ADVERTISEMENT

THREE-YEAR POST DOCTORAL FELLOWSHIP: INORGANIC ANALYSIS X2

Salary Range R 400 000.00 annum (All inclusive)

Overview of the Organisation

The NMISA is a Type 3A Public Entity established in accordance with the Measurement Unit and Measurement Standards Act, No. 18 of 2006 (the Act). The NMISA is mandated by the Act to provide for the use of the international system of units (the SI) and other measurement units in South Africa, to maintain national measurement standards (NMS) and to determine and ensure the comparability of the NMS. More information can be obtained from www.nmisa.org

The Position

To research, develop and implement reference measurements for Inorganic Analysis in the key sectors of critical minerals, the battery value chain and environmental pollution monitoring and deliver these services to the region, thereby supporting the fair and safe trade of South African products and services. The post-doctoral fellowship will be for a period of three (3) years, and the incumbent would also be required to assist with skills development and knowledge transfer to younger staff and recently graduated students.

Requirements:

- PhD Analytical Chemistry degree or equivalent scientific qualification in applicable field of study– the PhD degree was obtained after April 2022 and by 31 March 2027.
- Experience with ICP-OES and ICP-MS operation for quantitative inorganic analysis, including different modes of sample introduction and calibration procedures as applied during the PhD experimental work;
- Sample preparation of metal, food, geological and environmental samples for ICP analysis;
- Experience in a laboratory/technical environment (3 years minimum which may also include own experimental work for PhD).
- Experience in conducting research and literature reviews as evidenced through publication record.
- Scientific writing and the preparation of result reports in scientific format
- Computer literacy (MS Word, Excel and PowerPoint) and good presentation skills.
- Excellent communication skills.
- Must hold South African citizenship/ permanent residence.

Additional skills that would be advantageous:

- Isotope-dilution ICP-MS (IDMS), including double isotope-dilution (dIDMS)
- Application of hyphenated techniques such ion chromatography (IC) ICP-MS and HPLC ICP-MS
- Experience with geological / critical-mineral sample matrices

Responsibilities:

- Research, develop and validate methods for quantitative inorganic analysis (e.g. ICP-OES, ICP-MS) in critical minerals, the battery value chain and environmental monitoring.
- Write and validate standard operating procedures for inorganic measurements.
- Operate analytical instruments, perform measurements and keep detailed records of equipment and results.
- Estimate measurement uncertainty in line with the GUM.

- Issue certificates and reports on measurement and research results.
- Liaise with stakeholders in South Africa, the region and internationally, and feed the information gathered into NMISA's strategic planning.
- Transfer skills to junior colleagues and take part in training for own development.
- Share findings through peer-reviewed publications, conference presentations, and internal and external courses.
- Initiate and follow up on the timely procurement of equipment, instruments and consumables.
- Comply with NMISA's policies and procedures and its quality management system

Person Specification:

The ideal candidate should be proactive and self-motivated, with strong analytical and problem-solving skills and the confidence to take the lead and contribute innovative ideas. The candidate must demonstrate reliability, accountability and a strong sense of ownership in their work, as well as a hands-on approach in the laboratory and the ability to understand complex technical systems. A systematic and meticulous approach to work, with excellent attention to detail, is essential. The candidate should also possess excellent written and verbal communication skills in English, the ability to work independently and collaboratively as part of a team and demonstrate integrity and high ethical standards.

Please note:

How to apply – please read carefully (non-compliant applications will not be considered):
Email your application to **Careers2@nmisa.org**, using this exact subject line: **"THREE-YEAR POST DOCTORAL FELLOWHSHIP: INORGANIC ANALYSIS".** Submit only one application per person for this position.

You must attach **THREE separate PDF documents – do not combine them into one file**. Name each file using **exactly these labels – CV, ID, Qualifications – as "Surname Name – Label"**, for example:

- Your CV – e.g. "Mokoena Thandi – CV.pdf"
- A certified copy of your ID – e.g. "Mokoena Thandi – ID.pdf"
- Your qualification certificate(s) – e.g. "Mokoena Thandi – Qualifications.pdf"

Format rules (applications that do not follow these will not be considered):

- All three documents must be in **PDF format**. Word documents, photographs, JPEG/image files, and links (Google Drive, OneDrive, Dropbox) will not be accepted.
- Your CV must be a proper PDF created from a document (for example, "Save as PDF" from Word) – not a scan or a photograph – and your full name, cell number and email address must appear at the top of the CV.
- Your certified ID and qualification certificate may be scanned, but must be clear, legible PDFs.

Only applications that include all three documents, correctly named and in the correct PDF format, will be considered.

Closing date for applications: 04 December 2026

The NMISA subscribes to and applies the principles prescribed by the Employment Equity Act. Preference will be given to previously disadvantaged candidates who meet the requirements and who will add to the cultural and gender diversity of the organisation.

People with disabilities are encouraged to apply. Correspondence will be limited to shortlisted candidates only, should you not receive correspondence by 30 January 2027 consider your application unsuccessful. The NMISA reserves the right not to appoint.

By applying for this position at the NMISA, the applicant understands, consents and agrees that the NMISA may solicit a credit and criminal report from a registered credit bureau and/or the relevant authority in relation to positions that require trust and honesty and/or entail the handling of cash or finances, and may also verify the applicant's educational qualifications and employment history. You voluntarily give the NMISA consent to process your personal information.