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Plant Extracts Used to Control Microbial Growth: Efficacy, Stability and Safety Issues for Food Applications

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Message from the Guest Editors

Plant-based extracts include several compounds endowed with antimicrobial activity (e.g., phenolic compounds, terpenes, isothiocyanates) and have attracted significant attention due to their efficacy against spoilage microorganisms (including bacteria, yeasts, and fungi) and foodborne pathogens. The antimicrobial action of plant extracts (e.g., control of microbial growth, reduction in biofilm production) depends on the chemical composition of the extract and the microbial targets. Despite the antimicrobial action of plant extracts, their use as food preservatives is limited by their stability under processing or storage conditions. Therefore, several strategies have been proposed to enhance their stability (e.g., encapsulation, inclusion in biopolymers, spray-drying, and so on). However, plant extracts can be contaminated with several toxic compounds or accumulate dangerous compounds (e.g., heavy metals, mycotoxins, residues of crop protection products). For this reason, safety issues related to the use of plant extracts are of great interest.

Against this background, the Special Issue aims to collect original papers and reviews on this topic.



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Special Issue



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Message from the Editor-in-Chief

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