MSL913001 - Communicate with other people
This unit This unit of competency covers the ability to receive and pass on written and oral messages, provide relevant information in response to requests within timelines and demonstrate effective interpersonal skills.

Status: Core
Prerequisites: Nil
Elements
- Receive and act upon instructions
- Receive and convey messages
- Demonstrate appropriate interpersonal skills
- Provide appropriate information

MSL913002 - Plan and conduct laboratory/field work
This unit This unit of competency covers the ability to plan and complete tasks individually or in a team context. The tasks involve established routines and procedures using allocated resources with access to readily available guidelines and advice. Work plans may need to be modified with supervisor agreement to suit changing conditions and priorities.

Status: Core
Prerequisites: Nil
Elements
- Plan and organise daily work activities
- Complete allocated work
- Identify and resolve work problems
- Work in a team environment
- Update knowledge and skills as required

MSL924001 - Process and interpret data
This unit This unit of competency covers the ability to retrieve data, evaluate formulae and perform scientific calculations, present and interpret information in tables and graphs and keep accurate records. The unit requires personnel to solve problems of limited complexity where the information may be less obvious, but not contradictory, and can be determined by direct reasoning.

Status: Core
Prerequisites: MSL924001 Process and interpret data
Elements
- Retrieve and check data
- Calculate scientific quantities
- Present data
- Interpret data
- Keep accurate records and maintain confidentiality

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MSL934002 - Apply quality system and continuous improvement processes
This unit This unit of competency covers the exercise of good laboratory practice (GLP) and effective participation in quality improvement teams. Personnel are required to ensure the quality and integrity of their own work, detect non-conformances and work with others to suggest improvements in productivity and quality.

Status: Core
Prerequisites: MSL924001 Process and interpret data
Elements
- Satisfy quality system requirements in daily work
- Analyse opportunities for corrective and/or optimisation action
- Recommend corrective and/or optimisation actions
- Participate in the implementation of recommended actions
- Participate in the development of continuous improvement strategies

MSL943002 - Participate in laboratory or field workplace safety
This unit This unit of competency covers the ability to follow work health and safety (WHS) policies and procedures, deal with the identification and control of hazards, work safely at all times, follow emergency response procedures and contribute to the maintenance of workplace safety.

Status: Core
Prerequisites: Nil
Elements
- Identify, control and report WHS and environmental hazards
- Conduct work safely
- Follow incident and emergency response procedures
- Contribute to health and safety in the workplace

MSMENV272 - Participate in environmentally sustainable work practices
This unit This unit of competency covers the skills and knowledge required to effectively find out current resource use and carry out improvements, in own work area, including those that reduce the negative environmental impacts of work practices.

Status: Core
Prerequisites: Nil
Elements
- Identify current resource use and environmental issues
- Comply with environmental regulations
- Seek opportunities to improve environmental practices and resource efficiency

HLTPAT317C - Operate effectively within a pathology testing environment
This unit This unit of competency describes the skills and knowledge required by workers in a pathology laboratory who perform work that reflects an understanding of the structure and profile of the industry, the roles and relationships within and across the industry and key issues facing the industry

Status: Elective "A"
Prerequisites: Nil
Elements
- Demonstrate an understanding of the structure and profile of the pathology industry
- Develop a knowledge of different sectors and roles within a pathology laboratory
- Develop an understanding of specimen processing
- Document client information
- Work within organisation policies and procedures
MSL904001 - Perform standard calibrations
This unit This unit of competency covers the ability to calibrate test and measurement equipment in accordance with standard calibration procedures and documented test methods. These procedures/methods specify all associated reference standards, materials, equipment and methods to be used and the required parameters or quantities and ranges to be tested, including the criteria for rejection or approval.

Status: Elective "A"
Prerequisites: MSL904001 Perform standard calibrations & MSL905001 Perform non-standard calibrations

Elements
- Prepare items for calibration
- Perform calibration
- Document results
- Finalise calibration

MSL914001 - Prepare practical science classes and demonstrations
This unit This unit of competency covers the ability to manage the day-to-day running of science teaching laboratories and the preparation of practical experiments, demonstrations and field trips.

Status: Elective "A"
Prerequisites: Nil

Elements
- Ensure safe work practices
- Plan work schedule
- Organise experiments and demonstrations
- Manage resources

MSL924002 - Use laboratory application software
This unit This unit of competency covers the ability to use and apply computer software in the laboratory, field and/or production plants for analysis and reporting.

