

RESEARCH ON SELECTION OF COMPOSITION AND TECHNOLOGY OF GEL PRODUCTION FROM OLEUM HIPPOPHAES

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Annotation. The development of the technology of laboratory samples of gels was carried out on the basis of the center of practical skills in the specialty "Pharmacy" of the Institute of Pharmaceutical Education and Research.

To obtain gels, we have chosen the best bases in pharmaceutical technology - Oleum Hippophaes, beeswax, twin-80, with a 2% aqueous solution of sodium alginate, they ensure optimization of technological operations and, accordingly, cost savings. According to the modern concept of biopharmaceutics, in order to achieve the desired therapeutic effect in the development of soft dosage forms, it is necessary to take into account not only the physicochemical properties of medicinal substances and the nature of the disease, but also the properties of excipients. In particular, the properties of the mass were studied in the gel technology [1]. Bases for gels as excipients have a significant effect on the therapeutic effect, ensure the necessary release and absorption of the main medicinal components [2]. We studied the possibility of creating a gel based on vegetable oils that have a broad effect on the microflora of the skin, have anti-inflammatory and wound-healing properties. We selected the necessary equipment, auxiliary materials and calculated the consumption rates of the initial products to obtain a certain amount of the finished product. The equipment selected for obtaining gel consisted of a technical scale, a mass dissolving reactor, a reactor-mixer, a mixer for the base, a filter and a mixer-homogenizer [3]. Taking into account the in vitro bioactivity, all of the above factors can significantly affect the processes of release of active substances from the gel mass, as well as the completeness and speed of their absorption [4].

Chakanda oil (lat. *Oleum Hippophaes*) - oil obtained from northern fruits. Chakanda oil is obtained by several methods, including extraction with chemical solvents, maceration of dried pulp and skin of Chakanda fruits with other vegetable oils (sunflower, olive), extraction with diluted carbon dioxide, centrifugation of Chakanda fruit juice, etc. An oily, orange-red liquid with a characteristic odor and taste. Pure (obtained without the use of other vegetable oils and not diluted with them after extraction). Chakanda oil contains 300 to 1000 mg or more per 100 g of carotenoids, tocopherols, sterols, phospholipids, vitamin K, and glycerides. Also oleic, linoleic, palmitoleic, palmitic and stearic acids. In the former Union, an oil containing at least 180 mg/100 g of carotenoids was used for pharmaceutical purposes, diluted (normalized) with Chakanda oil (also known as Chakanda oil concentrate) to obtain such oil. other vegetable oils (mainly sunflower) have the desired parameters [5].

At present, under the name "Chakanda oil" the retail trade (especially pharmacies) offers mainly mixtures of Chakanda oil with other vegetable oils, where Chakanda oil alone can make up 5-10% (total carotenoid range). from 10-20 to 50-60 mg per 100 g). Due to the presence of large amounts of foreign oils, the medicinal value of such mixtures for external and internal use is significantly reduced. You should also pay attention to the amount of carotenoids indicated on the package (it should be 180 or more). Chakanda oil is recommended as an anti-inflammatory and antibacterial agent, it stimulates recovery processes in soft tissues, including liver cells after alcohol poisoning, increases the amount of protein in the liver, regulates fat metabolism and prevents the development of atherosclerosis. It has an analgesic and wound-healing effect. It is a good remedy for various skin diseases, especially those accompanied by a lack of vitamins in the body. They treat eczema and women's diseases (erosion of the cervix, colpitis) by lubricating the skin or mucous membranes and taking it orally. Chakanda oil is especially useful in the treatment of burns, bedsores, gastrointestinal ulcers, gastritis, duodenitis, inflammation of the tooth and gum pulp, sinusitis, and tonsillitis.

Beeswax (*Vosk pcheliniy*) - The most important natural wax used in the production of gel is beeswax. It is a solid yellow

or (when bleached) white viscous substance. Beeswax contains 72% of various natural waxes (wax esters), about 14% of free high molecular fatty acids, free fatty alcohols, etc. [6].

Twin-80 (TVIN-80) is a polysorbate, monooleate, nonionic surfactant. It is obtained chemically from sorbitol and fatty acids in olive oil. Synonyms: polysorbate-80, food additive E433, polyoxyethylene (20) sorbitan monooleate. The chemical formula is C₆₄ H₂₆ O₁₂. From a chemical point of view, the reagent is an ethoxylated monoester of anhydrohexavits of fatty acids.

Conclusion: 1. Base and excipients were obtained for 2 different compositions for Chakanda oil-based gel. 2. An effective technology of gel production was created for the selected 2 different compositions and the quality indicators were analyzed. 3. 2 different compositions for Chakanda oil-based gel fully met the quality indicators set for gel drugs.

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