STUDI LITERATUR PROSES ISOLASI, ANALISIS DAN POTENSI SENYAWA MITRAGININ DALAM DAUN KRATOM (*Mitragyna speciosa* Korth) UNTUK PENGEMBANGAN BAHAN BAKU OBAT

SKRIPSI

NELLA NURMEILASARI
A161069

SEKOLAH TINGGI FARMASI INDONESIA
YAYASAN HAZANAH
BANDUNG
2020

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Sebagai salah satu syarat untuk memperoleh gelar Sarjana Farmasi

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Agustus, 2020
Disetujui oleh:

Pembimbing 1	Pembimbing 2
apt. Adang Firmansyah, M.Si.	apt. Melvia Sundalian, M.Si.

Lembar persembahan

Skripsi ini dipersembahkan untuk orang-orang yang sangat saya sayangi. Terkadang, ketika saya kehilangan kepercayaan pada diri saya sendiri, kalian disini untuk percaya pada saya.

ABSTRAK

Kratom merupakan tanaman tropis asal Asia Tenggara yang banyak disalahgunakan. Beberapa kasus penyalahggunaannya dikombinasikan dengan obat-obatan lain tanpa mempertimbangkan dosis sehingga menyebabkan 81,25% laporan kematian. Kratom mengandung mitraginin yang memiliki banyak manfaat dibidang farmakologis sehingga berpotensi menjadi bahan baku obat dalam dunia kesehatan. Tingginya potensi mitraginin menyebabkan peneliti berupaya untuk memperoleh mitraginin dengan proses yang lebih efektif dan efisien. Studi ini bertujuan untuk memberikan informasi terkait farmakologis, proses produksi dan analisis mitraginin. Hasil menunjukan bahwa penggunaan kratom dalam bentuk mitraginin lebih aman dibandingkan kratom dalam bentuk mentah karena meskipun LD_{50} untuk ekstrak lebih tinggi daripada mitraginin namun *safety margin* mitraginin lebih luas daripada ekstrak. Hasil isolat tertinggi ditunjukan oleh metode konvensional pada suhu ekstraksi <50°C dengan pemurnian menggunakan *column flash chromatography* serta metode non konvensional dengan instrumen SFE dibantu *co-solvent* etanol pada suhu 40°C dan tekanan 5000 psi. Kedua metode diawali reaksi asam basa dan menghasilkan isolat masing-masing 0,091% dan 4,05% dari total daun kering. Mitraginin dapat dianalisis secara sederhana menggunakan KLT dibantu reagen Erlich yang dimodifikasi $HClO_4$, Spektrofotometer UV-Vis pada panjang gelombang 220 nm dengan bahu spektrum 247 nm, 285 nm dan 293 nm dan HPLC dengan fase gerak yang paling banyak digunakan metanol:air (80:20) menggunakan fase diam C18.

Kata Kunci: Kratom, *Mitragyna speciosa* Korth, mitraginin, farmakologis, isolasi, analisis

ABSTRACT

Kratom is a tropical plant from Southeast Asia that is widely abused with other drugs, resulted in 81.25% reported mortality. In pharmacological field, kratom contains mitraginin that has potential to become a raw material for medicine in the health sector. It causes researchers to seek to obtain mitraginin in a more effective and efficient process. This study aims to provide information related to pharmacology, production processes and mitraginin analysis. Kratom in the mitraginin form is safer than the raw form because although the LD_{50} for extract is higher, mitraginin safety margin is wider than the extract.. The highest yield of isolates by conventional methods with purification using column flash chromatography is <50 ° C and non-conventional methods with SFE instruments assisted by ethanol co-solvent is 40 ° C and 5000 psi pressure. Both were initiated by an acid-base reaction and produced isolates, respectively 0.091% and 4.05% of the total dry leaves. Mitraginin can be analyzed simply using TLC assisted by Erlich's reagent modified $HClO_4$, UV-Vis spectrophotometer at a wavelength of 220 nm with a spectrum of 247 nm, 285 nm and 293 nm and HPLC with the mobile phase most widely used methanol: water (80:20) using the C18 stationary phase.

***Keywords**: Kratom, Mitragyna speciosa* Korth, *mitraginin, pharmacological, isolation, analysis.*

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Penulis

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Lampiran Halaman

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