Employing Compritol in a Mixed Matrix for Sustaining Chlorpheniramine Maleate Release: Kinetic Study

Mohamed A. Ibrahim, Ehab A. Fouad, Mahmoud El-Badry

Abstract:

An investigational study aimed for studying the effect of compritol ATO888 (compritol) on the release of chlorpheniramine maleate (CPM) from hydrophilic matrix (HPMC) was conducted. Matrix tablets were manufactured by direct compression using different compritol - HPMC blends. The release kinetics showed anomalous release mechanism. All the tested matrices containing compritol showed an increase in the release of CPM when compared with tablets contain HPMC only. The results revealed that controlling the speed of water soluble drug CPM release from a hydrophilic polymer HPMC can be obtained through designing a mixed hydrophilic lipophilic matrix using compritol. Compritol showed the ability to affect the water uptake of the matrix. Also, compritol was found to affect the relaxation of HPMC. For matrix containing 50% mixture of HPMC and compritol, the contribution of compritol in 17.5 to 25% of this part will result in a suitable release.

Published In:

Digest Journal of Nanomaterials and Biostructures, Vol. 8, No. 2, pp. 737-746