

## **Fragrance in detergents and household products**

Fragrance compounds are used to provide scent to everyday detergents and household cleaning products. One fragrance compound can theoretically contain dozens of different fragrance ingredients. However, on average, approximately fifty fragrance ingredients are used in a fragrance compound providing the scent to a household or detergent product.

Fragrance compounds are generally conceived around three basic components: the head note (also known as the 'top note'), the heart note and the base note.

The role of the head note is to stimulate the individual's senses and draw them to the fragrance. The effect is instant but fleeting due to the rapid evaporation rate. Citrus and ginger scents are commonly used as top notes.

The heart note is the body of the fragrance. It forms the true character of a scent and will last a long time. In the heart note flower accords are often used sometimes combined with woody and spicy notes.

Base notes are rich and heavy in scent. They form the base of the fragrance and give it its backbone and longevity. Typical base note components often belong to the balsamic, musky or vanilla family.

Scents in household cleaning products and detergents make an essential contribution to the sense of well-being of consumers – and also to product identity. Different scent variations bring out different associations that can be very individual. Users should notice the scent when opening the package, when using the product, or after cleaning or washing their laundry. The challenge for manufacturers is to guarantee an equally good scent experience at all stages of the product's use.

Fragrance compounds in household cleaning and detergent products must offer more than just a pleasant smell, they must in addition be stable in all conditions of use and in combination with the other product ingredients. They must also cover the intrinsic smells of the raw materials, which are generally unpleasant.

## **Safety of Fragrance ingredients**

In order to ensure fragrance ingredients in household cleaning and detergent products are safe to be placed on the market, the industry has established a safety process that consists of four major phases:

1. An international research institute (Research Institute for Fragrance Materials – RIFM; [www.rifm.org](http://www.rifm.org)) assisted by an independent panel of experts carries out risk assessments on the potential impact of individual fragrance ingredients on human health as well as the environment.
2. Based on these assessments the International Fragrance Association (IFRA) develops Standards for the use of fragrances, e.g. asking for compliance with certain purity criteria, maximum contents for use, or bans of certain substances. IFRA members also subscribe to the IFRA Compliance Program which focuses on the safety of fragranced consumer products by ensuring that the IFRA Code of Practice is fully applied and adhered to. It involves the analysis of a variety of consumer products for the presence of fragrance ingredients regulated by IFRA Standards.

For more information about fragrance ingredients, testing and safety for consumers and the environment go to: [www.ifraorg.org](http://www.ifraorg.org)

3. The fragrance manufacturer then ensures that the fragrance is safe for the intended use.
4. Finally, the fragrance is examined with regard to its safe use in an end product, e.g. detergent. In this instance, the manufacturer of the end product also includes possible interactions of the fragrance with other constituents of the formulation of the product. Consumer exposure is considered in detail.

Some ingredients of detergents, maintenance and cleaning products can, on rare occasions, irritate the skin or eyes. The same holds true for certain fragrance ingredients.

Induction of a fragrance allergy via the use of household or detergent products is rare. Nevertheless, for consumers who may have already developed an allergy to a certain substance, allergic reactions (elicitation) may occur at very low levels of exposure. To help such persons identify fragrances that may bring about an allergic reaction, such allergenic fragrances must be labelled on packaging according to the following legislation:

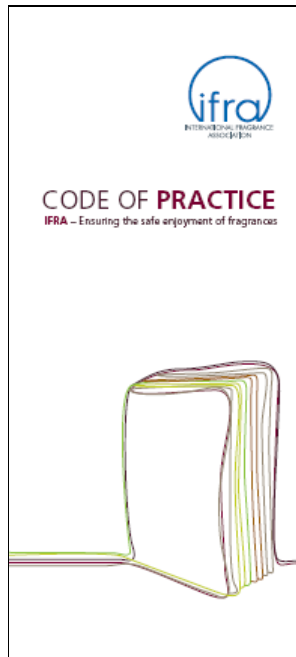
- Any substance in a preparation classified as sensitising according to the respective EU regulation and being present in a concentration equal to or more than 0.1% must be labelled on packaging of all detergents, maintenance and cleaning products. For the natural substance CITRONELLOL, for example, this must be done by way of the following sentences: "Contains CITRONELLOL. May produce an allergic reaction."
- For detergents, cleaning products, softeners and bleaching preparations for clothes there are currently 26 allergenic fragrance ingredients understood to be more susceptible to triggering allergic reactions (based on a literature survey of reported clinical cases by the SCCNFP). These ingredients must therefore be labelled on the packaging if their volume in the end product exceeds 0.01% (cf Detergent Regulation EC No 648/2004). The 26 potentially allergenic fragrance ingredients are:
  - ALPHA-ISOMETHYL IONONE
  - AMYL CINNAMAL
  - AMYLCINNAMYL ALCOHOL
  - ANISE ALCOHOL
  - BENZYL ALCOHOL
  - BENZYL BENZOATE
  - BENZYL CINNAMATE
  - BENZYL SALICYLATE
  - BUTYLPHENYL METHYLPROPIONAL
  - CINNAMAL
  - CINNAMYL ALCOHOL
  - CITRAL
  - CITRONELLOL
  - COUMARIN
  - EUGENOL
  - EVERNIA FURFURACEA EXTRACT
  - EVERNIA PRUNASTRI EXTRACT
  - FARNESOL
  - GERANIOL
  - HEXYL CINNAMAL

- HYDROXYCITRONELLAL
- HYDROXYISOHEXYL 3-CYCLOHEXENE CARBOX-ALDEHYDE
- ISOEUGENOL
- LIMONENE
- LINALOOL
- METHYL 2-OCTYNOATE

The industry self-regulatory measures and the legal requirements should ensure that consumers can safely use fragranced household and detergent products and enjoy a world of wonderful scents.

Nevertheless, if you suspect you have an allergic skin reaction, please consult a dermatologist. If an allergy is confirmed, you may receive (depending on your country of residence) an allergy passport listing the substances critical to you. By comparing these substances with ingredients of detergents, maintenance and cleaning products labelled on the packaging or listed on the internet, you can avoid products that could cause an allergic reaction in you.

For more information, please see also :



[www.ifraorg.org](http://www.ifraorg.org)