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Novel Analytical Techniques for Detecting Trace Elements in Foods

Guest Editor:

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Message from the Guest Editor

Trace elements are one of the most followed analytes in food matrices. The main sources are raw materials, soil, water, and food processing. Human intake of trace elements impacts human health. Scientists are mainly interested in the essentiality, the risk assessment, the toxicity, the bioavailability, the bioaccessibility, and the speciation of trace elements in food. In all these cases, novel analytical techniques have been developed to overcome the drawbacks of the existing ones. The main challenges remain efficiency, sensitivity, green chemistry, selectivity, and the cost of the analysis.

The Special Issue is dedicated to novel analytical techniques for detecting trace elements in foods. The techniques in question include sensors (electrochemical, optical, or mass-based sensors), inductively coupled plasma atomic emission spectroscopy (ICP-AES), inductively coupled plasma mass spectrometry (ICP-MS), atomic absorption spectrometry (AAS), X-ray fluorescence (XRF), total reflection XRF (TXRF), and neutron activation analysis (NAA). The novel techniques should address ameliorations in terms of efficiency, selectivity, sensitivity, green chemistry, or rapidity of analysis.

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Message from the Editor-in-Chief

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