Status: Elective "A"
Prerequisites: MSL924001 Process and interpret data

Elements
- Access application software
- Use software for specified purposes
- Produce reports of retrieved data and/or processed data
- Perform simple record housekeeping

MSL934001 - Contribute to the ongoing development of HACCP plans
This unit This unit of competency covers the ability to collect and analyse data obtained from hazard analysis and critical control points (HACCP) records. Personnel are required to implement approved corrective actions and complete the review and update of documents and systems related to HACCP plans.

Status: Elective "A"
Prerequisites: Nil

Elements
- Review existing HACCP plans
- Provide support for the implementation of HACCP plans
- Review the implementation plan
MSL934003 - Maintain and control stocks
This unit This unit of competency covers the ability to order, maintain and control the use of laboratory materials and/or equipment in the work area.

Status: Elective "A"
Prerequisites: Nil

Elements
- Maintain and control stocks of materials or equipment
- Order and receive materials and equipment
- Maintain stock records
- Maintain a safe work environment

MSL944001 - Maintain laboratory or field workplace safety
This unit This unit of competency covers the ability to monitor and maintain work health and safety (WHS) and environmental programs within a work area where the person has supervisory responsibility for others.

Status: Elective "A"
Prerequisites: Nil

Elements
- Perform all work safely
- Ensure others in the work group are able to implement safe work practices
- Monitor observance of safe work practices in the work area
- Participate in risk management processes
- Support the implementation of participative arrangements
- Support the implementation of emergency procedures within the work group

MSL954001 - Obtain representative samples in accordance with sampling plan
This unit This unit of competency covers the ability to obtain a range of samples that are representative of the source material (e.g. raw ingredients, product in process and final product) and to prepare the samples for testing. All sampling activities are conducted in accordance with a defined sampling plan. This unit does not cover the subsequent testing of the samples.

Status: Elective "A"
Prerequisites: MSL953002 Operate a robotic sample preparation system

Elements
- Prepare for sampling
- Conduct sampling and log samples
- Prepare samples for testing
- Address client issues
- Maintain a safe work environment
MSL954002 - Prepare mineral samples for analysis
This unit The unit of competency covers the ability to reduce given mineral samples to representative client samples and analytical portions that meet client requirements for analysis. Personnel are also required to recognise problems and invalid preparation steps and take appropriate corrective actions.

Status: Elective "A"
Prerequisites: Nil

Elements
- Interpret and schedule client requirements
- Prepare client samples for analysis
- Use non-destructive methods to prepare laboratory portions for analysis
- Maintain a safe work environment

MSL974001 - Prepare, standardise and use solutions
This unit This unit of competency covers the ability to prepare, standardise and monitor the quality of solutions.

Status: Elective "A"
Prerequisites: Nil

Elements
- Prepare solutions
- Standardise and use volumetric solutions
- Calculate and record data
- Monitor the quality of laboratory solutions
- Maintain a safe work environment

MSL974002 - Conduct geotechnical site investigations
This unit This unit of competency covers the ability to prepare for and conduct and conclude site activities, such as excavations, sampling and testing as part of a geotechnical investigation team. Personnel are expected to solve common site problems and seek advice to deal with situations beyond their own technical competence.

Status: Elective "A"
Prerequisites: Nil

Elements
- Prepare for on-site operations
- Arrange excavation of boreholes, test pits and/or trenches
- Conduct site sampling
- Conduct testing
- Finalise site operations
- Maintain records
- Maintain a safe work environment
MSL974003 - Perform chemical tests and procedures

This unit This unit of competency covers the ability to interpret chemical test requirements, prepare samples, conduct pre-use and calibration checks on equipment and perform routine chemical tests/procedures. These tests will involve several measurement steps. The unit includes data processing and interpretation of results and tracking of obvious test malfunctions where the procedure is standardised. However, personnel are not required to analyse data, optimise tests/procedures for specific samples or troubleshoot equipment problems where the solution is not apparent.

Status: Elective "A"

Prerequisites: Nil

Elements

- Interpret and schedule test requirements
- Receive and prepare samples
- Check equipment before use
- Test samples to determine chemical species or properties
- Process and interpret data
- Maintain a safe work environment
- Maintain laboratory records

MSL974004 - Perform food tests

This unit This unit of competency covers the ability to interpret food test requirements, prepare samples, conduct pre-use and calibration checks on equipment, and perform routine testing of raw food materials, in-process materials and final products. These tests will involve several measurement steps. The unit includes data processing and some interpretation of results and tracking of obvious test malfunctions where the procedure is standardised. However, personnel are not required to analyse data, optimise tests/procedures for specific samples or troubleshoot equipment problems where the solution is not apparent.

