

Solid Phase extraction and HPTLC Determination of Isoniazid and its Metabolite, Acetylisoniazid in Serum. Comparison with HPLC.

Guermouche, S. ; Guermouche, M. H..

Faculté de Chimie, USTHB, BP 32, El-Alia , Bab-Ezzouar, Algiers, Algeria.

Abstract

A new solid phase extraction (SPE) and quantitative determination of isoniazid (INH) and its acetyl metabolite (AcINH) in serum by high performance thin-layer chromatography (HPTLC) was presented. Alkalized serum samples with nicotinamide as an internal standard were applied to SPE cartridge containing a new solid phase extraction sorbent ; [poly (divinylbenzene-co-N-vinylpyrrolidone)] . A simple procedure of conditioning, washing eluting steps was described. After evaporation of the eluates to dryness and reconstitution, one-dimensional HPTLC was performed on silica gel plates with ethyle acetate-methanol (70:30) as a mobile phase. Quantitation was done by densitometry. A convenient validation parameters were obtained (linearity, detection limits LOD and LOQ, precision and accuracy) for INH and AcINH. The method was compared with and HPLC technique developed in the laboratory and satisfactory correlation was found between data from the two techniques. The HPTLC method is sensitive and specific and was used to quantify INH and AcINH in patient blood serum and the results were compared with those obtained by HPLC