**Internship Title**

Internship – Optimization of stable isotope analysis for fighting illegal trades.

**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 optimise the analysis of the stable isotope ratio of hydrogen of organic compounds with exchangeable hydrogen using Isotope Ratio Mass Spectrometry interfaced with a Pyrolysis system, following equilibration with waters with different isotopic composition. This analysis is essential for tracking the geographical origin of timbers and wild animals for combating the illegal trades.

**Tasks / Key Results Expected**

• support the optimisation of methods for equilibration of organic compounds with waters with different composition

• understand the percentage and the contribution of exchangeable hydrogen in different organic matrixes from timber and/or animal tissues

• contribute to the selection of fit for purpose reference materials with different percentages of exchangeable hydrogen

• draft of publication and/or report

**Knowledge, Skills and Abilities**

* Physics and/or Chemistry knowledge (Required)
* Laboratory skills and abilities (Required)
* Analytical chemistry experience (required)
* Knowledge on stable isotopes (asset)

**Qualifications and Experience**

* University degree in Physics, Chemistry, Environment 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 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.