Status: Elective "A"

Prerequisites: Nil

Elements

- Interpret and schedule test requirements
- Receive and prepare food samples
- Check equipment before use
- Test samples to determine food components and characteristics
- Process data
- Maintain a safe work environment
- Maintain laboratory records
**MSL974005 - Perform physical tests**

This unit covers the ability to interpret physical test requirements, prepare samples, conduct pre-use and calibration checks on equipment and perform routine physical tests. These tests will involve several measurement steps. The unit includes data processing and interpretation of results and tracking of obvious test malfunctions where the procedure is standardised. However, personnel are not required to analyse data, optimise tests or procedures for specific samples or troubleshoot equipment problems where the solution is not apparent.

**Status:** Elective "A"

**Prerequisites:** Nil

**Elements**
- Interpret and schedule test requirements
- Receive and prepare samples
- Check equipment before use
- Test samples to determine physical properties
- Process and interpret data
- Maintain a safe work environment
- Maintain laboratory records

**MSL974006 - Perform biological procedures**

This unit covers the ability to interpret work requirements, prepare samples, conduct pre-use and calibration checks on equipment, and perform routine biological procedures. These procedures may involve several steps and are used to classify cell types, species and biologically active compounds by analysing their biological and chemical characteristics. This unit includes data processing, interpretation of results and troubleshooting obvious departures from standard procedures.

**Status:** Elective "A"

**Prerequisites:** Nil

**Elements**
- Interpret and schedule work requirements
- Receive and prepare biological samples
- Perform techniques that assist in the classification of a cell or species
- Perform techniques that analyse biological activity
- Process and interpret data
- Maintain a safe work environment
- Maintain laboratory records

**MSL974007 - Undertake environmental field-based monitoring**

This unit covers the ability to organise and undertake field monitoring programs that are primarily focused on the determination of physical and chemical parameters and/or observation and documentation of biological/ecological systems. It covers confirming the requirements of the monitoring activities, sampling, sample handling, physical and chemical monitoring, and simple field-based analysis, data collection and recording. It also covers field camp maintenance and field safety. This unit of competency covers gaining clearance for animal trapping, tagging, keeping or experimentation. This unit does not cover animal handling techniques for specific species of animals. All work would be performed under the guidance and supervision of a scientific officer.

**Status:** Elective "A"

**Prerequisites:** Nil

**Elements**
- Confirm requirements for field monitoring activities
- Prepare for field monitoring activities
- Perform field activities
- Close down field monitoring activities
MSL974008 - Capture and manage scientific images
This unit This unit of competency covers the ability to capture accurate and reproducible images of scientific (environmental, medical and technical) subjects using a scientific approach and workplace procedures/protocols to ensure the integrity of the image. It also includes the ability to generate and maintain pre- and post-image capture records to ensure that images can be reproduced.

Status: Elective "A"
Prerequisites: Nil

Elements
- Establish requirements for image capture
- Plan and set up the shoot
- Capture and reproduce the required image
- Keep records and deliver images

MSL974009 - Undertake field-based, remote-sensing monitoring
This unit This unit of competency covers the ability to organise and undertake defined field-based, remote-sensing monitoring activities. These may include assembling, setting up and checking appropriate monitoring equipment on-site, sampling, data collection and storage, equipment and system maintenance, and associated field testing and laboratory analysis. This unit of competency does not cover developing specific monitoring protocols or detailed design and/or construction of instruments, buildings, structures associated with the remote-sensing monitoring activities.

Status: Elective "A"
Prerequisites: MSL973004 Perform aseptic techniques

Elements
- Confirm monitoring requirements with supervising staff
- Assemble remote-sensing field monitoring system
- Organise and establish the remote-sensing monitoring site
- Operate and maintain monitoring site
- Close down field monitoring activities

MSL974010 - Perform mechanical tests
This unit This unit of competency covers the ability to interpret mechanical test requirements, prepare samples, conduct pre-use and calibration checks on equipment and perform routine mechanical tests. These tests will involve several measurement steps. The unit includes data processing and interpretation of results and tracking of obvious test malfunctions where the procedure is standardised. However, personnel are not required to analyse data, optimise tests/procedures for specific samples or troubleshoot equipment problems where the solution is not apparent.

