Table 1

Results of quality testing of the experimental sample according to the State Pharmacopoeia of Ukraine (2nd edition)

№	Parameter	Result
1	appearance	white-yellowish suppositories with no specific odour
2	uniformity of texture	no inclusions presented on the split, no axial air cavity or indentation found inside
3	uniformity of mass (g)	3.92±0.02 (95% CI 3.89-3.95)
4	melting point (^{o}C)	35.5±0.03 (95% CI 35.46-35.54)
5	resistance to destruction (kg)	3.00±0.01 (95% CI 2.98-3.01)
6	total deformation time (min)	10.32±0.18 (95% CI 10.1-10.54)

*n=5, P±95%

EXPERIMENTAL SUBSTANTIATION OF QUALITATIVE AND QUANTITATIVE COMPOSITION OF EXCIPIENTS IN IMBITAB TABLETS

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Introduction. According to the WHO, diabetes mellitus (DM) is a complex medical and social problem in many countries, as the number of people with diabetes on the planet exceeds 366 million people and is projected to increase further. Among the registered cases of diabetes in Ukraine, approximately 90-95% are patients with type 2 diabetes. Diabetes is also an important problem for the Middle East, including Jordan. According to statistics from the Jordanian Society for the Care of Diabetes, the number of patients officially diagnosed with type 2 diabetes is 23% of the population, equivalent to two million people.

One of the alternative methods of treating diabetes is phytotherapy, because phytopreparations are low-toxic and do not cause side effects. They can be used alone or in combination with diet therapy, traditional drugs and insulin, thereby achieving compensation of the disease, and in some cases, reducing the dosage of insulin and other synthetic drugs.

Of particular interest among many plants is Zingiber officinale, which has a rich chemical composition and exhibits a wide range of pharmacological action, including sugar-lowering, which we have proven on the basis of previous pharmacological studies.

The analysis of the range of antidiabetic medicines in the pharmaceutical market of Ukraine and Jordan has indicated the absence of antidiabetic drugs based on ginger, which confirmed the prospects and feasibility of creating a medicinal product based on it.

The aim of the work – experimental substantiation of qualitative and quantitative composition of excipients of tablets with dry extract of Zingiber officinale using the method of mathematical planning of the experiment.

Materials and methods. The objects of the study were dry ginger extract, diluent - Galen IQ 721, which was selected on the basis of previous studies and excipients of three technological groups: dry binders (MCC 112, Polyplasdone s630 and Kollidon K30), moisture regulators (Syloid

244 FP, Neusilin UFL and Aerosil) and lubricants (calcium stearate, Compritol 888 and sodium stearyl fumarate).

The tablet mass was prepared by mixing 0.3 g of DZOE per tablet with 0.165 g of the diluent and excipients from each group.

The effect of excipients on parameters such as bulk density, tapped density and Carr index of tablet mass, as well as disintegration, hardness and friability of the obtained tablets were studied.

Mathematical methods used to process the experimental data included: mathematical planning of the experiment, analysis of variance, regression analysis and methods based on the theory of vector optimization.

Results and discussion.. Based on the analysis of variance, the optimal excipients in the composition of tablets with ginger extract were selected: from the group of binders - Kollidon K30, as a moisture regulator - Neusilin UFL 2 and lubricant - calcium stearate.

Using a methodology based on the theory of multi-objective optimization, the optimal amounts of selected excipients were established, namely: Kollidon K30 - 3.5%, Neusilin UFL 2 - 1%, calcium stearate - 1%, which provided the necessary pharmacological indicators in accordance with the SPU requirements to tablets with dry ginger extract.

Conclusions. Thus, based on the method of mathematical planning and regression analysis, the optimal composition of tablets with dry extract of medicinal ginger under the conditional name "Imbitab" has been substantiated.

DEVELOPMENT OF CREAM FOR CORRECTION OF SEBOREA

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Introduction. Seborrhea or seborrheic dermatitis - a pathological process of chronic course, characterized by dysfunction of the sebaceous glands. Under such conditions, there is excessive production of sebaceous secretion, which is a favorable condition for fungal skin lesions (reproduction of pathogenic fungi). If the dysfunction of the sebaceous glands is to reduce the production of sebaceous secretion, there is a decrease in the protective mechanisms of the skin, which develops an inflammatory process. In both cases, seborrhea of the head is accompanied by extremely unpleasant symptoms and significantly reduces the quality of life. Widespread and steady increase in morbidity determines different approaches to treatment, the main purpose of which is to achieve long-term positive results. Seborrheic dermatitis is a serious disease of the scalp. The scalp is intensely flaky, the person is constantly bothered by itching, there is a need for frequent washing of the head to avoid this active peeling. Inflammation can join these displays. Treatment and prevention of seborrheic dermatitis is one of the most pressing problems of dermatology and cosmetology. The urgency of this problem is caused, first of all, by the prevalence and constant increase in the incidence of this nosology, as well as the difficulty of choosing an effective correction with a long-term positive result.

Now on the world market there are sufficient methods of seborrhea of the face and scalp, also use special cosmetics that contain complexes of substances.

After analyzing the market of cosmetics and medicines for skin care with seborrhea of the face and scalp, it was found a small number of tools (mostly from foreign manufacturers) that can combat this problem. Thus, we can conclude that the development of a cream for the treatment of