



ChemTech

## International Journal of ChemTech Research

CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.11 No.05, pp376-386,2018

# Formulation and Optimization of Sustained Release Tablets of Rosuvastatin Using HPMC K4M, HPMC K100M and Carrageenan

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**Abstract:** The objective of the present study was to develop once daily sustained release tablets of Rosuvastatin (40mg) by using HPMC K4M, HPMC K100M and natural gum like carrageenan. Various ratios of drug and polymer like 1:1, 1:2 and combination were selected for the study. The drug- excipient mixture was subjected to physico chemical studies, in vitro drug release, and kinetic studies. The physicochemical properties of tablets were found to be within limits. The in vitro release of Rosuvastatin tablets was studied in 900ml of 0.1N HCl for 2 h at  $37 \pm 0.5^\circ\text{C}$  at 50 rpm, and then release studies were conducted in pH 6.8 phosphate buffer for 20 h. The optimized formulation F10 contain HPMC K4M (20mg) , HPMC K100M (20mg) shows drug release up to 99.4% in 20h and follows first order release with non Fickian diffusion mechanism.

**Key words:** Matrix tablets, Rosuvastatin, sustained release, HPMC K4M, HPMC K100M, carrageenan.

International Journal of ChemTech Research, 2018,11(05): 376-386.

DOI= <http://dx.doi.org/10.20902/IJCTR.2018.110542>

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