Status: Elective "A"
Prerequisites: MSL973010 Conduct laboratory-based acceptance tests for construction materials

Elements
- Interpret and schedule test requirements
- Receive samples and prepare test pieces
- Check equipment before use
- Test samples to determine mechanical properties
- Process and interpret data
- Maintain a safe work environment
- Maintain laboratory records
MSL974011 - Prepare tissue and cell cultures

This unit This unit of competency covers the ability to prepare primary tissue cultures for applications, such as maintenance of animal cell lines and propagation of plants by tissue culture, and basic subculture procedures. Personnel are required to manipulate equipment and materials and samples to prevent contamination at all preparation stages. They will have ready access to workplace procedures and will work under direct supervision.

Status: Elective "A"

Prerequisites: MSL973009 Conduct field-based acceptance tests for construction materials

Elements
- Work safely according to the legal and regulatory framework
- Prepare and test cell and tissue culture media
- Prepare tissue or cell cultures
- Monitor tissue or cell culture
- Maintain records

MSL974012 - Perform tests to determine the properties of construction materials

This unit This unit of competency covers the ability to conduct multi-stage tests to determine the properties of raw and/or manufactured construction materials. These test results are typically used by clients to prove raw material deposits, tender for supply of construction materials, classify soils, determine the suitability of construction materials for specialised uses and to inform the design of civil engineering works. The unit includes data processing and interpretation of results to identify obvious errors or unexpected results and take corrective action. However, personnel are not required to analyse data, optimise test methods or workplace procedures for specific samples or troubleshoot equipment problems where the solution is not apparent.

Status: Elective "A"

Prerequisites: MSL973009 Conduct field-based acceptance tests for construction materials & MSL973010 Conduct laboratory-based acceptance tests for construction materials

Elements
- Interpret and schedule test requirements
- Prepare samples or test pieces
- Check test equipment before use
- Conduct test to determine sample properties
- Process and interpret data
- Maintain laboratory records
- Maintain a safe work environment

MSL974013 - Monitor performance of structures

This unit This unit of competency covers the ability to monitor civil engineering structures (such as roads, dams, embankments, open cut faces, bridges, tunnels, towers and other concrete/steel erections) to measure their performance, confirm design parameters or measure the effects of improvements or rehabilitation. The unit involves confirming the requirements of the monitoring activities, liaising with site personnel, performing monitoring activities, setting up monitoring equipment, collecting reliable data and reporting results. Personnel are also expected to interpret results in the field, recognise/rectify obvious errors or unexpected results and troubleshoot common problems.

Status: Elective "A"

Prerequisites: Nil

Elements
- Confirm requirements for monitoring activities
- Prepare for monitoring activities
- Collect and verify monitoring data
- Finalise monitoring activities
- Maintain a safe work environment
MSL974014 - Classify soils

This unit This unit of competency covers the ability to classify soils for geotechnical and civil construction purposes using the symbols and descriptors specified in the Australian Standard for Geotechnical Site Investigations (AS 1726-1993 Geotechnical site investigations, or its replacement). The unit involves confirming the client’s requirements, physical examination of site samples, interpreting field observations and test results and assignment of an appropriate soil classification. Personnel are expected to recognise and rectify obvious errors or unexpected results, perform confirmatory tests if required and seek advice to deal with situations beyond their own technical competence.

Status: Elective "A"
Prerequisites: Nil

Elements
- Prepare to classify soil samples
- Examine properties of soil samples
- Analyse available test results
- Record soil classification
- Maintain a safe work environment

MSL974015 - Operate an automated mineral analysis system

This unit This unit of competency covers the ability to operate a computer-controlled robotic system for the specialised analysis of minerals, such as iron ore. Automated mineral analysis systems are operated in conjunction with robotic sample preparation systems to handle high volumes of relatively homogeneous material or when there is a need to minimise the operator's contact with potentially hazardous materials.

Status: Elective "A"
Prerequisites: Nil

Elements
- Prepare automated analysis system for operation
- Conduct or monitor loading of samples into system
- Monitor and adjust system operation
- Maintain a safe work environment

MSMENV472 - Implement and monitor environmentally sustainable work practices

This unit This unit of competency covers the skills and knowledge required to effectively analyse the workplace in relation to environmentally sustainable work practices, and to implement improvements and monitor their effectiveness.

