

## 'Hidden' fragrance compound can cause contact allergy

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A person tested for contact allergy. Credit: University of Gothenburg

Linalyl acetate, a fragrance chemical that is one of the main constituents of the essential oil of lavender, is not on the list of allergenic compounds pursuant to the EU Cosmetics Directive. Thus, it does not need to be declared on cosmetic products sold within the EU. Recent studies at the University of Gothenburg have shown that linalyl acetate can cause allergic eczema.

In accordance with the EU Cosmetics Directive, makeup, ointments, shampoo, deodorants, toothpaste and other products must contain a declaration of ingredients in order for consumers to avoid the substances to which they are allergic.

### **Cause of contact allergy**

Linalyl acetate, a fragrance chemical, is an exception—it is not listed in the Directive and does not have to appear in declarations of ingredients. The substance is mildly allergenic. New studies at Sahlgrenska Academy have found that it can react with oxygen in the air to form strongly allergenic hydroperoxides. Thus, linalyl acetate may be a common cause of [contact allergy](#).

### **Allergic reactions**

The study included 1,717 subjects who were being assessed for eczema related to contact allergy. Approximately 2% of them had [allergic reactions](#) to oxidized linalyl acetate.

"That may seem like a small percentage," says Lina Hagvall, a researcher at the University of Gothenburg. "But it is approximately the same result as for the fragrance compounds listed in the Cosmetics Directive."

### **Broad range of tests**

The subjects who reacted to oxidized linalyl acetate were also exposed to other fragrance compounds that are part of routine testing these days. A total of 57% of them had no allergic reaction.

"The trials suggest that a broad range of tests is required to detect contact allergies to fragrance compounds," Dr. Hagvall says. "Current tests do not identify the majority of people who have contact allergy to

oxidized linalyl acetate."

## **Hard to avoid**

Because the substance is not declared on [cosmetic products](#), consumers have trouble avoiding it, which can turn allergic eczema into a more severe, long-term condition.

According to the researchers, the study findings should lead to inclusion of oxidized linalyl acetate among the fragrance compounds used for diagnosis of contact allergy. The substance should also appear in the declaration of ingredients for cosmetic products.

"Air-oxidized linalyl [acetate](#) – An emerging fragrance allergen?" has been published in *Contact Dermatitis*.

### **More information:**

[onlinelibrary.wiley.com/doi/10.1111/cod.12350/pdf](https://onlinelibrary.wiley.com/doi/10.1111/cod.12350/pdf)

Provided by University of Gothenburg

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