Journal of Food Quality

Special Issue on
Nontargeted Analytical Techniques for Food Authentication

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CALL FOR PAPERS

Consumers' increased awareness of food quality and safety is accelerating research in the field of food authentication. Nonauthentic foods raise a number of concerns related to health, diet, religion, ethic, environmental, lifestyle, and so forth and have adverse economic implications. Label discrepancies may include origin, ingredients, production method, processing technology, or compliance with European schemes (e.g., Protected Designation of Origin; Protected Geographical Indication; Traditional Specialty Guaranteed).

Food authenticity stakeholders include not only consumers but also food industries, who are seeking the opportunity to assure labeling compliance and branding of their food products, and regulatory authorities, who need reliable and updated analytical methods for confirmation of authentic food products and to support law enforcement.

In order to effectively fight food fraud, a high number of products should be frequently controlled throughout the food chain. Towards this aim, rapid and efficient methods for food authentication are needed in order to make the control process affordable in terms of both time and costs. In this context, nontargeted analytical techniques, such as spectroscopy (UV-Vis, NIR, MIR, Raman, NMR, fluorescence, broad acoustic resonance, ultrasound, microwave, etc.), electronic nose, electronic tongue, and imaging (digital, hyperspectral, MRI, and X-ray computed tomography) play a key role. These techniques offer the possibility of simultaneously determining a high number of compounds or features, the so-called "fingerprint," analyzing samples in a nondestructive, easy, quick, and direct way with minimal sample preparation. The resulting datasets are usually high dimensional and complex, requiring chemometric methods of pattern recognition or multivariate calibration to extract important information.

This special issue is intended to publish high-quality research manuscripts as well as reviews addressing recent advances in nontargeted "fingerprinting" methods and chemometrics for food authentication.

Potential topics include but are not limited to the following:

- Spectroscopic methods for food authentication (UV-VIS, NIR, MIR, Raman, NMR, fluorescence, broad acoustic resonance, ultrasound, microwave, etc.)
- Electronic nose and tongue applied to food authentication
- Imaging methods for food authentication (digital, hyperspectral, MRI, X-ray computed tomography, etc.)
- Multivariate data and image analysis for food authentication
- Novel applications of handheld devices for food authentication
- Comparison of different instruments/methods for food authentication

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/jfq/nit/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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