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FORMULATION DEVELOPMENT AND EVALUATION OF CONTROLLED RELEASE TABLETS OF LAMOTRIGINE USING MIXED SOLVENCY CONCEPT

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In the present investigation, newly developed solid dispersion technology that precludes the use of organic solvent and also decreases the individual concentration of hydrotropic agents, simultaneously decreasing their toxic potential; was employed for preparing dispersions of lamotrigine. Prepared solid dispersions were evaluated for flow properties, XRD, DSC, SEM and were also compressed to form tablets. Dissolution studies of prepared tablets were carried out using USP Type II Apparatus. It was concluded that the concept of mixed solvency solid dispersion is novel, safe and cost-effective technique for enhancing the bioavailability of poorly water soluble drugs by dissolving drug in non-ionized form. The tremendous enhancement in solubility of lamotrigine is clear indication of its potential to be used in future for other poorly water soluble drugs in which low bioavailability is major concern.

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