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论文

人血清中奎尼丁的薄层荧光光密度测定法

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摘要：

关键词： 奎尼丁 血清 薄层分离 荧光光密度测定

TLC SEPARATION AND FLUORODENSITOMETRIC DETERMINATION OF QUINIDINE IN HUMAN SERUM

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Abstract:

A simple, sensitive, accurate and specific TLC fluorodensitometrie method for the separation and determination of quinidine in human serum is developed.Extraction: Fifty μl of serum is shaken with 0.5 ml of chloroform for 3 min in a 1 ml glass stoppered tube and then centrifuged for 3 rain at 2000 r/min. Four hundred μl of chloroform layer is transferred to another tube and evaporated to dryness below 80℃ in a water bath. The residue is dissolved in 40 μl of chloroform.Chromatography: Glass plates (10×15 cm) are coated with silica gel G and air dried. Equally spaced vertical grooves are traced through the adsorbent layer to divide it into 14 strips each 1.0 cm wide. Five μl aliquots of the extract are applied at points about 1.5 cm from the bottom edge of the plate, and the chromatogram is developed in a suitable chamber using chloroform—methanol (9.2: 0.8) as the developing solvent. Until the solvent front has ascended about 8.5 cm from the point of application, quinidine and its metabolites are thus separated. The plate is removed, air-dried, and the chromatogram is fumed with formic acid vapor, quinidine can be seen as light blue fluoroscent spots under UV light.Determination: Quinidine spots are measured fluorometrically using an excitation wavelength of 350 nm and a 450 nm filter for the emission wavelength. The results are calculated by external standard method. A linear relationship is obtained for quinidine in the range of 5～50 ng. The recovery from serum is from 94.71～107.22% for quinidine.The method is recommended for clinical assay and pharmacokinetic studies.

Keywords: TLC separation Fluorodensitometric determination Quinidine

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