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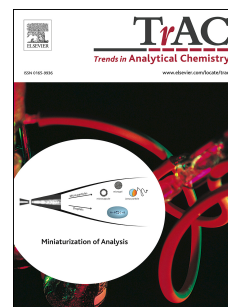
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Abstract

Mercury forms potent toxic compounds, which cause irreversible damage to the central nervous system, while selenium, if present in an adequate concentration, is an essential micronutrient needed for the regulation of metabolic processes. The interactions between mercury and selenium have been rigorously scrutinized particularly due to observed protective effects of selenium against mercury toxicity, however very few proposed mechanisms are supported by empirical data. With mercury concentrations steadily rising in the environment, this matter is of urgency, and pushes for the development of new sample preparation protocols and analytical techniques. Softer extraction methods should preserve the true chemical species, while a combination of chromatographic and direct analytical techniques enable identification and quantitation. This review summarizes the state of the art of current analytical techniques, which focus on the interactions between mercury and selenium

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