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ABSTRACT BOOK

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Solid Dispersion Adsorbate for Improved Dissolution and Flow Properties of Efavirenz: Characterization Using Factorial Design

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Key Words: Solid dispersions, Dissolution rate, Efavirenz, Poorly water-soluble drug

Aim and Objectives: The aim of the present investigation was formulation and evaluation of solid dispersion adsorbate (SDA) technique was improved the dissolution and flow properties of poorly water soluble drug Efavirenz.

Methodology: Solid dispersions (SDs) of EFV were prepared by fusion method using PEG 6000 and Poloxamer188 using A 32 factorial design. SDA granules of EFV were studied for flow properties and characterized using differential scanning calorimetry, scanning electron microscopy, and X-ray diffraction.

Results and Discussion: The result indicates that tablets prepared from SDA granules showed almost four-fold increase in cumulative percentage drug release as compared to tablets prepared from plain lurasidone hydrochloride (LH). The value of dissolution efficiency was enhanced from 49.60% for plain tablets to 94.15% for SDA tablets.

Conclusion: It was concluded that solid dispersion adsorbate by using PEG 6000 and Poloxamer188 can improve dissolution rate of Efavirenz.

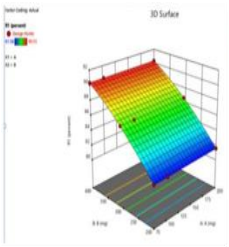

Fig.1:Effect of different adsorbent on t_{80}

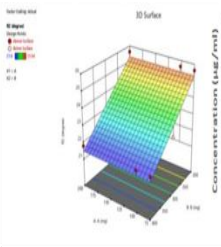

Fig.2: Response surface plot for angle of repose (Y_2)

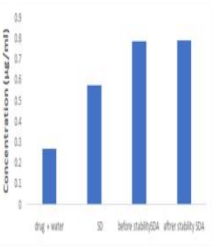

Fig.3 Solubility of SD and SDA tablets

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