

عنوان مقاله:

Evaluation of the effect of physical variables on in vitro release of diclofenac pellets using Box-Behnken design

محل انتشار:

مجله علوم پایه پزشکی ایران، دوره 18، شماره 7 (سال: 1394)

تعداد صفحات اصل مقاله: 5

نویسندگان:

Reza Enayatifard - *Pharmaceutical Sciences Research Center, Mazandaran University of Medical Sciences, Sari, Iran*

Aiding Mahjoob - *Department of Pharmaceutics, Faculty of Pharmacy, Mazandaran University of Medical Sciences, Sari, Iran*

Pouneh Ebrahimi - *Department of Chemistry, Faculty of Basic Sciences, Golestan University, Gorgan, Iran*

Pedram Ebrahimnejad - *Pharmaceutical Sciences Research Center, Mazandaran University of Medical Sciences, Sari, Iran*

خلاصه مقاله:

Objective(s): A Box-Behnken design was used for evaluation of Eudragit coated diclofenac pellets. The purpose of this work was to optimize diclofenac pellets to improve the physicochemical properties using experimental design. Materials and Methods: Diclofenac was loaded onto the non-pareil beads using conventional coating pan. Film coating of pellets was done at the same pan. The effect of plasticizer level, curing temperature and curing time was determined on the release of diclofenac from pellets coated with polymethacrylates. Results: Increasing the plasticizer in the coating formula led to decrease in drug release and increasing the curing temperature and time resulted in higher drug release. The optimization process generated an optimum of ۳۵% drug release at ۳ hr. The level of plasticizer concentration, curing temperature and time were ۲۰% w/w, ۵۵ °C and ۲۴ hr, respectively. Conclusion: This study showed that by controlling the physical variables optimum drug release were obtained.

کلمات کلیدی:

Diclofenac sodium, Eudragit, optimization, Pellet, Plasticizer

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1297083>

