

### Analysis of milk allergens by triple-quadrupole mass spectrometry

Food allergy is an abnormal immunological response to a food protein that may result in clinical manifestations ranging from disorders in the digestive tract to anaphylaxis. Patients rely on accurate food labelling to avoid the problematic food. Directive [2007/68/EC](#) regulates the declaration of all intentionally added ingredients that may cause an allergic reaction. However, the detection of accidentally added allergens remains a problem.

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Mass spectrometry has become the leading technology in protein identification and therefore offers new possibilities for allergen detection. Methods based on triple-quadrupole mass spectrometers may also be used for quantitative analysis. Briefly, these methods rely on tryptic digestion of the protein, followed by an identification of the generated peptides.

The presentation focuses on the development of a triple-quadrupole mass spectrometric method for the detection of caseins, which [trigger](#) for cow's milk allergy. The selection of appropriate peptides, the development of transitions for single reaction mode (SRM) mass spectrometry and the optimization of these is shown. The optimized method is capable of analyzing casein in different samples.

Verwijderd: are responsible