

Job Description for Professional Posts

Reference: NA2024/55

Position and Grade:	Associate Food Forensic Chemist, P2
Organizational Unit:	Food Safety and Control Laboratory Food Safety and Control Section Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture
Duty Station:	Seibersdorf
Type/Duration of Appointment:	FT – JPO, 1 year

Organizational Setting

The Department of Nuclear Sciences and Applications implements the IAEA's Major Programme 2, "Nuclear Techniques for Development and Environmental Protection". This Major Programme comprises individual programmes on food and agriculture, human health, water resources, environment and radiation technologies. These programmes are supported by laboratories in Seibersdorf, Monaco and Vienna. The Major Programme's objective is to enhance the capacity of Member States to meet basic human needs and to assess and manage the marine and terrestrial environments through the use of nuclear and isotopic techniques in sustainable development programmes.

The Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture assists Member States of the Food and Agriculture Organization of the United Nations (FAO) and the IAEA in using nuclear techniques and related technologies to improve food security, alleviate poverty and promote sustainable agriculture. The Joint Centre consists of five Sections, each with an associated laboratory (located in Seibersdorf, 45 km south-east of Vienna), in the areas of: animal production and health; plant breeding and genetics; insect pest control; soil and water management and crop nutrition; and food and environmental protection.

Main Purpose

As a member of a team led by the Head of the Food and Environmental Protection Laboratory (FEPL), the Associate Food Forensic Chemist provides analytical and regulatory expertise to aid capacity building and research in FAO and IAEA Member States in order to enhance food safety, quality and authenticity and to help meet requirements for international trade in food commodities.

Role

The Associate Food Forensic Chemist is: (i) an analyst, developing, adapting and validating analytical methods for food authenticity and verification/determination of geographical origin for transfer to Member State laboratories; (ii) a trainer of personnel in Member States' laboratories in analytical methods and laboratory procedures; and (iii) an advocate of laboratory quality assurance & quality control procedures in Member State laboratories and in the Food and Environmental Protection Laboratory

Partnerships

The Associate Food Forensic Chemist closely interacts with scientists and technical staff from Member States' laboratories in technology transfer activities and advises on issues related to analytical testing methodology using stable isotope measurements, trace element analysis and related techniques for food

authenticity and determination of geographical origin. There is also close collaboration with Joint FAO/IAEA Centre colleagues in the laboratories and at Headquarters.

Functions / Key Results Expected

- Develop and/or adapt and validate analytical/instrumental methods for the authentication of foods using isotope ratio mass spectrometry (IRMS), energy dispersive x-ray fluorescence spectroscopy (EDXRF) and related instrumentation.
- Perform sample preparation procedures for food analysis.
- Operate and carry out basic maintenance of laboratory instrumentation including IRMS and EDXRF.
- Evaluate scientific data, perform statistical analysis and modelling and prepare technical reports and scientific manuscripts for publication.
- Prepare and present training materials and laboratory exercises, including eLearning materials.

Competencies and Expertise (do not revise or edit)

Core Competencies		
Competence	Occupational Role	Behavioural Indicator
Communication	Individual Contributor	Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen and understand the perspective of others and proposes solutions.
Achieving Results	Individual Contributor	Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.
Teamwork	Individual Contributor	Actively contributes to achieving team results. Supports team decisions.
Planning and Organizing	Individual Contributor	Plans and organizes his/her own work in support of achieving the team or Section's priorities. Takes into account potential changes and proposes contingency plans.

Functional Competencies		
Competence	Occupational Role	Behavioural Indicator
Analytical Thinking	Associate	Gathers and analyses information, identifying critical relationships and patterns among data and proposes workable solutions.
Technical/Scientific Credibility	Associate	Acquires and applies new skills to remain up to date in his/her area of expertise. Reliably applies knowledge of basic technical/ scientific methods and concepts.
Commitment to continuous process improvement	Associate	Identifies opportunities for process, system and structural improvement as well as improving current practices, increasing effectiveness and achieving efficiency gains. Actively supports the application of sound quality management standards and process improvement.
Knowledge sharing and learning	Associate	Actively seeks opportunities to learn by formal and informal means; learns from others, adopting and sharing best practice.

Expertise	
Expertise	Description
Food Science and Technology	Strong laboratory skills: knowledge and practical skills in stable isotope measurement techniques. An overview of international guidelines and regulations for food authenticity and traceability.
Food Science and Technology	A good overview of food safety issues affecting consumer health and trade, international food safety guidelines, and food safety control systems.
Food Science and Technology	Knowledge of statistical data analysis, multi-variate analysis and chemometrics.

Education, Experience and Language Skills

- University degree in analytical or organic chemistry, or a related field.
- Minimum of two years' working experience in an analytical chemistry laboratory.
- Excellent oral and written command of English. Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish) is an asset.
- Experience of teaching or training in laboratory activities an advantage.