



POSITION DESCRIPTION

Position Title:	AMS Chemistry Technician
Cluster / Business Unit / Division	Nuclear Science and Technology
Section or Unit:	Centre for Accelerator Science (CAS)
Classification:	Band 3 / 4 Linked Role
Job Family:	Science
Position Description Number:	PD-0972
Work Contract Type:	Professional
STEMM/NON-STEMM:	STEMM
STEMM CATEGORY:	Research and Sciences

POSITION PURPOSE

The primary purpose of the AMS Chemistry Technician is to chemically pre-treat and process a wide variety of environmental samples for analysis by accelerator mass spectrometry (AMS) using routine and established methods and processes. The position holder will also provide support to the sample preparation team in maintaining laboratory operations and assist with supervision and training in routine sample preparation to laboratory users.

ORGANISATIONAL ENVIRONMENT

ANSTO leverages great science to deliver significant outcomes. We partner with scientists and engineers and apply new technologies to provide real-world benefits. Our work improves human health, saves lives, builds our industries, and protects the environment. ANSTO is the home of Australia's most significant landmark and national infrastructure for research. Thousands of scientists from industry and academia benefit from gaining access to state-of-the-art instruments every year.

Nuclear Science and Technology (NST) incorporate ANSTO's research, innovation, landmark research infrastructure, and associated platforms and capabilities. NST conducts research and development in relation to nuclear science and technology and connects people, transfers knowledge, and provides nuclear-based products and services for the benefit of Australia.

The Centre for Accelerator Science (CAS) is a multi-disciplinary team of scientists and engineers supporting academic and industry users across Australia and the world with a suite of ion beam accelerator instrumentation for ultra-sensitive analysis and irradiation applications. The facility informs policy, provides critical services for IAEA, and enables discovery and innovation in areas such as environment, climate and health sciences, space technologies, advanced energy, nuclear and quantum materials, and cultural heritage.

CAS offers accelerator mass spectrometry, sample processing and preparation, ion beam analysis, ion beam implantation, and ion beam irradiation - together in one centre - backed by decades of accumulated experience in accelerator science and in maintaining complex accelerator systems.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities - Band 3

- Contribute to routine processing of samples for AMS measurement, including pre-treatment, chemical separation, and AMS target preparation.
- Communicate variations in planned workflow, sample/equipment failures and anomalies to the Laboratory Manager in a timely way.
- Perform scheduled laboratory maintenance, restocking and cleaning activities to ensure continuous high-performance operation of laboratories.

- Ensure compliance with quality control measures and procedures, safe work practices and environmental protection requirements to ensure all laboratory processes and systems always comply with relevant standards, regulatory frameworks and documented procedures.
- With guidance from other team members, supervise users in sample processing techniques and quality control procedures.
- Assist senior officers with experiments to enhance existing and new processing technologies development in collaboration with the Laboratory Manager and other relevant team members.
- Communicate sample processing progress and issues with internal and external customers.
- Contribute feedback to reviews of laboratory compliance documentation.
- Contribute to laboratory priority planning and ensure completion of allocated tasks.

Key Accountabilities - Band 4

- Assess samples under the guidance of the Laboratory Manager to determine and execute pre-treatment method and sample processing plan.
- Provide advice to Laboratory Manager for approval and setting of sample prioritisation.
- Take responsibility for planning and testing incremental improvements to routine methods with the guidance of the Laboratory Manager or relevant senior team members.
- Test new sample processing methods under the direction of the Laboratory Manager or other relevant senior team members.
- Liaise with internal and external customers to provide information relating to the sample processing plan and report issues relating to user samples.
- Update quality control, safety and regulatory compliance documentation in consultation with the Laboratory Manager and area supervisors.
- Arrange maintenance and repair of sample processing equipment to ensure equipment availability, utilisation and quality control targets are met.
- Train users (visitors, students) in routine sample processing techniques and quality control procedures.
- Undertake additional duties as required and during periods of leave of other staff.

