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Detection and Risk Assessment of Undesirable Chemical Residues in Food

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Message from the Guest Editors

The dietary exposure to undesirable chemical residues in food may have adverse effects on humans' health. Hence, the analysis, measurement, and risk assessment of these chemical pollutants are a prominent topic in food science. These undesirable chemical residues include, but are not limited to: exogenous pollutants (such as pesticides, veterinary drugs, fungal toxins, bacterial toxins, microplastics, plasticizers, heavy metals, benzopyrenes, dioxins, etc.), endogenous toxins (such as aquatic products endogenous toxins, plant natural toxins, allergens, etc.), and hazardous substances generated during food processing (such as heterocyclic amines, chloropropanols, acrylamide, advanced glycation end products, etc.).

A series of toxic reactions may be triggered by dietary exposure to these chemical toxins, such as liver toxicity, kidney toxicity, intestinal toxicity and gut microbiota disorder, reproductive toxicity, endocrine disrupting effects, neurotoxicity, and teratogenic, carcinogenic, and mutagenic effects. The detection, risk assessment, and control of these undesirable chemical residues play a crucial role in ensuring food safety and humans' health.









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Message from the Editor-in-Chief

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