

Moringa oleifera Extract

General description:

- Botanical Name : Moringa oleifera L.
- Family : Moringaceae
- Common Name : Drumstick, Horse-radish
- Part used : Fruit, Leaf

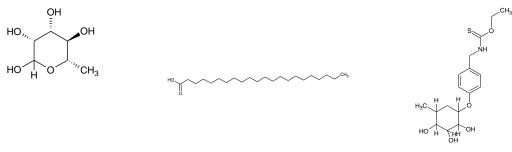
M. oleifera is widely cultivated in India. It is a perennial softwood Tree. It is being grown in many parts of Africa, Asia, Latin America, the Caribbean, and Pacific Islands. All parts of the Moringa tree are edible. Moringa trees have been used to combat malnutrition, especially among infants and nursing

mothers. Leaves can be eaten fresh, cooked, or stored as dried powder. Oil from moringa seeds is being used in foods, perfume, and hair care products, and as a machine lubricant. The seed cake remaining after oil extraction is used as a fertilizer and also to purify well water and to remove salt from seawater.^[1]



Phytochemistry

M. oleifera rich in simple sugar; rhamnose, unique group of compounds called glucosinolates and isothiocyanates. Bioactive compounds like behenic acid or docosanoic acid, niazimicin, pterygospermin, benzyl isothiocyanate, and 4-(α -L-rhamnopyranosyloxy) benzyl glucosinolate have been reported. *M. oleifera* seed is rich source of vitamins A, B, C, E and antioxidants.^[2]



Rhamnose

Behenic acid

Niazimicin

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Pharmacological activities:

A number of medicinal properties attributed to *M. oleifera* have been recognized by both Ayurvedic and Unani systems of medicines. Fruit have been used to combat malnutrition, especially among infants and nursing mothers for enhancing milk production and also regulate thyroid hormone imbalance. The plant finds its wide applicability in the treatment of cardiovascular diseases and posses antitumor activity, antistress, antioxidant activity.^[1]

Clinical Study:

20 patients of either sex with mild-to-moderate asthma were given finely powdered dried *M. oleifera* seed kernels with dose of 3 g for 3 weeks. The majority of patients showed a significant increase in hemoglobin and erythrocyte sedimentation rate was significantly reduced. Significant improvement in symptom score and severity of asthmatic attacks was observed.^[3] The antioxidant activities of leaves and fruits extract by DPPH radical scavenging, nitric oxide scavenging and hydrogen peroxide scavenging assay were evaluated. The ethanolic extract of fruit showed highest phenolic content, strong reducing power and free radical scavenging capacity.^[4]

Botanical/ Scientific name	Moringa oleifera
CAS No.	93165-54-9
Description	Light brown to brown powder
Identification	Gravimetry
Heavy metal	Not more than 20 ppm
Arsenic	Not more than 1 ppm
Lead	Not more than 10 ppm
Content of Saponins	10%
Microbiological profile	As per JPN Food Regulation

Specifications

References

- 1. Dangi et al., 2002. Antihypertensive activity of the total alkaloids from the leaves of *Moringa oleifera*. 40(2):144-148 (doi:10.1076/phbi.40.2.144.5847)
- Fahey et al., 2005. Moringa oleifera: A Review of the Medical Evidence for Its Nutritional, Therapeutic, and Prophylactic Properties. Part 1. Trees for Life J. 1:5. http://www.TFLJournal.org/article.php/20051201124931586
- 3. Agrawal and Mehta. 2008. Antiasthmatic activity of *Moringa oleifera* Lam: A clinical study. Indian J Pharmacol. 40(1):28-31.
- 4. Luqman et al., 2012. Experimental Assessment of *Moringa oleifera* leaf and fruit for its antistress, antioxidant, and scavenging potential using in vitro and in vivo assays. Evid Based Complement Alternat Med. 2012:519084. doi: 10.1155/2012/519084.