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POSITION DESCRIPTION

Technical Officer - ICP

Faculty/Division	DVC-Research and Enterprise
Classification Level	Professional 6
Hours & Span (Category)	E - Technical Officer, Senior Technical Officer
Position number	Click or tap here to enter text.
Shiftwork status	NOT SHIFTWORKER
Allowances	N/A
On call arrangements	N/A
Original document creation	31 October 2024

Position Summary

The ICP Laboratory sits within the Elemental Analysis Facility located in the Mark Wainwright Analytical Centre (MWAC) at the Kensington Campus of UNSW. The facility hosts liquid chromatography systems with organic carbon detection (LC-OCD) for size separation of organic matter, ion chromatography (IC) systems for anion analysis, a carbon-nitrogen elemental analyser, a spectrophotometric discrete analyser, two inductively coupled plasma-optical emission spectrometers (ICP-OES), two inductively coupled plasma-mass spectrometers (ICP-MS), and associated equipment for chemical sample preparation.

The Technical Officer will conduct sample preparation, maintenance, and operation of the LC-OCD, ICP-OES, ICP-MS, IC, dissolved carbon-nitrogen analysis, and discrete analysis. The role will also be expected to assist with user training on the instrumentation, maintain chemical and consumable inventories and help manage the health and safety documentation used in the laboratory.

This role reports to the Head of the Elemental Analysis Facility and has no direct reports.

Accountabilities

Specific accountabilities for this role include:

- Prepare and assist with running samples for ion chromatography, carbon-nitrogen elemental analyser, and liquid chromatography systems with organic carbon detection, and spectrophotometric discrete analysis.
- Prepare samples, including grinding, open and microwave digestion, and adapt protocols for analysis of inorganic cations, anions and neutral species using ICP-OES, ICP-MS.

- Provide user training on operation, calibration, data analysis, mobile phase preparation, and cleaning of glassware associated with LC-OCD analysis.
- Work with the ICP team to assign task sharing and efficient processing of samples through the laboratory.
- Liaise with the ICP Laboratory team to communicate instrument issues, and analytical data for reporting and invoicing purposes.
- Accurately prepare and maintain laboratory documentation including safety records, instrument/equipment/plant records.
- Maintain the chemical and consumable inventory in the laboratory as well as implementing procedures to the Health and Safety documentation for the laboratory.
- Lead lab inductions and training of research staff and students undertaking sample digestion and chemical analysis.
- Provide technical assistance to staff and students, such as demonstration of common techniques and the operation of equipment and respond efficiently and courteously to requests.
- General housekeeping in the laboratory including disposal of chemical waste and old samples.
- Contribute to the broader activities of the Mark Wright Analytical Centre as required, such as providing input to the local health and safety committee.
- Align with and actively demonstrate the UNSW Values in Action: Our Behaviours and the UNSW Code of Conduct.
- Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the psychosocial or physical health and safety of yourself or others.

Skills and Experience

- A relevant tertiary qualification or an equivalent level of knowledge gained through any other combination of education, training and/or experience.
- Demonstrated experience in a discipline involving analytical chemistry, preferably specialising in chromatography or elemental analysis.
- Demonstrated experience in research laboratory operation and support including managing users, materials and instruments.
- Proven technical capabilities in areas aligned with laboratory activities with a proven ability to apply knowledge and experience to analyse, investigate and solve technical and operational issues.
- Experience working with, training and supervising others within a multidisciplinary research environment.
- Excellent time management and organisational skills including the ability to prioritise work effectively.
- Excellent interpersonal and communication skills (written and verbal), including the ability to liaise with a diverse group of individuals from varying backgrounds.
- Demonstrated ability to work cooperatively and flexibly within a team environment.
- An understanding of and commitment to UNSW's aims, objectives and values in action, together with relevant policies and guidelines.
- Knowledge of health & safety (psychosocial and physical) responsibilities and commitment to attending relevant health and safety training.

About this document

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role.