Status: Elective "A"
Prerequisites: Nil

Elements
- Investigate current practices in relation to resource usage
- Set targets for improvements
- Implement performance improvement strategies
- Monitor performance

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HLTPAT419C - Perform Pathology Tests
This unit This unit of competency describes the skills and knowledge required by workers in pathology laboratories who perform duties that reflect an understanding of the structure and profile of the industry, the roles and relationships within and across the industry and key issues facing the industry.
Status: Elective "B"
Prerequisites: MSL904001 Perform standard calibrations
Elements
- Prepare to undertake basic pathology tests
- Perform handling or basic testing of samples
- Document results
- Maintain environment

MSL933001 - Maintain the laboratory/field workplace fit for purpose
This unit This unit of competency covers the general cleaning of work surfaces, cleaning and storage of equipment and the monitoring of laboratory stocks under direct supervision.
Status: Elective "B"
Prerequisites: Nil
Elements
- Clean work preparation areas
- Clean, maintain and store equipment
- Monitor stocks of materials and equipment
- Maintain a safe work environment

MSL933002 - Contribute to the achievement of quality objectives
This unit This unit of competency covers the development of a working knowledge of quality principles and their application in laboratory/field work.
Status: Elective "B"
Prerequisites: Nil
Elements
- Apply quality control procedures
- Contribute to quality improvements
- Maintain commitment to workplace quality standards in own work
- Assist in maintaining customer relationships
- Update knowledge and skills as required

MSL933003 - Apply critical control point requirements
This unit This unit of competency covers the ability to monitor critical, quality and regulatory control points related to a person's work responsibilities. This unit of competency also covers support for ongoing improvement of the workplace hazard analysis and critical control points (HACCP) plan.
Status: Elective "B"
Prerequisites: Nil
Elements
- Provide routine input to the HACCP plan
- Contribute to the continuous improvement of the HACCP plan
- Maintain a safe work environment
MSL933004 - Perform calibration checks on equipment and assist with its maintenance

This unit This unit of competency covers the ability to perform set-up, pre-use and in-house calibration/validation checks on equipment and assist with its maintenance.

Status: Elective "B"
Prerequisites: Nil

Elements
- Perform set-up and pre-use checks of laboratory equipment
- Perform calibration checks
- Assist with equipment maintenance
- Maintain records

MSL943001 - Work safely with instruments that emit ionising radiation

This unit This unit of competency covers the ability to safely store, transport and operate instruments that emit ionising radiation following established safe work practices and in accordance with laboratory procedures and licensing requirements. Examples include, use of process control instrumentation, such as fluid level gauges using radioactive sources, on-site non-destructive testing of weldments using X-ray and gamma ray sources and density testing of asphaltic concrete.

Status: Elective "B"
Prerequisites: Nil

Elements
- Store instruments safely and securely
- Transport instruments safely and securely
- Use instruments safely and maintain security
- Monitor radiation levels
- Maintain records
- Perform emergency procedures

MSL953001 - Receive and prepare samples for testing

This unit This unit of competency covers the ability to log samples, check sample documentation, and schedule and prepare samples for testing in accordance with workplace procedures. This unit does not include testing, tissue processing or similar techniques.

Status: Elective "B"
Prerequisites: Nil

Elements
- Log samples
- Address client and customer service issues
- Prepare samples for testing
- Distribute samples
- Maintain a safe work area and environment
MSL953002 - Operate a robotic sample preparation system

This unit This unit of competency covers the ability to operate a robotic sample preparation system to ensure efficient throughput of samples without sacrificing quality or safety. Personnel are expected to seek advice from their shift supervisor when non-routine problems arise.

**Status:** Elective "B"

**Prerequisites:** Nil

**Elements**
- Prepare robotic system for operation
- Load samples into system
- Monitor system and report errors
- Unload samples
- Maintain a safe work environment

MSL963001 - Operate basic handblowing equipment

This unit This unit of competency covers the ability to operate handblowing equipment to perform basic glasswork. Personnel may be less experienced workers working under the guidance of an experienced scientific glassblower.

