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DEVELOPMENT FEATURES OF THE COMPOSITION AND TECHNOLOGY OF SUPPOSITORIES WITH BLACK CUMIN OIL

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Actuality. One of the most important problems of medicine is prevention and treatment of diseases of the rectum, hemorrhoids. Today, the therapeutic means of therapy for this disease are aimed at eliminating symptoms, for example, the use of ointments and suppositories, which include anesthetics; pararectal novocaine blocks, tampons with oil, etc. The surgical way of treatment is very unpopular, because after surgical interventions, patients, as a rule, lose their ability to work for quite a long time.

The range of drugs used in proctology and currently produced by domestic and foreign industry does not meet the needs of modern practical medicine[1,3],.

Thus, the creation of domestic drugs for use in proctology is an actual area of pharmacy. A promising domestic biologically active substance for the creation of a new rectal medicinal product is black cummin oil, which has anti-inflammatory, reparative, antimicrobial and capillary-strengthening effects.

The purpose of the work. The purpose of the research was to develop a scientifically based composition and manufacturing technology of a rectal dosage form in the form of suppositories for proctology based on the study of their physicochemical, biopharmaceutical, microbiological, rheological and pharmacotechnological properties.

Materials and methods: Organoleptic, technological, physico-chemical research methods were used to solve the problems, which allow to objectively and fully evaluate the quality indicators of the developed rectal dosage form in the form of rectal suppositories on the basis of experimentally obtained and statistically processed results.

The results.

Suppository bases and surfactants, which are widely used in the industrial and pharmaceutical production of soft dosage forms, were studied as carriers for the rectal dosage form with Black Cummin oil. Suppositories were prepared by the pouring method using The average weight of suppositories on lipophilic bases was 1.3 g, and on polyethylene oxide - 1.6 g. The concentration of surface-active substances in all experiments was 2.5% of the weight of suppositories, the oil content was 0.6 g in each suppository. The study was conducted according to the plan of two-factor analysis of variance with repeated observations[2].

The degree of destruction of the structure of the studied systems in the process of irreversible deformations was estimated by the value of "mechanical stability", which was calculated as the ratio of the strength limit of the system structure before destruction to the value of the strength limit of the structure after destruction[4].

The rheogram of the flow of the suppository mass with Black cumin oil at body temperature is presented in Fig. 1.

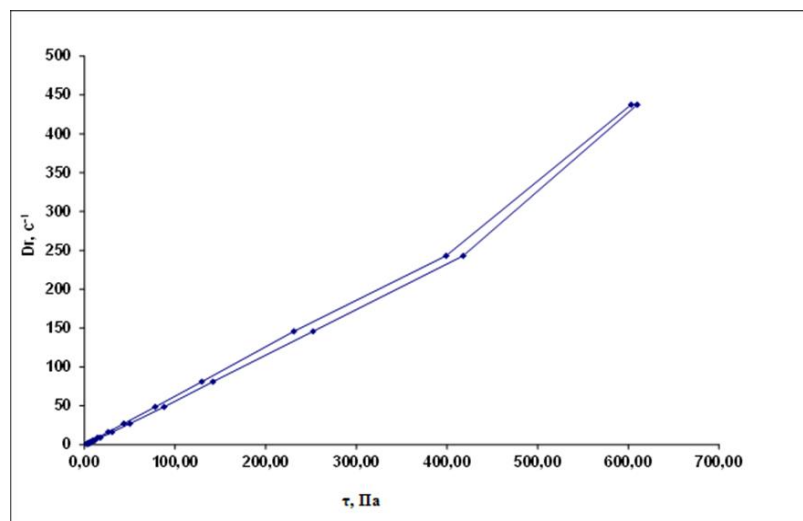


Fig. 1. Rheogram of developed suppositories

Analysis of the rheogram shows that a so-called "hysteresis loop" is formed by the ascending and descending branches, which convincingly proves the presence of coagulation bonds in the structure of the suppository mass, which are restored after destruction.

Conclusions. The identified thixotropic properties of the suppository mass with Black cumin oil at body temperature indicate its uniform distribution in the suppository composition.

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DEVELOPMENT FEATURES OF THE OLIGOGEL WITH OXYCOCI MICROCARPI AND BETULAE PENDULAE EXTRACTS

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Actuality. The water-lipid mantle is a film on the stratum corneum epidermis. Often, the water-lipid mantle is called a "line first contact" or "first skin barrier".