

**FIBER MORPHOLOGY OF OIL PALM TRUNK (*Elaeis guineensis*)**

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## ABSTRACT

### FIBER MORPOLOGY OF OIL PALM TRUNK (*Elaeis guineensis*)

The scientific name of oil palm is *Elaeis guineensis*. OPT biomass are widely used in the wood-based industry such as pulp and paper and wood plastic. Thus biomass can turn into value added material and as alternative raw materials. This study concentrate on the determination of fiber morphology according to its fiber length, fiber diameter, lumen diameter and cell wall thickness depended on different height portion and distance from outer layer and inner layer. In this study, the average result for the fiber length is 2.03 $\mu$ m, fiber diameter is 42.12 $\mu$ m, lumen diameter is 25.65 $\mu$ m and cell wall thickness is 25.78 $\mu$ m. for the runkel ratio and felting power, the highest recorded for both of them are 4.44 and 0.048 percent. According to the runkel ratio and felting power result, the fiber is not suitable for paper making.

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