Ebru Türköz Acar et al., J Chromatogr Sep Tech 2017, 8:5(Suppl)
DOI: 10.4172/2157-7064-C1-031

Development and validation of an HPLC method for determination of the eplerenone in rat plasma

Ebru Türköz Acar[1], **Samet Özdemir**[1] and **Melike Üner**[2]
[1]Yeditepe University, Turkey
[2]Istanbul University, Turkey

Eplerenone (EP) is an antihypertensive agent in the pharmacological group of selective aldosterone receptor antagonists (SARAs). The chemical structure of EP is pregn-4-ene-7,21-dicarboxylic acid, 9,11 –epoxy-17-hydroxy-3-oxo, γ-lactone methyl ester (7α, 11α, 17α). EP is slightly soluble in water and its solubility is independent from pH. Low water soluble active agents could not offer an effective therapy for the patients. To overcome bioavailability problems related to this property, there are some alternative ways like chemical and polymorphic modifications of drugs or designing appropriate pharmaceutical dosage forms. To provide an effective treatment, colloidal drug carrier systems of EP were prepared in this study. Investigation of loading capacity and encapsulation efficiency of these carriers and in vitro drug release profiles, in vivo evaluation of formulations, was highly depend on a reliable quantitative analytical method. There are a few methods for the quantitative determination of EP. These methods mostly include expensive instruments such as LC–MS, but one exception using high performance liquid chromatography (HPLC) with UV detection was found., To assess in vivo performance of EP formulations in rats, the method was not sufficient to provide specificity. Thus, a new specific method for EP detection was needed by using the simple extraction and detection techniques. To achieve the quantification of EP in the rat plasma, an HPLC method was developed and validated. EP spiked rat plasma samples were used for validation step. Then, spiked plasma was extracted and analyzed. The developed method was used to monitor the kinetic study results.

Biography

Ebru Türköz Acar has completed her PhD at Ondokuz Mayis University, Science and Art Faculty, Turkey. She is a Researcher and Lecturer at Yeditepe University, Faculty of Pharmacy Department of Analytical Chemistry.

ebruturkozacar@gmail.com

Notes: