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UJI AKTIVITAS PENURUNAN KADAR GLUKOSA EKSTRAK BUAH PARIJOTO ASAL BANDUNGAN DENGAN VARIASI PELARUT ETANOL 70% DAN 96%

(xxii + 130 Halaman + 14 Tabel + 19 Lampiran)

ABSTRAK

Latar Belakang : Buah parijoto (*Medinilla speciosa Blume*) merupakan salah satu bahan alam yang dimanfaatkan sebagai alternatif terapi komplementer. Buah parijoto mengandung senyawa aktif flavonoid yang dapat menurunkan kadar glukosa. Kadar metabolit sekunder buah parijoto dapat dipengaruhi oleh konsentrasi pelarut pada proses ekstraksi dan tempat tumbuh buah parijoto. Variasi pelarut yang digunakan yaitu etanol 70% dan 96% serta tempat tumbuh buah parijoto yaitu asal Bandungan.

Tujuan : Penelitian ini bertujuan untuk mengetahui aktivitas penurunan kadar glukosa ekstrak etanol 70% dan 96% buah parijoto dan mengidentifikasi kandungan flavonoid ekstrak etanol 70% dan 96% buah parijoto.

Metode: Buah parijoto diekstraksi dengan metode maserasi menggunakan pelarut etanol 70% dan 96%. Pengujian penurunan kadar glukosa ekstrak etanol 70% dan 96% buah parijoto konsentrasi 10, 20, 30, 40, 50, dan 60 ppm dilakukan dengan metode Nelson Somogyi menggunakan Spektrofotometer UV-Vis dan identifikasi flavonoid dengan metode Kromatografi Lapis Tipis (KLT) menggunakan fase gerak *n*-butanol : asam asetat glasial : aquadest (4:1:5).

Hasil : Ekstrak etanol 70% buah parijoto pada konsentrasi 10, 20, 30, 40, 50, dan 60 ppm mampu menurunkan kadar glukosa berturut-turut sebesar 56,1541%, 37,4633%, 45,0539%, 52,7261%, 35,5860%, dan 28,4851% sedangkan ekstrak etanol 96% buah parijoto sebesar 68,6419%, 53,2158%, 45,7885%, 52,3996%, 55,2563%, dan 39,5854%. Ekstrak etanol 70% dan 96% buah parijoto memiliki nilai R_f 0,37 dan 0,40 dan mengandung senyawa flavonoid dengan warna bercak coklat pada uap ammonia dan warna kuning kehijauan pada lampu UV_{254} .

Simpulan : Buah parijoto asal Bandungan yang diekstraksi menggunakan pelarut etanol 70% dan 96% mengandung senyawa flavonoid dan mempunyai aktivitas penurun kadar glukosa.

Kata kunci : Buah Parijoto, Glukosa, Pelarut Etanol.

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ACTIVITY TEST FOR GLUCOSE LEVELS OF PARIJOTO FRUITS EXTRACT FROM BANDUNGAN REGION WITH VARIATIONS OF 70% DAN 96% ETHANOL SOLVENT

(xxii + 130 Pages + 14 Tables + 19 Attachments)

ABSTRACT

Background: Parijoto fruits (*Medinilla speciosa Blume*) is one of the natural ingredients that is used as an alternative to complementary therapy. Parijoto fruits contains flavonoid active compounds that can lower glucose levels. The levels of secondary metabolites of parijoto fruits can be influenced by the concentration of solvent in the extraction process and where the parijoto fruits grows. The solvent variations used were ethanol 70% and 96% and the place where the parijoto fruits grew was from Bandungan.

Objectives: This study aimed to determine the activity of 70% and 96% ethanol extract of parijoto fruits to decrease glucose levels and to identify the flavonoid content of 70% and 96% ethanol extract of parijoto fruits.

Methods: Parijoto fruits was extracted by the maceration method using 70% and 96% ethanol as solvent. Tests for decreasing glucose levels of 70% and 96% ethanol extract of parijoto fruits at concentrations of 10, 20, 30, 40, 50, and 60 ppm were carried out by the Nelson Somogyi method using a UV Vis Spectrophotometer and identification of flavonoids using the Thin Layer Chromatography (TLC) method with the mobile phase was *n*-butanol: glacial acetic acid: aquadest (4:1:5).

Results: Ethanol extract 70% parijoto fruits at concentrations of 10, 20, 30, 40, 50, and 60 ppm was able to reduce glucose levels by 56,1541%, 37,4633%, 45,0539%, 52,7261%, 35,5860%, and 28,4851%, while ethanol extract of 96% parijoto fruits was 68.6419%, 53.2158%, 45.7885%, 52.3996%, 55.2563%, and 39,5854%. Ethanol extract 70% and 96% of parijoto fruits had R_f values of 0,37 and 0,40 and contained flavonoid compounds with brown spots on ammonia vapor and greenish-yellow color on UVlamp254.

Conclusion: Parijoto fruits from Bandungan which was extracted using 70% and 96% ethanol as solvent contains flavonoid compounds and has glucose-lowering activity.

Keywords: Parijoto fruits, Glucose, Ethanol Solvent.