

Oil Extraction in Geranium

(Dr. C. Venkatesh, Gopika S and *Brindhasree R)

J.K.K. Munirajah College of Agricultural Science, T.N. Palayam, Gobi, Erode

*Corresponding Author's email: brindhasreebrindhasree@gmail.com

Geranium is native to South Africa, geraniums are perennial shrubs with tiny pink blooms and sharp foliage. Geranium is the plant variety from which essential oil is derived. The process of distilling geranium plant leaves yields geranium essential oil. Folklore claims that it was used to treat a variety of illnesses. Many places grow geranium oil, including Asia and Europe. The pink blossom has a fresh, flowery scent and comes in a variety of strains. Although the scents of each type are different, their composition, advantages, and applications are almost the same.

Scientific name	:	<i>Pelargonium graveolens</i>
Family	:	Geraniaceae
Major constituents	:	Geraniol(68-75%) and Citronellol (23-40%)



Uses and Market Potential

One kind of oil that is frequently used in aromatherapy is geranium oil. The geranium essential oil is derived from the *Pelargonium graveolens* plant's leaves and flowers and has several health advantages. Many substances found in geranium oil are believed to improve health, such as geraniol and citronellol. When applied externally, geranium essential oil can help reduce acne breakouts, skin irritation, and skin infections because of its antibacterial, antimicrobial, and antiseptic qualities. The anti-inflammatory qualities of geranium essential oil also make it advantageous for a variety of inflammatory ailments, including skin-related ones. The past several years have seen an increase in the general demand for essential oils, which can be attributed to growing consumer knowledge of the product's health advantages. The overall demand for essential oil has been on the rise over the past few years which is attributable to the rising awareness about the health benefits associated with the product. An ever-increasing global population, rapid urbanisation, a growing pharmaceutical sector, and rising geriatric population are some of the significant factors that are influencing a steady

shift in consumer preferences. Another major factor that is responsible for the unprecedented growth of geranium essential oil market is that there is no other alternative for natural ingredients.

Machinery Requirement

Basic machinery requirement are as follows:

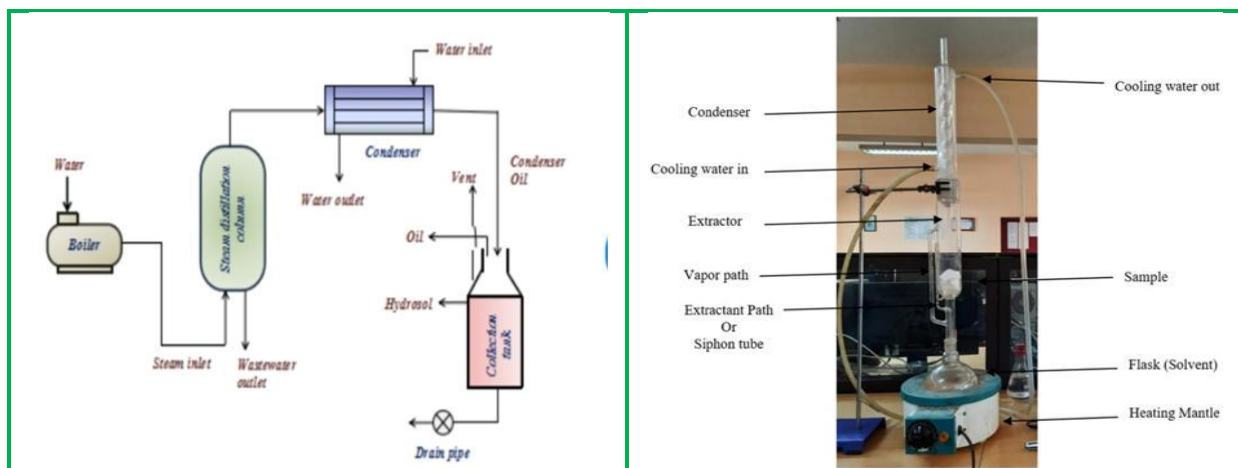
1. Heating Vessel
2. Condenser
3. Steam Pipe
4. Separator
5. Water Pump
6. Cooling Tower
7. Water Tank
8. Filling Machine

Basic raw material requirements are as follows:

1. Geranium Shoot
2. Packing Material (Bottles)

Extraction process

- The distillation unit uses the geranium shoots, which are temporarily held in a shaded location after being obtained from farmers. Typically, a straightforward distillation procedure is carried out using the steam and hydro distillation processes.
- For best extraction, geranium shoots are boiled in water in a heating vessel for three to four hours. During this time, the steam produced conveys geranium oil, which vaporizes from the plant's shoot. Since water and oil are insoluble, the contents of the condenser water and geranium oil are sent to the separator, whereupon the liquid is allowed to settle.
- The geranium oil settles above the water layer and the water settles below. Nearly all of the water in the separator can be drained via a valve at the bottom of the device, and the water is then returned to the heating vessel for enrichment. The process of enrichment lasts for three to four hours.



- Now water is completely drained from separator and oil is supplied to a filling machine. The filling machine fills the geranium oil in appropriate sized bottles which can range from 10ml to 500ml and machine setting are made accordingly.

Conclusion

Geranium is one of the most popular essential oils, both because of its many therapeutic properties (antibacterial, anticandida, anti-inflammatory, anxiolytic..) and its pleasant fragrance.