

INVESTIGATION OF PHYSICOCHEMICAL AND TECHNOLOGICAL PROPERTIES OF DIHYDROQUERCETIN

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Introduction. In the pathogenesis of vascular diseases, an important role is played by changes in the microcirculation of the blood. Therefore it's extremely important to search for new drugs that help improve microcirculation. Such medications include drugs based on dihydroquercetin - bioflavonoid, obtained from Siberian larch wood. It exerts a stimulating effect on the tissue bloodstream and stabilizes the barrier function of microvessels. Dihydroquercetin also reduces the permeability of the capillary walls and thereby helps to reduce congestion in microcirculatory way.

Objective. The research of the physicochemical and technological properties of Dihydroquercetin

Materials. The substance of Dihydroquercetin was used as a research object.

Methods. Physicochemical and technological methods of investigation were used to select the auxiliary substances.

Results. In the course of studying the physicochemical properties, it was found that Dihydroquercetin is a white crystalline powder, odorless, with a weak bitter taste. The results of microscopic analysis indicate that the particles of Dihydroquercetin are in the form of rods with a linear size of 0.2-1 / μm . The form factor is 0.1, which allows to assign Dihydroquercetin to powders with an anisodiametric form. The melting point is 220 ± 2 ° C, the residual humidity is 8.61%. A study of the solubility of Dihydroquercetin in water showed that it depends on temperature. The results of the study of technological characteristics indicate that the flowability of the powder is very low (0.52 g / s), the angle of the natural slope is 47.6 °, the bulk density 0.23 g / ml, the compression ratio is 0.73 g / cm. The study of moisture absorption at 40 and 100 relative humidity showed that the substance is hygroscopic. The study of the fractional composition showed that the fraction with a size of 0.5 to 1.0 mm predominates in the powder.

Conclusions. Dihydroquercetin can be considered as an effective treatment for vascular diseases. The results of the study of physicochemical and technical properties indicate that the powder has unsatisfactory technological characteristics and it is expedient to use auxiliary substances from the group of binder and fractional ones in the composition of tablets.