

Karanja oil is derived from the seeds of the *Pongamia pinnata* tree, also known as the Indian beech tree. This oil has been traditionally used in various applications, particularly in Ayurvedic medicine. Here is some detailed information about Karanja oil:

Origin and Extraction

- **Botanical Name:** *Pongamia pinnata*
- **Common Names:** Karanja, Indian beech, Pongamia oil
- **Extraction Method:** The oil is typically extracted through cold pressing or solvent extraction from the seeds of the tree.

Chemical Composition

Karanja oil contains several bioactive compounds, including:

- **Flavonoids:** Such as karanjin and pongamol, which contribute to its medicinal properties.
- **Fatty Acids:** Mainly oleic acid, linoleic acid, palmitic acid, and stearic acid.
- **Sterols:** Like β -sitosterol.

Medicinal and Therapeutic Uses

- **Antimicrobial Properties:** Effective against a variety of bacteria and fungi, making it useful for treating skin infections.
- **Anti-inflammatory:** Helps reduce inflammation and soothe irritated skin.
- **Insecticidal and Pesticidal:** Commonly used in organic farming as a natural pesticide due to its ability to repel insects.
- **Wound Healing:** Traditionally used to promote wound healing and treat ulcers.
- **Skin Disorders:** Used in the treatment of eczema, psoriasis, and dandruff due to its therapeutic properties.

Cosmetic and Personal Care Uses

- **Hair Care:** Incorporated into hair oils and treatments to combat dandruff and promote a healthy scalp.
- **Skin Care:** Used in lotions and creams for its moisturizing and protective properties, helping to soothe dry and damaged skin.

Industrial Uses

- **Biodiesel Production:** Due to its high oil content, Karanja oil is explored as a potential feedstock for biodiesel.
- **Soap Making:** Utilized in the production of soaps, especially those targeting skin conditions.