

ABSTRAK

Cep-cepan (*C.costata*) merupakan salah satu tumbuhan obat asli Sumatera Utara. Efek farmakologi daun *C.costata* telah dipelajari baik secara in vitro maupun in vivo tanpa mengidentifikasi senyawa bioaktifnya. Mengidentifikasi senyawa dapat dilakukan dengan instrument LC-MS/MS. Tujuan dari penelitian ini untuk mengetahui senyawa apa saja yang terkandung dalam Ekstrak daun *Castanopsis costata* dengan menggunakan LC-MS/MS. Jenis penelitian ini merupakan penelitian eksperimental yang dilakukan untuk mengidentifikasi senyawa pengujian kualitatif dengan LC-MS/MS. Penelitian ini terdiri dari penelitian pendahuluan meliputi uji penapisan fitokimia, standarisasi ekstrak parameter spesifik, dan nonspesifik. Sedangkan untuk penelitian utama dilakukan identifikasi senyawa menggunakan LC-MS/MS. Hasil penapisan fitokimia ekstrak daun *C.costata* mengandung fenolik, alkaloid, flavonoid, saponin, tannin, triterpenoid/steroid, dan glikosida antarkuinon. Kadar air yang didapat ialah $0,89\% \pm 0,06245$, kadar abu total yang didapat ialah $4,16\% \pm 0,213776$, dan kadar abu tidak larut asam yang didapat ialah $0,06\% \pm 0,103923$. Hasil yang didapat dari penelitian utama ialah berjumlah 7 senyawa dari ionisasi ESI positif, yaitu 3-Methoxyherbacetin, 6,17-Epoxylathyrol-5,15-diacetate-3-phenylacetate, Isoetin, Kansanol, Nobiletin, Rhamnetin, dan Robinetin dan juga terdapat 7 senyawa dari ESI negatif, yaitu 3β -O-trans-p-Coumaroyl aliphatic acid_1, Buddlenoid A, Isorhamnetin-3-O- β -D-robinobioside, Kaempferol-3-O-rhamnoside, Kaempferol-3-O- α -L-arabinoside, Kaempferol-3-O- β -rutoside, dan Patuletin-7-O-[6''-(2-methylbutyryl)]-glucoside.

Kata kunci : Identifikasi senyawa, Daun *C.costata*, LC-MS/MS

ABSTRACT

Cep-cepan (*C. costata*) is a medicinal plant native to North Sumatra. The pharmacological effects of *C. costata* leaves have been studied both in vitro and in vivo without identifying the bioactive compounds. Identifying compounds can be done with the LC-MS/MS instrument. The purpose of this study was to determine what compounds were contained in *Castanopsis costata* leaf extract using LC-MS/MS. This type of research is an experimental study which was conducted to identify qualitative test compounds with LC-MS/MS. This research consisted of preliminary research including phytochemical screening tests, standardization of extracts of specific and non-specific parameters. Meanwhile, for the main research, the identification of compounds was carried out using LC-MS/MS. The results of phytochemical screening of *C. costata* leaf extract contained phenolics, alkaloids, flavonoids, saponins, tannins, triterpenoids/steroids, and interquinone glycosides. The water content obtained was $0.89\% \pm 0.06245$, the total ash content obtained was $4.16\% \pm 0.213776$, and the acid insoluble ash content obtained was $0.06\% \pm 0.103923$. The results obtained from the main study were 7 compounds from positive ESI ionization, namely 3-Methoxyherbacetin, 6,17-Epoxylathyrol-5,15-diacetate-3-phenylacetate, Isoetin, Kansanol, Nobiletin, Rhamnetin, and Robinetin and there were also 7 compounds from negative ESI, namely 3β -O-trans-p-Coumaroyl aliphatic acid_1, Buddlenoid A, Isorhamnetin-3-O- β -D-robinobioside, Kaempferol-3-O-rhamnoside, Kaempferol-3-O- α -L-arabinoside, Kaempferol-3-O- β -rutinoside, and Patuletin-7-O-[6''-(2-methylbutyryl)]-glucoside.

Keywords: Identification of compounds, *C.costata* leaves, LC-MS/MS