

ABSTRACT

THE CHARACTERIZATION OF ALKALOID COMPOUND FROM SECONDARY METOBOLITE SPONGE *XESTOSPONGIA* SP.

By

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The characterization of alkaloid compound from secondary metabolite sponge *Xestospongia* sp. has been carried out. Sponge was collected from Kupang bay waters by scuba dive. Sample was extracted by methanol and evaporated by vacuum rotary evaporator in order to get extract methanol. The presence alkaloid compound from extract sponge was tested by using thin layer chromatography with visualization reagents, Dragendroft and cerium sulfate. The active compound T5b (5,2 mg) from methanol extract sponge were isolated through several chromatography steps and monitored by inhibition growth of bacterial *Staphylococcus aureus*. Analysis by TLC showed that T5b has Rf value 0.37 using eluent dichloromethane-methanol (9: 1). Interpretation the FTIR spectrum of T5b compound suggested that compound has hydroxyl group with O-H stretching vibration at 3425 cm^{-1} and C-O stretching vibration at 1144 cm^{-1} , alkyl group indicated with C-H stretching vibration at 2930 cm^{-1} , terminal methyl group indicated with C-H stretching vibration at 2856 cm^{-1} and C-H bend vibration at 1457 cm^{-1} . Amine cyclic group from alkaloid compound indicated with C-N stretcing vibration at 1384 cm^{-1} and 1320 cm^{-1} . Moreover, T5b compound showed an activity as antibacterial against *Staphylococcus aureus* with consentration 1,8 mg/mL.