

INTISARI

ANJAENI, G.F.N.K., 2017, UJI AKTIVITAS SENYAWA ANALOG 3',4'-DIKLOROKALKON PADA BAKTERI *Staphylococcus aureus* ATCC 25923, SKRIPSI, FALKUTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Kalkon merupakan suatu prekursor flavonoid terdiri dari dua cincin aromatik yang dihubungkan tiga karbon, dalam sistem α,β -tidak jenuh karbonil. Senyawa 3',4'-diklorokalkon dilaporkan mempunyai berbagai macam aktivitas biologis antara lain sebagai antibakteri. Penelitian ini bertujuan untuk mengetahui aktivitas senyawa analog 3',4'-diklorokalkon terhadap aktivitas antibakteri *Staphylococcus aureus* ATCC 25923.

Senyawa analog 3',4'-diklorokalkon diperoleh dari Laboratorium Sintesis Organik Universitas Setia Budi. Uji aktivitas menggunakan metode dilusi untuk mengetahui Kadar Bunuh Minimum dengan cara melakukan pengenceran 10 tabung, yaitu berupa seri pengenceran dengan konsentrasi 2500 $\mu\text{g/ml}$, 1250 $\mu\text{g/ml}$, 625 $\mu\text{g/ml}$, 312,5 $\mu\text{g/ml}$, 156,25 $\mu\text{g/ml}$, 78,125 $\mu\text{g/ml}$, 39,062 $\mu\text{g/ml}$, 19,531 $\mu\text{g/ml}$, kemudian diinokulasi pada medium diferensial VJA (*Vogel Johnson Agar*). Berdasarkan parameter elektronik ($C\beta$ gugus enon), lipofilitas ($\log P$) dan sterik (index winner). Dilakukan analisa kualitatif hubungan struktur dan anktivitas antibakteri pada gram posositif.

Hasil penelitian menunjukkan senyawa 3-(3-indolil)-1-(3,4-diklorfenil)prop-2-en-1-on mempunyai aktivitas antibakteri pada konsentrasi 2500 $\mu\text{g/ml}$ sedangkan senyawa 1-(3,4-diklorofenil)-3-(2-furanil)prop-2-en-1-on menunjukkan tidak adanya aktivitas antibakteri. Senyawa 3-(3-indolil)-1-(3,4-diklorfenil)prop-2-en-1-on mempunyai potensi penghambatan lebih besar dibandingkan senyawa 1-(3,4-diklorofenil)-3-(2-furanil)prop-2-en-1-on pada bakteri *Staphylococcus aureus* ATCC 25923.

Kata kunci : 3',4'-diklorokalkon, dilusi, *Staphylococcus aureus* ATCC 25923

ABSTRACT

ANJAENI, G,F,N,K., 2017, TEST ACTIVITY ANTIBAKTERIAL OF THE ANALOG COMPOUND 3',4'-DICLOROCHALCONE AN ANTIBACTERIAL *Staphylococcus aureus* ATCC 25923., SKRIPSI, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA

Chalcones are considered as the precursors of flavonoids which consist of two aromatic rings linked a three-carbon α,β -unsaturated carbonyl sytem. Chalcones and is derivates have been rrepted to prossess various biological activities such as antibacterial, anticancer, antifungal, anti-inflammatory and antioxidant. The aim of this study activity compound 3',4'-diclorochalcone an aktivitas bacterial *Staphylococcus aureus* ATCC 25923.

The compound of 3',4'-diclorochalcone were obtained from the Laboratory of Syntesis Organic Setia Budi University. The test activity used dilution method to know cocncentration Kill Minimum of the chalcone derivatives compound. Dilution method by 10 tube dilution, which from a dilution series with concentration of 2500 $\mu\text{g/ml}$, 1250 $\mu\text{g/ml}$, 625 $\mu\text{g/ml}$, 312,5 $\mu\text{g/ml}$ 156,25 $\mu\text{g/ml}$, 78,125 $\mu\text{g/ml}$, 39,062 $\mu\text{g/ml}$, 19,531 $\mu\text{g/ml}$, then inoculated on defferential medium VJA (Vogel Johnson Agar). Based on electronic parameters ($C\beta$ enon group), lipophilicity (log P) and steric (index winner). Qualitative analysis of structural relationship and antibacterial anktivitiy in gram positiv was performed.

The result of the experimen showed that compound 3-(3-indolil)-1-(3,4-diklorofenil)prop-2-en-1-on had the activity at 2500 $\mu\text{g/ml}$ concentration, while compound 1-(3,4-diklorofenil)-3-(2-furanil)prop-2-en-1-on showed no activity antibacterial at concentration 5000 $\mu\text{g/ml}$ had greater inhibitor potency than compound 1-(3,4-diklorofenil)-3-(2-furanil)prop-2-en-1-on at bacterial *Staphylococcus aureus* ATCC 25923.

Key words : 3',4'-diclorochalcone, *Staphylococcus aureus* ATCC 25923, dilusi