Available online at **www.joac.info**

ISSN: 2278-1862

Journal of Applicable Chemistry

2018, 7 (6): 1644-1650

(International Peer Reviewed Journal)

Formulation and *In-vitro* Evaluation of Nifedipine Nanosuspensions

M. Haritha[1], G. Devala Rao[2*], V. Harini Chowdary[3] and Mandava Bhuvan Tej [4]

1. Department of Phamaceutical Sciences, Krishna University, Machilipatnam-521001, **INDIA**
2. KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada, **INDIA**
3. Department of Pharmaceutical Sciences, Acharya and B M Reddy College of Pharmacy, Bengaluru-560107, **INDIA**
4. Sri Ramachandra College of Pharmacy, Porur, Chennai, Tamilnadu-600 116, **INDIA**

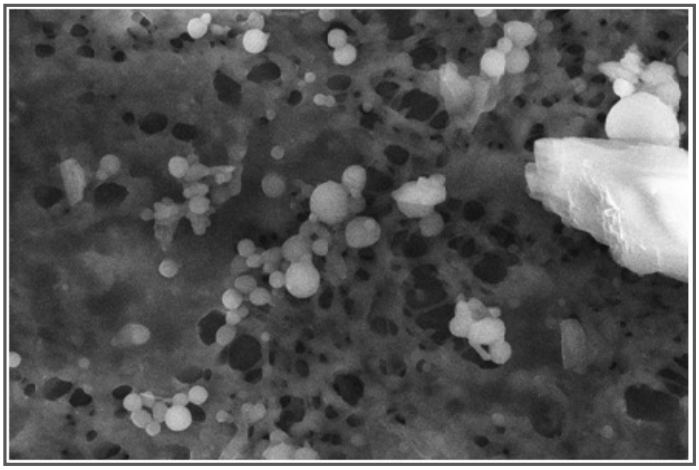
Email: medaharitha777@gmail.com

Accepted on 12th October, 2018

ABSTRACT

Nifedipine nanosuspensions were prepared by solvent evaporation method using various polymers such as SLS, Polaxomer, PVP-K30, urea and acetone. Optimized formulations of nanosuspension displayed zero order release kinetics and drug release. IR spectroscopic studies indicated that there are no drug-excipient interactions. NF8 is the best formulation which showed effective drug release of 99.75% within 30 min following zero order release kinetics. Thus nanosuspension can be a better alternative for the solubility and dissolution rate enhancement of nifedipine.

Graphical Abstract



SEM image of optimized nifedipine nanosuspension

Keywords: Nifedipine, nanosuspensions, SEM, dissolution studies.