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Multi-unit particulate system of Rabeprazole sodium

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Rabeprazole sodium is a standout amongst the best proton pump inhibitors (PPIs) utilized as a part of antiulcer treatment. Like most different PPIs, inferable from its corrosive labile nature, the medication is detailed as enteric-covered measurements frame utilizing Multi-Unit Particulate System (MUPS) innovation. Customary method for delivering postponed discharge multi particulate measurements types of PPIs require vast amounts of enteric polymer coatings. In the present review, keeping in mind the end goal to better assess the impact of polymeric covering on item execution, the pellet center structure and arrangement was kept steady. Before trials were started; preformulation studies were carried out by using some important parameters like bulk density, tapped density, angle of repose and Hausner's ratio. Standard graph of Rabeprazole was plotted and observed at 284 nm and r2 value was found to be 0.999 IR spectra analysis. In our study we formulated 10 different formulations and trials by using different percentages of excipients like Crospovidone, HPMC, enteric coting material as light MgO, Eudragit L30D and HPMC phthalate. F1 with 5% Crospovidone and 5% HPMC E5 as stable and found MUPS was undissolved in buffer media and found less solubility and concludes less dissolution rate. In F2 by increasing Crospovidone of 7.5% and 10% HPMC E5 results drug release was not satisfactory in buffer media. In F3 Crospovidone was 10% found good dissolve of core MUPS forward by increasing enteric coating for better acid resistance, F4 Eudragit L30D 15% drug release is 69.14%, F5 containing Eudragit L30D 20% drug release is increased to 72.72%, F6 containing Eudragit L30D 25% drug release increased to 77.33% and F7 Eudragit L30D 30% drug release is increased by 87.72%. By changing enteric polymer for less cost effective F8 with HPMC phthalate 5% shows better release of 94.02%, 94.18% in F9 and 95.79% in F10 respectively. The values of *in vitro* release were attempted to fit into various mathematical models, such as Zero order, First order, Higuchi matrix and Peppas model and it can concluded that optimized formula follows First order. Stability studies were carried out on the films of most satisfactory formulations as per ICH guidelines. The most satisfactory formulation stored in sealed aluminum foil. These were stored at 30±2 °C and 65±5% RH for 3 months. Films were evaluated for physical characteristics, drug content and *in vitro* drug release.

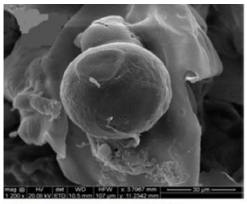

Figure. 01 SEM Photograph Depicting Rabeprazole sodium EC MUPS of 30µm

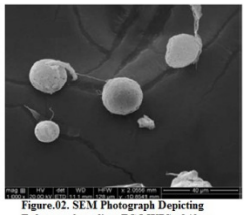

Figure.02. SEM Photograph Depicting Rabeprazole sodium EC MUPS of 40µm

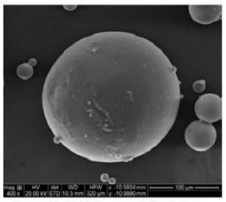

Figure.03. SEM Photograph Depicting Rabeprazole sodium ECMUPS of 100µ

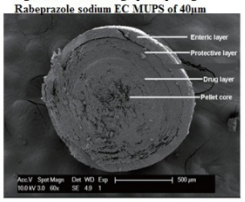

Figure.04. SEM Photograph DepictingRabeprazole sodium ECMUPS of 500µm

Biography

Gulam Irfani has completed his Master of Sciences of Pharmacy from the Rajiv Gandhi University of Health Sciences, India and worked at Spansules Formulations in Hyderabad, India. He has his expertise on various innovative drug delivery technologies. His main research work focuses on time and cost reduction on formulation and evaluation process for improving healthcare. He has built this research after years of experience in research, evaluation, teaching both in education and industry.

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