



# Balsam of Tolu



# Synonyms



- ☞ Thomas balsam
- ☞ Opobalsam
- ☞ Resin Tolu
- ☞ Balsam of Tolu.
- ☞ Sambranee

# Source



- ❧ **Tolu Balsam** is a balsam obtained from *Toluiifera balsamum* L., (*Myroxylon toluiferum* ), belonging to family: *Leguminosae*.
- ❧ It is also obtained from *Myroxylon balsamum* (Linne') Harms. Family: *Fabaceae*.

# Geographical source



- ❧ Native to Columbia, the drug is collected in Caribbean islands and Cuba.
- ❧ The name Tolu has been derived from a place situated near Cartagena on the north coast of Columbia.
- ❧ In India it is found in the states of Karnataka, kerala and West Bengal.
- ❧ It has also been introduced into African states of Ghana, Sierra Leone, Tanzania, Uganda and Zaire.

# Preparation



- ❧ **Tolu Balsam** is considered to be a pathological product produced in the new wood formed as a result of inflicted injury.
- ❧ For its preparation, it is an usual practice to make 'V' shaped incisions deep into the body of the main trunk.



- ❧ The exudate thus produced is collected either in cups or gourds held strategically just at the base of each incisions.
- ❧ **Balsam of Tolu** is collected from these cups, mixed and packed in air-tight sealed tins.

# Characteristic Features



- ✧ It is a yellowish-brown or brown semifluid or nearly solid resinous mass.
- ✧ It has a characteristic aromatic vanilla-like odour and slightly pungent taste.
- ✧ It is usually brittle when cold.



- ☞ It is found to be transparent in thin layers, and shows numerous crystals of cinnamic acid.
- ☞ It is almost insoluble in water and petroleum ether, but freely soluble in ethanol, benzene chloroform, ether, glacial acetic acid and partially in  $\text{CS}_2$  or NaOH solution.



# Chemical Constituents



- ☞ The drug contains **resin esters** (75-80%) *viz.*, **toluresinotannol cinnamate** along with a small proportion of the benzoate; volatile oil (7-8%)-containing chiefly **benzyl benzoate**; free cinnamic acid (12-15%); free **benzoic acid** (2-8%); **vanillin** and other constituents in small quantities.
- ☞ It also contains **cinnamein** (5-13%).

# Chemical Tests



1. An alcoholic solution of **Tolu Balsam** (0.2% w/v) where treated with a  $\text{FeCl}_3$  solution (0.5% w/v), the appearances of a green colour takes place.
2. Treatment of 1 g of the drug with 5 ml of 10% w/v  $\text{KMnO}_4$  solution when subjected to gentle heating yields benzaldehyde.

# Uses



1. It is used extensively in perfumery, confectionery and chewing gums.
2. It is used widely as an expectorant in cough mixture.
3. It also finds its application as an antiseptic in the form of its tincture.