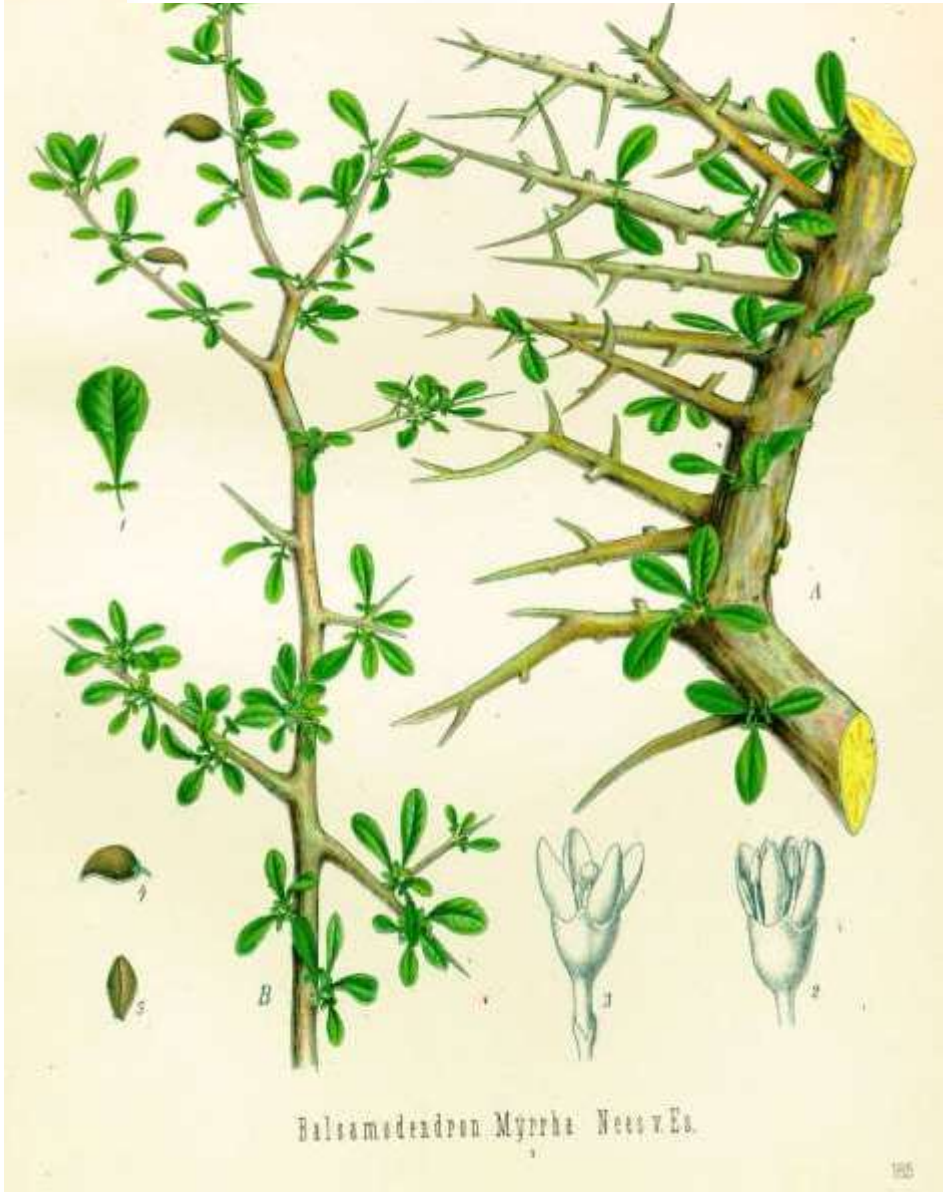


Myrrh

- **Synonyms** Gum Myrrh, Myrrha, Hirabol.

•**Source Myrrh** is an **oleo-gum-oresin** obtained from the stem and branches of *Commiphora molmol* (Berg) Engler or from other species of *Commiphora* belonging to family *Burseraceae.*

- **Geographical Source :** North east Africa, Southern Arabia.

- **Collection and Preparation** :
- The tree is small about 3m in height.
- The phloem contains schizogenous ducts and lysigenous cavities which are filled with yellowish granular liquid.
- After proper incisions are made in the bark of a tree., oleo gum resin exudes.
- It gradually hardens and becomes dark or reddish-brown in appearance.
- Collected by natives in goat skin.

Characteristic Features

Colour : Externally reddish brown , internally brown.

Odour : Aromatic and Agreeable.

Taste : Aromatic, Bitter & acrid.

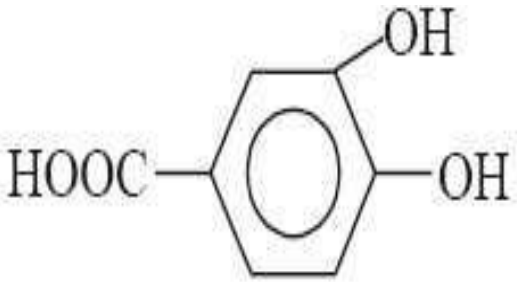
Surface : rough .

Size : About 1.5-3 cm in diameter

Shape : found in the form of rounded or irregular tears.

- **Chemical Constituents:**
- **Myrrh** contains volatile oil (7-17%), resin (20-25%), gum (57-61%), and bitter principle (3 to 4%). The volatile oil consists of **eugenol, *m*-cresol** and **cuminaldehyde.**
- The resin is found to consist of a mixture of **α-, β-, and γ-commiphoric acids (resin acids)** which are ether soluble**.** Besides, it also contains two phenolic resins **α- and β-heerabomyrrholic acids** which are ether insoluble.

- The oleo-gum-resin yields alcohol-soluble extract not less than 30%.
- It also contains phenolic compound such as: **pyrocatechin** and **protocatechuic acid.**
- The crude alcohol-insoluble fraction *i.e.*, '*gum*, comprises of protein (18%) and carbohydrate (64%) made up of **arabinose, galactose** and **glucuronic acid.** However, the gum is found to be associated with an oxidase enzyme.



Protocatechuic Acid

- **Chemical Tests**

1.Myrrh when triturated with water produces an yellow-emulsion.

2.When **myrrh** (0.1 g) is triturated with 0.5 g of pure washed sand (SiO_2) in the presence of ether, filtered and evaporated on an electric water-bath, it forms a thin film of **violet colour** on being exposed to **bromine** vapours in a closed dessicator.

- **Uses**

1. It is used chiefly in perfumes and incense.

2. It is frequently employed as an antiseptic and stimulant.

3.Myrrh acts as an astringent to the mucous membrane and hence it find its application in oral hygiene formulations, such as: gargles, mouth-washes.

4. It is also used as a carminative.

- **Adulterants:**
- Substituted by several species like Arabian myrrh, Yemen myrrh etc., both of them are less aromatic and less fragrant.
- In India myrrh is substituted by *Balsamodendron mukul*, known as Indian bdellium.