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Determination of glimepiride in pharmaceutical formulations using HILIC

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Glimepiride is one of the most widely prescribed antidiabetic drugs and contains both hydrophobic and hydrophilic functional groups in its molecules, and thus could be analyzed by either reversed-phase high performance liquid chromatography (HPLC) or hydrophilic interaction liquid chromatography (HILIC). In the literature, however, only reversed-phase HPLC has been reported. In this study, a simple, rapid and accurate hydrophilic interaction liquid chromatographic method was developed for the determination of glimepiride in pharmaceutical formulations. The analytical method comprised a fast ultrasound-assisted extraction with acetonitrile as a solvent followed by HILIC separation and quantification. The effects of various HILIC parameters on the separation and determination will be discussed in details at the presentation. The developed method has been successfully applied to determine the glimepiride contents in pharmaceutical formulations and human fluids.

Biography

Yuegang Zuo is a Full Professor and Director of Graduate Programs at Department of Chemistry and Biochemistry, University of Massachusetts Dartmouth. He received his BS degree in Chemistry from Wuhan University in 1982, MS degree in Environmental Chemistry from the Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, in 1984, and PhD in Environmental Science from Swiss Federal Institute of Technology Zurich in 1992. Most of his recent research has focused on separation, identification and quantification of PPCPs and phenolic antioxidants in plants, pharmaceuticals, foods and the environment and examine their occurrence, sources, bioeffects and fate in the biochemsphere.

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