

A review on quality enhancement of oil palm trunk waste by resin impregnation : future materials.

ABSTRACT

Oil palm trunk (OPT) is a solid waste obtained in large quantities after the felling of oil palm trees and is available year-round. Scientists and industrialists face difficulties in utilizing these solid wastes for different applications due to great variations in their physical and mechanical properties. Because OPT consists of lignocellulosic materials, its cellulosic material is utilized in the production of panel products such as particleboard, medium density fibreboard, mineral-bonded particleboard, block board, and cement board. In order to control the OPT waste, it is essential to consider its alternative utilization inside buildings as lightweight construction materials and furniture. The impregnation of different resins in wood and non-wood materials can improve the quality of the OPT, making it possible to utilize OPT as raw materials for different applications. The enhanced properties and good appearance of impregnated OPT have found use in high-grade furniture and housing materials. In order to further evaluate its potential, this review has been compiled for the detailed study of various properties, characteristics, and applications of OPT.

Keyword: Quality enhancement; Oil palm trunk; Impregnation; Characteristics of oil palm trunk.