

# Job Description for Professional Posts

**Reference:** NA2025/15

<b>Position and Grade:</b>	Associate Research Scientist, Pollutants from New Technologies, P2
<b>Organizational Unit:</b>	Marine Environmental Studies Laboratory Division of IAEA Marine Environment Laboratories
<b>Duty Station:</b>	Monaco
<b>Type/Duration of Appointment:</b>	FT – JPO, 1 year

## Organizational Setting

The Department of Nuclear Sciences and Applications implements the IAEA's Major Programme 2, "Nuclear Techniques for Development and Environmental Protection". This Major Programme comprises individual programmes on food and agriculture, human health, water resources, environment and radiation technologies. These programmes are supported by laboratories in Seibersdorf, Monaco and Vienna. The Major Programme's objective is to enhance the capacity of Member States to meet basic human needs and to assess and manage the marine and terrestrial environments through the use of nuclear and isotopic techniques in sustainable development programmes.

The Division of IAEA Marine Environment Laboratories (NAML) consists of three laboratories, which are located in Monaco. The Division supports Member States in enhancing their capacity to use nuclear and isotopic techniques to understand marine and atmospheric environmental processes and dynamics, and to identify and address environmental problems caused by radioactive and non-radioactive pollutants and climate change.

The Marine Environmental Studies Laboratory (MESL) is the analytical support centre for isotopic and elemental analysis of trace elements, organic contaminants and long-lived radionuclides in the marine environment. It provides reference materials, recommends procedures and carries out proficiency tests and interlaboratory comparisons for quality assurance programmes for the determination of non-nuclear contaminants. It implements marine monitoring programmes in collaboration with regional laboratories and provides training in analytical techniques and metrology in chemistry.

## Main Purpose

As part of a team led by the Laboratory Head and Professional staff, the Associate Research Scientist, will contribute to the development and optimisation of analytical methods using isotopic techniques for monitoring contaminants of emerging concern as byproducts of decarbonizing or green technologies, including rare earth elements, platinum group elements, among others, in different environmental matrices.

He/she will engage in studies aimed at improving the monitoring and assessment of the impacts of emerging inorganic contaminants associated with green technologies on ecosystem services, particularly within the realms of seafood safety, ocean health, and climate change. Additionally, he/she will develop analytical methods for these emerging contaminants to be applied across various marine matrices. This effort will leverage both newly developed and existing techniques to ensure a comprehensive analysis

and understanding of emerging marine pollutants that may impede the achievement of Sustainable Development Goals (SDGs).

## Role

The Associate Research Scientist is an environmental scientist with a robust foundation in analytical chemistry, responsible for designing and executing experiments.

## Partnerships

The Associate Research Scientist will collaborate as part of a team within a multidisciplinary environment. He/she will contribute to international collaborations focused on utilizing mass spectrometry (ICP-MS), among other techniques (e.g., ICP-OES), to evaluate the distribution and impacts of emerging inorganic pollutants. Additionally, he/she will assist in the implementation of research projects, such as Peaceful Uses Initiatives (PUI), aimed at supporting NAML's subprogramme on solutions for the sustainable management of coastal and marine ecosystems. Furthermore, he/she may engage in collaboration with the Technical Cooperation (TC) Department of the IAEA TC Programme on these topics.

## Functions / Key Results Expected

- Collaborate closely with the team to develop and optimize analytical methods for measuring emerging inorganic contaminants employing mass spectrometry techniques.
- Conduct assessments of marine pollution to elucidate its distribution, fate, and, critically, its impacts on seafood safety, ocean and human health.
- Prepare technical reports and scientific manuscripts for publication.
- Deliver training courses to fellows and other trainees in the laboratory, fostering skill development and knowledge transfer within the research community.

## Competencies and Expertise (do not revise or edit)

Core Competencies		
Competence	Occupational Role	Behavioural Indicator
Communication	Individual Contributor	Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen and understand the perspective of others and proposes solutions.
Achieving Results	Individual Contributor	Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.
Teamwork	Individual Contributor	Actively contributes to achieving team results. Supports team decisions.
Planning and Organizing	Individual Contributor	Plans and organizes his/her own work in support of achieving the team or Section's

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		priorities. Takes into account potential changes and proposes contingency plans.
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<b>Functional Competencies</b>		
<b>Competence</b>	<b>Occupational Role</b>	<b>Behavioural Indicator</b>
Knowledge sharing and learning	Associate	Actively seeks opportunities to learn by formal and informal means; learns from others, adopting and sharing best practice.
Judgement/ decision making	Associate	Consults with supervisor/manager and makes decisions in full compliance with the Agency's regulations and rules.

<b>Expertise</b>	
<b>Expertise</b>	<b>Description</b>
Environmental Analytical Techniques	Good knowledge in analytical chemistry and environmental sciences.
Mass Spectrometry	Experience and ability to conduct laboratory analyses using mass spectrometry
Scientific and Technical Publishing	Good presentation skills and ability to prepare reports, publications and training materials.

## **Education, Experience and Language Skills**

- University degree in chemistry, oceanography, environmental sciences, or a related scientific field, demonstrating expertise in environmental chemistry and analytical methodologies to evaluate inorganic pollutants in marine environments.
- A minimum of two years of professional experience in mass spectrometry.
- Track record of publications in marine environmental sciences, particularly emphasizing pollution and its impacts on marine ecosystems and seafood safety.
- Proficiency in spoken and written English is essential. Familiarity with other official IAEA languages (Arabic, Chinese, French, Russian, and Spanish) is advantageous. Working knowledge of French is desirable.

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