عنوان مقاله:

High performance liquid chromatographic method for determination of ezetimibe in pharmaceutical formulation tablets

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خلاصه مقاله:

Ezetimide belongs to a class of lipid lowering compounds that selectively inhibits intestinal absorption of cholesterol and related phytosterols. The purpose of this study is to establish a reliable and quick method for the assignment of ezetimibe in tablets form by high performance liquid chromatography with ultraviolet detection (HPLC-UV). A rapid and sensitive HPLC method has been developed for determination of ezetimibe in tablets formulation. Mobile phase was composed of acetonitrile-ammonium acetate (۱۰ mM, pH ۳.۰), ۷۵:۲۵ (v/v) with a flow rate of ۱ ml/min. The eluted peaks were detected by a UV detector was set at wavelength of ۲۴۰ nm. The method results in excellent separation with good resolution of analyte. Standard curves were linear (r = ۰.۹۹۶) over the wide ezetimibe concentration range of ۱۰-۶۰.۰ µg mL-۱ with acceptable accuracy and precision. The limits of detection (LOD) and quantitation (LOQ) of the method were ۵ and ۱۰ µg/ml, respectively. The average drug recovery was ۹۵.۳% throughout the linear concentration range. Statistical assessment of various in vitro dissolution parameters and assay results was also conducted to establish if there were any significant difference among them. The validated HPLC method has been used successfully to study ezetimibe. Due to simplicity, rapidity and accuracy of the method, we believe that the method will be useful for routine quality control analysis.

کلمات کلیدی:

Ezetimibe, HPLC, assay, dissolution, tablets