ESSENTIAL OIL FROM PLANT NILAM
(Pogostemon cablin Benth) BY FERMENTATION AND
HIDRODISTILATION METHOD AND BIOAKTIVITY TEST

Name : Diana Pramifta Putri Halimah
NRP : 1407 100 035
Advisor Lecturer: Dra. Yulfi Zetra MS

ABSTRACT

Patchouli oil has been isolated from leaves (A), stem (B) and a mixture of stem-leaf (C) patchouli (Pogostemon cablin Benth) included in the Labiteae family through the hidrodestilasi process. The main components of this essential oil is patchouli alcohol with a yield of 2.97% (essential oils A), 0.15% (essential oil B) and 2% (essential oils C). Patchouli oil was toxic as indicated by the BSLT method. Test insecticidal essential oils are made to the third instar larvae of Aedes aegypti. The test results showed that essential oils A, B and C is active as a natural insecticide with LC$_{50}$ respectively values of 46.40 ppm, 31.04 ppm and 47.59 ppm. Qualitative test of antioxidants with DPPH showed essential oil of patchouli potential as antioxidants.

**Key Words:** essential oil, Pogostemon cablin Benth., insecticidal, antioxidants