



Dissolution Rate Enhancement of Fenofibrate Using Liquefied Tablet Technique. Part II: Evaluation of *In Vitro* Dissolution Profile Comparison Methods.

Amrit B. KARMARKAR *¹, Indrajeet D. GONJARI ¹, Avinash H. HOSMANI ²,
Pandurang N. DHABALE ¹& Satish B. BHISE ¹

¹ Govt. College of Pharmacy, Karad – 415124, Dist. Satara, MS, India.

² Govt. College of Pharmacy, Amaravati, MS, India.

SUMMARY. The present work deals with the comparison of *in vitro* dissolution profiles of fenofibrate liquefied tablet formulations with those of marketed fenofibrate tablets, and the application of statistical methods to evaluate each method for its usefulness. The methods used to study dissolution profile comparison include Model independent method (Similarity factor, f_2); Model dependent methods (Zero order, First order, Hixson-Crowell, Matrix, Peppas, Higuchi models) and statistical methods based on ANOVA. Model independent method was found to be easier and simple to interpret. The f_2 value relates closeness of dissolution profiles. Dissolution profile followed Peppas model as “best fit” model. The application and evaluation of model dependent methods are more complicated. These methods give acceptable model approach which is indication of true relationship between percent drug release and time variables, including statistical assumptions. Statistical approach is very simple and is more discriminative of dissolution profiles. The liquefied formulation of fenofibrate serves to be an effective way to enhance dissolution rate of fenofibrate.

KEY WORDS: ANOVA, Dissolution, Fenofibrate, Liquefied Tablets.

* Author to whom correspondence should be addressed. Email: abkarmarkar@gmail.com