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Spectrophotometric Determination of Some Cephalosporins in Bulk and in Pharmaceutical Formulations

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Abstract

A simple, accurate and sensitive spectrophotometric method has been developed for the analysis of four cephalosporins, ceftriaxone (CEFT), cefatoxime (CEFX), ceftazidime (CEZD) and cefepime (CEPM) in bulk and in pharmaceutical formulations. The method is based on the diazotization of cephalosporins in acidic medium, followed by coupling with 3-amino phenol (AP), to give orange red colored product having a $\lambda_{\max}$ of 500 nm. The calibration graphs are rectilinear in the concentration ranges 20 - 160 $\mu\text{g mL}^{-1}$ for CEFT, 20-140 $\mu\text{g mL}^{-1}$ for CEFX & CEPM and 24 - 168 $\mu\text{g mL}^{-1}$ for CEZD respectively in the final measured solution. All the optimum conditions are

established and other analytical parameters are evaluated. Commonly associated excipients did not interfere with the determinations. Statistical analysis of results