

AMLA

INDIAN GOOSEBERRY



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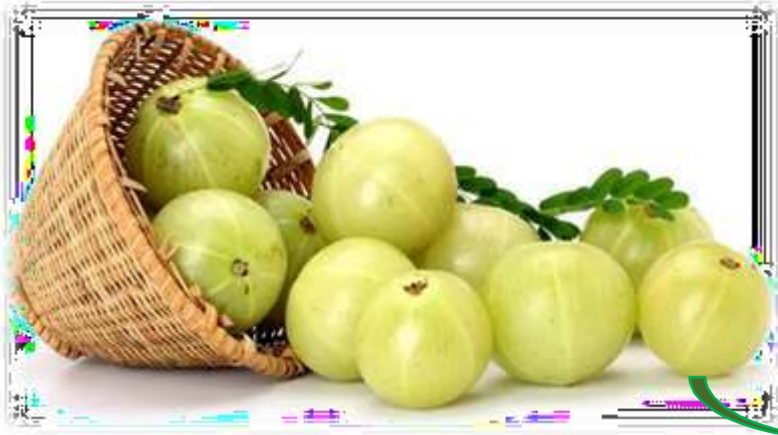


INTRODUCTION



- ✓ Name of the drug: Amla
- ✓ Synonym: Amlang (Ar.), Amlaki (B.), Ambala (G.), Amalica (H.), Aunla (Or.), Nellikai (Tm.)

- ✓ Biological Source: This is consists of dried, as well as fresh fruits pericarp of the plant *Emblica officinalis* Gaerth *Phyllanthus emblica* Linn. Belonging to family *Euphobiaceae*. It contains not less than 1.0% w/w of Gallic acid calculated on dry basis.



✓ **Geographical distribution:**

Asia-Temperate

- *China – Fujian ,Guangdong, Jiangxi, Yunnan*
- *Eastern Asia – Taiwan*

Asia-Tropical

- *Indian subcontinent: Bangladesh; Bhutan; India- mainly in Andhra Pradesh, Assam, Bihar, Gujarat, Punjab, west-Bengal, Tripura, Karnataka, Tamilnaru , some other state also; Nepal; Pakistan; Srilanka;*
- *Indo- china: Cambodia; Laos; Thailand; Vietnam;*
- *Malesia- Indonesia- Java, Kalimantan, Sumatra; Malaysia*

Taxonomical profile:

- ✓ Kingdom: Plantae
- ✓ Clade: Angiosperms
- ✓ Clade: Eudicots
- ✓ Clade: Rosids
- ✓ Order: Malpighiales
- ✓ Family:
Euphobiaceae
- ✓ Genus: Phyllanthus
- ✓ Species: P.emblica

DESCRIPTION

- Tree: small to medium in size, reaching 1-8m (3 ft 3 in- 26 ft 3 in) in height. The trunk is slightly curved and the branches are scattered around.
- Bark: Amla plant is gray with hard reddish wood. It has a yellowish green or pinkish colour flower.
- Fruit: pale yellow in colour, round in shape and has six vertical strips. A ripened Amla fruit is hard and weights approximately between 60 and 70 grams.
- Leaves: lighter in weight, linear and long in shape and smells like lemon and leaflets are arrange in pinnate shape.

❖ Macroscopic character:

➤ Fruit:

- Colour- the green colour changes to light yellow or brick red in maturity.
- Odour- odourless
- Taste- sore and astringent
- Size- average size is between 1.5 to 2.5 in diameter
- Shape- depressed, globular
- Extra features- Fruits are fleshy obscurely 4 lobed with 6-trygnous seed. They are very hard and smooth in appearance.

❖ Microscopic character:

- Extremely large rosette/shards of calcium oxalate (some as small as a few 1µm in the form of sand) observed at 400x with Acidified Chloral Hydrate Glycerol Solution.
- Large parenchyma with wrinkled cells walls and crystal sand observed at 400x with Acidified Chloral Hydrate Glycerol Solution.

CHEMICAL CONSTITUENTS

Type	Chemical Constituents
Hydrolysable Tannins	Emblicanin A and B, Punigluconin, Pedunculagin, Chebulinic acid (Ellagitannin), Chebulagic acid (Benzopyran tannin), Corilagin (Ellagitannin), Geraniin (Dehydroellagitannin), Ellagotannin
Alkaloids	Phyllantine, Phyllembain, Phyllantidine
Phenolic compounds	Gallic acid, Methyl gallate, Ellagic acid, Trigallayl glucose
Amino acids	Glutamic acid, Proline, Aspartic acid, Alanine, Cystine, Lysine
Carbohydrates	Pectin
Vitamins	Ascorbic acid
Flavonoids	Quercetin, Kaempferol
Organic acids	Citric acid

CHEMICAL TEST, IDENTIFICATION OF AMLA, ALLIED DRUG, ADULTERANTS

❖ Chemical test:

- Identification of chemical constituents:-
- Ferric chloride test- In amla there are present hydrolysable tannin. When the aqueous or alcoholic extract of amla is treated with ferric chloride solution. The blue colour is obtained.
- Adding of gelatine and sodium chloride solution in the aqueous extract produced milky white colour.

❖ Identification of amla:

- Foreign organic matter- not more than 3%
- Water soluble extractive- not less than 40%
- Ethanol soluble extractive- not less 30%
- Total ash- not more than 5%
- Acid insoluble ash- not more than 2%
- Loss on drying- not more than 12%. Determined on 5 gm by drying in an oven at 105 °c.

