



Simultaneous Determination of Antidiabetic and Antihypertensive Drugs in Pharmaceutical Formulations by RP-LC

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Abstract : The objective of the study was the development and validation of an isocratic RP-LC method for the simultaneous estimation of rosiglitazone, glimepiride and amlodipine in a combined dosage form. The separation was achieved with a C₁₈ 5micron {250 mm x 4.6 mm i.d.} column, using a mobile phase comprising of a mixture of methanol, water and ortho phosphoric acid (75: 25: 0.2, v/v), the pH of which was adjusted to 4.5 with the help of liquid ammonia. The flow rate was kept at 1 mL min⁻¹, with UV detection at 230 nm. The retention time for rosiglitazone, amlodipine and glimepiride was found to be 2.62, 3.9 and 7.387 minutes, respectively. The LOD was found to be 16.23, 19.88 and 15.81 ng mL⁻¹; while LOQ was found to be 54.16, 66.28 and 52.69 ng mL⁻¹ for rosiglitazone, amlodipine and glimepiride, respectively. The developed method was rapid, isocratic, specific, sensitive, accurate and precise and has been successfully applied to the analysis of pharmaceutical dosage forms.

Keywords : Rosiglitazone Maleate, Amlodipine Besylate, Glimepiride, High Performance Liquid Chromatography.