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Spectrophotometric determination of tenofovir using 1, 2-napthaquinone-4-sulfonic acid sodium in pharmaceutical dosage form

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A new, simple and sensitive spectrophotometric method for the determination of tenofovir has been developed. The method is based on the condensation of tenofovir with 1, 2- napthaquinone-4- sulfonic acid sodium (NQS) in alkaline media to yield orange colored product. Tenofovir showed maximum absorbance at 334 nm with linearity was observed in the concentration range of 2-12 µg/ml (R^2= 0.990). The relative standard deviation of 0.531% and recovery of tenofovir in tablet showed 99.33±0.52. The proposed method is simple, rapid, precise and convenient for the assay of tenofovir in pharmaceutical formulation.

Biography

Geeta Bhavani Balija is a student of JSS College of Pharmacy, JSS University, Mysore. She has completed her B.Pharm from H.L.T College of Pharmacy, Banglore. Presently she is pursuing her M.Pharm Degree in the branch of Pharmaceutical analysis. Her current area of research is on analytical method development of novel drugs.

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Gas chromatographic method development for determinination of duloxetine HCl using ethyl chloroformate as derivatizing agent

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A new, simple and sensitive gas chromatographic method for the determination of Duloxetine has been developed. The method is based on the derivatization of Duloxetine HCL with Ethyl chloroformate. GC method development and validation was carried out using SHIMADZU model 2014, coupled with Flame Ionization Detector (FID). Elution was done through Rtx-5 capillary column (cross bond of 5% diphenyl and 95% dimethyl polysiloxane) with dimension of 30m × 0.25mm.

The injection port and detector temperature were set to 150˚C and 250˚C respectively. 2 µL sample was manually injected in to the injector space. Column temperature was adjusted to 60^0C for 2 min. Temperature was gradually increased to 85^0C at the rate of 2^0 C min^{-1} and was maintained for 5 min. Carrier gas (Nitrogen) pressure was 85 Kpa. The limit of detection (LOD) and limit of quantification (LOQ) of this method was found to be 0.11 mcg and 0.34 mcg respectively. The method was found to be linear in the concentration range of 5-50 mcg/ml. The recovery value of this method was found to be 99.1%.

Biography

Gidugu Sai Sagar is a student of JSS College of Pharmacy, JSS University, Mysore. He has completed his B. Pharm from Sree Vidyanikethan College of Pharmacy, Tirupathi. Presently he is pursuing M. Pharm Degree in the branch of Pharmaceutical analysis. His current area of research is on analytical method development of novel drugs using GC.

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