

INTISARI

Indonesia merupakan negara tropis yang kaya akan tumbuhan berkhasiat obat, salah satunya adalah daruju (*Acanthus illicifolius* L). Tumbuhan ini banyak terdapat di rawa-rawa air payau. Daruju mengandung zat berkhasiat obat antara lain flavone asam amino, aktakosil alkohol, stigmasterol, verbakosida, asam fenolat, akantisifolina , asam oleanolat, lupeol, kuercetin, trigonelin alpha-L-arabinofurasil, (1+4)-beta-D-glukopiranosil dan (1-3)-beta-hidroksilup-20. Daruju memiliki manfaat yaitu dipakai untuk obat hepatitis akut dan kronis, pembesaran hati, pembesaran kelenjar limfe, asma, nyeri lambung, anti fungi, anti mikroba dan anti tumor.

Sediaan tablet banyak disukai oleh masyarakat. Salah satu cara pembuatan tablet adalah dengan metode granulasi basah, cara ini tepat untuk bahan yang memiliki sifat alir yang jelek.

Penelitian ini bertujuan untuk membuat tablet daruju yang memenuhi persyaratan secara granulasi basah. Penelitian diawali dengan membuat ekstrak daruju dari serbuk daruju kering dengan cara perkolasii menggunakan penyari etanol 70% (teknis). Ekstrak yang dihasilkan diperiksa kualitasnya, meliputi uji kadar air dan kelengketan, selanjutnya dikeringkan dengan menambahkan bahan pengering Avicel PH 101 (1:2). Pembuatan tablet ekstrak daruju dilakukan dengan membuat tujuh formula dengan kadar Polivinilpirolidon sebagai bahan pengikat 5%, 7,5%, 10%, 12,5%, 15%, 17,5% dan 20%. Selanjutnya semua bahan digranulasi dan granul yang dihasilkan diperiksa kualitasnya meliputi kadar air, waktu alir dan sudut diam. Tablet yang dihasilkan diperiksa sifat fisiknya yang meliputi keseragaman bobot, kekerasan, kerapuhan dan waktu hancur. Selanjutnya dilakukan uji KLT untuk mengetahui apakah terjadi perubahan kandungan kimia selama proses pentabletan.

Hasil penelitian menunjukkan bahwa formula VII (dengan PVP 20%) menghasilkan tablet daruju yang memenuhi semua persyaratan yaitu keseragaman bobot tidak menyimpang dari 7,5%, kekerasan 4,22 kg, kerapuhan 0,65% dan waktu hancur 14'39''. Semakin tinggi kadar PVP menyebabkan kekerasan semakin tinggi, kerapuhan semakin rendah, dan waktu hancur semakin lama. Uji KLT menunjukkan harga Rf ketujuh formula hampir sama dengan harga Rf serbuk daruju dan ekstrak daruju.

ABSTRACT

Indonesia is a tropical country that has many plants consumed as traditional medicine. One of them is *daruju* (*Acanthus ilicifolius* L), a mangrove plant, that usually grows in swam. It contains substances used as drugs, such as flavone, amino acid, and achantisifolina, alpha-L-arabinofurasil, (1+4)-beta-D-glukopiranosil, (1-3)-beta-hidroksilup-20, oleanolat and lupeol acid. It is useful to cure acute and chronic hepatitis, liver and lymph gland swelling, asthma, gastric ulcer, antifungi, anti microbe, and antitumor.

Tablet is the most dosage form preferred by people. Wet granulation method is one used to produce tablet. The method is suitable for substances with poor flow properties.

The study was aimed to produce tablets of *daruju* extract meet all the requirements of good tablet using wet granulation method. The *daruju* extract was obtained from dried *daruju* powder by percolation using ethanol 70% as solvent. The extract obtained was observed for quality, including moisture content and adhesive property. Avicel PH 101 (1:2) was added to dry it. Seven tablet formulas were used in the study. Polyvinilpirolidone (PVP) was used as binder with concentrations of 5%, 7.5%, 10%, 12.5%, 15%, 17.5% and 20%, respectively. Granules obtained were tested for quality including moisture content, flow time, and angle of repose. Tablets' properties were observed by performing tests of weight uniformity, hardness, friability and disintegration time. Thin Layer Chromatography (TLC) was utilized to observe any changes of chemical contents occur during the process of tablet making.

The study showed that formula VII (contains PVP 20%) resulted in tablets met all the requirements of weight uniformity (deviations < 7.5%), hardness (4.22 kg), friability (0.66%), and disintegration time (14'39''). Tablets' hardness and disintegration time were increasing, while tablets' friability was decreasing as the PVP concentration increased. The TLC test showed that Rf values of all tablets of all formulas were about the same with those of *daruju* powder and *daruju* extract.