



EVALUATION OF OILS OF *JATROPHA CURCAS* AND *ELAEIS GUINEENSIS* AS WOOD PROTECTANTS AGAINST SUBTERRANEAN TERMITES

O.E. Ajayi

Department of Biology, Federal University of Technology, P.M.B.704, Akure, Nigeria.
ajfumeu@yahoo.co.uk

ABSTRACT

Petroleum ether extracted oils of physic (*Jatropha curcas* (L.)), palm kernel (*Elaeis guineensis* (Jacq)) and locally extracted palm kernel oil (PKO) were tested as wood protectants against subterranean termites using *Triplochiton scleroxylon* as wood substrate *in vitro* at 100%, 80%, 60%, 40% and 20% concentration levels for each oil. Untreated, solvent treated, standard control (Diazinon) and experiment to determine effect of environmental factors on weight reduction of substrate wood were also set up. All treatments were replicated three times. Treated wood was exposed to termite and observed on weekly basis for signs of infestation for 12 weeks. Weight difference between the initial weight of substrate wood before field trial and final weight at 12 weeks of trial was used as index of protectant-ability of the plant oils. There was no significant difference ($P>0.05$) between effectiveness of petroleum ether extracted oil of *J. curcas* seed and locally extracted PKO at 100% treatment and the standard preservative. All the oils significantly ($P<0.05$) protected wood for twelve weeks but the degree of effectiveness varies with concentration, plant species and extraction method. The oils, from the result obtained have some inherent potential to protect wood against damage by termite.

Keywords: *Elaeis guineensis*, Protectant-ability *Jatropha curcas*, oil, *Triplochiton scleroxylon*