

treatment of severe burn injuries in the 1920s significantly reduced mortality rates. During World War I, tannic acid dressings were prescribed to treat "burns, whether caused by incendiary bombs, mustard gas, or lewisite. After the war this use was abandoned due to the development of more modern treatment regimens.

Tannic acid is still used in pharmaceutical applications to produce albumin tannate which is used as an antidiarrheal agent. Tannic acid is also used to produce tannate salts of certain antihistamine and antitussive products to impart increased stability or slow release properties to the active pharmaceutical ingredient. Further to this, tannic acid is the principle but perhaps minimally effective ingredient in antiallergen sprays.

Tannins have also been reported to exert many physiological effects, such as to accelerate blood clotting, reduce blood pressure, decrease the serum lipid level, produce liver necrosis, and modulate immunoresponses.

**Conclusion.** The results of studies indicate the possibility of increasing the effectiveness of local drug treatment by creating new ointments on hydrophilic bases, which have a multidirectional effect on the main pathogenetic factors of the wound process with tanin.

## STUDIES ON THE SUBSTANTIATION OF THE COMPOSITION OF OROMUCOSAL DRUG WITH PARACETAMOL AND ASCORBIC ACID

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**Introduction.** Oromucosal drugs combine a large group of drugs that, in different aggregate conditions, are introduced into the mouth or throat to detect local or systemic action.

Recently, the range of such oromucosal medicines such as pastilles and lozenges has been actively expanding. Pastilles and lozenges are solid, single-dose preparations for sucking or chewing, usually for local action in the mouth or throat, containing one or more active ingredients in a sweet flavored basis, intended for slow dissolution or decay in the mouth.

Pastilles and lozenges have become particularly popular among the pediatric population, due to their high compliance, pleasing organoleptic characteristics and easiness of use.

**Aim.** In order to expand the range of oromucosal medicines of domestic production for use in pediatric practice, we conducted studies on the development of pastilles with paracetamol and ascorbic acid.

**Materials and methods.** The subjects of the study were substances (paracetamol, ascorbic acid, fructose, sorbitol, citric acid, glycerol, gelatin) and pastilles samples based on them. The selected ingredients meet the requirements of the State Pharmacopoeia of Ukraine. The quality of the samples obtained was evaluated by organoleptic parameters.

**Results and discussion.** Doses of active substances (paracetamol and ascorbic acid) were established based on the doses of equivalent medicines already present on the Ukrainian market. Model compositions of pastilles samples are given in table 1.

**Table 1. Samples of pastilles with paracetamol and ascorbic acid**

Ingredient	Quantity, mass. %			
	Sample 1	Sample 2	Sample 3	Sample 4
1	2	3	4	5
Paracetamol	2.3	2.3	2.3	2.3
Ascorbic acid	0.1	0.1	0.1	0.1
Fructose	18.4	-	9.2	9.2
Sorbitol	-	18.4	9.2	9.2
Citric acid	0.7	0.7	0.7	0.7

1	2	3	4	5
Purified water	26.0	26.0	27.1	27.5
Glycerol	44.0	43.5	42.2	41.5
Gelatin	8.3	8.8	9.0	9.3
Gel food colorant (green)	0.1	0.1	0.1	0.1
Fruit flavoring (mattresses)	0.1	0.1	0.1	0.1
Total:	100.0	100.0	100.0	100.0

The lozenges were prepared using the following technology: gelatin was poured with the calculated amount of purified water and left to swell for 30-40 minutes. Sorbitol, ascorbic acid and fructose are sequentially ground in the mortar. The resulting powder mixture is dissolved in a minimum amount of purified water and mixed with glycerol. Paracetamol is administered by type of suspension: firstly, it is ground in the dry state and then by Deriagin's rule with part of the mixture of substances with glycerol, and then mixed with the whole mass of the mixture of substances and glycerol. Flavor and colorant are added. Gelatin is melted in a water bath and concentrate is added. The mixture is stirred until homogeneous condition, poured into molds (fig. 1) and placed in a refrigerator for freezing.



Fig. 1. Mold filled with pastilles mass

The obtained samples of pastilles are green, opaque, with a pleasant aroma of mattress. Sample 1 has an unsatisfactory consistency, indicating the insufficient quantity of gel forming agent. Samples 2 and 3 have the proper consistency, do not stick and have no tears. Sample 4 contains particles of gelatin, indicating its excess. Thus, the samples 2 and 3 meet the requirements for the appearance and consistency of the finished pastilles.

In terms of taste, the worst results are in sample 2 (has a bitter taste) and 1 (slightly sweet); samples 3 and 4 have a pleasant sweet taste.

**Conclusions.** Based on the studies of appearance, the consistency of the finished product and taste characteristics, it was found that only pastilles according to sample 3 meet all the requirements. Therefore, it is rational to use this composition for the further research.

## DEVELOPMENT OF EXTEMPORANEOUS SOFT DOSAGE FORM WITH VINYLIN

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**Introduction.** Recently, lightly crosslinked acrylic polymers (carbopols) have become widely used in the technology of dosage forms mainly in the technology of dermatological ointments. Great interest of carbopols is due to the valuable properties of their gels: high viscosity, significant emulsifying and suspending ability, providing high bioavailability and prolonging effect, the possibility of using in most types of dosage forms, significant bioadhesion, lack of irritating properties, microbiological stability, ease of administration, compatibility with many groups of medicinal substances, etc. Currently, lightly crosslinked polymers are used in the preparation of emulsions, suspensions, ophthalmic medicines, etc. Today, vaseline-containing bases are most often used in this case promote a number of negative properties: a violation of many skin functions (heat, moisture and gas exchange), an allergic and sensitizing effect. In some cases, vaseline-containing base and others hydrophobic ointment bases causes irritation, severe eczema, dermatosis. In addition, ointments with