Decision Making – Band 3

- Decisions on work schedules and task priorities for this position will be governed by the CAS Chemistry sample schedule, ANSTO Research Portal commitments and the CAS Business Plan.
- The position holder will respond to key work priorities within the context of agreed CAS Chemistry processing schedule as instructed by the Laboratory Manager.
- Decisions on sample processing application and quality control measures will be based on quality procedures and agreed work methods. Variations will be guided by information or advice from the Laboratory Manager or delegate.
- The position holder is required to liaise with other CAS Chemistry group members and the Laboratory Manager to manage variations in their work priorities as impacted by changes to the sample processing schedule.
- The position is accountable for the accuracy, integrity and quality of the work contributed to sample preparation for AMS analysis as a member of the CAS Chemistry team.
- The levels of authority delegated to this position are those approved and issued by the Chief Executive Officer. All delegations will be in line with the ANSTO Delegation Manual AS-1682 (as amended or replaced).

Decision Making – Band 4

- Variations to sample processing methods and quality control measures will sometimes require the position holder to make a judgement based upon knowledge and experience in consultation with the Laboratory Manager.

- The position holder will use judgement based upon their knowledge and experience to negotiate changes to their own key work priorities in response to unexpected variations of the sample processing schedule.

Key Challenges

- Managing allocated work tasks in a context of changing deadlines and conflicting priorities to allow sample processing objectives relating to high precision quality control requirements and volume targets to be met.
- Maintaining high compliance with quality control processes and workflow status reporting requirements.
- Identifying faults in equipment and sample processing from anomalies in data.
- Maintaining effective communication of laboratory systems faults, safety issues and quality system non-compliance to the Laboratory Manager.
- Developing and maintaining competence in the wide variety of sample processing methods utilised in the CAS Chemistry laboratories.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Manager/Executive	<ul style="list-style-type: none"> • Receive guidance and direction • Provide advice and analysis on sample processing matters
Work area team members	<ul style="list-style-type: none"> • Provide advice and analysis on sample processing matters • Contribute to group decision making processes, planning and goals • Collaborate and share accountability for team targets
External	
CAS AMS users	<ul style="list-style-type: none"> • Provide training in AMS sample processing techniques and quality control procedures for a broad range of sample types.

POSITION DIMENSIONS

Staff Data	
Reporting Line	Reports to the CAS Chemistry Group Lead
Direct Reports	Nil
Indirect Reports	Nil

Financial Data (2013/2024)	
Revenue / Grants	N/A
Operating Budget	N/A
Staffing Budget	N/A
Capital Budget	N/A
Assets	N/A

Special / Physical Requirements	
Location:	Lucas Heights, Centre for Accelerator Science Buildings 16, 29 and 53
Travel:	May be required travel to alternate ANSTO sites from time to time Occasional travel to ANSTO sites within Australia Occasional travel both internationally and nationally

Physical:	Office based physical requirements (sitting, standing, extended hours working at computer) Laboratory based physical requirements (long hours standing, frequent manual handling) Public speaking Wearing personal protective equipment for the handling of hazardous and/or radioactive materials
Radiation and Hazardous chemical areas:	Perform duties with and in an area where hazardous chemicals or materials are handled under tightly controlled safety conditions May be required to work in radiation areas under tightly regulated conditions Perform duties in an area where radioactive materials are handled under tightly controlled safety conditions
Hours:	Willingness to work extended and varied hours based on operational requirements After hours work may be required for short and infrequent periods
Clearance requirements:	Satisfy ANSTO Security and Medical clearance requirements
Linked Role:	The Transition from Band 3 to Band 4 is not automatic and requires a full written submission, in addition to the attached checklist, to demonstrate how the employee meets the requirements. Transition will only occur following approvals from the Leader, Centre for Accelerator Science.

Workplace Health & Safety

Specific role/s as specified in <u>AG-2362</u> of the ANSTO WHS Management System	All Workers May be required to undertake one or more of the specified roles within the context and course of their duties <ul style="list-style-type: none"> • Area Supervisor • Building Warden • Contractor Supervisor • Designated First Aid Officer Health and Safety Committee Member Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties
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ORGANISATIONAL CHART

Refer to published Organisational Chart.

