

Special Issue

Infrared Spectroscopy and Hyperspectral Imaging for Detecting Food Contaminants and Residues

Message from the Guest Editors

Infrared spectroscopy (IR) and hyperspectral imaging (HSI) have emerged as powerful non-destructive techniques for spotting food contaminants and residues. As food safety receives more attention for researchers, these new technologies can act as efficient monitoring tools for food quality and the detection of toxic substances. Most traditional detection methods are time-consuming and rely on high-rate consumables whereas IR and HSI allow for real-time, in situ detection, thus being valuable in food safety assessments.

These are based on the interplay between light and the food matrix to sense and measure the chemical constituents present. IR considers infrared absorption by food components, while HSI captures spectral information using a larger number of wavelengths, enhancing the detection of small variations in food composition. But there are still barriers to applying these technologies on a larger scale. Variability in food composition, calibration needs, and complexity in data processing must be addressed to promote consistent application. However, with ongoing research progress, IR and HSI will become indispensable tools to ensure food quality and safety.

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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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