

COMMENTARY

Methylisothiazolinone: the new star of contact dermatology

Preservatives have been used for a long time mainly but not exclusively by cosmetic industries. The aim was obvious, but most companies did not take into account the potential allergenicity of preservatives.

Different ones were launched on the market. The most popular were the parabens and the formaldehyde releasers, such as quaternium-15, 2,5-diazolidinyl urea (Germall II®) and imidazolidinyl urea (Germall 115®), and all of them displayed allergenic properties.

They are still included in the baseline or additional series of patch tests. But the prevalence of positive patch tests is low, and therefore, they can be considered 'weak' allergens. Why are they kept in the list?

Because they are present in our environment, not only in cosmetics but also in various water-based products, occupational or not.

A new era of dermatology-allergy was open by the introduction of a new preservative: methylchloroisothiazolinone–methylisothiazolinone (MCI/MI) considered to be revolutionary, due to its efficacy at very low concentrations, expressed in ppm. The major trade name was Kathon CG®. Unfortunately, an epidemic of allergic contact dermatitis appeared very soon, and MCI/MI was rightly considered a strong sensitizer. Different groups of dermatology-allergologists were concerned, and original articles were written to alert European regulation authorities, but these¹ were very slow to react, and when they took measures to reduce the concentration or ban the use of MCI/MI in cosmetics, the frequency of positive patch test reactions did not decrease significantly (effect Dillarsstone).²

The substitution of MCI/MI by one of the two isomers of the mixture, i.e. methylisothiazolinone (MI), did not prevent the occurrence of a 'new wave' of epidemic.

The current article by Uter *et al.*³ on behalf of the European Environmental Contact Dermatitis Research Group offers a remarkable synthesis of all facets of the problem:

- MI is a very powerful sensitizer
- There is cross-elicitation by other isothiazolinones, such as benzisothiazolinone (BIT) or octylisothiazoline (OIT), either cross-reactivity or concomitant exposure.

- MI is present in many cosmetics (leave-on or rinse-off). The response of the European regulation for accepting measures of prevention claimed by dermatology-allergologists. But prevention is far more complex when considering other water-based products such as paints⁴ due to a lack of information by the manufactures. Labelling of products is urgently needed.⁵

The most significant message of this paper is to provide guidelines when facing the problem of a new contact allergen.

Conflicts of interest

None to declare.

Funding source

None to declare.

J.-M. Lachapelle*

Department of Dermatology, Catholic University of Louvain, Brussels, Belgium

*Correspondence: J.M. Lachapelle. E-mail: Jean-marie.Lachapelle@uclouvain.be

Linked article: W. Uter *et al.* *J Eur Acad Dermatol Venereol* 2020; **34**: 333–339. <https://doi.org/10.1111/jdv.15875>.

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DOI: 10.1111/jdv.16174