

# VARIATIONS IN PULPING PROPERTIES OF *Pinus caribaea* MORELET FROM IJAYE FOREST RESERVE



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## **ABSTRACT**

The pulping properties of *Pinus caribaea* from Ijaye forest reserve are investigated. The mean fibre length is 4.12mm and the mean diameter is 0.046mm. Fibre length increased from 2.06mm from the pith to 5.44mm near the bark. The between tree differences in fibre length is significant. The mean fibre lengths in the vertical and oblique sequences are 2.93mm and 4.38mm respectively. The effects of trees, rings and discs are also significant in both sequences indicating that fibre length is closely related with tree height. However, the effects of trees and discs interaction are not significant in both sequences indicating that variation in fibre length is uniform with height. The mean holocellulose content is 71.85%. The holocellulose content decrease from the base to the top of the tree. The between tree differences in holocellulose content is significant, indicating the possibility of choosing trees with high holocellulose content for breeding. The mean lignin content of the studied species is 27.87%. Between trees differences in lignin content is significant and the regression analysis show the variation to be linear and negative, indicating that lignin proportion decreases along the tree height. Mean alcohol benzene extractive content is 7.01%. The tree effect on alcohol benzene soluble extractive content is significant indicating, the possibility of breeding trees with low probability of pitch deposition.

**Keywords:** Pulping, Holo-cellulose, lignin, Alcohol soluble benzene extractive content, Oblique, Vertical, Radial direction