ABSTRACT

ISOLATION, IDENTIFICATION, AND BIOACTIVITY TEST OF STIGMAST-5-EN-3β-OL (β-SITOSTEROL) COMPOUND FROM ROOT BARK OF BAKAU MINYAK (Rhizophora apiculata)

By

Rahmat Kurniawan

This study had done the isolation, identification, and bioactivity test of steroids compound from root bark of Bakau Minyak (R. apiculata). The isolation process include extraction with maceration method by methanol, separation with vacuum liquid chromatography (VLC), and purification with column chromatography (CC) using ethylacetat/n-hexane. The pure compound of isolated shown crystal needle-shaped with 0.214 grams (0.01%) was identified by Liebermann-Burchard reagent had a blue-coloured spot, indicated that a steroid compound. The result of thin-layer chromatography (TLC) with three different systems of eluens that is 1:9 ethylacetat/n-hexane, 1:9 cloroform/benzene, and 1:9 DCM/n-hexane given Rf value 0.25, 0.20, and 0.15 respectively with melting point test looking for 160.2°-161°C. The pure compound of isolated was determined by UV-Vis, FT-IR, 13C-NMR, 1H-NMR, DEPT, and GC-MS spectrophotometry. Base on analysis of data indicate that had formed a steroid compound called Stigmast-5-en-3β-ol (β-sitosterol). Bioactivity test of isolated compound gave 8 mm zone inhibits against E. coli.

Key word: stigmast-5-en-3β-ol (β-sitosterol), Rhizophora apiculata, Bioactivity