LABORATORY TECHNICIAN

EDUCATIONAL PATHWAYS

MSL20118 - Certificate II in Sampling and Measurement

This qualification covers the skills and knowledge required to perform a range of sampling and measurement activities as part of laboratory, production or field operations in the construction, manufacturing, resources and environmental industry sectors.

Employment outcomes targeted by this qualification include samplers and testers, production personnel, plant operators, production operators, field assistants, drivers, sample couriers and many others. Samplers and testers conduct routine sampling and testing as part of their duties in their particular industry. They apply a specified range of skills and operational knowledge to perform these tasks and do not generally work inside a laboratory.

FBP30121 - Certificate III in Food Processing

This qualification covers the skills and knowledge required to perform a routine range of laboratory operations across all industry sectors and is the entry level required for laboratory personnel across all industry sectors.

Employment outcomes targeted by this qualification include laboratory technicians, instrument operators and similar personnel. Laboratory technicians perform straightforward laboratory work. They follow set procedures and recipes, and apply well developed technical skills and basic scientific knowledge. They generally work inside a laboratory but may also perform technical tasks in the field or within production plants. They may also perform a range of laboratory maintenance and office tasks. Most of their work involves a predictable flow of parallel or similar tasks within one scientific discipline. Laboratory technicians perform straightforward technical tasks to prepare and test samples using relevant equipment, applications and procedures, Australian Standards and readily available organisational procedures, reference documents and advice. These tasks generally require close attention to detail and to the accuracy and precision of measurements. They may require the use of manual or semi-automated techniques.

MSL40118 - Certificate IV in Laboratory Techniques

This qualification reflects the role of workers who perform a range of laboratory techniques, including manual, semi-automated and fully automated processes, to collect and prepare samples in a laboratory. They conduct a wide range of basic, and specified range of specialist tests across a variety of industry sectors. Workers may be required to assist other personnel to solve technical problems, use laboratory equipment and test instruments, and to adjust formulations and production mixes. They may also train them to collect samples and conduct basic tests reliably.

Workers have responsibility for their own outputs according to established procedures. Work is carried out according to established procedures often under the direction and supervision of laboratory or quality managers, or scientific/medical professionals. Work is normally subject to frequent progress and quality checks.

MSL50118 - Diploma of Laboratory Technology

This qualification reflects the role of workers who apply a range of laboratory technologies to conduct scientific-technical tests in most industry sectors, utilising specialist technical knowledge. They conduct a wide range of routine and complex, specialised tests and surveys where atypical samples may be involved and the instrumentation used has a wide range of operating variables. Workers communicate sample requirements to other personnel and may liaise with suppliers to troubleshoot product non-conformance. They may also demonstrate methods to others and train team members to collect samples and conduct basic tests reliably.

Workers contribute to the modification of standard operating procedures (SOPs) and enterprise methods when necessary, they may also have a role in the planning of schedules and monitoring of resources in their work area. Work is carried out according to established procedures, often under the management of laboratory or quality managers, or scientific/medical professionals.

MSL60118 - Advanced Diploma of Laboratory Operations

This qualification covers the skills and knowledge required to supervise laboratory operations within a work area or project team. Senior technicians or laboratory supervisors are generally responsible for the planning, allocation of tasks, coordination, quality assurance, recording and reporting of laboratory outputs within their section. This requires significant judgement about work sequences, and choice of appropriate technology and procedures to ensure that products and services meet customer expectations and are provided safely and efficiently in keeping with the enterprise business plan. Under broad direction from scientists/medical staff/engineers, the senior technician/supervisor accepts responsibility for the day-to-day operation of his/her work/functional area. They are often responsible for the effective implementation of operational policies and the technical training of personnel in their work area. They also contribute significantly to the development of these policies through the application of specialised technical knowledge.

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LABORATORY TECHNICIAN

CAREER PATHWAYS/SPECIALISATIONS

Laboratory Supervisor:
Skilled and experienced laboratory technicians may be promoted to supervisor of a division in their company. As a supervisor you may be assigned project duties and organise how and when results will be recorded and analysed as well as assisting other technicians to solve problems they encounter when running tests. Experienced technicians with advanced skills and industry contacts may progress to become self-employed or contractors by setting up their own testing laboratories.

Laboratory Manager:
With further study an experienced and skilled laboratory technician could progress to become a laboratory manager. This role would require them to complete the following tasks - ensure company management systems and policies are understood by staff and are being followed within the laboratory, monitor workloads and resources, prioritise assessment of laboratory samples, liaise with clients on research outcomes, take responsibility for training new and existing staff, assist with business development plans, report to senior management and complete inter-laboratory audits.

Research Specialist
The manufacturing industry is so diverse that the opportunity to become a research specialist working in a laboratory is very high. Quality assurance and laboratory skills are transferrable across industries so you may like to explore some of the niche industries below that require staff to fill these roles –

Concrete materials testing- provide testing services to the transport infrastructure, oil and gas and mining industries to ensure concrete and other aggregates used are appropriate for the job.

