

Chromatographic analysis of phenobarbitone, ethosuximide, phenytoin and carbamazepine on a polystyrene-divinyl benzene column

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Abstract:

A liquid chromatographic method for the simultaneous assay of four anticonvulsant drugs, phenobarbitone, ethosuximide, phenytoin and carbamazepine on a polystyrene-divinyl benzene column is described. The method was developed by the systematic study of different types of copolymer materials, type and concentration of organic modifiers, buffer pH and concentration and column temperature. A PLRP-S 100 Å 8 µm column maintained at 60 °C and a mobile phase consisting of acetonitrile-tert-butanol-phosphate buffer (pH 7.6, 0.2 M)-water (25:5:10:60, v/v) were used. The flow rate was 1 ml/min with ultraviolet detection at 220 nm. The method has been validated and used for the analysis of raw materials, finished products and dissolution studies of the drugs