

## 62108 Tolubalsam

*(from "Pitman's Common Commodities and Industries, GUMS & RESINS – by Ernest J. Parry, London; Printed by Sir Isaac Pitman & Sons, Ltd, Bath, England, v-(1465E))*

Balsam of Tolu is the product of the trunk of the tree Myroxylon Toluifera, a tree indigenous to New Granada. It is an aromatic balsam exuding from artificially-made incisions in the trunk of the tree, and is collected in gourds, and finally exported in tins. When fresh, balsam of tolu is a soft, tenacious, resinous substance becoming much harder on keeping, and quite brittle in cold weather. If a small fragment be warmed and pressed between two pieces of glass, crystals of cinnamic acid can be discerned throughout the mass, when examined under the microscope.

Balsam of Tolu has a fragrant odor and an aromatic and slightly acid taste. It is used in perfumery and in the preparation of various aromatic substances, and also in medicine.

It contains benzyl benzoate, benzyl cinnamate, free cinnamic and benzoic acids, traces of vanillin and the benzoic and cinnamic acid esters of tolueresinotannol, an alcohol of very complex constitution.

The principal adulterants of balsam of tolu are ordinary colophony and Balsam of Tolu which has previously been deprived of most of its aromatic substances by a process of extraction. A genuine balsam will yield not less than 90 % to alcohol, 95 % to chloroform, and only 3 to 8 % to petroleum ether. A normal sample will have the following properties:

Acid value: 105 to 140

Ester value: 38 to 70

If 5 g are warmed with two successive portions of 25 cc. and 10 cc. of carbon bisulphide, the solutions, when evaporated, should yield a distinctly crystalline residue, which should require not less than one-third of its weight of caustic potash for saponification.

Colophony may be detected as follows: 5 g are exhausted with petroleum ether, and the filtered petroleum ether extract is shaken with an equal volume of a 0.1 % aqueous solution of acetate of copper. If colophony be present, the petroleum ether will be colored green, as the abietic acid present in colophony forms a green copper salt soluble in petroleum ether.

Balsam of Tolu is official in the British Pharmacopoeia, which requires it to have the following properties:

A soft, tenacious solid when first imported, becoming harder and finally brittle.

Transparent and yellowish-brown in thin films. Pressed between pieces of glass with the aid of heat, and examined with a lens, it exhibits crystals of cinnamic acid.

Fragrant odor, especially when warmed; aromatic taste and slightly acid. Soluble in alcohol (90 per cent.) the solution being acid to litmus.

Acid value: 107.4 - 147.2

Saponification value: 170 – 202

If 5 g are gently warmed with successive portions of 25, 15 and 10 ml of carbon disulphide, the solution yields, when evaporated to dryness, a distinctly crystalline residue, which when tested as described under "Styrax Preparatus" yields not less than 1.25 g of balsamic acids.