SPHERICAL AGGLOMERATION OF TELMISARTAN - AN APPROACH TO IMPROVE PHYSICOCHEMICAL PROPERTIES

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(Received 06 April 2024) (Accepted 18 June 2024)

ABSTRACT

The study explains the preparation of spherical agglomerates (SA) of telmisartan (TLS), a BCS class II drug used to improve it's physicochemical and bulk properties. Drugs of this class could potentially exhibit dissolution rate limited absorption. TLS spherical agglomerates were designed using hydrophilic polymer (PVP K-30), dimethyl formamide (DMF), water and ethyl acetate (bridging liquid) by solvent change method and evaluated for micromeritic properties. The SA were characterized by particle size determination, FTIR, PXRD and SEM. The results of micromeritic studies indicated that SA showed improved flow properties due to their spherical shape and bigger size. Absence of strong interaction at molecular level and alteration in the crystal structure of TLS with modification in crystallinity was confirmed by FTIR and PXRD respectively. TLS solubility characteristics were improved by this approach.