**Internship - Total Reflection X-ray Fluorescence (TXRF) analysis of samples of food products**

**Duration of Internship**

6-12 months; Start Q2-Q3 2024

**Organizational Setting**

Department: Nuclear Sciences and Applications

Division: Physical and Chemical Sciences

Section: Physics Section

Unit: Nuclear Science and Instrumentation Laboratory at Seibersdorf

**Main Purpose**

The main purpose of the internship is to conduct experimental work to develop and implement methods for the ultra-trace analysis of toxic and essential elements in food products by Total Reflection X-ray fluorescence (TXRF), including sample preparation.

**Tasks / Key Results Expected**

* To conduct organization of sample preparation laboratory and develop methods for clean glassware maintenance and storage
* To develop methods for sample preparation of different food products and fine-tuning measurement protocols
* To validate the developed methods
* To draft Standard Operational Procedures for the developed methods.

**Knowledge, Skills and Abilities**

* Knowledge of Chemistry, Physics or related disciplines
* Basic knowledge on principles of work in inorganic chemistry laboratory
* Ability to work independently under supervised guidance

**Qualifications and Experience**

* University degree in nuclear physics, analytical chemistry or related fields

Potential Institutions/Organizations to attract potential applicants

* National Laboratories
* Research Institutes
* Universities

Internships

The IAEA accepts a limited number of interns each year. The internships are awarded to persons studying towards a university degree or who have recently received a degree (see Internship web pages for further details).

The purpose of the programme is:

* To provide interns with the opportunity to gain practical work experience in line with their studies or interests, and expose them to the work of the IAEA and the United National as a whole;
* To benefit the IAEA's programmes through the assistance of qualified students specialized in various professional fields.
* The duration of an internship is normally not less than three months and not more than one year.

Applicant Eligibility

* Candidates must be a minimum of 20 years of age and have completed at least three years of full-time studies at a university or equivalent institution towards the completion of a first degree.
* Candidates may apply up to one year after the completion of a bachelor's, master's or doctorate degree.
* Candidates must not have previously participated in the IAEA's internship programme.
* Excellent written and spoken English essential; fluency in any other IAEA official language (Arabic, Chinese, French, Russian) an asset.
* Candidates must attach two signed letters of recommendation to their application.