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***Santalum album* L. (Indian sandalwood) oil content variation of Welimada region, Sri Lanka**

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Abstract

Indian sandalwood (*Santalum album*) has a cultural and economic attraction mainly because of its fragrant oil, known as Santalol, produced in the heartwood. Due to its woody, sweet aroma and fixative properties, Santalol is widely employed in the fragrance industry; in highly priced perfumes and for incenses. The increasing demand and price therefore, have produced a very high market interest.

Welimada-Badulla region of Sri Lanka is accepted as the best geographical location for best growth of sandalwood trees with higher oil yields. However, according to the literature, sandalwood oil quantity varies within the same area even for the same size of trees. The present study was therefore initiated to identify the oil quantity variation in Welimada region due to diameter at breast height (dbh) and height of the tree, as well as the percentage of heartwood available.

Samples from four different locations of Welimada area were collected for the present study. Core samples were extracted from the selected trees. Oil from each tree was extracted by hydro- distillation method. The dbh, height and the sapwood heartwood percentages were measured for the sample trees. The variations of oil content were then tested with dbh, height and heartwood percentage. Twenty three trees were used for the present study and the oil content of them varied from 0.05% to 4.28%. According to the results, the oil quantity did not significantly vary with diameter at breast height and percentage of heartwood but showed a negative correlation with height. Therefore, it can be concluded that sandalwood oil quantity does not vary with dbh and heartwood percentage. However more samples need to be analyzed to test the relationship between oil content and height of sandalwood trees.

Key words: Indian sandalwood, oil quantity, heartwood