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„SCIENCE AND PRACTICE” 2018

*Dedicated to the 100th anniversary
of independent Lithuania's pharmacy*

BOOK OF ABSTRACTS



November 9, 2018
Kaunas, Lithuania

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ABSTRACT BOOK

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The 9th international conference of Pharmacy Science and practice is organized by Lithuanian University of Health Sciences (LUHS) Faculty of Pharmacy and Lithuanian University of Health Sciences Faculty of Pharmacy Alumni in collaboration with Lietuvos Farmacijos sąjunga, Lietuvos vaistinininkų sąjunga ir Studentų farmacininkų draugija

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Justification for choosing a dosage form of a combined original pharmaceutical preparation

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For the purpose of developing a new drug used for alcohol dependence a research on choosing a solid dosage form that would meet the pharmacopeia requirements has been carried out.

The composition of the required medication includes the combination of pharmaceutical substances (glutamic acid, acetylsalicylic acid, ascorbic acid, thiocetic acid and glycine) in large doses, so the choice of the dosage form is very important. The combination of these components is proposed as effervescent powder for the preparation of an oral solution in single-dose sachets.

Effervescent powder, as a dosage form, is widely used in medical practice, since it has several advantages: relative simplicity of the manufacturing process; it may contain substances both of organic and inorganic nature; sufficiently high pharmacological activity, due to the high dispersion of medicinal products; dosing accuracy; great storage stability.

Anhydrous citric acid and sodium bicarbonate are very often used as auxiliary substances in the composition of effervescent powders. The release of carbon dioxide on dissolving effervescent powders contributes to masking the unpleasant taste of the substances; improving the absorption of the medicinal products. When preparing a solution, acceleration of the process of dissolution or dispersion of pharmaceutical substances is achieved due to the reaction between alkali metal bicarbonates and dry organic acids. The carbon dioxide, released during their dissolution, also increases the secretory and motor activity of the gastrointestinal tract, increasing the bioavailability of pharmaceutical substances. The required amount of anhydrous citric acid and sodium bicarbonate has been calculated using chemical neutralization data from the interaction of these substances during the preparation of the oral solution. The technological process of obtaining the dosage form chosen is cost-effective and includes several stages: preparation of raw materials (grinding, sifting and weighing), mixing the components in the mixer for 30 minutes and packing in sachet bags from foil paper (4 g of sachet).

During stability studies dosage form developed positive results upon accelerated (for 6 months at a temperature of 40 ± 2 °C and a relative humidity of 75 ± 5 %) and long-term storage (for 2 years at a temperature of 25 ± 2 °C and relative humidity 60 ± 5 %) have been obtained. The quality of the effervescent powder for the preparation of oral solution meets all the requirements of regulatory analytical documentation.

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