

EVALUATION OF CASHEWNUT SHELL LIQUID (CHSL) AS WOOD PRESERVATIVE USING CRUSHING STRENGTH

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ABSTRACT

A laboratory evaluation of cashew nut shell liquid (CNSL) as wood preservative on sapwood of *Triplochiton scleroxylon* test blocks sawn into 20m x 20mm x 300mm sizes against *Trametes cingulata* and *Lentinus lepideus* was studied using crushing method. The crude extract was diluted with n-hexane, volume for volume. Four levels of CNSL concentration were tested at 4%, 8%, 12% and 16%. The treated test blocks and control test blocks were exposed to the infection regions of the pathogens in Kollé-flasks for 2,4,6,8,10 or 12 weeks. After incubation, the test blocks were tested in radial compression and their modulus of elasticity (MOE) determined. Significant differences at $P < 0.05$ were found among the fungi types, levels of crude extract concentration and interactions between the fungi, concentrations and duration. Fungi activity was at minimum after 2 weeks of inoculation for concentrations of 12% and 16%. The CNSL was found to be very effective as fungicide in preventing wood decay at these levels. The recommended killing point concentration (KPC) against the microorganisms as obtained in this study is 16%.

Keywords: Cashewnut shell liquid (CNSL), *Triplochiton scleroxylon*; *Trametes cingulata*, *Lentinus lepideus*, Kollé-flasks, modulus of elasticity (MOE).