

# Chemicals used in cosmetics and perfume

[Health & Medicine](#), [Healthy Lifestyle](#)



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## Introduction

Cosmetics and perfumes, sometimes viewed as the savior of women and recently men too. A person beautifying their outward appearance has been a tradition in the world since ancient times. Whether it may be a new hair dye, a newly bought fragrance, or a pleasant shade of lipstick, cosmetics and perfumes have taken over the world as a boost in confidence of a person's appearance and body smell. Nowadays, people cannot be seen outside without some form of cosmetics on. Originally a strictly female usage only, men have also started to enter the world of cosmetics. Initially concerning only facial aspects, cosmetics becomes broader with each passing day and has branched out to include beautifying other body parts as well as perfumes. What exactly are these daily materials composed of to create such outstanding effects on the body? Cosmetics are composed of various

chemical substances obtained from artificial or natural sources. While these chemicals do great work and have many benefits, they happen to unfortunately come with a high amount of risks, which will be discussed in further details.

## **Categories**

Cosmetics are mainly divided into four categories of products: makeup, skincare, hair, and perfume. Among these four main categories are other smaller categories of cosmetics, such as teeth.

## **Makeup**

Makeup products are the most commonly used forms of cosmetics. They are used to alter and heighten a person's physical appearance, usually in a colorful way.

v Benefits: However few, there are certain chemicals in makeup products that are actually beneficial to people. For example, foundation is a commonly used form of makeup. Its composition includes chemicals like talc (magnesium silicate) and titanium dioxide. The former is excellent at allowing the skin to remain dry by sucking the moisture and stopping the formation of rashes and pimples. Titanium dioxide is also good at absorbing moisture, while also maintaining a neutral smell. Lipstick, another common makeup product, contains ingredients that can protect a person's lips from dangerous UV rays. It also contains vitamin E and Aloe Vera. These two provide hydration and keep the lips moist.

v Risks: The risks of chemicals used in makeup products are a long list. One of them concerns formaldehyde. This chemical is known to potentially cause cancer in people. It can be found in nail polish and nail polish removers. Lead can be found in lipstick, foundation, and in countless other cosmetics. It affects the nervous system by disrupting the body's learning and behavioral strategies. Quaternium-15 is a chemical compound that has been linked to cancer, irritation, and skin damages and can be found in eye – makeup products and face powders.

## **Skin**

Skin cosmetics are perhaps the most used, as they help to smoothen out the skin and can act as anti-aging solutions. This sector of cosmetics comes with its own many benefits and risks.

v Benefits: Moisturizers contain occlusive and menthol. The former includes all oil-like ingredients in moisturizers and prevents dehydration by holding on to water already present in the skin. Menthol acts as an itch treatment by releasing a cool feeling over the skin to cancel out the need to itch a dry spot. Anti-aging creams contain hydroxy acids, which destroy dead skin cells and introduce the growth of new, fresh, and soft skin, and niacinamide, a chemical substance that prevents dehydration of the skin and helps regain the skin's natural resilience. Face masks, another popular skin cosmetic, helps to purify and hydrate the face. It contains honey and Aloe Vera, chemicals that reduce aging, prevent acne, and cool the skin.

v Risks: Parabens are dangerous chemical compounds that have been linked to breast cancer tumors. It can be found in many lotions and moisturizers,

and are especially lethal to children and pregnant ladies. Hydroquinone, a chemical found in skin lighteners, can allow the passage of UV rays to penetrate the skin easily.

## **Hair**

v Benefits: Shampoo is used by everyone all over the world when dealing with hair. It contains some positive chemicals like panthenol. Panthenol holds in moisture, softens the hair and roots, and heals damaged hair. Linolenic acid is a chemical present in vegetable oils and other hair oil products. It is useful in treating the scalp and roots, and reviving fresh hair.

v Risks: Coal tar is a dense, black, fluid that can be found in various shampoos, specifically ones used to prevent dandruffs. It has been known to cause damages to the nervous system and increases the risk of developing tumors and destroying cells in the body. Ethylene oxide, also found in shampoos, is a known carcinogen and comes with many symptoms if exposed to it, such as nausea and diarrhea.

