ISOLASI SENYAWA DAN UJI AKTIVITAS AFRODISIAK FRAKSI ETIL ASETAT TANAMAN AKAR PURWO (*Eryngium foetidum* L.)

Oleh:

Rifqi Hijri Saputro
J2C 002 162

RINGKASAN

Berbagai jenis tumbuh-tumbuhan di Indonesia telah lama digunakan secara luas sebagai bahan obat tradisional. Salah satu di antaranya adalah akar purwo (*Eryngium foetidum* L.) yang mempunyai khasiat sebagai analgesik, antibakteri, antivirus, pencegah kanker, antidiabetik dan diuretik. Di beberapa daerah, tanaman ini juga digunakan sebagai agen afrodisiak. Penelitian ini bertujuan menentukan aktivitas afrodisiak fraksi etil asetat serta menentukan senyawa hasil isolasi yang terkandung dalam fraksi tersebut.

Penelitian dimulai dengan mengekstraksi akar tanaman akar purwo yang telah dihaluskan dengan metode esktraksi soxhlet menggunakan pelarut etanol. Ekstrak kasar etanol yang dihasilkan difraksinasi berturut-turut menggunakan pelarut *n*-heksana, metilen klorida dan etil asetat. Ekstrak kasar etanol dan fraksi etil asetat diuji aktivitas afrodisiaknya dengan menggunakan mencit (*Mus musculus*) galur DDY yang telah diberikan CMC, asetaminofen dan suspensi ekstrak etanol dan fraksi etil asetat. Untuk mendapatkan senyawa, fraksi etil asetat dipekatkan, kemudian dipisahkan endapan pengotornya dengan penambahan air. Fasa etil asetat lalu diuapkan. Endapan yang dihasilkan dicuci dan direkristalisasi menggunakan pelarut-pelarut etil asetat, metilen klorida, kloroform, metanol, aseton dan eter untuk mendapatkan padatan yang paling murni. Padatan yang telah direkristalisasi diidentifikasi kemurniannya dengan kromatografi lapis tipis (KLT) menggunakan pelarut *n*-heksana, kloroform, etil asetat dan metanol serta ditentukan titik lelehnya. Analisis spektroskopi dilakukan menggunakan spektrofotometri UV-Vis dan FTIR.

Hasil penelitian menunjukkan bahwa fraksi etil asetat mempunyai aktivitas afrodisiak, terbukti mampu memperbaiki aspek vitalitas seksual mencit jantan galur DDY, meliputi peningkatan jumlah penunggangan dan jumlah intromisi serta penurunan latensi penunggangan, latensi intromisi dan latensi ejakulasi. Potensi afrodisiak fraksi etil asetat lebih besar daripada ekstrak etanol. Isolasi senyawa menghasilkan padatan senyawa yang menunjukkan satu noda pada kromatografi lapis tipisnya. Padatan senyawa tersebut berwarna putih, mempunyai titik leleh 170 ^{o}C, larut dalam metanol serta tidak larut dalam air, etil asetat, metilen klorida, kloroform, aseton dan eter. Berdasarkan hasil analisis spektroskopi UV-Vis dan FTIR, senyawa diketahui mempunyai gugus alkohol, metil (CH_3), karbonil (C=O) serta cincin aromatik. Menurut hasil uji penapisan fitokimia, senyawa ini termasuk ke dalam salah satu dari golongan senyawa alkaloid, triterpenoid, steroid atau flavonoid.

SUMMARY

As long time, many kinds of Indonesian plants have been widely used as traditional medicines. One of them is akar purwo (*Eryngium foetidum* L.), which has pharmacological uses as analgesic, antibacterial, cancer preventive, antidiabetic and diuretic agents. In several areas, this plant is also used as aphrodisiacs. This research was done to determine the aphrodisiac activity of ethyl acetate fraction and also to identify the isolated compound contained on it.

The research was started by extracting the plant's roots using soxhlet extractor with ethanol solvent. Crude extract obtained then was fractinated with *n*-hexane, methylene chloride and ethyl acetate solvents respectively. The ethanol crude extract and ethyl acetate fraction were tested their aphrodisiac activity using DDY genealogical list mice (*Mus musculus*) that had been given CMC, acetaminophen, ethanol extract and ethyl acetate fraction suspensions. To get the substances, ethyl acetate fraction was concentrated, then the solid impurities ere separated by addition of water. Ethyl acetate phase then was of ethyl acetate, methylen cholride, chloroform, methanol, acetone and ether to get the purest one. The recrystalized solid was identified its pureness using thin-layer chromatography (TLC) techniques using *n*-hexane, chloroform, ethyl acetate and methanol solvents and the crystal was determined its melting point. Spectroscopic analysis was done using UV-Vis and FTIR spectrophotometers.

The research showed that ethyl acetate fraction had aphrodisiac activity, and proved enable to increase the sexual vitality of DDY genealogical list male mice, including the increasing of mounting and intromission numbers and also the decreasing of mounting, intromission and ejaculation latencies. The aphrodisiac potency of ethyl acetate fraction was bigger than ethanol extract. The compound isolation resulted a solid that showed only a single spot on its thin layer chromatography. The solid was white coloured, having melting point of 170 ^{o}C, soluble in methanol and insoluble in water, ethyl acetate, methylene chloride, chlorofrom, acetone and ether. According to the results of UV-Vis and FTIR spectroscopic analysis, the compound was known having alcohol, methyl (CH_3), carbonyl (C=O) groups and also aromatic rings. Based on phytochemical screening test, the compound was included in one of the alkaloid, triterpenoid, steroid or flavonoid classes.

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