

THE NATURAL POWER OF HORSE CHESTNUT IN COSMETOLOGY

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Annotation. This paper examines the use of horse chestnut extract in cosmetics. Particular attention is paid to its active components-escin and esculin-which have pronounced venotonic, anti-inflammatory, and antioxidant effects. The use of horse chestnut-based cosmetics helps strengthen blood vessel walls, improve microcirculation, and reduce swelling and redness. These products are effective in treating skin with signs of rosacea, fatigue, and loss of tone. The abstract emphasizes the importance of natural ingredients in modern cosmetology and the potential of using horse chestnut in the production of natural cosmetics.

Keywords: horse chestnut, escin, esculin, natural cosmetics, plant extracts, microcirculation, venotonic effect, anti-inflammatory properties, skin care, antioxidants.

Introduction. Natural cosmetics based on plant-based ingredients are becoming increasingly popular in today's world. Consumers seek safe and environmentally friendly products that not only improve the appearance of their skin but also have a beneficial effect on its health. One valuable natural ingredient widely used in cosmetology is horse chestnut extract (*Aesculus hippocastanum*).

Horse chestnut-based cosmetics are effective in strengthening blood vessels, improving microcirculation, and combating puffiness, thanks to the active ingredients escin and esculin, which have a toning, anti-inflammatory, and antioxidant effect. Using horse chestnut extract in creams, gels, and masks helps improve skin elasticity, reduce the appearance of rosacea and varicose veins, and give skin a healthy, well-groomed appearance. Horse chestnut contains the active ingredients escin and esculin, which have pronounced venotonic, anti-

inflammatory, and antioxidant properties. Due to these qualities, horse chestnut extracts are effectively used in facial and body skin care products, especially for those prone to rosacea, puffiness, and decreased skin tone. The relevance of this study stems from the growing interest in phytocosmetics and the need for scientific substantiation of the effectiveness of natural ingredients. Studying the properties and mechanisms of action of horse chestnut allows us to expand the possibilities of its use in the creation of highly effective cosmetic products.

The relevance of this study lies in the growing interest in phytocosmetics and the need for scientific substantiation of the effectiveness of natural substances in skin care. Studying the properties of horse chestnut and its application in cosmetics will help substantiate its potential use in modern natural cosmetology.

The aim of our study is to investigate the properties of horse chestnut and determine the potential for its use in cosmetic production. One of the objectives of the study is to study and analyze the chemical composition of horse chestnut and the biological effects of its active components. We examined the widespread use of horse chestnut extract in cosmetics. By studying the effect of horse chestnut-based products on skin condition, we determined the advantages and potential for its use in natural cosmetics and cosmeceuticals.

To obtain the plant material, we prepared locally grown chestnut trees and used the fruits, seeds, leaves, and bark of the horse chestnut. The raw materials were thoroughly dried and ground to a powder.

Horse chestnut extract was obtained from the resulting powder. Biologically active substances (escin, esculin, and flavonoids) were extracted from the plant material using glycerin extraction. The resulting extract was filtered and concentrated.

The resulting product can be used to prepare a cosmetic base. The base can be used to create creams, gels, toners, and masks by selecting an appropriate emulsion base, either gel or water-based. It may contain oils, waxes, emulsifiers, stabilizers, and moisturizing ingredients (glycerin, panthenol, aloe vera, etc.).

The active horse chestnut extract is added to the base during the cooling stage of the mixture to preserve the activity of the biological substances. The mixture is

thoroughly mixed until a homogeneous mass is obtained. Next, we added natural fragrances and plant-based preservatives, and adjusted the pH.

The resulting product has proven effective. This horse chestnut-based cosmetic improves microcirculation and skin condition with a toning effect, as well as anti-inflammatory and strengthening properties. The developed horse chestnut base can be used in creams, shower gels, and body toners.

Conclusion. During the review of this topic, it was established that horse chestnut is a valuable natural component with a broad spectrum of biological activity. The main active ingredients-escin and esculin-provide venotonic, anti-inflammatory, antioxidant, and strengthening effects, making horse chestnut extract particularly useful in the creation of cosmetics aimed at improving the condition of the skin and blood vessels.

Horse chestnut-based cosmetics help strengthen capillaries, improve microcirculation, reduce swelling, and improve skin tone. These products are particularly effective for skin prone to rosacea and fatigue.

The use of natural plant components is consistent with modern trends in cosmetology, focusing on safety, environmental friendliness, and comprehensive care. The use of horse chestnut extract in cosmetic products opens up opportunities for further research and the development of new natural cosmetic formulas that combine high efficacy with a gentle effect on the skin.

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