

ABSTRACT

Hypercholesterolemia is an excess of cholesterol in tissues that occurs due to the accumulation of cholesterol so that plasma cholesterol levels exceed normal conditions. High levels of cholesterol in the human body have the potential to cause hypertension, blockage of blood vessels of the brain or heart. One of the plants that can be utilized as an alternative to lower cholesterol levels is gerga orange. Gerga orange peel contains chemical compounds such as hesperidin, tangeritin, kojic acid and nobiletin that can reduce cholesterol levels. The purpose of this study is to determine the SCOBY fermentation of gerga orange peel infusa has an influence on total phenol content, total flavonoids and antihypercholesterol activity. The results showed that total phenol and total flavonoid levels in SCOBY fermentation of gerga orange peel infusa increased compared to gerga orange peel infusa. Gerga orange peel infusa has a total phenol content of 2.65% and total flavonoids 0.04% while in SCOBY fermentation gerga orange peel infusa has a total phenol content of 4.29% and total flavonoids 3.27%. For the antihypercholesterol test, the method used is experimentation with a complete randomized design (RAL) using 5 treatment groups, namely the normal group, positive control (simvastatin suspension), negative control (0.5% Na CMC suspension), P1 (gerga orange peel infusa), P2 (SCOBY fermentation of gerga orange peel infusa) induced using PTU, high fat food and quail egg yolk for 14 days. The data from the study were analyzed using One Way Anova Duncan's further test. Treatment with the administration of gerga orange peel infusa and SCOBY fermentation of gerga orange peel infusa can reduce cholesterol levels with the highest percentage reduction in SCOBY fermentation of gerga orange peel infusa which amounted to 29.84% while in gerga orange peel infusa amounted to 27.71%. It can be concluded that SCOBY fermentation of gerga orange peel infusa can affect total phenol content, total flavonoids and has activity as antihypercholesterol.

Keywords: Antihypercholesterol, SCOBY, Citrus Gerga

ABSTRAK

Hiperkolesterol merupakan kelebihan kolesterol dalam jaringan yang terjadi akibat adanya penumpukan kolesterol sehingga kadar kolesterol plasma melebihi kondisi normal. Tingginya kadar kolesterol pada tubuh manusia memiliki potensi yang menyebabkan hipertensi, penyumbatan pembuluh darah otak atau jantung. Salah satu tanaman yang dapat dimanfaatkan sebagai alternatif menurunkan kadar kolesterol adalah jeruk gerga. Kulit jeruk gerga mengandung senyawa kimia seperti hesperidin, tangeritin, kojic acid dan nobiletin yang dapat menurunkan kadar kolesterol. Tujuan dari penelitian ini yaitu untuk mengetahui fermentasi SCOBY infusa kulit jeruk gerga memiliki pengaruh terhadap kadar fenol total, flavonoid total dan aktivitas antihiperkolesterol. Didapatkan hasil bahwa kadar fenol total dan flavonoid total pada fermentasi SCOBY infusa kulit jeruk gerga meningkat dibandingkan dengan infusa kulit jeruk gerga. Pada infusa kulit jeruk gerga memiliki kadar fenol total 2,65% dan flavonoid total 0,04% sedangkan pada fermentasi SCOBY infusa kulit jeruk gerga memiliki kadar fenol total 4,29% dan flavonoid total 3,27%. Untuk uji antihiperkolesterol metode yang digunakan adalah eksperimentasl dengan rancangan acak lengkap (RAL) menggunakan 5 kelompok perlakuan yaitu kelompok normal, kontrol positif (suspensi simvastatin), kontrol negatif (suspensi Na CMC 0,5%) , P1 (infusa kulit jeruk gerga), P2 (fermentasi SCOBY infusa kulit jeruk gerga) yabg diinduksi menggunakan PTU, makanan lemak tinggi dan kuning telur puyuh selama 14. Data hasil penelitian dianalisis menggunakan one Way Anova uji lanjut Duncan. Perlakuan dengan pemberian infusa kulit jeruk gerga dan fermentasi SCOBY infusa kulit jeruk gerga dapat menurunkan kadar kolesterol dengan persentase penurunan paling tinggi pada fermentasi SCOBY infusa kulit jeruk gerga yaitu sebesar 29,84% sedangkan pada infusa kulit jeruk gerga sebesar 27,71%. Dapat disimpulkan bahwa fermentasi SCOBY infusa kulit jeruk gerga dapat mempengaruhi kadar fenol total, flavonoid total dan memiliki aktivitas sebagai antihiperkolesteol

Kata kunci : Antihiperkolesterol, SCOBY, Jeruk Gerga