**Status:** Elective "B"

**Prerequisites:** MSL963001 Operate basic handblowing equipment & MSL963002 Repair glass apparatus using simple glassblowing equipment

**Elements**
- Prepare for handblowing operations
- Follow sequence of operations for glasswork procedure to be performed
- Use annealing equipment
- Maintain a safe work environment
- Maintain records

MSL963002 - Repair glass apparatus using simple glassblowing equipment

This unit This unit of competency covers the ability to perform basic repairs to glass apparatus using simple glassblowing equipment. It includes the ability to assess the economics of salvage and to follow a procedure of disassembly/assembly of the apparatus in accordance with specifications.

**Status:** Elective "B"

**Prerequisites:** MSL963001 Operate basic handblowing equipment & MSL963002 Repair glass apparatus using simple glassblowing equipment

**Elements**
- Prepare for repair operations
- Repair apparatus
- Operate annealing equipment
- Maintain a safe work environment
- Maintain records
MSL973001 - Perform basic tests

This unit This unit of competency covers the ability to prepare samples and perform tests and measurements using standard methods with access to readily available advice from supervisors.

Status: Elective "B"
Prerequisites: Nil

Elements

- Interpret test requirements
- Prepare sample
- Check equipment before use
- Perform tests on samples
- Maintain a safe work environment

MSL973002 - Prepare working solutions

This unit This unit of competency covers the ability to prepare working solutions and to check that existing stocks of solutions are suitable for use. Working solutions include those required to perform laboratory tests. Personnel are required to calculate quantities and make dilutions.

Status: Elective "B"
Prerequisites: Nil

Elements

- Make up working solutions
- Check existing stock of solutions
- Maintain a safe work environment

MSL973003 - Prepare culture media

This unit This unit of competency covers the ability to prepare culture media which is free of contamination to facilitate optimal growth of organisms and cells. It includes the ability to organise the materials, equipment and work environment and follow standard methods. Media may be prepared from formulated powders obtained from microbiological companies or by first principles under supervision of a technical officer or scientist.

Status: Elective "B"
Prerequisites: Nil

Elements

- Prepare culture media
- Sterilise media
- Pour, label and store media
- Perform quality control checks
- Maintain work area and equipment to prevent cross-infection and contamination

MSL973004 - Perform aseptic techniques

This unit This unit of competency covers the ability to perform aseptic techniques to maintain the integrity of both the sample source and the sample. It applies to sampling techniques in tissue culture and to generic microbiological procedures.

Status: Elective "B"
Prerequisites: Nil

Elements

- Prepare for aseptic sampling or transfer
- Transfer materials aseptically
- Maintain work area and equipment to prevent cross-infection and contamination
MSL973005 - Assist with fieldwork

**This unit** This unit of competency describes the ability to perform tasks associated with the organisation of fieldwork and field surveys. It also covers basic field survival skills and collection of samples in the field. This unit of competency does not include gaining clearance for animal trapping, tagging, keeping or experimentation. It does not cover animal handling techniques.

**Status:** Elective "B"

**Prerequisites:** Nil

**Elements**
- Assist with organisation of fieldwork
- Support field operations
- Assist with field activities
- Demonstrate basic field survival skills
- Assist with the completion of fieldwork

MSL973006 - Prepare trial batches for evaluation

**This unit** This unit of competency covers the ability to prepare trial batches of materials for evaluation. Materials can include soil, minerals and manufactured products, such as concrete, asphalt, food, plastics, paint and other industrial chemicals.

**Status:** Elective "B"

**Prerequisites:** Nil

**Elements**
- Prepare for trial batch mixing
- Mix trial batch for evaluation
- Evaluate properties of the mixture by inspection and standard test methods
- Clean equipment and dispose of materials
- Maintain records
- Maintain a safe work environment

MSL973007 - Perform microscopic examination

**This unit** This unit of competency covers the ability to set up a light microscope for optimum resolution, to prepare routine samples and to observe, identify and report sample characteristics.

**Status:** Elective "B"

**Prerequisites:** Nil

**Elements**
- Interpret test requirements
- Set up work area for preparation and examination of samples
- Prepare samples for examination
- Set up and use a light microscope
- Observe, identify and report sample characteristics
- Maintain a safe work environment
MSL973008 - Perform histological procedures
This unit This unit of competency covers the ability to perform straightforward histological procedures involving processing and sectioning (by hand or rotary microtome) of plant and animal tissues in paraffin wax.

