

## BENZOIN

**Synonyms:** Gum Benjamin, Benzoin; Luban (Hindi).

**Biological Source:** Benzoin is a balsamic resin obtained from *Styrax benzoin* Dryand or *Styrax paralleloneurus* Perkins and other species of *Styrax* known in the market as Sumatra Benzoin.

**Family :** Styraceae

It contains about 25% of total balsamic acids, calculated as cinnamic acid

**Geographical Source:** The trees are found in Sumatra, Malacca, Malaya, Java, and Borneo.

**Characteristics:**

***Sumatra Benzoin :***

- Colour :- Grayish brown to gray
- Odour :- Aromatic and characteristics
- Taste:- Sweetish and slightly acrid
- Size :- It occur in the form of lumps of varying sizes or tears. Tears are externally yellow wish, milky white, the surface is uneven when heated fumes of benzoic acid and cinnamic acid are produced.

***Siam Benzoin :***

- Colour :- yellowish brown to rusty brown
- Odour :- Agreeable and vanilla like
- Taste :- Sweetish and slightly acrid
- Size :- It occur as hard brittle masses and when heated it is soften and become plastic

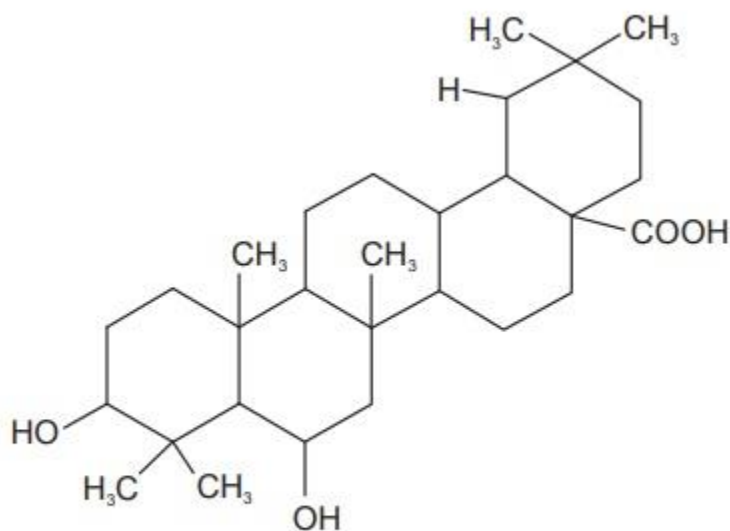
**Chemical Constituents**

Sumatra Benzoin consists of free balsamic acid (cinnamic and benzoic acids) (25%) and their esters. The amount of cinnamic acid is usually double that of benzoic acid. It also contains triterpenic acids like siaresinolic acid (19-hydroxy-oleanolic acid) and sumaresinolic acid (6-hydroxy-oleanolic acid); traces of vanillin, phenylpropyl cinnamate, cinnamyl cinnamate, and phenylethylene.

**Identification test:**

- Alcoholic solution of benzoin with water gives milky white solution.

- Heat small quantity of benzoin in a test tube covering opening of test tube with a glass plate. Cool the contents of the test tube. Examine the glass plate under microscope. The crystals of cinnamic acid shall be observed.
- To 2.5 g benzoin, add 10 ml ether, shake it well and pour 2 to 3 ml of this extract in a porcelain dish, add 2 to drops sulphuric acid. A deep brown color is produced in case of Sumatra benzoin and a deep purplish red color is obtained in case of Siam benzoin.
- Add 4 ml solution of potassium permanganate to 1 g benzoin and warm odour of benzaldehyde is produced in case of Sumatra benzoin.



Sioresinolic acid

## Uses

Sumatra Benzoin possesses expectorant, antiseptic, carminative, stimulant, and diuretic properties. It is used in cosmetic lotions, perfumery and to prepare Compound Benzoin. It forms an ingredient of inhalations in the treatment of catarrh of upper respiratory tract in the form of Compound Benzoin Tincture. Benzoin is used as an external antiseptic and protective, and is one of the main ingredients of Friar's Balsam. It is also used to fix the odour of incenses, skin-soaps, perfumes and other cosmetics and for fixing the taste of certain pharmaceutical preparations. Benzoin retards rancification of fats and is used for this purpose in the official benzoinated lard, also used in food, drinks and in incense.