Cosmetics	210gm	698
Face Pack	Sunny Papaya	Sunny herbals	150gm	190
Cream	Pappaya Cream	Nuskhe by Paras	100ml	899
Face Pack	Banjara's Multani Mitti	Banjara's touch of nature	100gm	160
Body Lotion	RDL Body Lotion	RDL	600ml	227
Scrub	Papaya Scrub	Lilium	250ml	299
Lip Balm	La Cura Lip Balm	La Cura	150gm	249
Lip Balm	Aqualogica Lip Balm	Aqualogica	15gm	349
Soap	Kozicare papaya Soap	Kozicare	225gm	349
Soap	Glutathione Papaya Soap	La Organo	100gm	349
Soap	Pyary Herbal Soap	Pyary	75gm	599
Shampoo	Nyle Shampoo	Nyle Naturals	800ml	445
Shampoo	Jiva Papaya Shampoo	Jiva Ayurveda	200ml	165
Shampoo	NEAR TO NATURE Shampoo	NEAR TO NATURE	400ml	299

IX. HOME MADE REMEDIES

Table 1.4 Home remedies of *carica papaya* plant

PLANT PART	**USES**	
PEEL		[60]
1. Using peel with a small amount of milk and honey	Moisturizes, calms, and protects the skin	
2. Use peel for a face mask for around 20 minutes.	Getting rid of blemishes on the skin	
3. Dice the papaya and let it steep in vinegar for a few weeks. Peel the papaya and apply the vinegar and lemon juice to the scalp 20 minutes before showering to combat dandruff.	Reduces dandruff	
4. Papaya peel cooked in olive, almond, and rosehip oils; the resultant oil is then rubbed into the skin and used with rosewater and honey.	Functions as a cleanser and toner for the skin	
5.Putting vinegar and papaya oil in a bathtub filled with oils such as rosemary, orange, and lavender	Nutritious, revitalizing, and calming; it also has analgesic and muscle-relaxant effect.	
FRUITS		
1. During the morning, have a fresh, ripe papaya.	Digestion, flatulence, constipation, and increased appetite	
2. Apply raw papaya juice to the injured region.	Acne, dermatitis, and oral ulcers	
LEAVES		
1. After washing, chop the leaves into smaller pieces. Using the cloth, filter and squeeze the pulp. Each day, two teaspoons of food It tastes really bitter. Therefore, it could offer some relief from dengue fever.	Used to treat dengue illness.	
2. Leaves	Treating injuries and wounds	
ROOTS		
1. A mixture created by boiling the root's outer layer	Treatment for dyspepsia	
SEEDS		
1. Dried seeds crushed and combined with vinegar.	1. Irritant for the skin to reduce fever	
2. Crushed seeds, fresh or dried	2. Fungicidal, bactericidal, and bacteriostatic.	
3. The morning before breakfast, take half a teaspoon of pulverized papaya seed mixed with warm water. proceed with 50 milliliters of castor oil and 350 milliliters of milk on an empty stomach two hours later. Consume this for two to four days.	3. Get rid of stomach worms	

X. CONCLUSION

Concluding the review article the finding suggested that leaves fruit both ripe as well as unripe, seeds and flower shows cosmological benefits. This review highlights the cosmetic uses of *Carica papaya*, including its ability to Exfoliate and brighten the skin due to its papain content, Hydrate and moisturize the skin with its vitamin C and potassium content, Reduce inflammation and improve skin elasticity, Treat acne, hyperpigmentation, and other skin concerns, Nourish and condition hair, promoting healthy growth and shine. This plant act as wonder on skin and can be further used for formulation of nanotechnology based cosmetic preparation

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