МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ

Сучасні технології у промисловому виробництві

МАТЕРІАЛИ та програма

IV Всеукраїнської міжвузівської науково-технічної конференції (Суми, 19–22 квітня 2016 року)

ЧАСТИНА 2

Конференція присвячена Дню науки в Україні



Суми Сумський державний університет 2016

HARMFUL COMPONENTS OF COSMETICS

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There are various chemicals used in the preparation of cosmetics which should be used with caution, or else they can have harmful effects. Some of the more dangerous chemicals are described below.

Coal tar is used in the preparation of makeup products and hair dyes. Using coal tar-based products is closely related to the cause of pigmented cosmetic dermatitis. Prolonged use of some types of tar also increases the risk of folliculitis. Coal tar is made of polycyclic hydrocarbons which may also cause phototoxicity. Exposure to some of the polycyclic aromatic hydrocarbons is associated with liver, skin and lung cancers.

Diethanolamine (DEA). This powerful chemical is used for preparing cosmetic products like shampoos and soaps. A study on the effects of DEA suggests that prenatal exposure may have detrimental effects on brain development. According to a research study, the application of DEA is associated with increased incidence of liver neoplasms and renal tubule adenoma in mice.

Formaldehyde. Some cosmetics like hair smoothing products also containformaldehyde. It is produced in small amounts in the human body, which is harmless, but excessive exposure to formaldehyde may lead to allergic reactions in the eyes, nose, throat and skin, and it can lead to asthma. It may also cause menstrual disorders in woman. Research studies suggest that exposure to formaldehyde may increase the risk of various forms of cancer as well.

Glycol ethers are used as ingredients in certain preparations of cosmetics. Exposure to glycol ethers may cause low fertility in men and can also be hazardous for pregnant women. Exposure to ethylene glycol may also cause weakness, nausea, headaches, and irritated skin.

Lead. Some cosmetics may also contain lead, which has a bevy of harmful effects. Prolonged exposure can be carcinogenic, harmful during pregnancy and may cause nausea, headaches, and irritability. It can also affect the nervous system, as well as the mental and physical growth of children.

Glucocorticoids. These are some of the prime ingredients used to prepare bleaching products for the skin. These bleaching products may aggravate or induce various skin diseases, and the main cause behind those skin complications is the presence of glucocorticoids.

Parabens (Isobutylparaben, Butylparaben, Methylparaben, and Propylparaben) Various cosmetics such as creams, makeup products, moisturizers, hair care and shaving products contain parabens. Numerous research studies have indicated the presence of parabens in human breast tumors and also noted the context of estrogen-like properties in parabens. However, the estrogenic activity associated with parabens is much less than the body's natural estrogen activity and there is a lack of data to support carcinogenic properties or other harmful effects of that sex

hormone. The current use of parabens is safe according to the FDA, but the evaluation and identification of health hazards related to parabens is ongoing.

Paraphenylenediamine is used in various hair dyes and the ink of tattoos. These types of products can be harmful to users in various ways. Usage of products with paraphenylenediamine can lead to dermatitis, allergies, and hypersensitivity. Care must be taken when choosing hair dyes and tattoo artists to avoid these health risks.

Cocamidopropyl betaine. This is a synthetic detergent used in various cosmetics and personal care products such as skin care products, cleansers, and shampoos. Cocamidopropyl betaine is used in these products because it causes very mild skin irritation as compared to other chemicals. However, the rate of sensitization is still on the higher side, which is attributed to impurities that are created during the manufacturing process. These impurities include amidoamine and dimethylaminopropylamne, which can both cause high skin sensitivity.

Fragrance (hydroxyisohexyl-3-cyclohexene, carboxaldehyde, isoeugenol etc.) Artificial fragrances can cause numerous health problems after prolonged exposure. These include skin irritation, headaches, lung problems, and dizziness.

Imidazolidinyl and Diazolidinyl urea. These chemicals are used as preservatives to activate the formaldehyde content in creams and cosmetics. These chemicals may increase skin sensitivity and can also contribute to allergies and contact dermatitis.

SLS acts as an emulsifier, surfactant and de-greaser, and is used in numerous personal care products such as body wash, soaps, shampoos, face cleansers, and shaving cream. Using products containing SLS can cause eye and skin irritation, as well as allergic reactions and a general drying out of the skin.

Triethanolamine (TEA). TEA is one of the chemical used to adjust the pH of various cosmetic products. This chemical may be harmful to the skin and eyes. It can cause eye problems, dryness of the skin and hair, as well as other allergic reactions.

Polyvinylpyrrolidone (PVP) Copolymer. These are used to prepare various cosmetics such as lipsticks, but exposure to and use of products containing PVP may induce or increase allergies and dermatitis.

Lanolin. This chemical is obtained from sheep's wool and is used in various cosmetics and personal care products such as eye care products, makeup products, lotions and creams. Lanolin can be poisonous if swallowed and can also have other harmful effects on the human body. You may experience skin rashes, redness, nausea, and vomiting. It is very important to be careful when using any product that contains lanolin.

Benzyldimethylstearylammonium chloride. Various cosmetic products such as lipstick, lotions, hair coloring, and conditioners containbenzyldimethylstearylammonium chloride. This chemical may irritate the skin and eyes. In fact, it can do permanent damage to your eyes and may contribute to allergic contact dermatitis.