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Development and validation of HPTLC method for simultaneous estimation of olmesartan medoxomil and indapamide in tablet dosage form

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A simple, precise, specific and accurate high performance thin layer chromatographic method has been developed for the simultaneous determination of olmesartan medoxomil and indapamide in pharmaceutical dosage form. The separation was carried out on Merck HPTLC aluminium plates of silica gel $60F_{254}$, using toluene: chloroform: ethanol (4:4:1 *v/v*) as the mobile phase. HPTLC separation of the two drugs followed by densitometric measurement was carried out in the absorbance mode at 254 nm. The drugs were resolved with Rf values of 0.15 and 0.47 for olmesartan medoxomil and indapamide, respectively. The linear regression analysis data for the calibration plots showed good linear relationship with r value 0.99930 and 0.99660 for olmesartan medoxomil and indapamide respectively, in the concentration range of 100 to 700 ng/spot for olmesartan and 100 to 600 ng/spot for indapamide. The method was validated according to the ICH guidelines with respect to accuracy, precision, specificity and robustness. The limit of detection and quantitation were 100 and 300 ng/spot respectively for olmesartan and 100 and 300 ng/spot for indapamide. The proposed developed HPTLC method can be applied for identification and quantitative determination of olmesartan medoxomil and indapamide in bulk drugs and pharmaceutical dosage form.

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