KNOWLEDGE, SKILLS AND EXPERIENCE

Band 3

1. Diploma in Chemistry of Laboratory Technology, or equivalent
2. Practical experience working within a chemical or analytical laboratory environment.
3. Experience in working with hazardous chemicals
4. Ability to report information effectively such as analysis results, technical data and QC information
5. Interpersonal skills allowing effective communication within a multi-compartment, interdependent analytical team
6. Demonstrated experience with compliance to quality assurance procedures, regulations and OHSE requirements
7. Demonstrated computer proficiency

Band 4

1. Diploma in Chemistry or Environmental Science or equivalent plus extensive experience in a chemical or analytical laboratory environment or equivalent
2. Demonstrated ability to communicate information and train staff on routine laboratory methods and processes
3. Experience with revising and maintaining regulatory documentation and quality procedures
4. Strong customer service focus
5. Demonstrated ability to work under limited supervision, and take initiative in responding to changing priorities and deadlines
6. Demonstrated competence in analytical chemistry techniques and quality control protocols.

VERIFICATION

This section verifies that the line manager and appropriate senior manager/executive confirm that this is a true and accurate reflection of the position

Line Manager		Delegated Authority	
Name:	David Child	Name:	Ceri Brenner
Title:	CAS Chemistry group lead	Title:	Leader, Centre for Accelerator Science
Signature:		Signature:	
Date:		Date:	

Appendix 1

ANSTO Job Families
Accounting & Finance
Administration
Communications & Marketing
Compliance & Regulation
Engineering and Technical
Human Resources
ICT & Digital Solutions
Information & Knowledge Management
Legal
Manufacturing
Monitoring & Audit
Operations
Organisational Leadership
Project & Program
Research
Science
Security & Intelligence
Senior Executive
Service Delivery
Strategic Policy
Trades & Labour

AMS Chemistry Technician (PD-0972)
Band 3 to Band 4 Transition Checklist

Name:	
Commencement Date:	
Assessment Date:	

Note: Full written submission demonstrating and justifying how the employee meets the requirements must also be attached.

Requirements for transition	Met Criteria
a) Minimum 5 years working as an AMS Chemistry Technician (Band 3) or b) Minimum 5 years equivalent experience	<input type="checkbox"/> Yes <input type="checkbox"/> No
Diploma in Chemistry or Environmental Science plus extensive experience in a chemical or analytical laboratory environment or equivalent	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to independently and responsibly perform Band 4 responsibilities and apply required knowledge, skills and experience for the Band 4 position including:	
Undertake Band 3 accountabilities at a technical expert level and independently without supervision or guidance.	
Demonstrate ability to plan and test improvements to routine methods, under coaching of the Laboratory Manager or relevant senior team members	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to revise and update quality control, safety and regulatory compliance documentation and processes in consultation with Laboratory Manager and area supervisors	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to assess samples to plan and execute complex sample pre-treatment in consultation with the Laboratory Manager.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to provide detailed technical information on sample processing methods, scheduling, and sample outcomes to internal and external customers.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to occasionally undertake select additional duties for short periods of time of staff absences.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to provide training on methods and techniques for laboratory users and visiting students.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to arrange for maintenance work in the event of breakdowns to equipment and facilities.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated ability to use knowledge and experience to negotiate changes to key work priorities in response to unexpected variations of the sample processing schedule.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated commitment to a sustained proactive work ethic, by assisting others to meet deadlines or finish tasks in times when there is spare capacity.	<input type="checkbox"/> Yes <input type="checkbox"/> No

Manager Recommendation:

I have reviewed the employee's competence in accordance with Linked Role PD-0972 and certify that the employee meets all requirements for transition and recommend transition from Band 3 to Band 4 be endorsed.

Manager Name:	
Signature:	
Date:	

Leader, Centre for Accelerator Science

I have assessed the submission and confirm that the employee meets all requirements for transition from Band 3 to Band 4.

Name & Title:	
Signature:	
Date:	
Effective date of transition:	