Journal of Food Quality

Special Issue on

Advanced Methods in Authentication and Traceability of Food Origin and Type

CALL FOR PAPERS

The classification of food samples based on their chemical composition can be used to provide useful information for a variety of purposes, such as recognition of geographical origin and authenticity, the characteristics of a product, quality control for companies, preservation, and category differentiation. An analysis could examine ingredients such as vitamins, minerals, enzymes, food additives, flavors, and colors and their reflection on food quality and consumer's health. One example of a classification problem is the authentication of organic food.

The certification label for country of origin or type of food adds market value to products, which makes the authentication process relevant under the perspective of possible fraud. Since the differences between the type and the origin of products are usually not visible to the naked eye, systematic control of the authenticity and traceability of food products relies on chemical analysis. Certification requires a series of steps that lead to a considerable increase in product value. Methodologies for the authentication of food type or origin are a matter of great interest. Some challenges are developing less costly, less invasive or destructive, and more trustworthy and reliable methods.

This special issue invites authors to contribute original research articles on innovative chemical analyses and chemometrics applied to the certification or assurance of food/beverage type or traceability throughout the entire production process until a product reaches its consumers. Submissions with real-world applications to the food and beverage industries are welcome. Review articles which describe the current state of the art of this topic are also encouraged.

Potential topics include but are not limited to the following:

- Machine learning methods for the classification of food and beverages
- Feature selection and extraction methods to improve classification
- Authentication of organic food
- Advanced methods for authentication and traceability of food products (atomic spectroscopy or molecular spectroscopy techniques)
- Omics analyses for food authentication
- Isotopic techniques in food safety, quality, and traceability
- Design of new software that provides novel tools or truly advances the use of machine learning/chemometrics methods in food science
- Development of new statistical, mathematical and computational methods for food science and related fields such as environmental chemistry, biochemistry, and toxicology

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

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

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