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APPLICATION OF RESPONSE SURFACE METHODOLOGY IN FORMULATION OF LAMOTRIGINE CONVENTIONAL DOSAGE FORM

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ABSTRACT

The basic objective of the present study is the application of statistical design for Lamotrigine formulation. It is a technique useful to minimize the possible number of experiments to be performed and gives better result. It is also helpful to predict the possible number of errors that might occur during process. Here it involves application of SAS tools to estimate model. This study investigates utility of 2 factor, 3 level full factorial design and optimization process for solubility, dissolution of the drug. Amount of urea, Sodium salicylate, Ascorbic acid are considered as independent variables and Solubility as dependent variable (table1, 2). Amount of MCC and Amount of DCP (table3) are selected as independent variables where as disintegration time, % friability and Dissolution (T₉₀%) are considered as dependent variables respectively. The prepared tablets of Lamotrigine were evaluated for the above variables. The responses were analyzed using ANOVA and the individual factor response parameters were evaluated using F-test to conclude the reliability of the method used. Polynomial equation was generated for each response using MLRA.

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