Penentuan Kadar dan Jenis Senyawa Aktif Ekstrak Etanol Daun Keji Beling (Strobilanthes Crispus L.) Sebagai Sediaan Obat Antihiperkolesterol = Determination of Content and Types of Active Compounds of Keji Beling Leaves (Strobilanthes Crispus L.) Ethanol Extract as an Antihypercholesterolemic Drug Preparation

Nyoman Keisha Narendriana Marinka, author

Abstrak

Daun keji beling merupakan salah satu tanaman herbal yang bermanfaat sebagai antihiperkolesterolemia, dimana dalam ekstraknya mengandung senyawa fenolik dan flavonoid. Pada penelitian ini, ekstrak didapatkan dengan metode ekstraksi UAEATPE (Ultrasound-Assisted Enzymatic Aqueos Two Phase Extraction). Proses pra-perlakuan dilakukan dengan hidrolisis enzimatik menggunakan enzim selulase. Proses ekstraksi dilakukan dengan sistem ATPS etanol-garam ammonium sulfat, dimana konsentrasi masing-masing adalah 33% w/w dan 14% w/w. Proses ekstraksi menghasilkan yield ekstrak rata-rata sebesar 59%. Nilai TPC (Total Phenolic Content) dan TFC (Total Flavonoid Content) pada crude ekstrak dianalisis menggunakan spektrofotmetri UV-Vis, dengan panjang gelombang masing-masing 765 nm dan 434 nm. Masing-masing nilai TPC pada fasa atas dan fasa bawah didapatkan sebesar 4,15 mg GAE/g sampel dan 1,08 mg GAE/g sampel. Sedangkan nilai TFC yang diperoleh adalah 1,88 mg QE/g sampel pada fasa atas; serta 0,29 mg QE/g sampel pada fasa bawah. Nilai perolehan (R) dan koefisien partisi (K) yang diperoleh yaitu sebesar 79,29% dan 2,22 untuk fenolik; serta 86,66% dan 3,78 untuk flavonoid, dimana semakin besar nilai koefisien partisi, semakin baik pemisahan yang terjadi. Hasil analisis Gas Chromatography dan Mass Spectrometry (GC-MS) dari ekstrak etanol daun keji beling yang memiliki aktivitas anti-hiperkolesterolemia adalah 1-Docosanol.

.....Keji beling leaves are one of the herbal plant that has benefit as an anti-hypercholesterolemia, in which the leave’s extract contain a phenolic and flavonoid compound. In this study, extract were obtained by extraction using the UAEATPE (Ultrasound-Assisted Enzymatic Aqueous Two Phase Extraction) method. Pre-treatment process was done with hydrolysis enzymatic using enzyme cellulose. Extraction process were done with ethanol-ammonium sulfate salt ATPS system, where the concentrations were 33% w/w and 14% w/w, respectively. The result from extraction process are an average yield extract of 59%. The TPC and TFC values in crude extract were analyzed using UV-Vis spectrophotometry, with a wavelength of 765 nm 434 nm, respectively. Each TPC values on the top and bottom phases obtained were 4.15 mg GAE/g sample and 1.08mg GAE/g sample. Meanwhile, the TFC values obtained were 1.88mg QE/g sample for top phase; and 0.29 mg QE/g sample for bottom phase. The recovery value and partition coefficients values are 79.29% and 2.22 for phenolic; and 86.66% and 3.78 for flavonoid, respectively. In which indicate the bigger the partition coefficients values, the better the separation occurred. The analysis result of ethanol extract of keji beling leaves with Gas Chromatography and Mass Spectrometry (GC-MS) which has anti-hypercholesterolemia activity is 1-Docosanol.