International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.11 No.09, pp 290-297, 2018

# Formulation and Evaluation of Sustained Release Tablet of Ibuprofen

**Gadhave Jayant, Shinde Sachin, Gharge Varsha***

**Gourishankar Institute of Pharmaceutical Education & Research, Limb, Satara, Maharashtra, India-415015**

**Abstract :** In this study of Ibuprofen it is an (NSAIDs) non steroidal anti- inflammatory drug and used as analgesic & anti –inflammatory drug. It can be also used in the treatment of rheumatoid arthritis, osteoarthritis, and primary dysmenorrheal. Ibuprofen is absorbed rapidly, bound avidly to protein, but it has low aqueous solubility so it also lowers the dissolution profile of drug. To overcome this problem, various techniques are used, like solid dispersion, complexation, co-solvency, hydro trophy. nano-technology approach.The main aim of proposed work was to develop Ibuprofen tablets, sustained release dosage form, for the treatment inflammation and pain in the body. Ibuprofen is used to reduce fever and treatpain or inflammation caused by many conditions such as headache, toothache, back pain, arthritis, menstrual cramps, or minor injury. Sustained release formulation is the drug delivery system that designed to achieve a prolonged therapeutic effect by continuously releasing medication over an extended period of time after administration of single dose. The tablets were prepared by direct compression method using hydroxypropymethylcelluose (HPMC K4M), Avicel pH 102**,** magnesium stearate and talc. In the formulation HPMC K4M and magnesium stearate used in varying ratios. Tablets blends were evaluated for loose bilk density, tapped density, compressibility index and angle of repose shows satisfactory results. The compressed tablets were then evaluated for various physical tests like diameter, thickness, uniformity of weight, hardness, friability and drug content. The results of all these tests were found to be satisfactory. The in vitro dissolution study was carried out for 12 hours using paddle method in phosphate buffer (pH6.8) as dissolution media. Formulation F3 shows – of drug release at the end of 12 hours.

**Keywords :** Ibuprofen, ,Sustained Release, Dissolution Rate

**Gharge Varsha *et al*** /International Journal of ChemTech Research**,** 2018,11(09): 290-297.

**DOI= http://dx.doi.org/10.20902/IJCTR.2018.110935**

*****