

INFLUENCE OF EXCIPIENTS ON DRUG RELEASE FROM THE MEDICAL FORMS

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Introduction. Excipients applied when creating new and improving existing drugs in technology of drugs. In the last decade range of auxiliary substances have been increased. Natural and synthetic compound are widely are used in the manufacture of medicines in deferens dosage forms with appropriate physical, chemical and therapeutic properties. Especially, excipients have a significant impact on the pharmacological effect of drugs by released them from soft dosage forms. Particularly influence of auxiliary substance significantly on pharmacodynamics and pharmacokinetics of drugs in such dosage forms as ointment. Variety of ointment bases contributes to the need to study their impact on the pharmacological effects of drugs.

Aim. The aim of this work was to study the effect of different ointment bases on the release of sulfonamides from ointments with concentration of 10% which were made in various ointment bases.

Materials and methods. Experienced ointments samples were produced in the laboratory by the general rules of suspension ointments technologies. Most of sulfonamides are poorly soluble in water, so they are introduced in dermatological ointments according to the type of suspensions. The drug substance was triturated in a mortar by Derjaguin rule with half the amount of molten basis, as its amount was > 5%. Total 5 ointments samples were manufactured with vaseline, petrolatum, lanolin, petrolatum with dimethylsulfoxide, emulsion bases and also with the hydrophilic bases (methylcellulose and polyethylene oxide). Degree of release of active substance from the test samples of ointments was determined by «in vitro» method. For this purpose, the method of «agar plates» and the method «dialysis» was used. The amount of released active substance was adjusted by rapid method for the diazotization reaction.

Results and discussion. They showed that the used excipients have a significant impact on the rate and extent of release of the sulfonamides from ointments. The data obtained at various ointment bases differ.

Conclusions. A variety of properties of auxiliaries and their wide range obliges their conversion attempts into universal which used with any drug substance. Apathetic substances do not exist. Excipients are essential variable pharmaceutical factor, the study of which is a binding in the development of composition and technology of various medicinal preparations. Carrying of biopharmaceutical research is mandatory requirements, while creating soft medicinal forms. The results of this work used in conducting of the educational process in Biopharmaceutics.