# FOOD SAFETY

## AND CONTROL



## Background

Food control systems underpin food safety and quality. Both are vital components of food security and both necessary to safeguard international trade. Food control systems are under increasing pressure not least because of the lingering disruptive effects of pandemics, but also food-borne disease outbreaks, and conflicts affecting food production, distribution, and supply. Climate change is also influencing patterns of food contamination as profound changes in weather patterns promote the conditions necessary for microbes and pests to thrive, impacting food-borne illnesses, wastage, and losses.

Many analytical methods fundamentally rely on a nuclear related property, e.g., nuclear spin in magnetic resonance, ionization for mass spectrometry, radiotracers in radiometric techniques, and differences in the mass of nuclei for isotope ratio analysis and mass spectrometric separation. Nuclear techniques used alone or with complementary, non-nuclear methods provide powerful solutions to food safety and control issues. Examples include; addressing food safety and quality requirements for market access; detection of chemical or microbiological contaminants; controlling food-borne disease

risks, and; rapid, field-based testing capabilities to respond quickly to disruptive events impacting the food supply.

Outside the laboratory, nuclear related technologies also play a role. As phytosanitary measures, pre-packaged fresh fruits or vegetables are exposed to ionizing radiation to enable trade across quarantine boundaries by preventing the spread of pests through trade. Food irradiation is also used to maintain food quality, prevent foodborne illness, reduce food losses, and extend product shelf-life.

Promoting awareness of the possibilities and comparative advantages of nuclear techniques will secure their further integration into food control systems. Encouraging dialogue will also contribute to global initiatives such as 'One Health' and mitigation of global challenges such as antimicrobial resistance and climate change.

This symposium will provide a forum for information sharing on research and developments in the use of nuclear technologies for food safety and control, networking between the public and private sectors and identifying future research needs and directions.

#### Purpose and Objectives

To bring together experts and stakeholders in food safety and food control systems to consider the protection of the integrity of the food supply chain and measures to improve its resilience to food security challenges (e.g., disruptive events, climate change, foodborne disease, food fraud, antimicrobial resistance). Contemporary and new uses of nuclear and complementary techniques will be presented. Future perspectives and opportunities will be discussed. As a networking forum, the symposium will facilitate a broad understanding of food safety and food control systems and promote the peaceful use of nuclear technologies.

### **Main Topics**

- 1. Food authenticity and food fraud
- 2. Food and phytosanitary irradiation
- 3. Chemical residues and contaminants in food and feed
- 4. Preparing for, and responding to emergencies and incidents affecting the food supply
- 5. Detection and characterization of pathogens in food
- 6. Standard setting and risk assessment
- 7. One Health, holistic approaches to human, animal and environmental health.

#### **Audience**

Those concerned with food safety and control systems and maintaining the integrity of the food supply chain will be welcome, especially scientists, researchers, laboratory analysts, policymakers, regulators, enforcers, retailers, civil society and food producers.

## Key deadlines

17 November 2023 Submission of abstract (including

Forms A and B) through the InTouch+

platform

17 November 2023 Submission of grant applications

(Form C) through the InTouch+

platform

19 January 2024 Notification of acceptance of abstracts

**18 March 2024** Submission of extended abstracts

22 May 2024 Submission of Form A only (no paper

submission, no grant request) using Form A through the InTouch+Platform

## Registration

There is no registration fee charged.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants.

#### Language

The working language of the symposium will be English.

#### **Exhibition**

Space will be available for commercial vendors' displays/ exhibits during the symposium. Interested parties should contact the Scientific Secretariat by 1 December 2023, please email:

FSC-Symposium-2024.Contact-Point@iaea.org

#### **IAEA** contacts

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## Symposium webpage

Detailed information on administrative matters including registration, paper submission and grants: https://www.iaea.org/events/FSC-Symposium-2024

Please include ref. IAEA-CN-322 in all communications

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