Status: Elective "B"
Prerequisites: Nil
Elements
- Assemble equipment and materials
- Process and embed plant and animal tissue
- Cut sections of plant and animal tissue
- Stain sections
- Maintain a safe work environment

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MSL973009 - Conduct field-based acceptance tests for construction materials
This unit This unit of competency covers the ability to conduct in situ tests to confirm the acceptability of raw or manufactured, construction materials prior to or after their use. Personnel are expected to be able to work independently and liaise with site personnel to ensure that testing is conducted safely and efficiently. They may transport samples and/or equipment to and from the site, as necessary, and prepare test pieces on-site for later laboratory testing.

Status: Elective "B"
Prerequisites: Nil
Elements
- Prepare for field-based acceptance tests
- Perform field tests
- Collect site samples and prepare test pieces
- Finalise field testing
- Maintain a safe work environment

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MSL973010 - Conduct laboratory-based acceptance tests for construction materials
This unit This unit of competency covers the ability to conduct laboratory tests to confirm the acceptability of raw and/or manufactured construction materials. Personnel will have access to established test methods, workplace procedures and readily available advice. They are expected to obtain reliable test results safely and efficiently. In general, these personnel do not calibrate equipment and make only limited adjustments to the controls. The unit of competency does not cover interpretation or analysis of results or troubleshooting equipment problems.

Status: Elective "B"
Prerequisites: Nil
Elements
- Prepare for laboratory-based acceptance tests
- Prepare samples or test pieces
- Check test equipment before use
- Perform laboratory tests
- Maintain a safe work environment

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MSL973011 - Perform fire pouring techniques

This unit This unit of competency covers the ability to follow standard procedures for extracting precious metals from their host matrices in readiness for analysis. Fire pourers are expected to handle routine samples, recognise common sample preparation and cupellation problems and make standard adjustments to fluxes and firings. They are expected to seek advice from their supervisor when non-routine problems arise.

Status: Elective "B"
Prerequisites: Nil

Elements

- Plan work for shift
- Prepare sample racks for fusion
- Obtain acceptable buttons and prills
- Troubleshoot and correct common recovery failures
- Perform daily maintenance of assay equipment
- Maintain a safe work environment

MSL973012 - Perform site investigation activities

This unit This unit of competency covers the ability to prepare for and conduct activities, such as excavations, sampling and testing, as part of a site investigation team. Personnel are expected to identify common site problems and seek advice to deal with situations beyond their own technical competence.

Status: Elective "B"
Prerequisites: Nil

Elements

- Prepare for on-site operations
- Conduct excavation of boreholes, test pits and/or trenches
- Conduct site sampling
- Conduct site testing
- Complete site operations
- Maintain records
- Maintain a safe work environment

TAEDEL301A - Provide work skill instruction

This unit This unit describes the performance outcomes, skills and knowledge required to conduct individual and group instruction and demonstrate work skills, using existing learning resources in a safe and comfortable learning environment. The unit covers the skills and knowledge required to determine the success of both the training provided and one's own personal training performance. It emphasises the training as being driven by the work process and context.

Status: Elective "B"
Prerequisites: Nil

Elements

- Organise instruction and demonstration
- Conduct instruction and demonstration
- Check training performance
- Review personal training performance and finalise documentation

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MSL905001 - Perform non-standard calibrations

This unit This unit of competency covers the ability to recognise non-conforming calibration work, research and select the most appropriate test method or calibration procedure for a given measurement request, and then conduct the calibration. It also covers the ability to modify and revise existing procedures or substitute alternative instruments and measurement standards, when necessary.

Status: Elective "C"

Prerequisites: MSL904001 Perform standard calibrations & MSL905001 Perform non-standard calibrations & MSL905002 Create or modify calibration procedures

Elements
- Select the appropriate calibration procedure
- Prepare items for calibration
- Perform calibration
- Document results
- Finalise calibration

MSL905002 - Create or modify calibration procedures

This unit This unit of competency covers the ability to create or modify calibration procedures in response to the introduction of alternative/new equipment, changing test circumstances, activities involved in research and development trials or to meet client needs. The unit covers research of current calibration procedures and technology, development or modification of a procedure, its subsequent trialling and confirmation that it is fit for purpose. This unit of competency does not cover the ability to create or edit software controlled calibration procedures as this is covered in another unit of competency.

Status: Elective "C"

Prerequisites: Nil

Elements
- Assess the suitability of available calibration procedures
- Develop procedure
- Prepare equipment for testing
- Trial modified or new calibration procedure
- Confirm the modified or new procedure is fit for purpose
- Document and review modified or new calibration procedure

MSL905003 - Create or modify automated calibration procedures

This unit This unit of competency covers the ability to create, edit, test and document computer controlled calibration procedures for test and measurement instruments. This may be in response to the introduction of alternative or new equipment, changing test circumstances, activities involved in research and development trials or to meet client needs. The unit covers performance of automated, including computer-aided, calibrations as well as the programming and control of automated calibration systems.

