Pharmaceutical availability of capsules of sedative profile

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Introduction: Scientific researches of medicinal flora are being conducted at S.D. Asfendiyarov Kazakh National Medical University to create Phytosubstances corresponding to pharmacopoeia requirements for pharmaceutical industry of the Republic of Kazakhstan. Optimal technology for obtaining liquid hydrophilic extract of *Leonurus turkestanicus* by maceration and thick lipophilic extract of *Valeriana turkestanica* by carbon dioxide extraction have been developed, their standardization carried out. Pharmaceutical development of capsules under the code name "Sedofit" from the above mentioned substances has been implemented in three laboratory series. The effect of solubility of the obtained Phytosubstances on disintegration and release of active substances from the capsules has been experimentally studied. It has been revealed that introduction of disintegrants and diluents into the mass for encapsulating increases the solubility of the lipophilic extract of *Valeriana turkestanica*.

Aim: The aim is to study the kinetics of release of active substances from the capsules under the code name Sedofit in vitro.

Materials & Methods: The study was conducted on the device of the type “rotating basket” DT 600 H (Erweka, Germany) in the two dissolution media: 0.1 M hydrochloric acid and purified water. The volume of dissolution medium 500 ml, temperature 37±0.5 °C, the rotation speed of the basket 100 rev/min. Sampling was carried out every 5 minutes for 60 minutes. Validated methods and proven and efficient equipment were used in the experiment: A spectrophotometer SF-2000 (CJSC "SPECTR", Russia), an analytical balance (Shimadzu, Japan), pH meter ANION 7000 (LTD "Infraspak-analyte", Russia).

Results: It is found that the process of release of active substances from gelatin capsules in vitro is described with a kinetic curve and comprises two steps: breaking of the capsule shell integrity and intense release of biologically active substances. The time of complete release of active substances does not exceed 45 minutes; Q (dissolution rate) was 92±4% for each dosage unit.

Conclusions: The kinetics of release of BAS from the capsules under the code name Sedofit showed 92% for a period not exceeding 45 minutes, which corresponds to the test Dissolution of the State Pharmacopoeia of the Republic of Kazakhstan and the European Pharmacopoeia. The results obtained confirm the high availability of pharmaceutical capsules Sedofit.

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