A NOVEL STABILITY INDICATING UV SPECTROSCOPIC METHOD FOR SIMULTANEOUS ESTIMATION OF AZELNIDIPINE AND CHLORTHALIDONE IN ITS PURE AND PHARMACEUTICAL DOSAGE FORM

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ABSTRACT

An accurate, precise and simple stability indicating ultraviolet spectroscopic technique was developed to quantify azelnidipine and chlorthalidone, simultaneously was bulk and in combination by absorbance correction method. Ethanol (99.9 %) is used as the solvent in the method. The detection wavelength was found to be 275 nm for chlorthalidone, and 345 nm for azelnidipine. The methodology was validated concerning sensitivity, linearity, reproducibility, accuracy, ruggedness and robustness. Beer-Lamberts law was obeyed in the concentration from 3.2–80 µg mL^{-1} in case of azelnidipine and 5-125 µg mL^{-1} in case of chlorthalidone. Detection limits were obtained as 1.74 µg mL^{-1} for azelnidipine and 2.376 µg mL^{-1} for chlorthalidone. For azelnidipine, quantification limit was 5.272 µg mL^{-1}, while for chlorthalidone it was 7.2 µg mL^{-1}. Accelerated stability studies were carried out. Azelnidipine and chlorthalidone showed different degradation characteristics under acid, alkali, humidity, heats, and oxidized environment.