

Analysis of food-contact films

The problem: To determine the regulatory compliance of a film structure containing an isocyanate-based adhesive, extractions needed to be run using food simulating solvents and very sensitive analytical tests were required.

The challenge: The residual monomer in the adhesive was reactive towards the extracting solvents.

Our solution: Understanding the chemistry of the reaction products of the extraction solvents with the isocyanate monomer was key in resolving this issue. Since the extraction solvents consisted of water/ethanol blends, 3 different species (diamine/amine carbamate/dicarbamate) needed to be measured in order to estimate worst-case migration potential. LC/MS techniques were developed that allowed sensitive quantitation of these three species, which allowed determination of the compliance of the film structures.

How STRIDE can help

STRIDE's team of analytical scientists have extensive experience in developing the right sampling procedures and test methods for a diverse array of complex analytes. We are ready to develop custom methods to help you with your analytical challenges.

Contact us to learn more at research@stride2future.org