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KAJIAN ARTIKEL PENGARUH SUPERDISINTEGRAN *SODIUM STARCH GLYCOLATE, CROSCARMELLOSE SODIUM,* DAN *CROSPOVIDONE* TERHADAP SIFAT FISIK DAN PROFIL DISOLUSI SEDIAAN TABLET *ORODISPERSIBLE*

ABSTRAK

Latar belakang: Tablet *orodispersible* merupakan tablet ramah pasien yang hancur dalam rongga mulut setelah kontak dengan air tanpa mengharuskan pasien untuk menelan. Pada tablet *orodispersible*, disintegrasi yang cepat merupakan langkah penting untuk pelepasan obat dan aksi yang cepat, sehingga ditambahkan superdisintegran. Penggunaan superdisintegran dapat berpengaruh pada sifat fisik dan disolusi tablet orodispersible. Tujuan *literature review* ini mengkaji pengaruh superdisintegran *sodium starch glycolate* (SSG), *croscarmellose sodium* (CS), dan *crospovidone* (C) terhadap sifat fisik dan profil disolusi sediaan tablet *orodispersible*.
Metode: Metode *literature review* digunakan dengan mengkaji 5 jurnal yang memiliki relevansi dengan latar belakang penelitian.
Hasil: Penggunaan superdisintegran SSG, CS, dan C memberikan sifat alir granul yang sangat baik. Hasil uji sifat fisik tablet *orodispersible* dari 5 jurnal yang digunakan yaitu keseragaman bobot yang memenuhi standar, kekerasan SSG 1,98-6 Kg/cm^2, CS 1,90-5,6 Kg/cm^2, C 1,95-6 Kg/cm^2, kerapuhan SSG 0,33-0,926%, CS 0,365-0,877%, C 0,397-0,904%, waktu pembasahan SSG 23,4-64 detik, CS 14-55 detik, C 9-42 detik, rasio penyerapan air SSG 25-287%, CS 23-175%, C 24,5-187%, waktu hancur SSG 15-75 detik, CS 25-84 detik, C 9-87 detik, dan profil disolusi SSG 48,88-98,45%, CS 51,86-99,60%, C 64,56-99,98%.
Kesimpulan: Berdasarkan *literature review* yang telah dilakukan dapat disimpulkan bahwa superdisintegran *sodium starch glycolate*, *croscarmellose sodium*, dan *crospovidone* dapat mempengaruhi sifat fisik seperti keseragaman bobot, kekerasan, kerapuhan, waktu pembasahan, rasio penyerapan air, dan waktu disintegrasi serta profil disolusi tablet *orodispersible*.

Kata kunci: tablet *orodispersible, sodium starch glycolate, croscarmellose sodium, crospovidone,* sifat fisik

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LITERATURE REVIEW OF THE EFFECT OF *SODIUM STARCH GLYCOLATE*, *CROSCARMELLOSE SODIUM*, AND *CROSPOVIDONE* SUPERDISINTEGRANT ON PHYSICAL PROPERTIES AND DISSOLUTION PROFILE OF ORODISPERSIBLE TABLETS

ABSTRACT

Background: *Orodispersible tablets are patient-friendly tablets that disintegrate in the oral cavity upon contact with water without requiring the patient to swallow. In orodispersible tablets, rapid disintegration is an important step for drug release and rapid action, so the addition of a superdisintegrant is required. The use of superdisintegrants can affect the physical properties and dissolution of orodispersible tablets. The purpose of this literature review is to examine the effect of superdisintegrant sodium starch glycolate* (SSG), *croscarmellose sodium* (CS), *and crospovidone* (C) *on the physical properties and dissolution profile of orodispersible tablets.*

Method: *Literature review method is used by reviewing 5 journals that have relevance to the research background.*

Results: *The use of superdisintegrants* SSG, CS, *and* C *provide excellent granule flow properties. Tests on the physical properties of orodispersible tablets in those 5 journals have results as follows: weight uniformity that meet the standards, hardness* SSG *1,98-6 Kg/cm^2,* CS *1,90-5,6 Kg/cm^2,* C *1,95-6 Kg/cm^2, friability* SSG *0,33-0,926%,* CS *0,365-0,877%,* C *0,397-0,904%, wetting time is* SSG *23,4-64 second,* CS *14-55 second,* C *9-42 second, percentage of water absorption ratio is* SSG *25-287%,* CS *23-175%,* C *24,5-187%, disintegration time* SSG *15-75 second,* CS *25-84 second,* C *9-87 second, and dissolution profils* SSG *48,88-98,45%,* CS *51,86-99,60%,* C *64,56-99,98%.*

Conclusion: *Based on literature review that has been carried out, it can be concluded that superdisintegrant sodium starch glycolate, croscarmellose sodium, and crospovidone can affect physical properties such as weight uniformity, hardness, friability, wetting time, water absorption ratio, and disintegration time also dissolution profile of orodispersible tablets.*

Keywords: *orodispersible tablets, sodium starch glycolate, croscarmellose sodium, crospovidone, physical properties*