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ივანე თარხნიშვილის სახელობის სტუდენტთა
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ABSTRACT BOOK

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Study on the method of adding the complex extract into solid dosage form

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Introduction

Nowadays allergy became a global problem for all humanity. According to WHO about 40% of the world's population suffers from the allergic diseases. Besides, there is a clear upward trend in the quantity of patients affected by this pathology in recent years.

According to the official dates there are many synthetic drugs registered in Ukraine pharmaceutical market, which can be used for allergy treatment. But there are no plant-based anti-allergic drugs. Taking into account the importance of allergy treatment and increasing popularity of herbal drugs the aim of our work was to obtain a new multicomponent plant extract and to rationale a method of its adding into solid dosage form.

Material and methods

The object of study was a complex extract with anti-allergic activity. Neusilin S2, Neusilin UFL, Fugicalin SG, Syloid 244 FP, β-cyclodextrin, Microcrystalline cellulose (MCC) 101 and MCC 200 were tested as carriers. During the experiment organoleptic and technological properties were researched.

Results

Fluid complex extract was obtained by percolation using 40% ethanol with further filtration and evaporation of the extractive solvent at 60°C up to 38% of humidity. In order to turn obtained soft extract into solid substance with good technological properties it was necessary to define appropriate carrier. Based on the organoleptic analysis of the obtained mixtures of soft extract with various adsorption substances, MCC 200 was chosen as a final carrier. However, according to microscopic analysis of this blend the inhomogeneous anisodiametric particles with uneven edges were observed, which could provide poor technological properties. In addition, this method of preparation brought significant losses of extract because of its consistency.

So we've decided to preliminary dissolve the soft extract in 40% ethanol up to 20% of dry residue and mix it with MCC 200 in the ratio 1 : 0.75. After drying, the mass was also subjected to microscopic analysis, which revealed homogeneous particles of isodiametric shape with more even surface. As the result of the technological properties study, the good bulk and flow properties of blend were established.

Conclusion

The blend obtained by mixing MCC 200 with the extract in liquid form showed a sufficiently high technological potential for administration into solid dosage form, which requires further study.