

Spectrophotometric Determination of Phenylephrine Hydrochloride by Coupling with Diazotized 2,4-Dinitroaniline

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Abstract : A rapid spectrophotometric method for the micro-determination of phenylephrine-HCl (PHE) has been developed. The proposed method involves the coupling of phenylephrine-HCl with diazotized 2,4-dinitroaniline in alkaline medium at λ_{\max} 455 nm. Under the present optimum condition, Beer's law was obeyed in the range of 1.0-20 $\mu\text{g/ml}$ of PHE with molar absorptivity of $1.915 \times 10^4 \text{ l. mol}^{-1} \cdot \text{cm}^{-1}$, with a relative error of 0.015 and a relative standard deviation of 0.024%. The current method has been applied successfully to estimate phenylephrine-HCl in pharmaceutical preparations (nose drop and syrup).

Keywords : diazo-coupling, 2,4-dinitroaniline, phenylephrine-HCl, spectrophotometry

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