



Validated HPLC and HPTLC Methods for Simultaneous Determination of Some α_1 -Adrenoreceptor Blockers

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SUMMARY. Alpha-blockers (alfuzosin, tamsulosin, doxazosin, prazosin and terazosin) relax the smooth muscles in the prostate and are indicated for the symptomatic treatment of benign prostatic hyperplasia due to evidence of their positive and rapid effect on lower urinary tract symptoms. Our objective was to develop and validate simultaneous estimation of these drugs. Same class of drugs may have almost same functional groups and therefore research focused on development of RPLC and HPTLC method for simultaneous quantitative determination. The separation was achieved in HPLC method on a C18 column, a UV detector at 230 nm and a elution was performed under a gradient mobile phase composed of (A) ACN-diethylamine (0.05 mL), (B) methanol, (C) 10 mM ammonium acetate and (D) Water. For HPTLC method separation was achieved by using mobile phase chloroform and methanol in the ratio 9.5:0.5. Both of the validated methods can be utilized for the assay of these α_1 adrenoreceptors in pharmaceutical industries.

KEY WORDS: Alfuzosin, Doxazosin, Estimation of alpha-one blockers, Method validation, Prazosin, Terazosin, Tamsulosin.

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