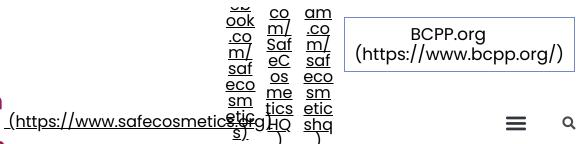
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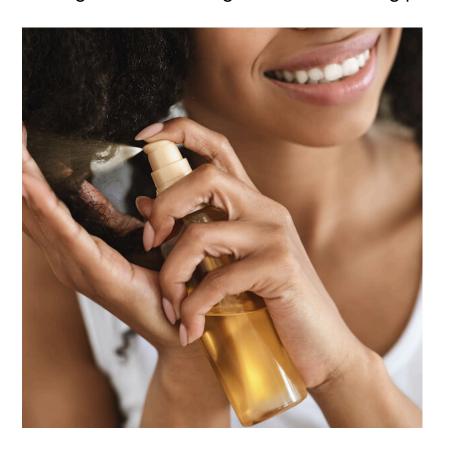
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# Quaternium-15

Quaternium-15, a known skin toxicant and allergen, may be especially dangerous for hairdressers and janitors, who are sometimes exposed to this formaldehyde-releasing chemical at regular doses for long periods of time.



## WHAT IS POLYQUATERNIUM?

Polyquaternium refers to any polymer that has been modified by a process called quaternization. This process results in changes to molecules that improve the performance of body care products. Polyquaternium may also be referred to as quaternary ammonium compounds (QACs) or simply quats. [1]

## Found In

- Hair conditioners
- Hair styling products
- Creams
- Lotions
- Cleansers
- Shaving products
- Eye drops contact solutions
- Household cleaning products.

## What to look for on the label

- Benzalkonium chloride
- Benzethonium chloride
- Ouaternium-15
- Centrimonium bromide
- Polyquaternium followed by a number (i.e. polyquaternium-7).

## **Health Concerns**

**Irritation:** Quaternium-15 is a known human skin toxicant and allergen and possible eye irritant. [2] It is also a formaldehyde-releasing preservative. Formaldehyde is often the culprit of skin irritation and allergic reactions. [3]

Evidence presented in animal and human studies show that other quaternary ammonium compounds may lead to contact dermatitis. Use of products containing quats may contribute significantly to cases of contact dermatitis. Studies estimate 13 percent  $\frac{[4]}{[4]}$  to 34 percent  $\frac{[5]}{[6]}$  of contact dermatitis cases may be linked to quats. Concentrated solutions of quats may cause burns to the skin as well.  $\frac{[6]}{[6]}$ 

**Sensitization:** In rare cases, quat use may elicit more severe health symptoms. A study performed on hairdressers, who are routinely exposed to quaternary ammonium compounds in hair products found hairdressers had almost five times as many antibodies to quats. Increased levels of this antibody relate to an increased risk of allergic reactions to anesthesia,  $\frac{7}{2}$  a serious concern since allergic reactions to anesthesia can lead to life-threatening reactions. A case study reported that a woman suffered from cutaneous cell death after applying a quat-containing antiseptic. Yet another case study described a man with a pre-existing skin condition who developed dermatitis due to a quaternary ammonium compound in his deodorant, suggesting that quats have the potential to induce sensitivity, especially on damaged skin.

# **Vulnerable Populations**

Workers (https://www.safecosmetics.org/population/workers/)

# Regulations

Quaternium-15 is regulated by the Cosmetics Directive of the European Union and can be used up to maximum concentrations of 0.2% in cosmetics and personal care products. [11] In the US, there are currently no regulations for quaternium-15 use in cosmetics.

## How to Avoid?

Read labels and avoid products that contain quaternary ammonium compounds.

### **Explore other Chemicals**

P-Phenylenediamine (https://www.safecosmetics.org/chemicals/p-phenylenediamine/)

<u>Preservatives (https://www.safecosmetics.org/chemicals/preservatives/)</u>

Octinoxate (https://www.safecosmetics.org/chemicals/octinoxate/)

Nanomaterials (https://www.safecosmetics.org/chemicals/nanomaterials/)

<u>Triclosan (https://www.safecosmetics.org/chemicals/triclosan/)</u>

<u>Polytetrafluoroethylene (PTFE, Aka Teflon®)</u>
(<a href="https://www.safecosmetics.org/chemicals/polytetrafluoroethylene/">https://www.safecosmetics.org/chemicals/polytetrafluoroethylene/</a>)

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## **Looking for a Safer Alternative?**

Use Clearya's app to find non-toxic products! Clearya alerts you to toxics and helps you find safe products.



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# **Your Action Helps**

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Take Action Today!

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