

## EXTRACTION OF HOUSE DUST MITE ALLERGEN, DER P 1, FROM DUST

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A recent article in this journal found that the type of extraction buffer did not affect measured levels of the major group one allergen (Der p 1) from the house dust mite, *Dermatophagoides pteronyssinus*, in household dust samples (1). This differed from a previous study where about twice the levels of Der p 1 were found in borate-buffered saline extracts, compared to ammonium bicarbonate buffer or phosphate-buffered saline extracts, irrespective of extraction temperature or time of extraction (2).

In discussing our previous study (2), the authors state that we did not use Tween-20 in our extraction buffers. Although our article did not make a mention of Tween-20, we in fact did use it in our extraction media. It was an oversight of us in that we did not mention this in our article.

We further explored temperature and buffer effects on Der p 1 extraction in an external quality control program where six dust samples were sent to 23 laboratories worldwide (3). Results from this study again showed that type of extraction buffer and extraction temperature influenced Der p 1 measurements. The majority of the participant laboratories did use Tween-20 as a wetting agent in their extraction buffers.

As pointed out by the authors, adding Tween-20 to extraction media results in higher endotoxin levels and is recommended by the European Committee for Standardisation. The authors call for further investigation on the effects of Tween-20 on extraction efficiency of all indoor allergens from dust. However, the majority of indoor allergen analysis laboratories use ELISA or MARIA™ kits from Indoor Biotechnologies where the recommended extraction medium is phosphate-buffered saline containing 0.02 % Tween-20. It would take much effort to study this systematically to obtain results with sufficient internal and external validity.

### REFERENCES

1. Prester L, Kovačić, Macan J. Comparison of buffers for extraction of mite allergen Der p 1 from dust. *Arh Hig Rada Toksikol* 2012;63:293-300.
2. Siebers R, Luey B, Crane J, Fitzharris P. The effects of temperature and buffer on the extraction of Der p 1 from dust. *J Allergy Clin Immunol* 1997;100:580.
3. Siebers R, Rains N, Fitzharris P, Crane J. The worldwide external Der p 1 quality control program: results from round three. In: Siebers R, Fitzharris P, Cunningham M, Crane J, editors. *Mites, asthma and domestic design III*. Wellington (NZ); Asthma Research Group, University of Otago; 2000. p. 21-5.

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