

Authenticity is a quality criterion for food and food ingredients, and is required more and more worldwide, as a result of legislative protection for regional foods. Reviews of analytical methods for the determination of geographical origin of food and beverages have been published. Organic components of a food-crop production depend on various conditions (e.g., fertilization, history of the field, climatic conditions in the year of cultivation, geographic location and soil composition), so it is not always possible to determine the origin of a product by analyzing the organic components. Methods based on elemental composition have been reviewed as have methods based on isotope ratios. Over the past decade, with the development of new advanced analytical techniques we can successfully retrieve elemental and isotopic compositions of any given food sample and determine the geographic origin successfully. The growing concern of the consumers stimulated scientific research and publications in recent years, including multi-element and isotope-ratio methods of analysis in food authentication after statistical evaluation of the results.



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Multi-Isotope Characterization of Plant Food

Multi-isotope ratios records for characterization of
the geographical origin of various plant food



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