

Special Issue

Innovative Processing Technologies and Their Effects on Antioxidant Activity in Plant-Derived Natural Products

Message from the Guest Editor

Extraction methodologies exert a critical influence on the qualitative and quantitative profiles of bioactive compounds in natural extracts. Parameters such as solvent type, polarity, temperature, extraction duration, and pressure directly influence the recovery of bioactive secondary metabolites, including phenolic compounds, alkaloids, terpenoids, and carotenoids. This Special Issue aims to highlight recent advances in the study of how both conventional and innovative extraction methods, such as ultrasound, microwave, and supercritical fluid-assisted extraction, impact the chemical composition, antioxidant activity, and functional potential of natural products. Studies that combine detailed chemical characterization with modern methodological approaches, including cell-based assays and other biologically relevant models, are encouraged, providing a more comprehensive understanding of antioxidant activity. Contributions exploring correlations between extraction conditions, phytochemical profiles, and functional antioxidant responses, as well as approaches to optimize yield, bioactivity, and environmental sustainability, are particularly welcome.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of “oxidative stress” a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

Editor-in-Chief

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