ABSTRAK

Lisinopril merupakan obat antihipertensi golongan ACE inhibitor yang bekerja dengan menghambat enzim pengubah angiotensin, sehingga efektif menurunkan tekanan darah. Penelitian ini bertujuan untuk memvalidasi metode spektrofotometri UV-Vis dalam penetapan kadar lisinopril, serta mengevaluasi profil disolusi dari tiga merek tablet lisinopril yang beredar di Indonesia. Validasi metode dilakukan dengan menilai parameter linearitas, akurasi, presisi, limit of detection (LOD), dan limit of quantification (LOQ) sesuai pedoman validasi analitik. Uji disolusi dilakukan untuk mengevaluasi sejauh mana zat aktif dilepaskan dari sediaan tablet ke dalam medium disolusi sebagai indikator bioavailabilitas secara in vitro. Hasil validasi menunjukkan bahwa metode spektrofotometri UV-Vis memiliki linearitas sangat baik dengan koefisien korelasi (r) sebesar 0,997, persen recovery berkisar antara 104,1% hingga 106,7%, dan nilai %RSD kurang dari 2%, yang menandakan metode ini akurat dan presisi. Selain itu, nilai LOD dan LOQ masing-masing sebesar 0,916 ppm dan 2,78 ppm. Hasil pengujian disolusi menunjukkan bahwa ketiga merek tablet lisinopril yang diuji memenuhi persyaratan Farmakope Indonesia, dengan profil disolusi yang seragam dan efisiensi pelepasan obat yang sebanding. Berdasarkan hasil tersebut, dapat disimpulkan bahwa metode spektrofotometri uv-vis layak dan dapat diandalkan untuk analisis kadar lisinopril, serta tablet yang diuji telah memenuhi standar mutu dan kualitas disolusi yang diharapkan.

Kata Kunci : Lisinopril, validasi metode analisis, spektrofotometri UV-VIS, disolusi, mutu obat.

ABSTRACT

Lisinopril is an antihypertensive drug classified as an ACE inhibitor that works by inhibiting the angiotensin-converting enzyme, thereby effectively lowering blood pressure. This study aimed to validate a UV-Vis spectrophotometric method for the quantitative analysis of lisinopril and to evaluate the dissolution profiles of three lisinopril tablet brands available in Indonesia. Method validation was carried out by assessing parameters such as linearity, accuracy, precision, limit of detection (LOD), and limit of quantification (LOQ) in accordance with analytical validation guidelines. The dissolution test was conducted to evaluate the extent to which the active ingredient is released from the tablet formulation into the dissolution medium as an indicator of in vitro bioavailability. Validation results showed that the UV-Vis spectrophotometric method demonstrated excellent linearity with a correlation coefficient (r) of 0.997, recovery percentages ranging from 104.1% to 106.7%, and %RSD values below 2%, indicating that the method is accurate and precise. Furthermore, the LOD and LOQ values were 0.916 ppm and 2.78 ppm, respectively. The dissolution test results showed that all three lisinopril tablet brands met the requirements of the Indonesian Pharmacopoeia, with consistent dissolution profiles and comparable drug release efficiency. Based on these results, it can be concluded that the UV-Vis spectrophotometry method is feasible and reliable for the analysis of lisinopril levels, and the tested tablets have met the expected quality and dissolution quality standards.

Keyword : *Lisinopril, method validation, spectrophotometry UV-VIS, dissolution, drug quality.*