

## **Screening of Secondary Metabolites Compounds in Stem Bark of Frangipani (*Plumeria alba*) and Toxicity Test on Shrimp Larvae (*Brine Shrimp Lethality Test*)**

Santi Nur Handayani dan Moch. Chasani

Program studi Kimia Jurusan MIPA FST UNSOED

santinurhandayani@yahoo.com

### **ABSTRACT**

Frangipani is a plant belonging to the family *Apocynacea* and potential for development as anti-cancer drug material. Content of secondary metabolites, anti-cancer compounds from frangipani (*Plumeria alba*) steam bark, especially it has not been made. This research aims to identify compounds secondary metabolites from frangipani steam bark extract potential for development as anti-cancer drug material.

Steps undertaken in this study include: Extraction of secondary metabolites with frangipani stem bark maceration method of storey with n-hexane, chloroform, ethyl acetate, and ethanol. Each tested extracts obtained using prawn shrimp toxicity *A. salina* Leach and continued with the testing of secondary metabolites using color reagents. fraction extract has potential as an anti-cancer drugs is purified using gravity column chromatography technique with elusi gradient technique using a solvent mixture n-hexane:ethyl acetate hen conducted toxicity tests followed by identification using GC-MS

Extraction results obtained by the four extracts namely: n-hexane extract (E<sub>1</sub>) is positive flavonoid groups, chloroform extract (E<sub>2</sub>), ethyl acetate extract (E<sub>3</sub>) and ethanol extract (E<sub>4</sub>) is positive for secondary metabolite groups flavonoid and alkaloid. Toxicity test results obtained LC<sub>50</sub> values respectively participated: 973.7 ppm (E<sub>1</sub>), 451.35 ppm (E<sub>2</sub>), 112.557 ppm(E<sub>3</sub>), and 637.50 ppm(E<sub>4</sub>).

**Keywords:** *Plumeria alba*, secondary metabolite, toxicity test, and *A. salina* Leach