

Special Issue

Plant Essential Oils: Extraction Methods and Applications in Food Packaging

Message from the Guest Editors

Plant Essential Oils in Food Packaging Growing consumer demand for natural foods and sustainable packaging drives research into **plant essential oils (PEOs)** as bio-based alternatives to synthetic preservatives. This Special Issue, "Plant Essential Oils: Extraction Methods and Applications in Food Packaging," explores the integration of PEO extraction into food packaging systems. PEOs offer remarkable **antimicrobial** and **antioxidant properties**, crucial for extending shelf-life and enhancing food safety. Yet, their volatility and strong sensory impact pose application challenges. PEO efficacy and stability in packaging depend on the **extraction method** (e.g., hydrodistillation), which influences yield and bioactive profile. Innovative **encapsulation techniques** (e.g., cyclodextrins) and material engineering are vital for controlled release and maximizing PEOs' preservation potential in active and intelligent packaging. This Special Issue seeks research on novel extraction, advanced encapsulation, PEO-loaded materials, preservation impact, migration studies, and safety/sustainability assessments.

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Message from the Editor-in-Chief

Foods (ISSN 2304-8158) is an open access and peer reviewed scientific journal that publishes original articles, critical reviews, case reports, and short communications on food science. Articles are released monthly online, with unlimited free access. Currently, *Foods* has been indexed by the Science Citation Index Expanded (SCIE - Web of Science), PubMed, and Scopus. Our aim is to encourage scientists, researchers, and other food professionals to publish their experimental and theoretical results as much detail as possible. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global food science community.

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