

Agarwood-type Resin from *Gyrinops walla* Gaertn: A New Discovery

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Abstract

Agarwood is an expensive resinous product extracted from some members of *Aquilaria* and *Gyrinops* species of the family Thymalaeaceae. Agarwood essential oil is a highly valued perfumery product in modern cosmetics and traditional Attar. Agarwood extraction from the above species and product manufacturing are done in India and Southeast Asian countries. However, overharvesting, low natural regeneration, and legal restrictions at present, have limited the supply of this product.

Gyrinops walla is recorded in the wet zone of Sri Lanka, and it had been very rarely recorded in extreme Southwest India. However, recent reports of the abundance of *G. walla* in India are hard to find. Studies were not conducted in the past for *G. walla* on its ability of agarwood resin production and the quality of that resin. This study is the first to identify the agarwood resin formation and the quality of *G. walla* which can be used as a substitute for that of *Aquilaria* and other species of *Gyrinops*.

Resinous tissues were extracted from six *G. walla* trees for the present study from two different areas, i.e., Labugama and Yagirala of the wet zone of Sri Lanka. The resins were solvent extracted in the laboratory and the resin quality was tested using gas chromatography analysis. The results indicated an extreme similarity of the compounds of *G. walla* resin with that of commercially available agarwood resins. However, further studies should be conducted to identify *G. walla* distribution and formation of agarwood.

Key words: *Gyrinops walla*, *Aquilaria*, agarwood

1. Introduction

Internationally, agarwood is widely known for its fragrant resinous wood. Agarwood refers to species within four genera: *Gyrinops*, *Aetoxylon*, *Gongystylis* and more commonly, *Aquilaria* within the family Thymalaeaceae. The value of the resin currently found in a small percentage of trees mainly harvested from certain species in the genus *Aquilaria*. The process of the oleo-resin production is the tree's response to injury of its first line of defence, formation of phloem callus tissue, is inhibited from forming over the injury (Blanchette, 2003). The resin derived from the agarwood tree is highly sought after for religious, medical, ceremonial and domestic activities by Asian Buddhists and Moslems. In addition to that, a large demand is seen for agarwood in Southeast Asia, Middle East and United States as a perfumery agent.

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