Abdul Hafeez, J Pharma Care Health Sys 2016, 3:2 (Suppl)
http://dx.doi.org/10.4172/2376-0419.C1.014

Cefpodoxime proxetil microsphere: Physicochemical characterization and enhanced *in vitro* release efficiency

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The objective of the present study was to optimize Cefpodoxime proxetil microsphere in order to achieve an extended retention in the upper GIT which may result in enhanced absorption and thereby improved bioavailability. Cefpodoxime proxetil microspheres were prepared using hydroxy propyl methyl and ethyl cellulose in different ratios taking into account emulsion solvent diffusion method. The formulations were characterized for various physicochemical studies and in vitro drug release mechanism. The morphology of the particle was visualized using photoelectric microscope adjusted with micrometer tools and scanning electron microscopy (SEM). The particle size was found to be in the range of 228.80-296.21 μm, percentage yield between 65.92-79.20%, drug entrapment efficiency 50.91-79.42% and buoyancy percentages 52.59-64.69%, respectively. The maximum release was achieved in formulation composition HPMCK15M: Ethylcellulose in the ratio of 0.5:0.25:0.75 with release of 70.45% with diffusion mechanism. Finally, it could be concluded that the Cefpodoxime proxetil microsphere accentuates the floating efficiency of Cefpodoxime proxetil and could be used as a carrier for effective floating delivery.

Biography

Abdul Hafeez has completed his MPharm in Pharmaceutics from Teerthankar Mahaveer University, India and he is pursuing his Doctoral studies from Glocal Unversity, Saharanpur in Pharmaceutics Department, Glocal School of Pharmacy. He has published more than 5 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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