Iron ore samples testing - setting up and applying safe sustainable laboratory system of work to ensure zero harm for employees, contractors, and the environment. Developing the laboratory's foundation sample management systems and analytical processes to ensure a quality and consistent product for manufacturing.

Composite Fibre Technologies testing - lead a team of technicians to research, trial, test, and apply leading trends in composite materials, products and manufacturing processes through innovation.

Food quality testing- there are five key areas of testing that is undertaken to maintain quality products. These include - analysing the chemical compounds, testing for micro-organisms, nutritional analysis, food allergens and sensory testing (how the food smells, tastes and feels).

Electrical product testing- To comply with the Electrical Equipment Safety System (EESS), Responsible Suppliers must have evidence that equipment meets the Relevant Standard. Evidence is generally in the form of a test report. Most testing is conducted by specialist laboratories. The specific testing requirements are based national or international standards. After testing, laboratories produce a test report. A test report should identify the product (type, model and batch number), the testing agency, the standards tested to, the tests conducted, the test results, and (if appropriate) the methodology used to conduct the test.

For further information relating to this job click on the industry logo or scan the QR code.

Science Education Technicians Australia (SETA)	Science and Technology Australia	Manufacturing Australia
Electrical Equipment Safety System	Australia Unlimited	

For further information or advise contact
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National Careers Institute

LABORATORY TECHNICIAN

HINTS ON HOW TO APPLY FOR THIS JOB

The first thing to do is to look up the local manufacturers and food processing plants or employment agencies and ring them or meet with them to discuss the opportunity to work in this industry. If you can't locate a business, then follow the 10 steps below that could assist you to secure work with a laboratory technician-

1. identify your strengths and weaknesses, especially in problem solving and science as these are essential to being successful as a laboratory technician. Completing any of the following; hospitality, white card, food hygiene or forklift ticket training units of competence as well as using tools or machinery will provide the practical skills that will assist you to meet the selection criteria that employers set.

2. decide where you want to work; are you willing to relocate to get your dream job? There may be more opportunities in cities than in regional areas.

3. do some research, as to who the key employers are that could employ a laboratory technician such as food processing plants, refineries, water treatment plants and research centres. Consider what type of industry you would like to work in then choose the specialisation that you most like before making enquiries to see if they will take on trainees.

4. research information about these employers or companies that you would like to work for; find out what the entry requirements or essential criteria are that must be met; such as do you need to complete an aptitude test before getting an interview?

5. make a shortlist of potential prospective employers to contact. You may also like to chat to your job search agent or search some of the online employment agencies such as SEEK, Job search, Indeed or Linked In to find job vacancies for electricians in your region.

6. create a quality resume and include your academic achievements, experience, interests and passions.

7. contact potential employers by writing or directly calling them to demonstrate your interest and communication skills. Prospective employers highly value self-starters and prospective career aspirants with initiative who take such steps to seek for themselves employment as an apprentice.

8. if you are still at school, you may be able to take up a school-based apprenticeship. There are opportunities available in some schools that allow you to take on a part-time apprenticeship known as a School-Based Apprenticeship or Traineeship (SBAT). Ask your school if they support this government initiative and ask the employer if they would be interested in such an arrangement. SBATs are a really good way to allow you to finish school and at the same time learn and earn as an apprentice.

9. your employer should contact the Australian Apprenticeship Support Network (AASNs) **https:// www.australianapprenticeships.gov.au/** for further information on how to sign you up.

10. sign up to your traineeship with your employer (and support of your family if you are under 18 years old) to start "learning and earning" to be a laboratory technician.

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MAE MANUFACTURING, AGRIFOOD AND ELECTROTECHNOLOGY

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HAVE YOU CONSISDERED THESE RELATED JOBS?

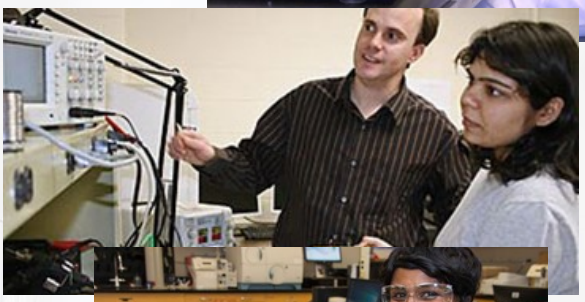
Additional industry contacts you may like to explore -

	Australian Industry Group (AiGroup)
	Australian Chamber of Commerce and Industry (ACCI)

Other related jobs you might like to research that are similar to a laboratory technician include -

Biological Testing Technical Assistant

Environmental Field Assistant (Sample Testing)
Mineral Assay Laboratory Assistant,
Biomedical Laboratory Assistant
Laboratory Assistant
Specialist Lab Support
Air Sampler/Tester
Research Assistant
Environmental Testing Technical Assistant
Construction Materials Testing Technical Assistant
Dairy Factory Laboratory Assistant
Water Quality Laboratory Assistant
Food Testing Laboratory Assistant
Polymer Testing Laboratory Assistant
Veterinary Laboratory Assistant
School Laboratory Technician
Laboratory Analyst
Laboratory Technician
Laboratory and Field Testing Technician
Medical Laboratory Technician
Microbiologist laboratory technician



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