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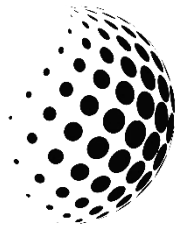
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## **DETERMINATION OF HYDROXY ACIDS IN MEDICAL COSMETICS BY SPECTROPHOTOMETRIC METHOD**

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Salicylic and tartaric acids are widely used in medical cosmetics due to their unique properties that help improve skin condition. They belong to the category of acids used in chemical peels, masks, serums and other skin care products, especially in dermatological cosmetology. Salicylic acid is a beta hydroxy acid (BHA) and has a pronounced keratolytic, anti-inflammatory and antiseptic effect. It effectively dissolves sebum, penetrates deep into the pores and cleanses them of impurities, which makes it indispensable in the care of oily and problematic skin prone to acne and comedones. In addition, salicylic acid promotes exfoliation of dead skin cells, accelerates skin renewal and reduces the risk of post-acne. In medical cosmetics, it is included in lotions, tonics, cleansing gels, as well as in products for spot application to inflamed areas.

Tartaric acid, an alpha hydroxy acid (AHA), has a mild exfoliating effect, stimulates cell regeneration and improves complexion. It helps to even out skin texture, eliminate pigmentation and increase elasticity. Due to its ability to retain moisture, tartaric acid is often included in moisturizing and anti-aging products. In addition, it enhances the effect of other active ingredients in cosmetic products, such as vitamin C and hyaluronic acid. The combined use of salicylic and tartaric acids allows you to achieve a pronounced rejuvenating effect, improve skin tone and combat inflammatory processes. It is important to consider that acids can cause irritation, so in medical cosmetics they are used in safe concentrations and are often supplemented with softening and moisturizing components such as aloe vera, panthenol and oils. Regular use of cosmetics with these acids, subject to recommendations, helps maintain the health and youth of the skin.

Currently, all cosmetic products, including those containing active pharmaceutical ingredients, are subject to hygienic certification. Moreover, taking into account the current trend of harmonization and safety thanks to the benefits of the European Union, the problems of developing methods for the control of acidity for the purposes of personal cosmetics are becoming increasingly relevant.

To conduct practical studies, solutions of salicylic and tartaric acids were prepared in a concentration  $10^{-4}$  M, the optical density was measured using a spectrophotometer JenWay in the wavelength range from 200 nm to 600 nm.



Figure 1. UV-spectrum of Salicylic acid  $10^{-4}M$



Figure 2. UV-spectrum of Tartaric acid  $10^{-4}M$

As a result of the conducted studies, it was shown that for salicylic acid, the absorption maximum is observed at 300 nm, and for tartaric acid – at 225 nm, which makes it possible to identify them when present together. The obtained results will be the basis for further development of the method for identification and quantitative determination of the above-mentioned acids in medicinal cosmetic products.

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## рН ТА СОЛЕВМІСТ ДЕЯКИХ ЗРАЗКІВ ПИТНОЇ ВОДИ

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Здоров'я та самопочуття людини безпосередньо залежать від чистого повітря, правильного харчування та якісної питної води. В масштабах усієї Планети вода є найціннішим ресурсом та універсальним компонентом живої матерії, яка об'єднує всіх істот. Не менше 80% сучасних захворювань спричиняє погана якість споживаної води. На фоні того, що екологія доквілля погіршується і чистих природних джерел стає дедалі менше, значення якості питної води зростає. Якість води – це поєднання хімічного і біологічного складу та фізичних