Rositasari, D., 2011. Sintesis, Karakterisasi Senyawa Koordinasi Zn(II)-kurkumin dan Uji Aktivitas Antibakteri terhadap *Staphylococcus aureus*. Skripsi di bawah bimbingan Drs. Hamami, M.Si dan Dr. Sri Sumarsih, M.Si., Departemen Kimia Fakultas Sains dan Teknologi, Universitas Airlangga, Surabaya.

ABSTRAK

Telah dilakukan sintesis dan karakterisasi senyawa koordinasi Zn(II)-kurkumin serta uji aktivitas antibakteri terhadap *Staphylococcus aureus*. Sintesis senyawa koordinasi ini dilakukan dengan mereaksikan Zn(II) dan ligan kurkumin dengan perbandingan mol (metode job) pada perbandingan stoikiometri Zn(II) : kurkumin = 1:1. Karakterisasi hasil sintesis ini dilakukan dengan menentukan panjang gelombang maksimum (λmaks) dengan spektrofotometer UV-Vis, analisis gugus fungsi dengan spektrofotometer IR dan momen magnet dengan *Magnetic Susceptibility Balances* (MSB). Uji aktivitas antibakteri terhadap *Staphylococcus aureus* dilakukan dengan metode difusi. Pada penelitian ini diperoleh senyawa koordinasi Zn(II)-kurkumin yang berbentuk kristal jarum berwarna oranye. Hasil analisis spektrofotometer UV-Vis diperoleh panjang gelombang maksimum 468 nm, analisis spektrofotometer IR menunjukkan adanya ikatan Zn(II)-kurkumin yang muncul pada bilangan gelombang 462 cm^{-1} sedangkan analisis M*agnetic Susceptibility Balance* (MSB) diperoleh harga momen magnet sebesar 0,0152 BM. Senyawa koordinasi Zn(II)-kurkumin mempunyai aktivitas antibakteri terhadap *Stapylococcus aureus.*

Kata kunci : Senyawa koordinasi, Zn(II)-kurkumin, Stapylococcus aureus.

Rositasari, D., 2011. Synthesis, Characterization of Coordination Compound Zink(II)-curcumin dan Test of the Antibacterial Activities Against *Staphylococcus aureus*. Have been supervised by Drs. Hamami, M.Si and Dr. Sri Sumarsih, M.Si., Chemistry Department Faculty of Science and Technology, Airlangga University, Surabaya.

ABSTRACT

The synthesis and characterization of coordination compound zink(II)-curcumin and also the test of the antibacterial activities against *Staphylococcus aureus* were done. The synthesis of compound was conducted by reacting zink(II) and curcumin ligand with the mol comparison (job method) on the stoichiometry comparison Zn(II) : curcumin=1:1. The synthesis result characterization was done by determine the maximum wave length (λ_{max}) with spectrophotometer UV-Vis, the group function analysis with spectrophotometer IR and the magnetic moment with *Magnetic Susceptibility Balances* (MSB). The test of the antibacterial activities was done with diffusion method. From this result can be obtained the coordination compound zink(II)-curcumin in orange needle crystal shaped. From the UV-Vis spectrophotometer analysis result, it can be obtained the maximum wave length 468 nm, IR spectrophotometer analysis show there is zink(II)-curcumin bonding was appeared at wave number 462 cm^{-1} whereas from the *Magnetic Susceptibility Balance* (MSB) analysis can be obtained the magnetic moment value 0,0152 BM. Coordination compound zink(II)-curcumin has antibacterial activities against *Staphylococcus aureus*.

Key words: Coordination compound, Zink(II)-curcumin, Staphylococcus aureus.