



Organización de las
Naciones Unidas
para la Alimentación y la
Agricultura



IAEA

Átomos para la paz y el desarrollo

الوكالة الدولية للطاقة الذرية

国际原子能机构

International Atomic Energy Agency

Agence internationale de l'énergie atomique

Международное агентство по атомной энергии

Organismo Internacional de Energía Atómica

Centro Conjunto FAO/OIEA

de Técnicas Nucleares en la Alimentación y la Agricultura

Vienna International Centre, PO Box 100, 1400 Vienna, Austria

Phone: (+43 1) 2600 • Fax: (+43 1) 26007

Email: Official.Mail@iaea.org • Internet: <http://www.iaea.org>

In reply please refer to: EVT2004125

Dial directly to extension: (+43 1) 2600-28325

Las Secretarías de la Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO) y del Organismo Internacional de Energía Atómica (OIEA) (denominados en adelante las “Organizaciones Patrocinadoras”) saludan a los Estados Miembros de las Organizaciones Patrocinadoras y tienen el honor de señalar a su atención la celebración del **Curso de Capacitación sobre el Uso de Perfiles de Isótopos Estables y Oligoelementos para Determinar el Origen de los Alimentos y Verificar la Autenticidad de los Alimentos** (denominado en adelante el “evento”), que tendrá lugar de manera virtual a través de la plataforma NUCLEUS del OIEA **del 11 al 22 de octubre de 2021**.

La finalidad del evento es proporcionar a los participantes conocimientos básicos e intermedios sobre el uso de la espectrometría de masas de relaciones isotópicas y la espectroscopia de fluorescencia de rayos X por energía dispersiva para verificar la autenticidad y el origen de los alimentos como parte de un sistema de control para proteger a los consumidores del fraude y reducir al mínimo las posibles perturbaciones en el comercio de productos agrícolas.

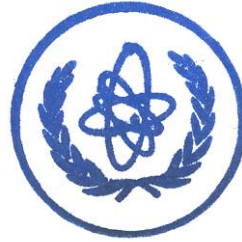
El evento se celebrará en inglés.

Se invita a los Estados Miembros de las Organizaciones Patrocinadoras a designar a una o más personas para que participen en este evento en representación de su Gobierno y se los alienta encarecidamente a que seleccionen con ese fin a mujeres calificadas.

Las designaciones deben presentarse al OIEA por conducto de la autoridad nacional competente (el Ministerio de Relaciones Exteriores, la Misión Permanente ante el OIEA o la Autoridad Nacional de Energía Atómica), a más tardar el **15 de agosto de 2021**, por medio del formulario de participación adjunto (Formulario A). Los formularios de participación debidamente cumplimentados y autorizados deben enviarse por correo electrónico a la dirección Official.Mail@iaea.org o por fax al número: +43 1 26007 (no se precisan copias impresas). Asimismo, han de enviarse copias por correo electrónico al Secretario Científico del evento, Sr. Simon Kelly, Centro Conjunto FAO/OIEA de Técnicas Nucleares en la Alimentación y la Agricultura, Departamento de Ciencias y Aplicaciones Nucleares (correo electrónico: S.Kelly@iaea.org), y a la Secretaria Administrativa, Sra. Malgorzata Rydeng (correo electrónico: M.Rydeng@iaea.org). Una vez recibidas las designaciones oficiales, el Secretario Científico del evento contactará directamente a los participantes en relación con otras cuestiones de organización, según proceda.

Las Organizaciones Patrocinadoras no se hacen responsable de virus informáticos, gusanos, troyanos, puertas traseras, temporizadores, relojes, contadores o cualquier otra rutina, instrucción o diseño que limiten el funcionamiento, u otro código no solicitado malicioso, ilícito o similar, incluidos programas de vigilancia o rutinas que puedan permitir a cualquier persona el acceso, que estén diseñados con ese fin, o que accedan por iniciativa propia, con el objetivo de borrar, o dañar o modificar de cualquier otro modo datos o sistemas, servidores, instalaciones u otra infraestructura del usuario final (colectivamente, “código inhabilitante”). Asimismo, el proveedor de los servicios para la reunión virtual ha asegurado y garantizado que los Servicios no contendrán, ni ningún usuario final recibirá del programa informático empleado para celebrar la reunión virtual, ninguno de estos códigos inhabilitantes.

Las Secretarías de las Organizaciones Patrocinadoras aprovechan esta oportunidad para reiterar a los Estados Miembros de las Organizaciones Patrocinadoras el testimonio de su distinguida consideración.



