

A weak ion monolithic column for on-line extraction and analysis of theophylline in human urine

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A weak ion exchange monolithic column was prepared in stainless steel column tubule, which was used for analysis and determination of theophylline as solid phase extraction material in urine samples. With the column switch technique, on-line cleaning up and screening of human urine sample was executed under the condition of water. Chromatography was performed by reversed-phase HPLC on a C₁₈ column with 1.0 mL/min flow ratio and ultraviolet detection at 274 nm, using an eluting solution consisting of methanol-water (30:70, v/v). This method was suitable for the determination of theophylline in human urine, which had avoided tedious pretreatment and provided a fast, economic, repeated and effective method for assaying trace drugs in biologic samples.