Determination of some antiemetic drugs through its native fluorescence or fluorescence quenching of cerrous ammonium sulphate

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Abstract

The manuscript describes two fluorimetric methods for the determination of some antiemetic drugs namely granisetron HCl, ondansetron HCl and tropisetron HCl, used in the management of nausea and vomiting induced by cytotoxic chemotherapy and radiotherapy. Granisetron HCl solution exhibits a native fluorescence, which can be applied for its determination at 365 nm upon excitation at 305 nm. The method was applied for the determination of granisetron HCl in drug substance, drug product as well as in presence of its acid induced degradation products. The quantum yield was calculated. The second proposed method is based on measuring the quenching effect induced by ondansetron HCl or tropisetron HCl on the fluorescence intensity of cerrous ammonium sulphate at ƛem 348 nm upon excitation at 250 nm in acidic medium. The analysis of quenching data showed that quenching of cerrous ammonium

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