

## INTISARI

**YULIANA, ED., 2019, FORMULASI *FAST DISINTEGRATING TABLET* CAPTOPRIL MENGGUNAKAN KOMBINASI *SUPERDISINTEGRANT CROSCARMELOSE SODIUM* DAN *CROSPVIDONE*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA**

*Fast disintegrating tablet* captopril ini dimaksudkan untuk mengalami disintegrasi di mulut ketika kontak dengan saliva dalam waktu kurang dari 1 menit dan diharapkan mempercepat efek terapi obat. Penelitian ini bertujuan untuk mengetahui pengaruh kombinasi *superdisintegrant croscarmellose sodium* dan *crospovidone* pada *fast disintegrating tablet* captopril terhadap mutu fisik dan profil disolusinya, dan mendapatkan kombinasi *superdisintegrant croscarmellose sodium* dan *crospovidone* yang tepat sehingga didapatkan formulasi *fast disintegrating tablet* captopril yang paling baik.

Penelitian ini memformulasikan captopril yang dibuat *fast disintegrating tablet* dengan metode kempa langsung dengan variasi konsentrasi *croscarmellose sodium* dan *crospovidone* perbandingan 0:100%; 75:25%; 50:50%; 25:75%; 100:0%. Pengujian yang dilakukan untuk mengetahui mutu fisik *fast disintegrating tablet* captopril adalah keseragaman bobot, keseragaman kandungan, kekerasan, kerapuhan, waktu pembasahan, waktu hancur (*in vivo* & *in vitro*), dan disolusi. Data yang diperoleh kemudian dianalisis secara statistik dengan uji *Kolmogorov-Smirnov* untuk menguji distribusi data, jika distribusi normal data dianalisa menggunakan uji *one-way analysis of variance* (ANOVA) dengan taraf kepercayaan 95%.

Berdasarkan hasil penelitian, kombinasi *superdisintegrant croscarmellose sodium* dan *crospovidone* menunjukkan bahwa kombinasi *superdisintegrant croscarmellose sodium* yang tinggi dan *crospovidone* yang rendah dapat menurunkan kekerasan, kerapuhan, waktu pembasahan dan waktu hancurnya, sehingga profil disolusi *fast disintegrating tablet* captopril meningkat dan kombinasi dengan komposisi *croscarmellose sodium* 75% : *crospovidone* 25% mampu memberikan waktu hancur yang cepat yaitu 24,50 detik.

---

Kata kunci: *fast disintegrating tablet*, captopril, *croscarmellose sodium*, *crospovidone*

## ABSTRACT

### **YULIANA, ED., 2019, FORMULATION OF FAST DISINTEGRATING CAPTOPRIL TABLET USING COMBINATIONS SUPERDISINTEGRANT CROSCARMELLOSE SODIUM AND CROSPROVIDONE**

Captopril is intended to fast disintegrating tablets disintegrates in the mouth when in contact with saliva in less than 1 minute and are expected to accelerate the therapeutic effect of the drug. This research aims to determine the effect of the combination of superdisintegrant croscarmellose sodium and crospovidone on fast disintegrating captopril tablets on physical quality and the dissolution profile, and get a comparison of the combination of superdisintegrant croscarmellose sodium and crospovidone so that the best form of fast disintegrating captopril tablet is obtained.

This study formulated captopril made by fast disintegrating tablets with direct compression method with variations in croscarmellose sodium and crospovidone concentration with the ratio of 0: 100%; 75: 25%; 50: 50%; 25: 75%; 100: 0%. Tests conducted to determine the physical quality of fast disintegrating captopril tablets are uniformity of weight, uniformity of content, hardness, friability, wetting time, disintegration time (in vivo & in vitro) were tested, and dissolution. Data which had been obtained analyzed statistically by Kolmogorov-Smirnov test to test the distribution of data, if the normal distribution of data is analyzed by one-way analysis of variance test (ANOVA) with confidence interval 95%.

Based on the research results, the combination of superdisintegrant croscarmellose sodium and crospovidone shows that the combination of superdisintegrant croscarmellose sodium high and crospovidone low can reduce hardness, friability, wetting time and disintegration time, so the dissolution profile of fast disintegrating captopril tablets increases and combination with the composition of croscarmellose sodium 75% : crospovidone 25% is able to provide a fast disintegration time of 24.50 seconds.

---

Key words: fast disintegrating tablet, captopril, croscarmellose sodium, crospovidone.