

INTISARI

ADHAWIYAH, R.,2016, OPTIMASI PROPORSI *FAST DISINTEGRATING TABLET* PIROKSIKAM DENGAN KOMBINASI *SUPERDISINTEGRANT CROSPVIDONE* DAN BAHAN *EFFERVESCENT* DENGAN METODE *SIMPLEX LATICE DESIGN*. SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Piroksikam merupakan salah satu NSAID dengan struktur oksikam. Piroksikam adalah obat yang mempunyai kelarutan yang rendah, sehingga membutuhkan waktu yang lama untuk mencapai efek yang diinginkan. Metode *fast disintegrating tablet* dapat membantu mempercepat efek.

Fast disintegrating tablet piroksikam yang dibuat dengan metode SLD terdiri dari tiga formula dengan variasi perbandingan, formula pertama 100% *Crospovidone* : 0% komponen *effervescent*, formula kedua 50% *Crospovidone* : 50% komponen *effervescent*, dan formula ketiga 0% *Crospovidone* : 100% komponen *effervescent*. Ketiga formula dicetak dengan metode kempa langsung dan diuji mutu fisik serbuk, sifat fisik tablet dan uji tanggap rasa. Hasil uji sifat fisik kemudian di optimasi dengan program *Simplex Lattice Design*, menggunakan parameter titik kritis yaitu kekerasan, kerapuhan, waktu hancur *in vivo*, waktu hancur *in vitro*, waktu pembasahan, disolusi Q_1 dan DE_5 .

Variasi konsentrasi komponen *effervescent* dan *crospovidone* berpengaruh terhadap titik kritis. Kombinasi *Crospovidone* dengan komponen *effervescent* dapat mempercepat waktu hancur dan memberikan rasa yang menyenangkan. Hasil optimasi *fast disintegrating tablet* piroksikam didapatkan formula optimum dengan perbandingan 18,68 % *Crospovidone* : 81,32 % komponen *effervescent* dengan *desirability* 0,688. Hasil uji dari optimasi di validasi menggunakan *One Sample T-test* dengan taraf kepercayaan 95%. Hasil validasi formula optimum didapatkan nilai *sig.* > 0,05 sehingga tidak berbeda bermakna.

Kata kunci : Piroksikam, *fast disintegrating tablet*, *crospovidone*, *effervescent*, *Simplex Lattice Design*.

ABSTRAK

ADHAWIYAH, R., 2016, OPTIMIZATION OF PROPORTION FAST DISINTEGRATING TABLET PIROKSIKAM WITH COMBINED SUPERDISINTEGRANT CROSPVIDONE AND MATERIALS EFFERVESCENT WITH SIMPLEX LATIC DESIGN METHODS. THESIS, FACULTY OF PHARMACY UNIVERSITY OF SETIA BUDI, SURAKARTA.

Piroxicam is a NSAID with oksikam structure. Piroxicam are drugs that have low solubility, thus requiring a long time to achieve the desired effect. Methods of fast disintegrating tablet can help speed up the effects.

Fast disintegrating tablets piroxicam made methods SLD consists of three formulas with variations of comparison, the first formula of 100% Crospovidone: 0% component of the effervescent, second formula of 50% Crospovidone: 50% of the components effervescent, and formula three 0% Crospovidone: 100% component of the effervescent , The third formula is printed with direct forged and tested methods of physical quality of physical properties of powders and tablets and then responsive falvour test. The test results later in the optimization of physical properties with Simplex Latice Design program, using the parameters of the critical point, namely hardness, friability, disintegration time in vivo, in vitro disintegration time, wetting time,dissolution Q1, and DE₅.

Effervescent component concentration variation and crospovidone affect the critical point. Crospovidone combination with effervescent component can accelerate disintegration time and provide a sense of fun. Optimization results fast disintegrating tablet piroxicam obtained optimum formula by comparison Crospovidone 18.68%: 81.32% effervescent component to the desirability 0.688. The test results of the optimization validation using One Sample T-test with a level of 95%. The optimum formula validation results obtained sig. > 0.05 so do not differ meaningfully.

Keywords: Piroxicam, fast disintegrating tablet, crospovidone, effervescent, Simplex Latice Design.