

Shellac resin

Shellac (or lac) resin is produced by the *Kerria lacca* Kerr insect (*Coccidae* family) that lives on tropical trees in the South-East Asia, mainly in India. The raw resin is known as stick-lac and mainly consists of resinous components but also contains wax (6-7%), dyestuffs (4-8%) and bits of wood and bark, also dead insects, etc. [1,2]. Depending on the extent of purification stages, shellac resin with different properties and quality is obtained from stick-lac. The colour of shellac resin varies from a pale-yellow for bleached shellac to deep reddish-brown. Shellac resin consists mainly of aliphatic acids such as aleuritic and butolic acids [1]. In addition, it contains a small amount of sesquiterpenoids like shellolic acid, jalaric acid, and laccijalaric acid (see Fig. 1) [1-3]. During ageing, the level of cross-linkage between the components increases due to esterification, resulting in deterioration of the solubility of the resin [1-4]. The most important product of shellac resin is the **spirit varnish** that is mainly used for woodwork, such as furniture but also musical instruments, etc. [1, 3, 5]. Shellac varnish leaves a hard, thick, and lustrous varnish coat on the surface of the object. Although the varnish layer is usually coloured it is still very transparent and it helps to accentuate the structure of the wood [1]. The main drawback of shellac varnish is the sensitivity to moisture, heat and sunlight [1, 4].

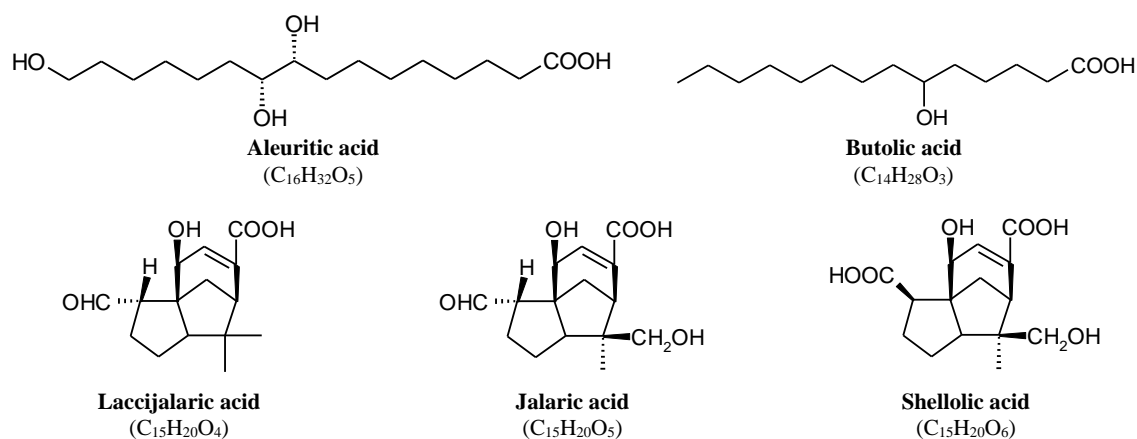


Fig. 1. Selection of components present in shellac resin [1].

References

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