STUDI KOMPARATIF KONSENTRASI *CROSPOVIDONE* TERHADAP DISINTEGRASI TABLET KITOSAN YANG DIBUAT DENGAN METODE CETAK LANGSUNG

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ABSTRAK

Penelitian ini dilakukan untuk melakukan analisis pengaruh konsentrasi *crospovidone* dengan konsentrasi 2%, 3% dan 5% terhadap tablet kitosan yang dibuat dengan metode cetak langsung terhadap karakteristik fisik tablet. Bahan tambahan yang digunakan antara lain *microcrystalline cellulose* 102, *α–lactose monohydrate* 200 M, c*rospovidone*, *colloidal silicon dioxide* dan magnesium stearat. Evaluasi karakteristik tablet pada F1 (Formula I) dengan konsentrasi *crospovidone* 2%, F2 (Formula II) dengan konsentrasi *crospovidone* 3% dan F3 (Formula III) dengan konsentrasi *crospovidone* 5% memenuhi persyaratan yang meliputi waktu hancur, keseragaman bobot, keseragaman ukuran, kekerasan dan friabilitas. Evaluasi waktu hancur (disintegrasi) dari ketiga formula dianalisis menggunakan metode *One-Way Anova* dan analisis lanjut *One-Way Anova* dengan taraf signifikan 5%. Terdapat perbedaan yang signifikan diantara ketiga formula tersebut. Konsentrasi *crospovidone* yang memberikan karakteristik tablet waktu hancur yang paling singkat adalah *crospovidone* dengan konsentrasi 5%.

Kata kunci: Tablet, kitosan, c*rospovidone*, waktu hancur, cetak langsung.

COMPARATIVE STUDY OF CROSPOVIDONE CONCENTRATION ON DISINTEGRATION OF CHITOSAN TABLETS MADE WITH DIRECT COMPRESSION METHOD

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ABSTRACT

Research was conducted to analyze the effect of crospovidone concentration on 2%, 3% and 5% of chitosan tablets made by direct compression method to the physical characteristics of tablets. Exicipient used include microcrystalline cellulose 102, α-lactose monohydrate 200 M, crospovidone, colloidal silicon dioxide and magnesium stearate. Evaluation of tablet characteristics in F1 (Formulation I) with a crospovidone concentration of 2%, F2 (Formulation II) with a crospovidone concentration of 3% and F3 (Formulation III) with crospovidone concentration of 5% conform with the requirements, including disintegration time, uniformity of weight, uniformity of size, hardness and friability. Evaluation of disintegration of the three formulations were analyzed using One-Way Anova and further analysis of the One-Way Anova with significance level of 5%. There are significant differences among the three formulation. The fastest of disintegration time performed by crospovidone concentration of 5%.

Keywords: Tablet, chitosan, crospovidone, disintegration time, direct compression.