



Internship Title

Internship – Measurement of uranium and thorium in water samples

Duration of Internship

6 – 12 months

Organizational Setting

Department: NA (Nuclear Sciences and Applications)
Division: NAPC (Division of Physical and Chemical Sciences)
Section: RCRT (Radiochemistry and Radiation Technology Section)
Unit: TERC (Terrestrial Environmental Radiochemistry Laboratory)

Main Purpose

The main purpose of the internship is to develop a technique for the measurement of uranium and thorium in water samples using Inductively Coupled Plasma Mass Spectrometry (ICP-MS). To demonstrate the technique a variety of environmental water samples will be measured.

Tasks / Key Results Expected

- Develop a procedure for the measurement of uranium and thorium in water using ICP-MS. This includes sample preparation; calibrations; measurements; and data interpretation.
- Measure a variety of environmental samples for uranium and thorium content and compare measurements with those obtained using radiochemical separation and alpha-spectrometry.
- Produce a technical report and presentation detailing all work undertaken.

Knowledge, Skills and Abilities

- The ability to work within a laboratory and undertake analytical tasks (Required)
- Knowledge of radioanalytical techniques (Asset)
- Knowledge of mass spectrometry techniques (Asset)

Qualifications and Experience

- University degree in Chemistry, Physics, Environmental or a related Scientific discipline.
- Excellent 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 Nations 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.