## **Perfume**

Perfume makes up a largest section of the cosmetics community. It is an essential product of everyday human life that comes with its own pros and cons.

v Benefits: The main benefit of perfume is its captivating smell. The aroma produced by chemicals makes the perfume irresistible to people. Some chemicals that are beneficial include ethyl alcohol, as it is efficient at dissolving and disappearing quickly on human skin. Perfume oil is where the

actual smell is derived from, like a flower. Its chemical composition depends on where the oil was extracted from.

v Risks: Here are some examples of chemicals found in perfumes and colognes and their effects on humans. Benzyl acetate, a chemical compound that gives some perfumes their fruity smell, has been linked to pancreatic cancer. Acetone, a chemical present in cologne, can cause neurological damage through slurred speech, and can also cause vomiting and dry mouth.

## **Risk to the Environment & Alternatives**

Unfortunately, daily beauty practices may not only be harming people, but also the environment. The materials and chemicals used in popular beauty products can cause severe damages to the environment, especially when thrown away or drained. One of these damaging pollutants is called microbeads. They are very small plastic balls that can be found in products like face scrubs and toothpaste. These microscopic plastic particles used to clean the skin happen to have a negative influence on the environment.

When using face scrubs to wash your face, microbeads are rinsed off and drained away. However, due to their miniscule size, sewage treatment plants are not able to capture these small plastic particles, causing them to wash away into rivers, lakes, and other bodies of water. This eventually leads to plastic pollution in our waters. At first glance, this may seem insignificant, but the microbeads have become high in concentration as of recently. This combined with their ability to stay present in waters for up to 50 years and danger to aquatic life, has alerted organizations and companies to prevent

the increase in microbeads. As an alternative method, ensure the ingredients of face scrubs do not contain any plastic materials. Popular companies that still do use plastic and microbeads include Aveeno, Olay, and Dove.

However, there are a few companies that use natural and biodegradable ingredients for face scrubs, such as Ives, Freeman, and Burt's Bees.

Furthermore, there are quite a few chemicals used in cosmetic products that have large impacts on the environment. For example, P-phenylenediamine is a toxic chemical compound used in lipsticks and hair dyes that are lethal to planktons and other marine life. Dibutyl phthalate is another substance used to increase plasticity and can be found in nail polish. Unfortunately, this chemical tends to negatively affect fish behavior and reproductive cycle, destroy ecosystems, and cause mutations in amphibians. Fortunately, the effects of these chemicals can be reduced through consumers. By raising awareness and campaigning for the removal of these chemicals, companies will be forced to prevent the usage of them during the creation process of their materials. By reading the ingredients, consumers could check for lethal chemicals and materials in products. As an alternative, microdermabrasion could be used instead. It is a recently popular treatment that is effective at removing dead skin cells to allow the appearance of bright and soft looking skin, while also eliminating wrinkles. Therefore, cosmetics can not only be a hazard to people, but also the environment.

## Conclusion

In conclusion, chemistry can be found anywhere, in all aspects of the modern industry. It is heavily used when concerning cosmetics and perfume. The various popular products that we use in our daily beauty routines would not

exist right now without the chemical compounds used to create them. Through these chemicals, people are able to transform their image in incredible ways. The chemicals used in cosmetics can have many positive effects on the human body, such as removing dead skin cells, keeping certain body parts moist and hydrated, protection from UV rays and sun damage, and numerous more effects. However, these countless pros happen to come with many cons. Cosmetics could not only cause damages to the human body, such as cancer, neurological damage, and cellular damage, but it also has large harmful impacts on the environment and aquatic life. Fortunately, alternative methods and prevention steps could be taken to reduce these risks, so that people may not have to compromise their beauty standards after all.