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Development and validation of a stability–indicating reversed phase HPLC method for simultaneous determination of Ramipril, Atorvastatin and Aspirin in their pharmaceutical formulation

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A specific, sensitive, and rapid stability-indicating chromatographic method has been developed, optimized and validated for simultaneous determination of ramipril (RAM), atorvastatin (ATV) and aspirin (ASP) in their mixture and in the presence of their degradation products. Successful separation of the cited drugs from their degradation product was achieved on X-bridge C-18 analytical column (250×4.6 mm i.d., 5 µm particle size) in an isocratic mode, using mobile phase containing a mixture of acetonitrile-phosphate buffer (pH 2.5, 0.05 M)-tetrahydrofuran (60:40:0.1%, by volume) with UV detection at 218 nm. The linearity of the proposed method was established over the ranges 5–50 µg/mL for RAM and 2-16 µg/mL for both ATV and ASP. The suggested method was validated in compliance with the ICH guidelines and was successfully applied for the quantification of RAM, ATV and ASP in their commercial tablets. The obtained results were statistically compared to those of the official and reported methods; using Student's t test and F test showing no significant difference with high accuracy and good precision.

Biography

Noha Samy Mostafa has completed her MSc in Analytical Chemistry in Faculty of Pharmacy at Cairo University. She is a Teaching Assistant in the Analytical Chemistry Department, Faculty of pharmacy, Cairo University. She has published two papers in reputed journals.

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