INTRODUCTION: Wood preservation aims to improve the durability of wood, particularly against wood destroying organism, such as subterranean termites. However, most of available commercial wood preservatives is synthetic compounds that tends to promote environmental pollution due to their biodegradables characteristic. Therefor, development of more enviromental friendly wood preservatives is quite crucial. Various studies reveals that bark and leave’s extract of Suren Merah (Toona sinensis Roem.) had antifeeding effect against insect pest. A laboratory study was conducted to evaluates the efficacy of Suren Merah’s bark and leave extract against subterranean termite C. curvignathus.

MATERIAL AND METHODS: Bark and leave of Suren Merah tree (from eight years plantation of Sukabumi, West Java) was extracted using soxletation method with ethanol 99% as solvent. The ethanol extract then was fractionated sequentially using n-hexane and ethyl acetate. Each fraction resulted from the process was dried using kiln dryer (60°C, ± 48 hours), then dissolved in ethanol to be 4%, 8%, and 12% concentration of extract solution respectively. Efficacy of each extract solution then was conducted based on SNI 01. 7202-2006 (21 days of forced feeding against C. curvignathus) with three replications respectively.

RESULT AND DISCUSSION: Most of the bark extract fraction was residue (polar), meanwhile the leave extract fraction dominated by ethyl acetate fraction (semi polar). After 21 days of feeding period, all bark extract fraction were caused 100% mortality of C. curvignathus. Meanwhile leave extract fraction were caused 46% to 92.7 % termites mortality. In addition n-hexane fraction of bark as well as leave extract was the most effective fraction in reducing feeding activity of C. curvignathus. As such, bark and leave’s of Suren Merah has a great potential to be utilized as bio-preservatives source, especially in preventing termites attack to wood construction.

KEYWORDS: Suren Merah, enviromental friendly, subterranean termite.

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