**NA 2024-02-Internship – Nuclear and Isotopic Techniques to Assess Nanomaterials Impacts in Marine Pollution Studies**

**Duration of Internship**

12 Months

**Organizational Setting**

Department: Nuclear Sciences and Applications

Division: IAEA Marine Environment Laboratories

Section: Marine Environmental Studies Laboratory

**Main Purpose**

The main purpose of the internship is to conduct laboratory experiments related to research and development work concern with the distribution and fate of nanomaterials such as engineered nanoparticles and nanoplastics in an aquatic pollution context. The intern will contribute to the development of analytical methods for the isolation of nanomaterials from environmental samples using Field Flow Fractionation and their analysis by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) to further understand the impact of man-made nanomaterials in the marine environment, including in seafood.

**Tasks / Key Results Expected**

* Assist in the development of methods for the isolation of nanomaterials in marine environmental samples using Field Flow Fractionation
* Assist in the development of methods for the analysis of nanoparticles using Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)
* Assist in the validation and application of sample preparation procedures and analysis of nanomaterials in marine samples (seawater, biota, sediments)

**Knowledge, Skills and Abilities**

* Analytical chemistry, instrumental analytical techniques for inorganic compounds (required)
* Inductively Coupled Plasma - Mass Spectrometry (ICP-MS) an asset
* Trace metals in environmental samples an asset
* Contaminants and residues in food and environment an asset
* Quality management an asset
* Computer programming & data analysis an asset

**Qualifications and Experience**

* University degree in chemistry, environmental sciences or a related scientific field with a demonstrated laboratory component in the field of inorganic analytical chemistry
* Knowledge in Analytical Chemistry, Instrumental Analytical Techniques.
* Good written and spoken English essential; fluency in any other IAEA official language (Arabic, Chinese, French, Russian, Spanish) an asset.

**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.
* Good written and spoken English essential; fluency in any other IAEA official language (Arabic, Chinese, French, Spanish or Russian) an asset.
* Candidates must attach two signed letters of recommendation to their application.