

Plant Perfumes and Cosmetics

Introduction:

The aromatic plants either one or more than one parts have substance producing pleasing odour or sweet scent are called as **perfumes**. Since the perfumes are also produced in the form of synthetic organic chemical substances, the substances having fragrance and present in plants are called **plant perfumes**. The majority of the natural perfumery materials are obtained from scented or aromatic parts of the plants.

In all aromatic plants, which are economically important for plant perfumes, there occurs a group of highly aromatic volatile organic substances, known collectively, as 'essential oils'. The essential oils differ in both, chemical structure and properties from the fixed or non-volatile vegetable oils.

The plants or plant preparations which are used for beautifying or designated the complexion of hair are called **plant cosmetics**. The cosmetics preparations for application to skin, hairs etc. are in the form of rouge or powder of plant material. The essential oils can be easily removed from plant tissues without any change in their composition. Essential oils are very complex in chemical nature and consist of many chemical substances of which terpenes and oxygenated and sulphuretted oils are the two important constituents. The exact role of essential oils in plant metabolism is not known. They are considered as by-products of metabolism. It is believed that, their aroma and flavor are useful in attracting pollinating agents and animals, useful for fruit and seed dispersal. Some important species of aromatic plants are:

a. *Citronella*

Botanical name: ***Cymbopogon nardus*** (L.) Rendle

Family: **Poaceae (Gramineae)**

Common name: **Citronella**

Source: **Leaves and stem.**



It is having 80 species and about 12 sps. Occur in India. Densely tufted tall, hardy, perennial grass, about 1.5 m in height all aerial and underground parts arising from narrow branches produced from short rhizome are aromatic, leaves long slender, broadly flat, strongly aromatic.

Economic Importance:

1. The oil of Citronella is used for flavouring all kinds of soaps, disinfectants, sprays, polishes etc. it is important soap perfume.
2. The oil of Citronella is mosquito repellent and hence, mixed with mustard oil or coconut oil and it is used for such purpose. For the same purpose it is used in the form of lotions or creams.
3. The oil has insecticidal properties and therefore, used as a constituent of many insecticides.
4. The oil is used as a source of geraniol and citronella in perfume industries.
5. In some cosmetic preparations Citronella oil can be used as a substitute for Otto of roses.
6. Citronella oil is used as a constituent in some medicinal preparations for digestive system disorders.

b. Jasmine

Botanical name: *Jasminum officinale* L. var. *officinale* Cl.



J. arborescens Roxb. – Tree Jasmeine; Chameli



J. auriculatum Vahl. – Needle flower Jasmine, Jui



J. angustifolium Vahl. – Wild Jasmine, Ranmogari



J. sambac Air – Arabian Jasmine, Mogara



J. malbaricum Wt. – Jungli Chameli, Kusar



J. multiflorum Roth. – Downy Jasmine, Kunda



Family: **Oleaceae**

Common name: **Jasmine**

Source: **Flowers.**

These are most important flowering plants for perfume industries. It is large genus comprising of about 300 sps. these are climbing or spreading perennial shrubs with opposite or alternate trifoliate or pinnate leaves. Flowers with biparous or tirparous cymes or solitary, white in colour or slightly reddish or yellowish.

Economic Importance:

1. Jasmine oils are used extensively in the manufacture of cosmetics, soaps, confectionery, perfumes, syrups, aerated water, ointments, disinfectants and detergents.
2. The jasmine oil is used in the preparation of hair-oils and attars.
3. The different plant parts like leaf, stem, bark, root, fruit and seeds are medicinally very useful and most important for pharmaceutical beverages.
4. The roots of some species of *Jasminum* are used in treatment of ringworms.
5. Lotions made from flowers of *J. officinale* and *J. sambac* are used against headache and eye troubles.
6. The leaves of *Jasminum* are used medicinally for different purposes e.g. fever, blood purifier, whooping cough and Pneumonia.
7. The oil can be used as irritant, sedative, neuralgic and inflamative.
8. The flowers contain yellow pigment, which can be used as a substitute for saffron.

c. Rose

Botanical name: *Rosa damascena* Mill.

Family: **Rosaceae**

Common name: **Rose, Gulab.**

Source: **Flowers (petals)**



It is large genus includes about 120 or more species. It is an erect, climbing, shrub grown in gardens. Stem and branches with large hooked prickles; leaves pinnate, leaflets, 3-7, petioles prickly, flowers many in a corymbs, double, red pink or white, sweet scented.

Economic Importance:

1. Roses are commercially important for various products like [Rose-water](#), [Otto](#) or [Rose, Attar](#), [Gulkand](#) and [Rose-pankhuri](#) (petals).
2. [Rose attar](#) is one of the important products for perfume industry. It is prepared by distillation of rose petals and used for flavouring tobacco, to perfume [agarbattis](#) and also used as [perfume](#).
3. [Gul-roghan](#) is a type of [hair oil](#), prepared by maceration of rose petals with sesame oil i.e. by modified enfleurage process.
4. [Gulab-pandhuri](#) is a shade dried rose petals and used for preparation of [summer drinks](#) and in some [food preparations](#).
5. [Rose-jam](#) or [Gulkand](#) is prepared by mixing one part of rose petals with two parts of sugar and by keeping it in sunlight for maturation. Its good tonic & [mild laxative](#).
6. [Rose water](#) prepared by hydro distillation of rose petals, is used for making syrups, in medical preparation and also for sprinkling is social auspicious functions.
7. [Rose water](#) is medicinally important and used in [eye lotions](#) and [eye drops](#) for its soothing action.
8. [Otto](#) or [Rose](#) or [Rose-oil](#) is widely used in perfume industry and it is very important [perfume material](#).
9. The roses are cultivated in gardens and commercially for ornamental purpose and are used in the form of [cut flowers](#) on many occasions.
10. Flowers buds are astringent and are used in [cardiac troubles](#).

d. **Lawsonia**

Botanical name: **Lawsonia inermis** Linn.

Family: **Lythraceae**

Common name: **Henna, Mendi, Hian**

Source: Cosmetic use - **Leaves and stem.**

Essential oil – **Flowers**



It is monotypic genus. Widely cultivated as ornamental hedge plant and as a cosmetic. Much branched, perennial shrub or small tree with grayish brown bark; leaves opposite, subsessile, entire. Flowers numerous, small, white or rose coloured, fragrant, in large panicle cyme. Fruits globose capsule with many smooth seeds.

Economic Importance:

1. **Lawsonia** leaf powder, commercially known as **Henna powder**, is used as **plant cosmetic**, for **colouring palms**, soles of **feet** and **finger tips** with **nails**. For this purpose paste of leaf powder in water is used.
2. **Lawsonia** leaf powder is also used for **dyeing hairs**, **beard** and **eye brows**.
3. Henna dye was extensively used to **dyeing silk** and **woolen fibers**. The use of Henna dye for **textiles** has been declined due to use of **synthetic dyes**.
4. **Lawsonia** is cultivated and widely used as **hedge plant**.
5. Henna leaves are used as prophylactic against **skin diseases**.
6. **Lawsonia** leaves are used externally in the form of paste or decoction against **boils**, **burns**, **bruises** and **skin inflammation**.
7. A decoction of leaves is used as **gargle** for relaxation of **sore throat**.
8. Alcoholic extracts of henna leaves show mild **antibacterial** property.
9. Henna oil is used in perfumery for its fragrance. It is also used for preparation of **Henna Attar** (Hina attar) and many cosmetic products.

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