

## THE PRINCIPLES OF CHANGES IN FLAVORS AND MEDICAL PREPARATIONS

The article describes the experimental studies on the selection of sweeteners for the correction of the taste of medicines. It has the potential to improve the organoleptic properties of the drugs after the use of which remains an unpleasant odor and bitter taste.

**Keywords:** flavor, taste correction, sweetener, glycine, ibuprofen, oral gel

Increasing the patient's commitment to medical therapy is the main goal of the treatment, regardless of the patient's diagnosis and the extent of the disease. Preservation of the recommended treatment regime of the patients determines the effectiveness of the treatment. One of the factors determining the sequence of treatment is the taste of drugs. In some cases, the smell and taste of medicines are unpleasant, which negatively affects the patients and does not even allow them to take them. Therefore, nowadays, the corrective things are added that change the taste of the drug. Correction of the drug's taste due to the use of the corrective substances causes the absence of adverse conditioned reflexes, and causes the positive emotions, that gives a positive taste of the drug and a positive effect on the patient's mind, thereby positively affecting the entire body, especially well on the mind of children and geriatric patients. The relevance of the article lies in the fact that these emotions contribute to the positive effect of the drug on the mental level and on the human body.

Types of synthetic flavoring agents are high in pharmaceuticals.

**The purpose of the study:** to change the taste of the drug, adding the synthetic flavors. The object of the study is the preparations: glycine-white, having a fine, crystalline taste and ibuprofen-white, having a crystalline bitter taste, which show two different organoleptic characteristics. Change their taste by adding the synthetic sugar substitutes. Elimination of side effects, based on the taste of the drug, and then prevent from the diseases by affecting the patient's treatment regime.

**Materials and methods:** There are several ways to adjust the taste of medicines: technological (adding the flavors of taste and smell, smear the bark, etc.), chemical (complexity of drug molecules with negative molecules that limit undesirable taste) and physical methods (change drugs in insoluble form, etc.). One of the simplest and most frequently used methods in technology is the introduction of flavors and smell.

Adding flavors. The easiest way to spoil the negative taste of the active pharmaceutical substance is to add the sweeteners and flavors. Sweeteners quickly react with the taste buds of the tongue with the good solubility in water, thereby slowing the interaction of the active pharmaceutical substance with the taste buds. Flavors give the drug a special taste and smell. In using the flavoring agents that have a taste exceeds the taste of the drug, and the basic taste is significantly reduced.

Cellulose of the brand Tabulose® (Blanver) was obtained as a gel corrector to obtain an oral glycine gel.

In order to hide the own "paper" taste of cellulose as a flavoring, branded sugar was taken: such as: sucrose (LLC «Himstatus»), mannitol (Roquette Freres), maltitol (Roquette Freres), aspartame (NutraSweet Company), Compri-Zucker®G (Südzucker AG).

Ibuprofen oral gel was obtained on the basis of the composition of acrylic acid and polyethylene glycol Carbopol 974P (Lubrizol) and Kolliphor 407 (BASF). Aspartame (NutraSweet Company), sorbitol (Roquette Freres) and Compri-Zucker®G (Südzucker AG) were studied as flavoring agents.

To define the taste, a method for determining the digital indicators and an organoleptic method for evaluating the flavors of A.T.Tentzov are used. The organoleptic method A.I.Tentzov for assessing the flavors is used. The proposed method A.I.Tentzova allows you to get the index of taste.

**Results and discussion.** A group of twenty people assesses the taste of the samples according to the proposed scheme. "Tasty" indicator (1-not sweet, 5-very sweet), "remnant taste" (1-no, 5-high), "description of the left taste" (1-unpleasant, 5-very pleasant), "general taste" (1-unpleasant, 5-pleasant). The method of determining the quantitative indicators is based on determining the basic taste qualities of preparations. A group of five people value the taste on a scale from 0 to 5, where 0 is a very unpleasant taste, and 5 is a very pleasant taste. The content of samples of glycine gel is shown in table 1.

Table 1 - The content of samples of glycine gel to determine the taste according to the method A.I.Tentzova

Model, №	1	2	3
Content, %			
Mannitol (Roquette Freres)	28,0	-	-
Maltitol (Roquette Freres)	-	19,0	-
Aspartame	-	-	0,07

The organoleptic taste property is assessed according to the A.I.Tentzov method according to Table 1. The obtained data were used as an arithmetic medium of taste index.

Table 2 - The results of taste definition of glycine gel models

Index Model, №	Tasty	remnant taste	description of the left taste	general taste
Digital index				
1	94	90	92	96
2	98	86	86	78
3	74	76	72	76

The higher taste and the basic taste index, so the higher the probability of hiding potential. A high digital index is directly proportional to the concealment of the flavor. According to the survey, the 1<sup>st</sup> grade mannitol gel received the highest value of 28.0.

Table 3 - The content of samples of Ibuprofen gel to determine the taste according to the method A.I.Tentzova

Model, №	1	2	3
Content, %			
Aspartame (NutraSweet Company)	20,0	-	-
Sorbitol (Roquette Freres)	-	0,3	
C Compri-Zucker® G (Südzucker AG) Brand sugar	-	-	15,0

It was chosen the 1<sup>st</sup> model gel due to the questionnaire.

Table 4 - The results of taste definition of Ibuprofen gel models

Index Model, №	Tasty	remnant taste	description of the left taste	general taste
Digital index				
1	92	74	70	85
2	64	87	42	52
3	71	81	41	52

Thus, aspartame was taken instead of ibuprofen gel as a flavoring organoleptic properties. Since aspartame has a numeric index of 20.0, it has a higher taste hiding property than other flavors.

**Conclusion:**

The compositions of oral gels containing an unpleasant odor and bitter taste (ibuprofen-gel in the composition of acrylic acid a) and medicinal and additional things that have an unpleasant taste after use (cellulose-based glycine gel) were studied. It was found that it is necessary to add aspartame for ibuprofen gel (SES index 160.0 - 200.0), and secondly, mannitol (SES index 0.5-0.7). Changing the taste of the drugs through these ingredients will have a positive effect on patients.

REFERENCES

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**КОРРИГЕНТТЕРМЕН ДӘРЛІК ЗАТТАРДЫҢ ДӘМІН ӨЗГЕРТУ ПРИНЦИПТЕРІ**

**Түйін:** Мақалада дәрілердің дәмін түзету үшін тәттілендіргіштерді таңдау бойынша тәжірибелік зерттеулер сипатталған. Құрамында ащы дәмі, қолданғаннан кейін жағымсыз дәмі қалатын заттары бар препараттардың органолептикалық қасиеттерін жақсарту мүмкіндігі көрсетілген.

**Түйінді сөздер:** корригент, дәм коррекциясы, тәттілендіргіш, глицин, ибупрофен, пероральді гель

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**ПРИНЦИПЫ КОРРЕКЦИИ ЛЕКАРСТВЕННЫХ СРЕДСТВ С ПОМОЩЬЮ КОРРИГЕНТОВ**

**Резюме:** В работе описаны практические исследования по выбору корригентов для коррекции вкуса лекарственных средств. Показана возможность улучшения органолептических свойств препаратов с горьким вкусом и с неприятным послевкусием.

**Ключевые слова:** корригент, коррекция вкуса, подсластитель, глицин, ибупрофен, пероральный гель.