SPECTROPHOTOMETRIC METHOD FOR LOVASTATIN QUANTIFICATION

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Introduction. Lovastatin is a hypocholesterolemic agent and has been demonstrated as a specific inhibitor of 3-hydroxy-3-methylglutaryl-coenzyme A (HMG-Co A) reductase in cholesterol biosynthesis (1). Lovastatin decrease the plasmatic concentration of low density lipoprotein (LDL) by regulating cholesterol synthesis and consequently synthesis of LDL receptors (2). Currently, this drug is very important in the field of medicine, the main method for quantification by high pressure liquid chromatography (HPLC). However, for performing this technique is required to have the equipment so that it is sometimes not possible, then the UV-VIS spectrophotometry technique is more accessible to determine the concentration of lovastatin and the absorbance is linearly dependent on the concentration (3). In this study was established the spectroscopic method for lovastatin quantification.

Methods. A stock solution of lovastatin in acetonitrile was prepared. Wavelength scanning between 200-300 nm was performed. A standard curve from 0 to 50 µg/ml was prepared. All measurements were performed in triplicate

Results. The wavelength at which the maximum absorption was observed and which was read the calibration curve was 248 nm. at this wavelength there is no interference with acetonitrile (1). Figure 1 shows the calibration curve and the curve equation.

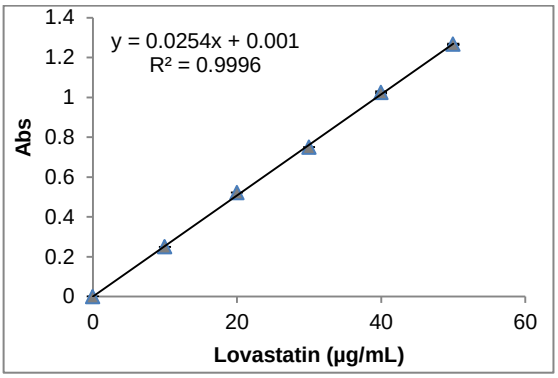

Fig.1 Lovastatin calibration curve.

Conclusions. Lovastatin can be quantified spectrophotometrically faster and cheaper than with HPLC having a high degree of accuracy.

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