



Carbon isotope ratios and isotopic correlations between components in fruit juices

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Nowadays food products are defined by geographical origin, method of production and by some regulations concerning terms of their authenticity. Important data for confirm the authenticity of product are providing by isotopic methods of food control. The method checks crucial criteria which characterize the authenticity of inspected product. The European Union Regulations clearly show the tendency for application of the isotopic methods for food authenticity control (wine, honey, juice). The aim of the legislation steps is the protection of European market from possibility of the commercial frauds. Method of isotope ratio mass spectrometry is very effective tool for the use distinguishably the food products of various geographical origin. The basic problem for identification of the sample origin is the lack of databases of isotopic composition of components and information about the correlations of the data. The subject of the work was study the isotopic correlations existing between components of fruits. The chemical and instrumental methods of separation: water, sugars, organic acids and pulp from fruit were implemented. IRMS technique was used to measure isotopic composition of samples. The final results for original samples of fruits (apple, strawberry etc.) will be presented and discussed.

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