27 de julio de 2021

Documentación adjunta (en inglés únicamente):

Reseña informativa

Formulario de participación (Formulario A)



Training Course on the Use of Stable Isotope and Trace Element Profiling to Determine Food Origin and Verify Food Authenticity

Virtual Event

11 October 2021–22 October 2021

Ref. No.: EVT2004125

Information Sheet

Introduction

Nuclear techniques have been shown to be very effective in authenticating food products (i.e. detection of adulteration or counterfeiting), and in discriminating foods from different geographical origins. These systems have the potential to provide supplementary verification of information-based traceability systems and provide information on the integrity of the food product itself. For example, the combination of stable isotope analysis with trace element analysis (*SITE analysis*) of foodstuffs can provide an indication of geographical origin, production origin (e.g. organic) and serve in the detection of food adulteration.

The application of *SITE analysis* in combination with multivariate statistical modelling is relatively new in the area of food provenance determination. This workshop will further strengthen and highlight the applicability of stable isotope ratio measurements in combination with elemental concentration analysis in Member States as useful tools in a control system for verification of origin and authenticity of food. The workshop will provide a strong foundation for Member States that are new to the topic and the relevant nuclear analytical and statistical techniques.

The training is designed to provide basic to intermediate knowledge of:

elemental analyser – isotope ratio mass spectrometry (EA-IRMS)

gas chromatography - isotope ratio mass spectrometry (GC-IRMS)

energy dispersive x-ray fluorescence spectroscopy (EDXRF)

multivariate statistical analysis (MVA)

These techniques are combined to confirm the authenticity and origin of foodstuffs. The programme will provide theoretical and practical knowledge of IRMS, EDXRF and chemometrics through on-demand presentations, instructional videos and Expert led audio-visual seminars:

- Compound-specific stable isotope analysis (CSIA) to confirm the botanical origin of sugars (Food Chemistry 318 (2020) 126413);
- EN 12140 - Fruit and vegetable juices - Determination of the stable carbon isotope ratio;
- EDXRF screening of elemental profiles for food origin analysis;
- Chemometric Add-in for Excel (CAFE) analysis of multivariate data to confirm food authenticity and origin.

This will include demonstration of published methods and provision of protocols to training course participants for implementation in their own laboratories.

Target Audience

IAEA Member States interacting with the Food and Environmental Protection subprogramme in the field of testing for food authenticity and geographical origin are eligible for application.

Working Language(s)

English.

Expected Outputs

The expected outcome of the course will be well informed trained personnel in the appropriate use of nuclear technology applied to determining the authenticity of foodstuffs. By the end of this course, participants will have had an opportunity to be exposed to (a) relevant analytical methods and techniques, and (b) methods for calibration, data processing and quality control that will enable them to conduct suitable tests to verify food authenticity and origin.

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **15 August 2021**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

Selected participants will be informed in due course on the procedures to be followed with regard to accessing the on-line training through the IAEA NUCLEUS SharePoint site and the process for NUCLEUS account registration. The course includes assignments and quizzes. Candidates who successfully complete the training course will receive an attendance certificate.

IAEA Contacts

Scientific Secretary:

Mr Andrew Cannavan

Section Head

Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture

Department of Nuclear Sciences and Applications

International Atomic Energy Agency

Vienna International Centre

PO Box 100

1400 VIENNA

AUSTRIA

Tel.: +43 1 2600 28395

Fax: +43 1 26007

Email: A.Cannavan@iaea.org

Mr Simon Kelly

Food Safety specialist

Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture

Department of Nuclear Sciences and Applications

International Atomic Energy Agency

Vienna International Centre

PO Box 100

1400 VIENNA

AUSTRIA

Tel.: +43 1 2600 28326

Fax: +43 1 26007

Email: S.Kelly@iaea.org

Administrative Secretary:

Ms Malgorzata Rydeng

Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture

Department of Nuclear Sciences and Applications

International Atomic Energy Agency

Vienna International Centre

PO Box 100

1400 VIENNA

AUSTRIA

Tel.: +43 1 2600 21641

Fax: +43 1 26007

Email: M.Rydeng@iaea.org

Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.

Event Web Page

Please visit the following IAEA web page regularly for new information regarding this event:

www.iaea.org/events/EVENT_2004125

Participation Form

Training Course on the Use of Stable Isotope and Trace Element Profiling to Determine Food Origin and Verify Food Authenticity

Virtual Event

IAEA Laboratories, Seibersdorf, Austria, 11 October 2021–22 October 2021

To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary S.Kelly@iaea.org and to the Administrative Secretary M.Rydeng@iaea.org.

Deadline for receipt by IAEA through official channels: 15 August 2021

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms
Institution:		
Full address:		
Tel. (Fax):		
Email:		
Nationality:	Representing following Member State/non-Member State/entity or invited organization:	
If/as applicable: Do you intend to submit a paper? Yes <input type="checkbox"/> No <input type="checkbox"/> Would you prefer to present your paper as a poster? Yes <input type="checkbox"/> No <input type="checkbox"/> Title:		

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.