

## **B-79: Wood properties of some Sri Lankan timbers**

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Wood properties such as gravity, shrinkage and colour have a great impact on the classification of timbers according to their end uses. Specific gravity in particular has a direct influence on the strength properties of wood. Hence aim of this research was to study some wood quality parameters which have a direct influence on the end use as construction and furniture timber. It is hoped that data gathered in this study would be useful in developing a system to classify Sri Lankan timbers according to their properties.

Wood samples were collected from sawmills visited and specific gravity of 66 species, shrinkage of 50 species and colour of 54 species were determined by carrying out experiments in the laboratory. Specific gravity was determined according to the maximum moisture content method. Tangential, longitudinal and volumetric shrinkage values were determined according to the Sri Lankan standards (SLS 836: 1988). Colour of the timbers were determined by comparing planed timber samples with Munsell soil colour charts.

Based on specific gravity values, and end uses it was possible to classify timbers into three specific gravity ranges: low (less than 0.5 specific gravity), medium (0.5-0.6) and high (more than 0.7). Heavy construction timber, medium construction timber and light construction timber fell into the categories of high, medium and low specific gravity ranges respectively. Timbers used for common furniture consisted of both low and medium specific gravities. Heavy construction timber and high quality furniture timber fell into the range of high specific gravity.

Timbers which are popular for joinery work (eg. satin, jak, mahogany, suriyamara, milla) had low shrinkage values (less than 10%). Some lesser known timbers, lunumidella, mango, kanda, gansooriya, ginisapu and rubber also had low shrinkage values, indicating the potential of using these species in joinery work. Timbers having higher shrinkage values (more than 10%)

can be used for furniture and construction work after they are kiln seasoned. Volumetric shrinkage of the timbers was found to be higher than both tangential and radial shrinkages, whereas tangential shrinkage was higher than radial shrinkage. Colour of the timbers were also listed and photographs of these timbers were taken.

Sri Lankan timbers, were classified into low, medium and high specific gravity ranges. Specific gravity was found to have an association with the end use of timber. It was also possible to classify timbers according to their shrinkage: low and high shrinkage ranges.