SKRINING FITOKIMIA SERTA PENETAPAN KADAR TOTAL FLAVONOID DAN FENOL EKSTRAK AIR RAMUAN JAMU SAINTIFIK DIABETES MELLITUS DAN OSTEOARTHTRITIS

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Abstrak

Ramuan jamu saintifik osteoarthtritis (OA) dan diabetes mellitus (DM) telah terbukti secara ilmiah melalui uji klinis yang dilaksanakan oleh peneliti Balai Besar Penelitian dan Pengembangan Tanaman Obat dan Obat Tradisional Tawangmangu. Kandungan kimia yang terdapat dalam tanaman-tanaman penyusun ramuan antara lain berupa senyawa fenolik seperti flavonoid. Penelitian ini bertujuan untuk mengetahui golongan senyawa yang terkandung dalam ramuan OA dan DM serta kadar total flavonoid dan total fenolnya. Metode skrining fitokimia yang digunakan adalah menggunakan reaksi pengujian warna sedangkan penetapan kadar total flavonoid dan total fenol menggunakan metode spektrofotometri. Hasil skrining fitokimia menunjukkan bahwa ekstrak air ramuan OA positif mengandung senyawa flavonoid, saponin, tanin, alkaloid, dan triterpenoid. Kadar total flavonoid pada ekstrak air OA sebesar 1.69 mg/ 1gram ekstrak dan total fenol sebesar 38,332 mg/ 1 gram ekstrak. Sedangkan hasil skrining fitokimia ekstrak air ramuan DM positif mengandung flavonoid, saponin, triterpenoid, tanin, dan alkaloid. Kadar total flavonoid pada ekstrak air DM sebesar 0,0565 mg/1 gram ekstrak dan total fenol sebesar 54,8833 mg/1 gram ekstrak.

Kata kunci : skrining fitokimia, total flavonoid, total fenol, jamu saintifik OA, jamu saintifik DM

Abstract

The scientific herbal medicine for osteoarthritis (OA) and diabetes mellitus (DM) has been scientifically proven through clinical trials conducted by researchers at the Center for Research and Development of Medicinal Plants and Traditional Medicine in Tawangmangu. The chemical content contained in medicinal plants of herbal preparation includes phenolic compounds such as flavonoids. This study aims to determine the class of compounds contained in the ingredients of OA and DM as well, and levels of flavonoids and phenol compounds. The phytochemical screening method used a color testing reaction while the determination flavonoid and phenol content using spectrophotometric methods. The results of phytochemical screening showed that the OA herbal water extract contained flavonoids, saponins, tannins, alkaloids, and triterpenoids. Flavonoid content in OA herbal water extract was 1.69 mg / 1gram extract and phenol compound was 38.332 mg / 1 gram extract. While the results of phytochemical screening of DM herbal water extract extract positively contain flavonoids, saponins, triterpenoids, tannins, and alkaloids. The flavonoid compound in DM herbal water extract was 0.0565 mg / 1 gram extract and phenol compound was 54.8833 mg / 1 gram extract.

Keywords: Phytochemical screening, flavonoids, phenol, osteoarthritis herbal medicine, diabetes mellitus herbal medicine