



Foods

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an Open Access Journal by MDPI

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CiteScore: 8.7

Indexed in PubMed

Impact Factor: 5.1

Special Issue Reprint

## Plant Extracts Used to Control Microbial Growth

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Plant-based extracts include several compounds endowed with antimicrobial activity (e.g., phenolic compounds, terpenes, isothiocyanates); they have attracted significant attention due to their efficacy against spoilage microorganisms (including bacteria, yeasts, and fungi) and foodborne pathogens. Plant-based extracts have been used to control microbial growth in different foods and limit the spread of foodborne pathogens and antibiotic resistance. 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). This Reprint reports several cases of the application of plant extracts and natural antimicrobials in food model systems.

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