

STUDY OF THE POSSIBILITY OF CREATING MILK BATHS WITH PHYTOMINERAL COMPLEX AND HAIR SHAMPOO BASED ON HYDROLYZED WHEY

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Abstract

The possibility of using trivial whey, a by-product of the dairy industry in medical practice has been known since ancient times. Promising directions are the use of milk baths and the creation of cosmetic products for hair, enriched with nutritional components. The aim of the research is to create milk baths with a phytomineral complex, as well as a high-quality cosmetic hair care product (hair shampoo based on hydrolyzed whey) for people with hypersensitivity of the skin.

The object of research was a shampoo based on whey enriched with nutritional components, with and without beer wort. The research was conducted in the sanatorium Mineralnye Vody-2 - Centre of hygiene and epidemiology at the Rospotrebnadzor in the Stavropol territory, and in the laboratories of Experimental immunomorphology, immunopathology and immunobiotechnology and in the vivarium of the North Caucasus Federal University. Milk baths were tested on 10 volunteering patients. Skin pH was established according to GOST 32089-2013 [7], and pH influence on *Propionibacterium acnes* by *in vitro* experiments by classical method. Experiments for testing shampoo was conducted on 3 laboratory rats of the Vistar line. In the course of 10 days, we followed hair growth in a laboratory rats, and the hair was studied by microstructural method. Shampoo based on hydrolyzed milk whey was examined for sanitary-chemical (toxicity index, by the methodical recommendation 1.1.0121-18) and toxicology (allergic effect by the methodical recommendation № 05 RC/3140 - 91) parameters.

It was established that taking a milk bath helps to stabilize the skin's pH level. A balanced pH of the skin means that the protective mantle can cope with the onslaught of external negative factors, and cannot resist infections and other adverse factors. An experiment on testing a shampoo based on hydrolyzed whey confirms an increase in hair growth, and due to hydrolysis by enzymes, the product is potentially hypoallergenic. The results of microstructural evaluation confirm that the shampoo based on hydrolyzed whey has a positive effect on the hair shaft, the hair acquires a dense structure, does not break off at the ends, and acquires a protective film.

We can conclude that shampoo based on hydrolyzed milk whey have quality characteristics of the product, which has a positive effect on the hair.

Key words: Milk whey, Milk baths, Cosmetic detergents.