❖ Allied drug:

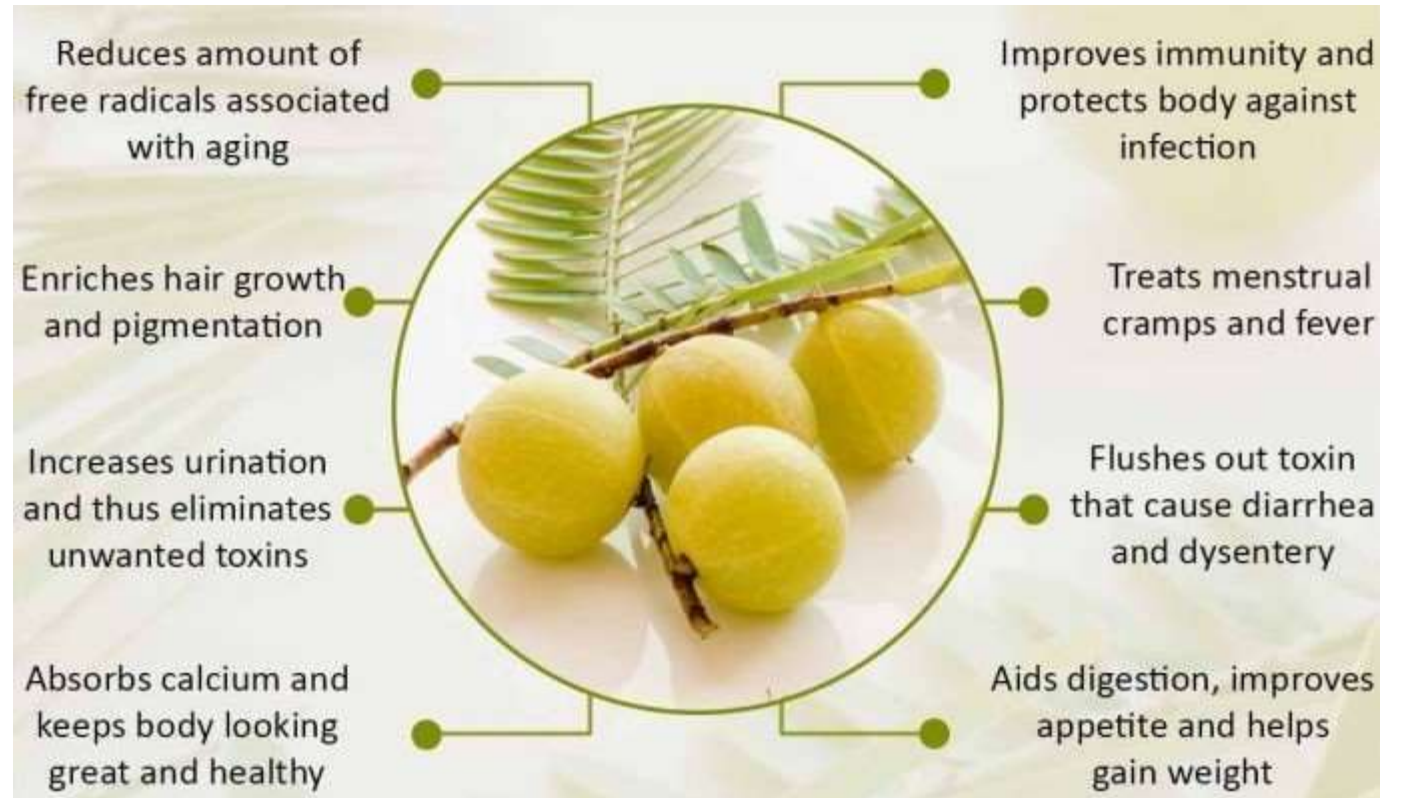
Phyllanthus emblica and phyllanthous amarus (bhumi amla) is use as allied drug instead or admix with *Emblca officinalis*.

❖ Adulterants:

Small leather pieces or fruits pulp is drying and makes look like drying amla they are admix as adulterants. Sour flavour is added in this.

USES

- **Fresh amla:** These are available in season in Indian stores. You can eat amla slices raw with salt and spices, like in India or you can mix a teaspoon of honey. Honey balances the tart taste of amla.
- **Dried amla:** Dried amla fruit can be chewed on. But be aware that they may have a lot of sugar added to it. In India, the candied pickle is called amla murabba.
- **Amla powder:** Organic versions are available in the market and can be mixed with water, honey, or yogurt to be made into a hair or face mask.
- **Amla oil:** This oil helps to strengthen the hair, prevents premature greying and stops hair fall.
- **Amla juice:** Taking amla juice diluted with water early in the morning on an empty stomach helps keep the digestive system healthy and aids in managing blood sugar levels.



Ingredients Obtain	Use In Treatment
Amla Powder	Treat cardiac disease, Action on diabetes, The blood sugar, Eye tonic, Impedes constipation, Jaundice
Amla Juice	Blood purification, Act on diabetes, Act on cold and cough, Gout, Piles
Amla Paste	Respiratory disorder, Urinary problem, Migraine, Therapy for diarrhoea, Prevents skin damage, Act against pimple, As natural mouth freshener, Immune system enhancer Anti-venom activity
Amla Oil	Ameliorates eyesight, Hinders gallbladder disorders, Good for reproductive health

❖ **Products contains amla:**

- ✓ Dabur Chyawanprash: Each 100 gm. Contains 90 gm. *Emblica officinalis*.
- ✓ Patanjali triphala guggul: 16% *Emblica officinalis*.
- ✓ Patanjali amrit rasayan: Each 5 gm. Contains 989 mg. *Emblica officinalis*.
- ✓ Dabur triphala churna: Each 5 gm contain 1.66 gm. *Emblica officinalis*.
- ✓ Dabur vatika enriched coconut oil with Hibiscus: Each 100 ml. Oil contains 0.1gm. *Emblica officinalis*.