

Job Description for Professional Posts

Position and Grade:	Junior Professional Officer Laboratory Analyst (JPO) (P2)
Organizational Unit:	Marine Environmental Studies Laboratory IAEA Environment Laboratories (NAEL), Monaco Department of Nuclear Sciences and Applications
Duty Station:	Monaco
Type/Duration of Appointment:	Junior Professional Officer / 2 years

Organizational Setting

The IAEA Environment Laboratories (NAEL) is a Division of the Department of Nuclear Sciences and Applications comprising four laboratories, of which three are located in Monaco and one in Seibersdorf (about 45 km south of Vienna). NAEL implements the Environment Program under Major Program 2; the part relevant to marine ecosystems is implemented in Monaco, that relevant to terrestrial ecosystems is implemented in Seibersdorf. The Division operates in a complex environment, receiving inputs from many parts of the organization, including the Department of Technical Cooperation for the implementation of several projects and other Departments for horizontal collaboration. The Director's office is located in Monaco.

The Marine Environmental Studies Laboratory (MESL) is one of three laboratories in Monaco. It is staffed by two professional and four technical support staff. Working with various UN and regional organizations throughout the world, MESL provides technical support for the monitoring and assessment of marine pollution and applies stable isotope techniques to study climate change and marine pollution process. MESL supports marine analytical chemistry by producing marine certified reference materials, organizing global inter-comparison exercises, and running training courses for the analysis of pollutants in the marine environment.

Main Purpose

Reporting to the Unit Head and Professional staff, Junior Professional Officer (JPO) conducts laboratory tests related to on-going research and development work on using Carbon and Nitrogen stable isotopes to assess organic matter cycling in the marine environment, fingerprinting oil contaminant sources and investigating eutrophication processes in the coastal marine environment. The JPO will contribute to the development and optimisation of analytical methods for stable light isotopes analysis (C and N) and participates in studies in view of assisting Members States understanding climate change and pollution processes in vulnerable coastal

marine ecosystems. The JPO will be further involved in the procurement for and maintenance of laboratory equipment, supporting overall operations and participated in the training of fellows.

Role

The JPO is a *laboratory analyst*, carrying out sample preparation and analysis of carbon and nitrogen stable isotopes; a *technical specialist* optimising chemical procedures and methods to enable accurate and precise measurements of carbon and nitrogen stable isotopes in environmental samples; and an internal quality control analyst to assist and maintain the quality management system on analyses of stable isotopes.

Working Relationships

The Junior Professional Officer (JPO) has frequent contact with Professionals and General Service staff within the section as well as throughout the other sections for day-to-day operations including on-going experimental work. He/she also has consistent contact with fellows and associates in organizing their research work, in relation to the analysis of stable isotopes of carbon and nitrogen, administering training material, and providing technical assistance as required. The JPO has external contact with local suppliers in attaining equipment/material for the laboratory and interacts with laboratories around the world on issues related to the optimisation of analytical methods for stable isotopes analysis. He/she will also collaborate with the Technical Cooperation (TC) Department of the IAEA TC Programme on this topic.

Functions / Key Results Expected

- Carry out analysis of carbon and nitrogen stable isotopes using Isotope Ratio Mass Spectrometry (IRMS) as requested in the regular programme and extra budgetary projects of MESL.
- Assist in optimising recommend methods for the analysis of light stable isotopes and evaluation of the results, to understand climate change and pollution processes.
- Apply stable isotopes techniques in fingerprinting pollution sources
- Provide training courses to fellows and other trainees in the laboratory, on the analysis of carbon and nitrogen stable isotopes in environmental samples.
- Prepare and revise standard operating procedures (SOPs) and collaborate in the establishment and maintenance of the laboratory's quality system.
- Maintain the general laboratory facilities according to the ISO 17025 standard (inventory, sample registration, sample handling, training records etc.).

Knowledge, Skills and Abilities

- Good practical knowledge of analytical techniques for the analysis of stable isotopes of carbon and nitrogen using Isotope Ratio Mass Spectrometry (IRMS).
- Working knowledge of ISO 17025 standard and Good Laboratory Practice.
- Basic knowledge on statistics.
- Ability to work in a multi-cultural setting, with sensitivity and respect for diversity.
- Ability to carry out assigned tasks in a timely manner under minimal supervision.
- Ability to document performed experiments and to prepare reports

- Good planning and organizing skills with the ability to be flexible and to work independently
- Interpersonal skills. Demonstrated ability to work in a team environment with scientific, technical and administrative staff and to maintain collaborative partnerships across organizational boundaries

Education, Experience and Language Skills

- University degree in chemistry, environmental sciences or a related scientific field with a demonstrated strong laboratory component in the field of carbon and nitrogen stable isotopes analysis.
- Minimum of two years of relevant professional experience in the field of analytical chemistry
- Publications in this field would be of advantage.
- Fluency in written and spoken English, with proven ability to write and edit reports as well as to make oral presentations. Working knowledge of French desirable. Knowledge of another IAEA official language (Arabic, Chinese, Russian or Spanish) an advantage.