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## **UNDRESTANDING SKIN PRODCUT INGREDIENTS**

Admission: There are millions of different skin care products on the Ukrainian market, all with different combination of ingredients. The key ingredients present in most cosmetics include water (aqua), emulsifiers, preservatives, thickeners, moiturisers, colours and fragrances. All cosmetic ingredients can be either naturally occurring or artificial, but any potential impact on our health depends mainly on the chemical compounds they are made of. Ukrainian consumers increasingly care about the validity, safety and stability of personal care products.

Aim of the study: to identify and analyze the latest ingredients in skin care products that may benefit our skin and health.

The research methods and material: Ingredients in today's skin care products are an excellent example of how discoveries in chemistry are part of our day-to-day lives. The scientific literature and personal care market in Ukraine and other sources relevant to a particular problem were examined and compared. On the basis of this research the ingredients of the Ukrainian brands' skin care products (Biokon, Farmak, Irenen Bukur, Elfa Pharm) were analyzed.

In our research cosmetics is defined as "anything intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or functions." The word "cosmetics" derives from the Greek word meaning "technique of dress and ornament". In fact, just reading the composition of any common cosmetic can become a chemistry class: water, emulsifiers, preservatives, thickeners, pH stabilizers, dyes and fragrances, combined in different ratios, for different purposes.

Many cosmetics that are marketed nowadays often contain antioxidants as the active ingredients. It is known that oxidation reactions could produce free radicals, which can start chain reactions that will damage skin cells. Increasing the amount of free radicals could initiate the wrinkling, photoaging, elastosis, drying, and pigmentation of the skin. Topical antioxidants could terminate the chain reactions by removing the free radical intermediates and inhibit other oxidation reactions by being oxidized themselves; this could defend the skin against the environmental stress caused by free radicals.

Skin care products containing alpha-hydroxy acids (glycolic, lactic, tartaric, and citric acids) have become increasingly popular in recent years. Creams and lotions with alpha-hydroxy acids may help with fine lines, irregular pigmentation and age spots, and may help shrink enlarged pores. To help avoid skin irritation, start with a product with a maximum concentration of 10% to 15% AHA.

Salicylic acid removes dead skin and can improve the texture and color of sun-damaged skin. It penetrates oil-laden hair follicle openings and, as a result, also helps with acne. There are many skin care products available that contain salicylic acid.

Retinol is derived from vitamin A and is found in many over-the-counter “anti-aging” skin care products.

Here's why skin responds to skin care products with retinol: vitamin A has a molecular structure that's tiny enough to get into the lower layers of skin, where it finds collagen and elastin. Retinol is proven to improve mottled pigmentation, fine lines and wrinkles, skin texture, skin tone and color, and your skin's hydration levels.

Besides, many skin care products on the Ukrainian market today boast vitamin C derivatives as an ingredient (magnesium ascorbyl phosphate or ascorbyl palmitate, for example), but L-ascorbic acid is the only useful form of vitamin C in skin care products. With age and sun exposure, collagen synthesis in the skin decreases, leading to wrinkles. Vitamin C is the only antioxidant proven to stimulate the synthesis of collagen, minimizing fine lines, scars, and wrinkles.

Hyaluronic acid is often touted for its ability to "reverse" or stop aging. This substance occurs naturally in humans and animals, and is found in young skin, other tissues, and joint fluid. Hyaluronic acid is a component of the body's connective tissues, and is known to cushion and lubricate. Diet and smoking affect your body's level of hyaluronic acid over time. Skin care products with hyaluronic acid are most frequently used to treat wrinkled skin.

Also, copper peptide is often referred to as the most effective skin regeneration product. Studies have shown that copper peptide promotes collagen and elastin production, acts as an antioxidant, and promotes production of hyaluronic acid. Studies have also shown that copper-dependent enzymes increase the benefits of the body's natural tissue-building processes. The substance helps to firm, smooth, and soften skin, doing it in less time than most other anti-aging skin care products.

Parabens are commonly used as preservatives in cosmetics. The parabens used most commonly in cosmetics are methylparaben, propylparaben, butylparaben, and ethylparaben. Scientists continue to review published studies on the safety of parabens.

Conclusions: The cosmetics and personal care market in Ukraine witnessed strong growth for a considerable amount of time. However, in 2014-2019 sales suffered from high inflation rates resulting in sharp decline in USD value and moderate growth in local currency. Price becomes the most influential factor in purchasing decisions for many consumers, as well as the main platform for competition in all market categories. Brand owners must convey the value of new ingredients, formulas and products through clear language, with explanations of benefits based on scientific studies or other trials. Consumers and producers are becoming more open to the usage of natural cosmetics. At this time, scientists do not have information showing that parabens as they are used in cosmetics have an effect on human health. The results suggest that on the market of cosmetic products, health and environmental awareness will be a significant trend for both producer and consumer behavior, even in the future.

## REFERENCES

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