INTERNATIONAL E-CONFERENCE CONTEMPORARY PHARMACY: ISSUES, CHALLENGES AND EXPECTATIONS

23rd OF OCTOBER 2020, KAUNAS

ABSTRACT BOOK

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Language of abstracts was not corrected.

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SCIENTIFIC SECTION

INTERNATIONAL E-CONFERENCE CONTEMPORARY PHARMACY: ISSUES, CHALLENGES AND EXPECTATIONS

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Timetable

9.30-9.40	**Welcome Speeches** Prof. Dr. Jurga Bernatonienė Head of Drug Technology and Social Pharmacy, Lithuanian University of Health Sciences Assoc. Prof. Dr. Giedrė Kasparavičienė conference coordinator
9.45-11:50	**Students Section** Moderators: Gabrielė Vilkickytė and Jurga Andrėja Kazlauskaitė
12:00-12:35	**PhD Students Section** Moderators: Lect. Dr. Gabrielė Balčiūnaitė-Murzienė and Lect. Dr. Agnė Mazurkevičiūtė
12:45-14:30	**Scientist Section** Moderators: Prof. Dr. Lina Raudonė and Assoc. Prof. Dr. Giedrė Kasparavičienė
	Closing remarks

The list of rewards will be announced in the Teams class environment and e-mail. Conference certificates will be sent personally by e-mail.

Place: Microsoft Team virtual meeting room

Conducting postcompressional tests to evaluate the quality of compressed medicated chewing gum for dental use

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Introduction: Medicated chewing gum (MCG) is one of the most promising drug delivery system for the treatment of various dental diseases, which provides high therapeutic level of the active substance in the saliva. One of the way to obtain MCG is a compression method, which facilitates and expands the possibilities of manufacturing this dosage form at pharmaceutical enterprises using ordinary tablet machines. The aim of this study was to evaluate the effect of compression force applied during production of MCG with lysozyme hydrochloride and ascorbic acid based on the chewing composition HiG PWD 01 on technological, textural and biopharmaceutical parameters.

Materials and methods: MCG was obtained with a compression force of 5, 10 and 15 kN. The hardness of the gums was determined according to the requirements of Ph.Eur. 9.0 for their friability (chapter 2.9.7), resistance to crushing (chapter 2.9.8) and texture profile. Evaluation of the release profile of active pharmaceutical ingredients (APIs) from chewing gums was performed *in vitro* according to Ph.Eur. 9.0 chapter 2.9.25 "Dissolution test for medicated chewing gums" using a special device that simulates the chewing process (Apparatus B). Quantitative content of lysozyme hydrochloride was determined spectrophotometrically, ascorbic acid – by redox-based iodometric titration.

Results: According to the results of technological and texture research, there is no need to apply high compression force for the process of MCG manufacturing from the point of view of consumer characteristics, for it will primarily affect the sensory sensations at their use. The compression force also has virtually no effect on the release of lysozyme hydrochloride and ascorbic acid from the MCG. The composition of the compressed gums was shown good release profiles – more than 90 % of the APIs were released after "chewing" for 10 minutes.

Conclusions: It was established that the optimal compression force of the studied MCG was 5 kN, which was ensured the production of a high quality product according to the all observed indicators.

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