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Hydrophilic interaction liquid chromatographic determination of anti-diabetic drug, Glimepiride, in pharmaceutical formulations

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Glimepiride is one of the most widely prescribed anti-diabetic 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 currently a Full Professor in Analytical and Environmental Chemistry and Director of Graduate Programs at Department of Chemistry and Biochemistry, University of Massachusetts Dartmouth. He has completed 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. His recent researches focused on separation, identification and quantification of pharmaceuticals and personal care products (PPCPs) and phenolic antioxidants in plants, pharmaceuticals, foods and the related environments and examine their occurrence, sources, distribution, transportation and fate in the bio-chemosphere. He has published over 70 peer-reviewed papers in prestigious international scientific journals such as *Science and Environmental Science and Technology*.

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