

عنوان مقاله:

A liquid chromatography method for determination of p-cresol in human plasma by in situ surfactant-based solid phase extraction

محل انتشار:

بیستمین کنگره شیمی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Negar Amirhaghian - *Drug Applied Research Center, Tabriz University of Medical Sciences, Tabriz, Iran*

Azam Samadi - *Liver and Gastrointestinal Diseases Research Center, Tabriz University of Medical Sciences, Tabriz, Iran*

Hamid Tayebi Khosroshahi - *Kidney Research Center, Tabriz University of Medical Sciences, Tabriz, Iran*

Abolghasem Jouyban - *Pharmaceutical Analysis Research Center and Faculty of Pharmacy, Tabriz University of Medical Sciences, Tabriz, Iran, Kimia Idea Pardaz Azarbayjan (KIPA) Science Based Company, Tabriz University of Medical Sciences, Tabriz, Iran*

خلاصه مقاله:

Recent researches on sample pretreatment and preparation methods have being oriented toward the development of efficient, economical, and miniaturized methods. In situ surfactant-based solid phase extraction (ISS-SPE) is a sample preparation technique in which the alkyl group of cationic surfactant interacts with the hydrophobic parts of an analyte and acts as an extraction medium. Then, the interaction between the surfactant and an ion-pairing agent forms very fine solid particles that could be dissolved in an appropriate solvent [1, 2]. A sensitive and reproducible high performance liquid chromatography–fluorescence method was developed and validated for determination of p-cresol in plasma samples. ISS-SPE was proposed for pretreatment of plasma samples prior to HPLC analysis. The separation was carried out on a C18 column (250 × 4.6 mm, 5 μm) by isocratic elution with sodium acetate buffer (pH 3.8) and acetonitrile (40:60, v/v) as the mobile phase. The method was validated and found to be linear in the range of 0.5 to 8 μg mL⁻¹ with the limit of quantification of 0.038 μg mL⁻¹. The variations for intra-day and inter-day precisions were both less than 8.2% and the extraction recoveries were more than 97%.

کلمات کلیدی:

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