KAJIAN PUSTAKA PROSES ISOLASI, ANALISIS DAN AKTIVITAS FARMAKOLOGI SENYAWA SKOPOLETIN

NASKAH TUGAS AKHIR

JESICHA DIAN YENBYEEBE MANOBI
A 161 066

SEKOLAH TINGGI FARMASI INDONESIA
YAYASAN HAZANAH
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Sebagai salah satu syarat untuk memperoleh gelar sarjana farmasi

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JESICHA DIAN YENBYEEBE MANOBI
A161066

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Disetujui oleh:

Pembimbing	Pembimbing
Dr. apt. Adang Firmansyah, M.Si.	apt. Wiwin Winingsih, M.Si.

Kutipan atau saduran baik sebagian ataupun seluruh naskah, harus menyebut nama pengarang dan sumber aslinya, yaitu Sekolah Tinggi Farmasi Indonesia

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ABSTRAK

KAJIAN PUSTAKA PROSES ISOLASI, ANALISIS DAN AKTIVITAS FARMAKOLOGI SENYAWA SKOPOLETIN

Oleh

Jesicha Dian Yenbyeebe Manobi

NIM: A 161 066

Skopoletin (*7-hydroxy-6-methoxy coumarin*) merupakan senyawa fenolik kumarin yang banyak ditemukan pada tumbuhan dan termasuk turunan kumarin yang merupakan unggulan pada beberapa jenis tumbuhan. Artikel ini dibuat untuk memberikan informasi mengenai proses isolasi, analisis, dan aktivitas farmakologis. Metode yang digunakan adalah mempelajari dan menganalisis artikel skopoletin dari jurnal nasional dan internasional. Dari sumber data yang ditelaah, didapat rendemen ekstrak skopoletin dalam *Morinda citrifolia* L yaitu 0,93%, *Helichrysum italicum* yaitu 1,933mg/100g. Kandungan skopoletin dalam *Convolvulus pluricaulis* yaitu 0,17%, *Artemisia annua* yaitu 0,3%, *Lasianthus lucidus* yaitu 54 mg, dan *Morus alba* L. (Po-sa) yaitu 0,0009%. Rendemen ekstrak skopoletin terbanyak yaitu 0,93% yang terdapat dalam buah mengkudu (*Morinda citrifolia* L) dengan menggunakan metode Soxhlet. Kandungan skopoletin tertinggi yaitu 0,3% dalam *Artemisia annua* dengan menggunakan kolom kromatografi dan direkristralisasi. Identifikasi skopoletin dapat dilakukan dengan menggunakan Kromatografi Lapis Tipis (KLT), Kromatografi Cair Kinerja Tinggi (KCKT), Spektrofotometer *Fourier Transform Infra Red* (FTIR), Resonansi Magnetik Nuklir, dan Spektrometri Massa. Berdasarkan studi *in vitro*, skopoletin mempunyai aktivitas farmakologis, antara lain sebagai antihepatotoksisitas, antibakteri, antijamur, antituberkular, dan antioksidan. Aktivitas farmakologi yang sudah dibuktikan secara *in vivo* yaitu aktivitas antitiroid, antihipertensi, antiproliferatif, antiinflamasi, neurologis, antidopaminergik dan antiadrenergik, antidiabetes, serta antihipperurikemik. Dari berbagai aktivitas farmakologi skopoletin tersebut, dapat berpotensi untuk dikembangkan lebih lanjut.

Kata kunci: skopoletin, isolasi, analisis, aktivitas farmakologi

ABSTRACT

Literature Review Isolation Process, Analysis And Pharmacological Activities Of Scopoletin Compounds

Written by:

Jesicha Dian Yenbyeebe Manobi

NIM: A 161 066

Scopoletin (7-hydroxy-6-methoxy coumarin) is a coumarin phenolic compound that is widely found in plants and includes coumarin derivatives which are superior in several types of plants. This article was created to provide information regarding the isolation process, analysis and pharmacological activity. The method used is to study and analyze scopoletin articles from national and international journals. From the data sources studied, the yield of scopoletin extract in Morinda citrifolia L was 0.93%, Helichrysum italicum was 1.933mg / 100g. The scopoletin content in Convolvulus pluricaulis is 0.17%, Artemisia annua is 0.3%, Lasianthus lucidus is 54 mg, and Morus alba L. (Po-sa) is 0.0009%. The highest yield of scopoletin extract was 0.93% found in noni (Morinda citrifolia L) using the Soxhlet method. The highest scopoletin content was 0.3% in Artemisia annua using column chromatography and recrystallization. Scopoletin identification can be done using Thin Layer Chromatography (TLC), High Performance Liquid Chromatography (HPLC), Fourier Transform Infrared Spectrophotometer (FTIR), Nuclear Magnetic Resonance, and Mass Spectrometry. Based on in vitro studies, scopoletin has pharmacological activities, including as an antihepatotoxicity, antibacterial, antifungal, antitubercular, and antioxidant. Pharmacological activities that have been proven in vivo are antithyroid, antihypertensive, antiproliferative, anti-inflammatory, neurological, antidopaminergic and antiadrenergic, antidiabetic, and antihyperuricemic activities. From the various pharmacological activities of scopoletin, it has the potential to be further developed.

Keywords: *scopoletin, isolation, analysis, pharmacological activity*

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Tabel Halaman

DAFTAR GAMBAR

Gambar Halaman

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