

Article type : Letter to Editor

**Periocular contact allergy from spectacle frames
cleaned with methylisothiazolinone-containing household detergents.**

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This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/jdv.15718

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Funding: none.

Conflicts of interest: none.

Running head: Contact allergy from methylisothiazolinone in detergents.

Key words: allergic contact dermatitis, case report, eyelid dermatitis, household detergent, medical device, methylisothiazolinone, non-cosmetic products, penetration, preservatives, spectacle frames.

Editor,

Methylchloroisothiazolinone/methylisothiazolinone (MCI/MI) and MI are well-known sensitizers that can be present in cosmetics, paints and household detergents. A 60-year-old, non-atopic woman presented with eyelid dermatitis extending towards the cheeks (**Figure 1**). Patch tests were performed with the Belgian baseline and additional series, all applied on her back using Allergeaze[®] patch test chambers (SmartPractice, Calgary, Canada). The tests were occluded for 2 days using Fixomull[®] stretch (BSN medical GmbH, Hamburg, Germany). Readings were performed according to ESCD guidelines [1] and showed, on day (D)4, contact allergy to nickel (+) and PPD (+?), both of past relevance, and to MCI/MI 0.02% aq. (++)

and MI 0.2% aq. (+). The patient informed us she had been cleaning her spectacle frames with a popular household washing-up liquid (Dreft[®], Procter & Gamble, Petit-Lancy, Switzerland) previously shown to contain MI (~ 200 ppm or 0.02%) [2]. A second, 36-year-old, atopic female was seen because of a persistent facial dermatitis, notably of the periorbital region and the cheeks. Patch tests were performed as in Case 1. Readings on D4 showed reactions to limonene and linalool hydroperoxides (+?), Balsam of Peru (+?), MI 0.2% aq. (++) and MCI/MI 0.02% aq. (++) , as well as to octylisothiazolinone 0.1% pet. (+?) and benzisothiazolinone 0.1% pet. (+?). The patient had previously suffered from skin reactions due to cosmetics, and from a rash and respiratory complaints after painting her house [3]. Interestingly, also in this case, the patient had cleaned her spectacle frames with an MI-containing detergent. In both cases, stopping the use of the culprit detergents to clean the spectacle frames, along with treatment by topical corticosteroids, made the periocular dermatitis disappear completely. Both females had most likely been sensitized to MCI/MI and MI in the past, because of their presence in cosmetics and/or paints, and the current elicitation of dermatitis was due to MI in a household detergent, used in a rather unexpected way. Both MCI/MI and MI have been held responsible for world-wide epidemics of allergic contact dermatitis [4,5]. Therefore, the EU Cosmetic Regulation has been sharpened, no longer allowing the presence of MCI/MI and MI in leave-on cosmetics, and restricting their use in rinse-off cosmetics to a maximum of 15 ppm (0.0015%). However, non-cosmetic products, such as household detergents, are still relevant sources of exposure to this preservative, and may still provoke allergic contact dermatitis in consumers [5]. The EU Detergents Regulation requires household detergents to be labelled with the preservatives they contain, but no maximum allowed use concentrations are imposed. High concentrations of MI can be present in detergents [4,6]. Moreover, isothiazolinones may contaminate, penetrate into, and reside on or in solid materials, as such able to elicit allergic contact dermatitis even from -at first sight-

innocuous sources [5]. For example, isothiazolinones have been shown to penetrate gloves and dental prostheses [2,7]. Here, we suspect that MI from the detergent either penetrated and resided in the spectacle frame structure during cleaning, or formed a residual film on the spectacle frames by inadequate rinsing. Also, as isothiazolinones are widely used by various industries, the intrinsic presence of MI in the spectacle frames due to its use during the production process might not be excluded, as such cases have been reported [8]. The latter, however, is unlikely in view of the positive evolution in our cases, with both patients being able to continue the wearing of their spectacles after stopping the use of the culprit detergent. When patients react to own, solid materials, informing about cleaning habits may thus prove to be rewarding. As MI-levels are occasionally quite high in household detergents, restrictions may need to be considered.

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Figure legends

Figure 1: Periocular dermatitis extending towards the cheeks attributed to a methylisothiazolinone (MI)-containing household detergent used to clean spectacles in Case 1.



