INTISARI

Pengembangan obat-obatan tradisional bahan alam menjadi suatu sediaan farmasi dapat meningkatkan efisiensi, kualitas dan nilai jual obat tersebut. Hasil penelitian sebelumnya menyatakan bahwa ekstrak daun kepel [*Stelechocarpus burahol* (Bl.) Hook.F. & Th.]berkhasiat untuk menurunkan kadar asam urat hingga 78.33%. Penelitian ini bertujuan untuk memperoleh formula optimum dari tablet ekstrak daun kepel dengan kombinasi *crospovidone* dan HPMC dan menguji stabilitasnya secara fisika dan kimia.

Tablet dibuat sebanyak delapan run menggunakan metode granulasi basah yang terdiri dari lima variasi konsentrasi HPMCdan *crospovidone*yaitu(2%:5%); (2,75%:4,25%); (3,5%:3,5%); (4,25%:2,75%); dan (5%:2%).Evaluasi sifat fisik tablet meliputi uji keragaman bobot, kekerasan, kerapuhan dan waktu hancur. Data yang diperoleh diolah dengan metode *Simplex Lattice Design* (SLD) pada *software Design Expert version 10* untuk memperoleh formula optimum. Setelah dilakukan verifikasi, dilanjutkan dengan uji stabilitas untuk mengevaluasi sifat fisik dan menetapkan kadar flavonoid total tablet selama penyimpanan pada minggu ke 0, 1, 2, 3, dan 4.

Hasil yang diperoleh menunjukkan bahwa semakin tinggi konsentrasi *crospovidone* maka waktu hancur tablet semakin cepat sementara kekerasan dan kerapuhan tablet menurun. Semakin besar konsentrasi HPMC maka kekerasan tablet semakin meningkat dan waktu hancur dan kerapuhan semakin menurun. Formula optimum yang diperoleh adalah tablet dengan kombinasi HPMC : *crospovidone* 2%:5%. Berdasarkan analisis statistik, tablet yang dihasilkan tidak stabil selama penyimpanan.

Kata kunci : kepel, *crospovidone*, HPMC, stabilitas

ABSTRACT

The development of traditional medicines into a pharmaceutical dosages form can improve the efficiency, quality and value of the drug. The results of previous study stated that kepel leaf extract *[Stelechocarpusburahol* (Bl.) Hook.F. & Th.] is capable for lowering gout level up to 78.33%. This research aimed to obtain the optimum formula of tablet of kepel leaf extract with combination of *crospovidone* and HPMC and to test its stability physically and chemically.

Tablets were made of eight runs using wet granulation method consisting of five variations of HPMC and *crospovidone* concentration which are (2%: 5%); (2.75%: 4.25%); (3.5%: 3.5%); (4.25%: 2.75%); and (5%: 2%). Evaluation of tablet physical properties include weight uniformity, hardness, friability and disintegration time. The obtained data were analyzed by *Simplex Lattice Design* (SLD) method of *Design Expert version 10* software to determine the optimum formula. After verification test, stability tests were performed to evaluate the physical properties and determine the total flavonoid content of tablets during storage at weeks 0, 1, 2, 3, and 4.

The results showed that increasing *crospovidone* concentration will increase the tablet disintegration rates while the tablet hardness and friability will decrease. As the HPMC concentration increased, the disintegration rates and hardness of tablet will decrease and tablet friability increased. The optimum formula was achieved with combination of HPMC : crospovidone 2%: 5%. Based on statistical analysis, tablets are not stable during storage.

Key word : kepel, *crospovidone,* HPMC, stability