



AMLA EMBLIC AYURVEDA EXTRACT

PRODUCT IDENTIFICATION

INCI composition (EU) : Aqua CAS no. : 7732-18-5
Propylene Glycol CAS no. : 57-55-6
EMBLICA OFFICINALIS CAS no. : 90028-28-7
(Embllica Officinalis Fruit Extract)

BOTANICAL DATA



Latin name : *Embllica officinalis* Gaertn., *Phyllanthus embllica* L.

Family : Euphorbiaceae

Common names :

Arabic : Ambliy, Amlaj,

Assam : Amlaki, Sohmyrlain,

Bengal : Ambolati, Amla, Amlaki, Aonla,

Cambodia : Ngop,

Chinese : An Mo Le,

Hindi : Aonla, Aora,

English : Emblic, Myrobalan Tree,

Malyalam : Amalakam, Nelli,

Nepal : **AMLA**,

Persian : Ameloh, Amuleh,

Sanskrit : Adiphala, Akara, Amalaki,

Amlika, Amraphala, Amrito, Dhatri,

Dhatrika, Jatiphala, Kayastha,

Urdu : Anwala.

AMLA tree is native to tropical southeastern Asia, particularly in central and southern India, Pakistan, Bangladesh, Ceylon, Malaya, southern China and the Mascarene Islands. It is commonly cultivated in home gardens throughout India and grown commercially in Uttar Pradesh. Many trees have been planted in southern Malaya, Singapore, and throughout Malaysia.

It is a moderate sized (up to 10 meters), mostly deciduous, much - branched tree, with greenish grey outer bark exfoliating in small irregular patches ; inner bark reddish ; branchlets (10 - 20 m long) slender with compound feathery arranged symmetrically giving the appearance of pinnate leaves, entire branchlets are often deciduous, but some persist to form new branches ; leaflets small (7 - 25 x 2 - 4 mm), narrow, linear and glabrous ; flowers appear in March - May, monoecious, small, greenish yellow, in clusters (fascicled) along leaf - bearing branchlets.

The nearly stemless fruit is round or oblate, indented at the base, and smooth, though 6 to 8 pale lines, sometimes faintly evident as ridges, extending from the base to the apex, give it the appearance of being divided into segments or lobes. Light green at first, the fruit becomes whitish or a dull, greenish-yellow, or, more rarely, brick red as it matures. It is hard and unyielding to the touch. The skin is thin, translucent and adherent to the very crisp, juicy, flesh. Tightly embedded in the centre of the flesh is a slightly hexagonal stone containing 6 small seeds.

Rural folk in India claim that the highly acid, fresh, raw fruit, followed by water, produces a sweet and refreshing aftertaste. Woodcutters in Southeast Asia eat the **AMLA** to avoid thirst, as the fruit stimulates the flow of saliva. This is the one tree left standing when forests are clear-cut in Thailand, and busses stop along highways to let thirsty travellers run to the tree to get the fruits.

Many Hindus regard the **AMLA** as sacred and the Hindu religion prescribes that ripe fruits are eaten for 40 days after a fast in order to restore health and vitality. It is a common practice in Indian homes to cook the fruits whole with sugar and saffron and give one or two to a child every morning.

According to Ayurveda, fruits are acrid, sour, cooling, alexiteric, carminative, alterative, laxative, tonic, antipyretic and useful in treatment of burning sensation, vomiting, biliousness, urinary discharges, thirst, leprosy, constipation, inflammations, erysipelas and leaves are useful in ophthalmia and incipient blindness. Seeds are acrid, aphrodisiac and useful in treatment of asthma, bronchitis, and leucorrhoea.

Flowers are cooling and aperient whereas fruit is acrid, sour, cooling, astringent, tonic, expectorant, vulnerary and improves appetite. It is useful in treatment of heart diseases, liver complaints, thirst, piles, biliousness, and eye troubles.

The fresh leaf juice is good hair tonic.

The seed powder mixed with Shahad (Honey) is considered as good for gynaecological troubles especially in case of leucorrhoea (Safed Pani).

Traditional Ayurvedic Uses

Balances all three Doshas (Vata, Pitta, Kapha), especially Pitta.

It contains five of the six tastes, which a very rare and valuable property because it indicates how this one herb balances all the laws of nature operating in the mind and body.

Because of its well known rejuvenate and revitalizing properties, **AMLA** is a powerful Rasayana (longevity enhancer) all by itself. It therefore is often used by itself even in the Maharishi Ayurveda health system, which usually recommends using herbs only in expert combinations. As a Rasayana, Amla helps to culture the full potential of the mind and body.

ACTIVE INGREDIENTS

Food Value Per 100 g of FRUIT

Moisture	77.10 g
Protein	0.07 g
Fat	0.20 g
Carbohydrates	21.80 g
Fibber	1.90 g
Ash	0.50 g

Calcium	12.5 mg
Phosphorus	26.0 mg
Iron	0.48 mg
Carotene	0.01 mg
Thiamine	0.03 mg
Riboflavin	0.05 mg
Niacin	0.18 mg
Tryptophan	3.0 mg
Methionine	2.1 mg
Lysine	17.0 mg
Ascorbic Acid	625.0 mg

SPECIFICATIONS

Drug	Fruit
Appearance	Limpid liquid
Colour	
Odour	Characteristic
Plant/Extract ratio	1/1
Density at 20°C	1.040 ± 0.010
Refractive index at 20°C	1.385 ± 0.010

Pesticides	0.2 ppm max.
Heavy metals	0.3 ppm max.
Solubility	In water and alcohol 60°
Preservation	Phenonip 0.25 % m/m

Identification of Vitamin C Positive

Total germs	< 100/ml
Yeasts and moulds	< 100/ml
Pathogens	Absence

COSMETIC PROPERTIES

In cosmetic **AMLA** can be used externally for its strong anti-oxidant (see Bibliography *1, 2, 3) and antiradical properties.

APPLICATIONS

Face and body care products (creams, milks, gels, serums, lotions, etc...),

Use level 1 - 10 %

TOXICITY

Oral toxicity	Not considered as toxic (DL 50 oral/rats > 40 g/kg)
Skin irritation	Not irritant
Skin sensitisation	Not sensitising

STORAGE

In a tightly closed container, at room temperature (20°C), away from light, heat, and humidity sources.

BIBLIOGRAPHY

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(*2) JOSE J. K. and Kuttan R., **Antioxidant activity of Emblica officinalis**, Journal of Clinical Biochemistry and Nutrition , Amala Cancer Res. Cent., Amala Nagar, Thrissur, 1995, KERALA, INDIA

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(*3) SCARTEZZINI P. and SPERONI E., **Review on some plants of Indian traditional medicine with antioxidant activity**, Journal of Ethno pharmacology, Department of Pharmacology, University of Bologna, 2000, BOLOGNA, ITALY

SHARMA N., TRIKHA P., & al., **In vitro inhibition of carcinogen-induced mutagenicity by Cassia occidentalis and *Emblca officinalis***, Drug and Chemical Toxicology an International Journal for Rapid Communication, Department of Medical Elementology and Toxicology, Hamdard University, 2000, NEW DELHI, INDIA