DISTRIBUSI KURKUMIN DAN KURKUMINOID PADA TEMU HITAM (*Curcuma aeruginosa Roxb*) BERDASARKAN PERBEDAAN BAGIAN RIMPANG DAN UMUR TANAMAN

Irma Aviani Meilinda Handayani
12/331450/PA/14704

INTISARI

Telah dilakukan isolasi kurkumin dan kurkuminoid dari empu dan anakan rimpang temu hitam (*Curcuma aeruginosa Roxb*) untuk mengetahui distribusi senyawa kurkumin dan kurkuminoid serta mempelajari pengaruh umur tanaman terhadap kandungan kurkumin dan kurkuminoid.

Metode yang dilakukan dimulai dengan preparasi sampel. Isolasi kurkumin dan kurkuminoid dilakukan menggunakan metode ekstraksi maserasi 24 jam menggunakan pelarut etanol 95%. Selanjutnya dilakukan optimasi eluen. Eluen yang diperoleh berupa kloroform:metanol (97:3). Eluen tersebut digunakan sebagai fasa gerak dalam metode kromatografi lapis tipis preparatif dan hasil pemisahan ditentukan kadarnya menggunakan *TLC Scanner* serta diidentifikasi menggunakan LC-MS.

Hasil yang diperoleh dari isolasi rimpang *C. aeruginosa Roxb* berupa senyawa kurkumin, demetoksikurkumin dan bisdemetoksikurkumin. Distribusi ketiga senyawa lebih besar pada bagian empu dibanding anakan rimpang. Kadar yang diperoleh bisdemetoksikurkumin>demetoksikurkumin>kurkumin pada umur tanaman 3 bulan, sedangkan kurkumin>demetoksikurkumin>bisdemetoksi-kurkumin pada umur tanaman 10 bulan. Komponen utama pada rimpang *C.aeruginosa Roxb* pada umur 3 bulan berupa bisdemetoksikurkumin, sedangkan pada umur 10 bulan berupa kurkumin.

Kata kunci: *C. aeruginosa Roxb*, isolasi, kromatografi lapis tipis preparatif, kurkumin dan kurkuminoid, *TLC Scanner*

DISTRIBUTION OF CURCUMIN AND CURCUMINOID FROM *Curcuma aeruginosa Roxb* BASED ON THE DIFFERENCE OF RHIZOME AND AGE OF PLANTS

Irma Aviani Meilinda Handayani
12/331450/PA/14704

ABSTRACT

Isolation of curcumin and curcuminoid from mother and finger rhizomes of *Curcuma aeruginosa Roxb* has been conducted. This research aims are understanding the distribution of curcumin and curcuminoid compound and studying the influence of plant age on curcumin and curcuminoid contents.

The first method of this research was preparing the sample. The isolation of curcumin and curcumionid had been carried out using maseration extraction for 24 hours using etanol as solvent. The next step was eluent optimization . The proper eluent was chloroform:methanol (97:3). The eluent was used as mobile phase on preparative thin-layer cromatography. The content of curcumin and curcuminoid compound was determined using TLC Scanner and LC-MS, respectively.

The results of curcumin and curcuminoid isolation on *Curcuma aeruginosa Roxb* rhizome were curcumin, demetoxycurcumin and bisdemetoxycurcumin. The level contains were bisdemetoxycurcumin>demetoxycurcumin>curcumin at 3 months plant, and curcumin>demetoxycurcumin>bisdemetoxycurcumin at 10 months plant. The distribution on mother was higher than finger. The main component of 3-months *Curcuma aeruginosa Roxb* was bisdemetoxycurcumin, whereas curcumin was the main component of 10-months *Curcuma aeruginosa Roxb.*

Keywords: *C. aeruginosa Roxb*, isolation, preparative thin-layer cromatography, curcumin and curcuminoid, *TLC Scanner.*