

THE USE OF WALNUT LEAF EXTRACT FOR COSMETIC PRODUCTION

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Abstract: The article provides for the production of extract and powder from walnut leaves for cosmetic production. The results of obtaining extract and powder from walnut leaves, as well as physic-chemical research and organoleptic indicators of the obtained raw materials are presented. The research results made it possible to develop a cosmetic product based on walnut leaf extract and powder.

Key words: extract, walnut leaf, cosmetic production, powder, composition of the product, essential oil.

Introductions. Currently, the most important direction in the development of the cosmetics industry is the development of a new generation of anti-age cosmetics for functional purposes. An integral part of these products are biologically active substances (BAS), the main sources of which are plants. Each plant is characterized

by a balanced and characteristic only the composition of biologically active substances. Development of new cosmetic products is the correct way to obtain natural extracts and selection of the required composition of components that have the specified properties.

In recent years, another mechanism has attracted the attention of scientists (with it associated with the appearance of typical symptoms of skin aging such as wrinkles, sagging, decreased elasticity) - increasing activity of the dermis, destroying the components of the extracellular matrix, including its main structural elements - collagen, elastin. A direct consequence of this is the premature appearance of wrinkles and loss of skin elasticity.

From time immemorial, folk healers have used walnut leaves to treat people. The first mention of walnut leaves is found in the philosopher of the Middle Ages - Avicenna. The healer appreciated the ingredient for the rapid healing of wounds, an antidote to poisoning and dysentery. Avicenna especially noted the hemostatic properties of the leaves.

Walnut leaf extract has unique properties, such as wound healing, antimicrobial, antiviral, anti-inflammatory, and immunostimulant properties. From a medical point of view, the leaves help increase blood clotting and reduce glucose levels, which is very useful for diabetes. They are also useful in helping the body fight viral infections. They are also used as an external remedy for prolonged bleeding and wounds that do not heal for a long time. Their most common indications are viral and mycotic skin lesions. The use of the leaves of this tree and the shells of green fruits in the form of lotions or compresses helps relieve inflammation of the lymph nodes in the oral cavity.

The decoction is also used in the form of baths for skin acne. They reduce inflammation and significantly improve the appearance of the skin. Externally, the oil or decoction is used to treat furunculosis.

The effectiveness of using the plant to get rid of the following pathologies has been proven:

- inflammatory processes in the gastrointestinal tract;
- atherosclerotic damage to the vessels supplying the brain;
- diabetes;
- diarrhea;
- internal hemorrhages;
- gout;
- helminthic infestations;
- diseases of the throat and oral cavity;
- hair loss and also due to diathesis.

Drugs taken orally or applied externally:

- treat skin diseases, sore throat, stomatitis;
- disinfected wounds;
- removed “excess” water, relieved swelling;
- diarrhea, constipation, bloating has stopped;
- heartbeat returned to normal;
- provoked by a “rut” of bile;
- eliminated stagnation of urine;
- cleaned the intestines of parasites.

Combined preparations from different parts of the “royal” tree showed good results. After severe illnesses and physical exertion, they took leaf and kernel extracts.

Morning tea from walnut leaves - prevention of vitamin deficiency. 100 ml of drink before meals normalizes metabolism. Brew two teaspoons of crushed raw materials with a glass of boiling water. Walnut leaf extract can be used in various areas due to its beneficial properties.

Walnut leaf extract is often used in cosmetics and personal care products such as creams, lotions, face masks and shampoos. They regenerate the skin and stimulate hair growth, improving the condition of the scalp and hair, softening and moisturizing them.

Walnut leaf extract is used as an active ingredient in supplements for some purposes, such as supporting heart health. In the food industry, walnut leaf extract can be used as a food additive to impart walnut aroma and flavor to foods, and in aromatherapy, walnut leaf extract can be used to create soothing and relaxing aromas.

creation of a creative cosmetic cream based on walnut leaf extract and scientific substantiation of the composition of a therapeutic and cosmetic cream for the care of dry skin in order to prevent age-related changes. The technology of an emulsion-based cosmetic cream with a thick extract of walnut leaves for the care of aging skin. Important indicators that ensure the consumer properties of cosmetic creams are their structural, mechanical and rheological parameters. As a result of experimental studies to study the influence of the ratio of base components on the technological and rheological properties of model bases, the optimal number of base components was established:

- safflower oil - 8%,
- cottonseed oil - 5%,
- emulsifier No. 3 - 7%,
- polypeptides - 1.5%,

synthetic alcohols fractions C 16-C21 - 1%,
anhydrous lanolin - 1%,
propylene glycol - 7%.

For the optimal concentration of the biologically active substance, we chose walnut leaf extract. The developed cream showed anti-inflammatory, wound-healing, and moisturizing effects. The study allowed us to determine the optimal concentration, which is 0.25%. One of the main requirements for the quality of cosmetic creams is stability against microbial contamination. It was also found that the concentration ensures the stability of the cream throughout the entire shelf life (1 year). As a result of the research, the composition of a medicinal and cosmetic cream with an extract of walnut leaves of local origin was experimentally substantiated. The introduction of the extract from the leaves into the hydrophilic phase of the cream can be carried out at a temperature of 65°C. The study of the effect of temperature on the structural and mechanical properties of the developed cream was established at the stage of packaging the cream in tubes and should be carried out at a temperature of 40 - 50°C. The experiment also proved the necessity of the cream maturation stage. The reproducibility of analysis methods is confirmed by the results of statistical processing of experimental data. Storage conditions have been established and rational packaging of the medicinal and cosmetic cream has been selected, which ensure its stability for one year of storage. As a result of the studies, the presence of anti-inflammatory, therapeutic, moisturizing effects of the cream, as well as its harmlessness with long-term use, was proven.

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