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Palm (*Phoenix dactylifera* L)



Synonym:

Gujarati: ખજૂર (Khajur)

Hindi: खजूर (Khajur), छुहरा (Chhuhara)

English: Date Palm, Common Date

Botanical name: *Phoenix dactylifera* L.

Family: Arecaceae (Palm family)

Chemical Constituent:

1. Oil Palm (*Elaeis guineensis*)

- Fatty Acids:
 - Palmitic acid, Oleic acid, Linoleic acid, Stearic acid
 - Found in mesocarp and kernel oils
- Triacylglycerols:
 - Major energy source and emollient
- Sterols:
 - β -sitosterol, Campesterol, Stigmasterol

- Tocopherols and Tocotrienols:
 - Vitamin E derivatives with antioxidant properties
- Carotenoids:
 - β -carotene – precursor of Vitamin A

2. Date Palm (*Phoenix dactylifera*)

- Polyphenols:
 - Gallic acid, Caffeic acid, Ferulic acid
- Flavonoids:
 - Quercetin, Luteolin, Apigenin
- Amino Acids:
 - Arginine, Glutamic acid, Aspartic acid
- Vitamins & Minerals:
 - Vitamin C, B-complex, Calcium, Magnesium, Iron

Therapeutic Effect:

- Antioxidant
 - Tocotrienols and polyphenols neutralize free radicals

- Protects against oxidative stress and aging
- Cardioprotective
 - Reduces LDL cholesterol and improves lipid profile
 - Supports vascular health
- Antimicrobial
 - Fatty acids and phenolics inhibit bacterial and fungal growth
 - Used in topical and oral formulations
- Anti-inflammatory
 - Reduces cytokine activity and inflammation markers
 - Useful in arthritis and metabolic disorders
- Neuroprotective
 - Tocotrienols protect neurons and improve cognitive function

Marketed preparation:

- Palm Oil Products

- Crude palm oil, Palm kernel oil – used in cooking, cosmetics, and soaps
 - Rich in Vitamin E and carotenoids
- Date-Based Supplements
 - Date syrup, Date powder, Date seed extract – used in energy bars and nutraceuticals
- Palm Jaggery and Candy
 - Made from *Borassus flabellifer* (Palmyra palm)
 - Used as natural sweeteners and iron-rich supplements
- Cosmetic Products
 - Palm oil used in moisturizers, shampoos, and anti-aging creams
- Ayurvedic and Traditional Formulations
- Used for anemia, fatigue, and digestive health
- Often combined with herbs like Ashwagandha or Shatavari

Key Constituents:

Fatty acids, Tocopherols & Tocotrienols, Vitamin E derivatives with antioxidant activity, Carotenoids, Sterols, Triacylglycerols

Uses:

- Antioxidant – protects cells from oxidative damage
- Cardioprotective – improves lipid profile and reduces cholesterol
- Antimicrobial – inhibits bacterial and fungal growth
- Anti-inflammatory – reduces swelling and cytokine activity
- Wound healing – promotes tissue repair (especially date palm leaf extract)
- Hypoglycemic – helps lower blood glucose levels
- Neuroprotective – supports brain health and cognitive function
- Nutritional – provides energy, vitamins, and minerals

- Cosmetic – used in moisturizers, soaps, and anti-aging creams
- Digestive support – palm jaggery aids digestion and relieves constipation