ESSENTIAL OIL FROM PLANT LEAVES AND STEM
TWO SPECIES CYMBOPOGON GENUS, GRAMINEAE
FAMILI AS NATURAL INSECTICIDE AND
ANTIBACTERIAL

Abstract

Two Cymbopogon species, Cymbopogon nardus and Cymbopogon citratus, were chosen to prepare essential oil by hydrodistillation and to identify their volatile compound compositions. Gas chromatography/mass spectrometry (GC/MS) was used to identify the volatile compound compositions. Citronella (30,58%) was the major component of C. nardus, while geranial (42,11%) of C. citratus. Essential oil of both species are active as antibacterial and insecticide. This is known by a low LC_{50} (LC_{50}<500) in the antimicrobial test with Brine Shrimp Lethality Test (BSLT) method that is equal to 315,24 ppm for C. nardus dan 270,93 ppm for C. citratus, while at insecticide test LC_{50} values amounted to 422,30 ppm for C. nardus dan 321,92 ppm for C. citratus.

Keyword: Cymbopogon nardus, Cymbopogon nardus, GC-MS, essential oil, hydrodistillation, bioactivity.