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Mineral analysis of human diets by spectrometry methods

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Highlights

- The review provides an updated summary of mineral element analysis in human diets.
- Sampling, sample preparation and determination procedures were discussed.
- The discussion is based on the present limitations and expected future trends.
- Minerals in human diet from different countries are compared with RDI values.

Abstract

Mineral element determination in human diets is very important for human health, due to the presence in foods of essential and toxic elements or their incorporation in the manipulation and cooking food process. Different instrumental techniques have been used to determine mineral elements in human diets, but atomic spectroscopy and mass spectrometry based ones are the most commonly employed. Sampling procedures for diet analysis are the main critically step for mineral element determination, being employed different standardised protocols. This review summarised critically the state-of-the-art of mineral analysis in human diets, considering sampling, sample preparation and determination procedures. Results obtained from different countries are compared between them and with recommended daily intake values established by international agencies for the preservation of human health.

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