

Detection of Wheat Allergens by LC-MS/MS using a Multi-Allergen Assay for Major Allergens in Food

Food allergy is a significant health issue in western countries. The prevalence of food allergies in the United States is estimated at 6% for children and 3.7% for adults. There is a need for specific and sensitive methods to detect allergens at trace levels. Screening for allergens in food is traditionally performed using enzyme-linked immunosorbent assays (ELISAs). Qualitative and quantitative results generate regularly variable results, and false-positive as well as false-negative results occur, constituting a severe limitation of this technique. A rapid LC-MS/MS method for the detection of peanut, milk, egg and wheat allergens will be presented. Limits of quantitation are comparable to those obtained by ELISA assays. The method has been used for the detection of wheat allergens from several food matrices.