

## Abstracts

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#### Hydrolysed Proteins in Cosmetic's Production

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The basic amino acid content of a protein depends on genetic code and is strictly connected with its source. Hydrolysates which are derived from the same proteins such as collagen, keratin, wheat, and corn or soy gluten have similar amino acid content. Process modification of obtaining plant-based hydrolysates enables production of the cosmetic raw materials with physicochemical properties similar to animal-derived hydrolysed proteins, i.e. collagen. This is impossible in case of proteins with very characteristic amino acid content, such as elastin, which is in 80% built with non polar amino acids. Most of protein-based cosmetic raw materials is produced by using simple globular and fibrous proteins derived from animal (mammal, fish) or plant sources. Less popular are proteins obtained from lower organisms (algae, fungi). Conjugated proteins (proteoglycans, nucleoproteins) are used more rarely. They are received in the form of animal or plant tissue extracts. The most important criteria, which determine selection of the protein source for the cosmetic raw materials production, is availability, cost of production and its market value.

#### Lanolin derivatives in bath formulas

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The Lanolin is one of the most appreciated raw materials used in cosmetic industry. Its basic form is mostly used in the so called white cosmetics - creams, balms and lotion type emulsions. For the washing and cleansing reparations, the ethoxylated and ethoxylated-propoxylated lanolin has a better hydrophilicity, but maintains its skin fattening performance. The main purpose of the present research was to optimize formulas recipes with lanolin derivatives for bath oils. Its important element was to experimentally establish the amount of needed Sodium Chloride, in order to receive cosmetics with similar viscosity to those already present on the market. Due to introduction of lanolin derivatives in bath oils, the higher amount of Sodium Chloride is needed in order to receive viscosity similar to that in the market products. The important parameter, characteristic for bath oils is their ability to emulsify fatty soil. It is assumed, that the easier the preparation emulsifies fats, and the more stable is obtained emulsion, the better is its washing, cleansing and degreasing action. Next analysed properties considered

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foam volume and stability of the formulas. Summaizing, it can be stated, that the skin refattening substance type has an important influence on the utilitary features. It is especially important, when one aims to create a recipe with certain properties and precise parameters.

#### Progress in Surfactants-Innovations of the Last Five Years

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In recent years, a new dimension has been added to the criteria important for the use of surfactants such as cost effectiveness, synergy potential, ready and complete biodegradability, and skin tolerance: sustainability. New concepts like »green« or »natural« surfactants and the

»footprint« (impact on the CO<sub>2</sub> balance) of surfactants dominate the scene. Renewable raw materials for surfactants are becoming more important on the grounds of a more favourable CO<sub>2</sub> balance. Sustainability can be achieved through raw materials as well as products and processes. Continuous development of knowledge of the fundamentals of surfactant action contributes to the more effective use of these functional specialty chemicals. GTL technologies will supplement the raw material base for surfactants in the medium term. Green surfactants and sustainable technologies such as enzyme catalysis will be used particularly in the cosmetics sector. Everyone of us encounters surfactants almost every day in the form of household and body care products. Surfactants are also indispensable in institutional and industrial cleaning and as process chemicals in many branches of industry.