



BE PROGRESS²

IN INTERNATIONAL CONFERENCE
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THE CHOICE OF EXCIPIENTS IN THE COMPOSITION OF A MEDICATED CHEWING GUM.

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Introduction: Medicated chewing gum (MCG) is a rational dosage form for the treatment of dental diseases. MCG, except active pharmaceutical ingredients (APIs), contains chewing basis and excipients, choice of which was the aim of our work.

Methods: As object of study was chosen MCG with lysozyme hydrochloride and papain and as a gum base –HiG-01 (Cafosa, Spain). We used the following groups of adjuvants: sweetening agents, flavoring agents, glidants, lubricants, humidifiers, binders. During the development of the composition we researched physicochemical (crystal size and shape, moisture content) and technological parameters (bulk density, flowability).

Results: The results of physico-chemical and technological research of APIs and there mixture with the gum base have established the need of granulation for tableting mass. For this purpose as humidifiers we used a solution of PVP 5% and ethanol 20%. In appearance of the obtained granules and optimal technological properties as binder component was selected ethanol 20%. To enter the liquid flavoring oil Melon in the MCG composition necessary to use moisture-absorbing agents that make it easy to transform liquid APIs in powder with good fluidity. For this purpose were used Aeros 380, Syloid® 244FP, Neusilin®, which also play a role of glidant in the manufacture of solid dosage forms. According to the results of the moisture-absorbing capacity of adsorbents and fluidity research was obtained that the best results had a mixture with Syloid® 244FP at a concentration of 1.5%. To determine the optimal flavoring agent were used xylitol and sorbitol. According to the results we selected xylitol in an amount of 0.3%, which also has anticaries effect. As anti-friction substance was selected magnesium stearate in an amount of 1%.

Conclusions: All things consider, on the basis of physicochemical and pharmacological and technological research was developed optimal composition of medicated chewing gum for use in the dental practice.

Keywords: Dental diseases, medicated chewing gum, excipients, physico-chemical and technological researches.