

Response

The Relationship of Vehicle and Concentration for Imidazolidinylurea, with Attention to Formaldehyde Allergy Status

To the Editor:

The article describes patch testing of imidazolidinylurea in aqueous and petrolatum vehicles. Differences in the frequency of positive reactions between the two vehicles over a time period were noted and questions were raised related to the accuracy of the stated concentrations. The results of high-performance liquid chromatography (HPLC) in a laboratory in Sweden indicated differences in stated concentrations on the material submitted for testing. HPLC analysis showed 2.0% for the aqueous vehicle and 3.1% for the petrolatum. (Labels state 2% for both.)

Chemotechnique Diagnostics was contacted by one of the authors of the letter to the editor to comment on these findings as the company is the producer of the allergens. A small sample of the actual batch 03414B of the petrolatum allergen was forwarded to us. We checked our batch record, and it indicated an accurate concentration at 2%. To confirm this further, we forwarded the received sample,

along with an in-house refrigerated and properly stored sample from the same batch, to Bruker Optics, a German laboratory specializing in Fourier transform infrared (FT-IR) spectroscopy.

Triplicate analysis of the reference syringe showed a concentration of $1.98\% \pm 0.142\%$, and the used material from the US clinic showed $1.42\% \pm 0.142\%$, thereby confirming that no production errors had occurred. The FT-IR method using a standard curve with six measuring points showed a high correlation coefficient (0.998), which is a measure of the high accuracy of the method. The advantage of this method is that no extraction of the sample with solvents is needed, thereby avoiding the introduction of secondary parameters. Our findings using this method have initiated research work to apply the method for other allergens as well. No information regarding storage and use conditions was given for the used sample from the clinic. One possible explanation for the lower concentration at 1.42% found in this analysis and the 3.1% found in the previous analysis could be that phase separation has occurred during the period of use of the allergen due to unintentional heat exposure.

Reprints not available.

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