



Spectrophotometric determination of chlorodiazepoxide in pharmaceutical preparations by ion pair formation

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Abstract : Simple, rapid and sensitive spectrophotometric methods were developed for the determination of chlorodiazepoxide drugs in pharmaceutical dosage forms. This method is based on ion pair and charge transfer complexation reactions. The method is based on the reaction of the chlorodiazepoxide drug with Mo(V)-thiocyanate in hydrochloric acid medium followed by an extraction of the coloured ion-pair with 1,2-dichloroethane and the absorbance of the ion pair was measured at 470 nm. All the optimum conditions are established. The calibration graphs are rectilinear in the concentration ranges 5-35 mg L⁻¹ for chlorodiazepoxide. The limit of detection (LOD) and relative standard deviation are 0.52 mg L⁻¹ and 2.3% respectively.

Keywords: Liquid-liquid extraction, Chlordiazepoxide, 1,2 dichloroethane, Spectrophotometry.

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