Special Issue

Application of Near-Infrared Spectroscopy in Food Quality and Safety

Message from the Guest Editors

An increasing demand for high-quality food requires the quality and safety monitoring of food products and the application of fast detection methods for the determination of undesired substances in food. During the last 20 years, near-infrared spectroscopy (NIRs) has emerged as a rapid, nondestructive, and environmentally friendly method for the evaluation of the complexity of food matrices regarding composition, microstructure, and biological activity. The information arising from the interaction between the food structure and electromagnetic radiation could be explained via the use of chemometrics. The term chemometrics refers to a multidisciplinary approach, highly used for the analysis of large, complex chemical data using mathematical and statistical methods. This Special Issue will include papers with the rapid detection of food contaminants, food quality monitoring, data analysis and the development of mathematical models using chemometrics and machine learning algorithms based on near-infrared spectra obtained from food products, identification of the authenticity, quality, bio-functional and nutritional aspects of food based on its geographical and botanical origin.

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