

# **SHRINKAGE PROPERTIES OF OIL PALM TRUNK (OPT)**

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## ABSTRACT

The oil palm trunk (*Elaeis guineensis*) was used as raw material to replace solid wood in this study. The objective of this study was to determine the shrinkage properties of oil palm trunk (OPT) at different trunk's portions (radial, tangential and longitudinal), layers (L1, L2 and L3) and cutting directions (radial, tangential and longitudinal). In this study, oil palm trunk was divided into different portions and layers by using specific measurement. All samples prepared then weighed and the cutting dimension were measured before been applied with shrinkage testing. Shrinkage testing was done using oven-dry at 105°C until there is no weight and dimensional changes anymore. This testing took about 2 weeks time. From this study, it can be concluded different portions was highly affecting the shrinkage properties of OPT at different cutting direction, which bottom portion had the lowest shrinkage properties, followed by middle and bottom. This result trending was totally different when applied at different layers of OPT. Different layers of OPT did not affect the shrinkage properties of OPT. For different cutting direction, radial direction had the greatest shrinkage properties and longitudinal had the lowest shrinkage properties and almost unchanged.