

Spectrophotometric determination of Nitrazepam, using Thymol as a new chromogenic reagent

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Abstract:A simple and sensitive spectrophotometric method for the determination of Nitrazepam in pure form and in pharmaceutical dosage was developed. The method is based on reduction of the Nitrazepam with zinc powder and hydrochloric acid, followed by reaction with thymol as a new organic reagent and ammonium hydroxide in the Diazo-coupling reaction, to form a stable chromophore which absorbs at (477nm). The method showed a good linearity in the range (0.1– 12 $\mu\text{g. mL}^{-1}$) with molar absorptivity of ($2.264 \times 10^4 \text{ L.Mol}^{-1}\text{cm}^{-1}$) This method is free from the interference of common excipients that found in pharmaceutical dosage. It was also applied for the determination of chlorpromazine hydrochloride (NCP) in some of pharmaceutical dosage sample containing of this drug.

Keywords :Nitrazepam, spectrophotometric, diazo-coupling, Thymol.

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