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A novel stability-indicating LC method for determination of avanafil

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Avanafil (AVA) is a phosphodiesterase type 5 inhibitor compound, prescribed to treat erectile dysfunction. Up to date, due to recent introduction of AVA to the market, chemical analysis of its degradation products and possible process impurities were not published anywhere. A novel reversed-phase high-performance liquid chromatography method was developed and validated for the determination of avanafil, in the presence of its degradation products. Forced degradation studies were performed employing acidic, alkaline, neutral, oxidative, thermal and photolytic stress conditions and retention characteristics of AVA was assessed by the evaluation of common chromatographic and system suitability parameters. Identification of compounds was realized using LCMS-IT-TOF instrument and an additional LC-MS/MS system was utilized for precise quantitation of AVA. The developed method was validated as per International Conference on Harmonization (ICH) guidelines with respect to specificity, accuracy, precision, linearity, limit of detection and quantification, and robustness. The applicability of the proposed method for the determination of avanafil was demonstrated.

Biography

Nafiz Oncu Can has completed his PhD from Anadolu University under the supervision of Prof. Dr. Goksel ARLI. He has published 15 papers in reputed journals and has an H-index value of 7. He is working as a full-time Associate Professor at the Department of Analytical Chemistry, Faculty of Pharmacy, Anadolu University, Turkey.

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