

ТЕМАТИЧЕСКИЕ РУБРИКИ

61.45.15 Исследования и разработки в области технологии химико-фармацевтических средств

61.45.39 Готовые лекарственные формы

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COMPLEX USE OF *SEDUM MAXIMUM*

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Sedum maximum is a perennial herb belonging to the *Crassulaceae* family. This plant has a wide range of therapeutic effects due to its rich chemical composition, so *S. maximum* has been widely used in traditional medicine. Therefore, the aim of the work was to obtain medical products based on *S. maximum*. As a result, experimental samples of antihæmorrhoidal suppositories and anti-inflammatory gel for external use were obtained.

Key words: *phytotherapy, Sedum maximum, medicine, flavonoid, gel, suppository.*

In recent years, the popularity of phytotherapy, despite great successes in the creation of synthetic drugs, is increasing. The interest in natural active substances and drugs based on them is increasing due to both the unique properties of herbal remedies and rapidly developing research technologies in biology, medicine and pharmacy.

Therefore, the search for new medicinal plants, expansion of plant-based pharmaceuticals, the study of plants chemical composition and the possibility of isolation of biologically active substances (BAS) from them is a relevant scientific research direction.

One of these plants is the *Sedum maximum*. It is widely used in traditional medicine as an adjuvant for the treatment of certain diseases, including the treatment of hæmorrhoidal nodes in the form of lotions, as well as for healing wounds and burns.

S. maximum has a variety of therapeutic properties: anti-inflammatory, wound-healing, analgesic, styptic, restorative, because of the plant chemical composition.

The aim of the work is to obtain medical products based on *S. maximum*.

At the beginning of the work, a quantitative analysis of BAS, which has anti-inflammatory properties, was conducted. The results of the analysis are shown in the table.

Table – The results of quantitative analysis of BAS

BAS	The content of BAS in dry raw materials	
Flavonoids, %	1,00 ± 0,20	
Mucus, %	43,95 ± 0,30	
Tannins, %	9,45 ± 0,40	
Provitamin A, %	0,19 ± 0,05	
B ₂ (riboflavin), mcg/cm ³	Oxidized form	2,62 ± 0,10
	Reduced form	10,23 ± 0,10
B ₅ (nicotinic acid), mg/g	482,90 ± 1,10	
Vitamin C, %	0,12 ± 0,01	
Organic acids, %	1,59 ± 0,20	

Based on the results obtained, it can be concluded that it is advisable to use *S. maximum*. in further work.

The medical products with *S. maximum* were developed on the basis of the Biotechnology Department of BSTU. Obtained drugs with anti-inflammatory activity are anti-inflammatory gel for external use and antihaemorrhoidal suppositories.

Flavonoids are chosen as the active ingredient in the obtained forms because of the main contribution to the anti-inflammatory effect.

Test samples of gel with flavonoids content of 10.00 mg per 10 g of product and antihaemorrhoidal suppositories with flavonoids content of 0.00136 g per suppository were obtained. These samples were tested for compliance with the quality indicators specified in the general article of the State Pharmacopoeia of the Republic of Belarus for gels and suppositories. The obtained prototypes meet all requirements.

The developed gel is recommended for the treatment of blackheads, acne, poorly healing wounds, post-burn skin conditions, insect bites, urticaria, skin itching, allergic skin irritations.

Suppositories based on *S. maximum* is recommended for use as a symptomatic agent in the complex therapy of haemorrhoids and anal fissures.

Further research will focus on improving the compositions of the resulting products.

As a result, prototypes of gel for external use with anti-inflammatory properties and antihaemorrhoidal suppositories were obtained. Development and obtaining herbal medicine is the relevant task today. Therefore, further work will be aimed at improving the composition.

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