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Utility of Inorganic Oxidants for the Spectrophotometric Determination of Ganciclovir in Dosage Forms

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***SUMMARY*. Eight direct spectrophotometric methods for determination of ganciclovir has been developed and validated. These methods were based on the oxidation of the drug by different inorganic oxidants: ceric ammonium sulphate, potassium permanganate, ammonium molybdate, ammonium metavanadate, chromium trioxide, potassium dichromate, potassium iodate and potassium periodate. The oxidation reaction were performed in perchloric acid medium for ceric ammonium sulphate and in sulfuric acid medium for the other reagents. Different variables affecting the reaction conditions were carefully studied and optimized. Under the optimum conditions, linear relationships with good correlation coefficients (0.9987-0.9993) were found between the reading and the corresponding concentration of the drug in the ranges of 2.0-1500 μg.mL^{-1}. The limits of detection ranged from 0.26-18.25 μg mL^{-1}. The precision of the methods was satisfactory; the values of relative standard deviations did not exceed 2.0 %. The proposed methods were successfully applied to the analysis of ganciclovir in dosage forms with good accuracy and precisions; the label claim percentages ranged from 99.9–100.4 ± 0.62–1.05 %.**

KEY WORDS: Ganciclovir, Inorganic oxidants, Spectrophotometry, Dosage forms.

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