

## CHOICE OF EXCIPIENTS FOR CAPSULES WITH ECHINACEA EXTRACT AND CRATAEGI EXTRACT

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**Introduction.** Secondary insufficiency of cellular and humoral immunity in patients with chronic heart failure occurred against a background of coronary heart disease and complicated community-acquired pneumonia hypostatic requires recovering of altered immune parameters by including in the therapy immunomodulators. Herbal medicines are becoming more popular throughout the world. The echinacea extract may be used to reduce symptoms, such as cough, pharyngitis (sore throat) and fever, and shorten the duration of the common flu and cold. Echinacea is also recommended to help the body fight infections and help boost the immune system. Crataegi (hawthorn) extract have a wide range of pharmacological actions on the cardiovascular system. Preparations of Crataegus are used traditionally in minor forms of heart failure, coronary heart disease and cardiac arrhythmia. So the creation of new medicines with extracts combination in oral dosage form as hard gelatinous capsules is topical.

**Aim.** The choice of excipients for the development of hard gelatins capsules with echinacea dry extract and crataegi dry extract was the aim of this work.

**Materials and methods.** The extracts, excipients, mixtures for encapsulation and prepared capsules on their basis were research subject. The pharmacotechnological tests which described in State pharmacopoeia of Ukraine were used for researches.

**Results and discussion.** The extracts are polydisperse powders with a predominance of small fraction fines. The particles of two extracts have a rough surface, that stipulates a significant friction force between particles and bad flowability. The bulk density of the active substances mixture was small (0.35g/ml). The results of research have been shown the improvement of pharmacotechnological properties of extracts bland with the use of lactose, light magnesium carbonate and talc. Fifty (50) capsules each with a nominal weight of 250 mg were prepared from powders consisting of Crataegi extract (40.00% w/w), Echinacea extract (20.00% w/w), lactose (33.00% w/w), light magnesium carbonate (5.0% w/w), and talc (2% w/w). Extracts were thoroughly mixed together and with magnesium carbonate, after which lactose was added. The mixture was lubricated with talc and filled into size 0 hard gelatin capsules shells using a manual capsule filling machine.

**Conclusions.** Based on pharmacotechnological studies the excipients for the hard gelatins capsules with echinacea and crataegi dry extracts were selected.