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Development and Application of Nondestructive Testing Technologies in Food Quality and Safety

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Message from the Guest Editors

Dear Colleagues,

Nondestructive testing (NDT) technologies have revolutionized the fields of food quality and safety inspection. These advanced techniques allow for the evaluation of food products without causing any damage, ensuring the integrity of food and safety for its consumption. NDT techniques include a wide range of methods such as visual inspection, sensory evaluation, physical measurements, chemical analysis, and microbiological testing. These methods are designed to detect defects, contaminants, and other quality issues in food products. Technologies such as spectroscopy, ultrasonic testing, nuclear magnetic resonance, X-ray-computed tomography, laser scattering, electronic nose, and optical methods have been developed to analyze food products for various purposes. Novel biosensing, machine vision, and image processing also play a key role in food quality and safety inspection for detecting surface defects, foreign objects, and other contaminants. These nondestructive technologies are essential for ensuring public health and maintaining consumer confidence in the food industry.

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Message from the Editor-in-Chief

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