EVALUASI SEDIAAN TABLET VITAMIN C GENERIK DAN MEREK DAGANG MELALUI UJI DISOLUSI SERTA PENETAPAN KADAR MENGGUNAKAN SPEKTROFOTOMETRI UV-VIS

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ABSTRAK

Vitamin C merupakan vitamin larut air yang berfungsi sebagai antioksidan dan meningkatkan sistem imun, sehingga banyak dipasarkan dalam bentuk tablet generik maupun merek dagang. Masih terdapat anggapan masyarakat bahwa tablet bermerek memiliki kualitas lebih baik dibandingkan generik, meskipun keduanya wajib memenuhi standar mutu yang sama. Penelitian ini bertujuan untuk mengetahui hubungan antara evaluasi mutu sediaan tablet vitamin C generik dan merek dagang dengan profil disolusi, serta menentukan kadar zat aktif terdisolusi menggunakan metode spektrofotometri UV-Vis. Penelitian dilakukan secara eksperimental *in vitro* dengan sampel tablet vitamin C generik dan merek dagang yang diperoleh dari pasaran. Parameter yang diuji meliputi keseragaman bobot, kekerasan, kerapuhan, waktu hancur, serta profil disolusi pada menit ke-5 hingga ke-60. Hasil menunjukkan bahwa kedua tablet memenuhi persyaratan Farmakope Indonesia edisi VI: keseragaman bobot sesuai, kekerasan 4–8 kgf, kerapuhan <1%, dan waktu hancur <15 menit. Pada uji disolusi, kadar zat aktif terlarut mencapai 85,8% (generik) dan 85,5% (merek dagang) pada menit ke-45, serta mendekati 100% pada menit ke-60. Perbedaan kecil pada laju disolusi dipengaruhi oleh faktor formulasi dan eksipien, namun tidak berpengaruh pada kesetaraan farmasetik. Dengan demikian, mutu fisik berhubungan erat dengan profil disolusi, dan kedua sediaan terbukti setara secara farmasetik sehingga diperkirakan memberikan efek terapi yang sama.

Kata kunci: Vitamin C, tablet generik, tablet merek dagang, profil disolusi, spektrofotometri UV-Vis.

EVALUATION OF GENERIC AND BRANDED VITAMIN C TABLETS THROUGH DISSOLUTION TESTING AND CONTENT DETERMINATION USING UV-VIS SPECTROPHOTOMETRY

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ABSTRACT

Vitamin C is a water-soluble vitamin that functions as an antioxidant and immune booster, widely marketed in both generic and branded tablet forms. There is still a perception among the public that branded tablets have better quality than generics, although both are required to meet the same quality standards. This study aimed to determine the relationship between the evaluation of the quality of generic and branded vitamin C tablets with their dissolution profile, as well as to determine the amount of dissolved active substance using UV-Vis spectrophotometry. The research was conducted as an in vitro experimental study on samples of generic and branded vitamin C tablets obtained from the market. The evaluated parameters included weight uniformity, hardness, friability, disintegration time, and dissolution profile at the 5th to 60th minute. The results showed that both tablets complied with the Indonesian Pharmacopoeia VI requirements: weight uniformity within limits, hardness ranging from 4–8 kgf, friability less than 1%, and disintegration time under 15 minutes. Dissolution testing revealed that the percentage of dissolved active substance reached 85.8% for generics and 85.5% for branded tablets at the 45th minute, and approached 100% at the 60th minute. Minor differences in dissolution rate were influenced by formulation factors and excipients, but did not affect pharmaceutical equivalence. In conclusion, physical quality was closely related to the dissolution profile, and both formulations were pharmaceutically equivalent, thus expected to provide the same therapeutic effect.
Keywords: *Vitamin C, generic tablet, branded tablet, dissolution profile, UV-Vis spectrophotometry.*

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