Status: Elective "C"

Prerequisites: Nil

Elements
- Assess the suitability of available automated procedures
- Create or edit automated procedure
- Configure instruments/equipment
- Refine the automated procedure
- Verify automated procedure is fit for purpose
- Document and review automated procedure
**MSL915001 - Provide information to customers**

*This unit* This unit of competency covers the ability to respond to both internal and external inquiries of a specialised technical nature. The advice and information requested will require the gathering of information, such as trend analysis, collection of data and samples, confirmation of validity of results, and revision of plans or product advice additional to that on data sheets.

**Status:** Elective "C"

**Prerequisites:** Nil

**Elements**
- Assess the request for information and/or advice
- Prepare response
- Provide information and/or advice
- Record details of the request and response

**MSL915002 - Schedule laboratory work for a small team**

*This unit* This unit of competency covers the ability to schedule laboratory work for a small team to meet operational requirements. It covers the ability to identify resource requirements and then document, monitor and adjust schedules in response to operational variations and in consultation with relevant personnel.

**Status:** Elective "C"

**Prerequisites:** Nil

**Elements**
- Determine work requirements and laboratory resources
- Develop schedules in consultation with relevant personnel
- Monitor schedules
- Adjust schedules in consultation with senior personnel

**MSL925001 - Analyse data and report results**

*This unit* This unit of competency covers the ability to perform scientific calculations, analyse trends and uncertainty in data and report results within the required timeframe.

**Status:** Elective "C"

**Prerequisites:** Nil

**Elements**
- Perform scientific calculations
- Analyse trends and relationships in data
- Determine variation and/or uncertainty in data distributions
- Check for aberrant results
- Report results

**MSL925002 - Analyse measurements and estimate uncertainties**

*This unit* This unit of competency covers the ability to use statistical analysis to estimate and report measurement uncertainty in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (or its replacement Standard). Personnel are required to review their estimates of measurement uncertainty to assist with making decisions on the fitness for purpose of the measurements.

**Status:** Elective "C"

**Prerequisites:** Nil

**Elements**
- Identify the measured quantity and the uncertainty components
- Determine the size of each uncertainty component
- Reduce each uncertainty component to a standard uncertainty
- Calculate an expanded uncertainty to the required confidence level
- Report the expanded uncertainty
MSL935001 - Monitor the quality of test results and data
This unit This unit of competency covers the ability to analyse a series of test results and data to detect potential or actual non-conformances, assess their significance and recommend preventative or corrective actions. The unit assumes personnel will have access to workplace quality assurance procedures based on Australian and/or international standards. This unit of competency does not cover the adaptation or development of test methods or procedures.

Status: Elective "C"
Prerequisites: MSL924001 Process and interpret data & MSL925001 Analyse data and report results

Elements
- Verify accuracy of data and technical records
- Assess the quality of data/results
- Identify potential causes for unacceptable results
- Report findings to relevant personnel

MSL935002 - Assist in the maintenance of reference materials
This unit This unit of competency covers the ability to assist in the maintenance of reference materials that can be used in tests and the identification of new specimens as part of quality control of laboratory procedures. The unit of competency does not cover the scientific identification of species or specimens.

Status: Elective "C"
Prerequisites: Nil

Elements
- Acquire reference materials
- Maintain reference materials
- Dispense reference materials to clients
- Maintain a safe work environment

MSL935003 - Authorise the issue of test results
This unit This unit of competency covers the ability to critically assess the accuracy of data and validity of test results prior to formally authorising their release to the client. It involves the statistical analysis of data and information generated during calibration, sampling and testing to determine whether quality and/or process parameters have been achieved. Personnel are required to investigate and, if necessary, rectify results that are not consistent with expected values.

Status: Elective "C"
Prerequisites: Nil

Elements
- Verify the accuracy of data and technical records
- Determine if results are acceptable and within expectation
- Investigate unexpected or unacceptable results
- Liaise with clients about results
MSL935004 - Maintain instruments and equipment
This unit This unit of competency covers the ability to check the serviceability and calibration of laboratory/field instruments and equipment and perform routine maintenance, such as cleaning and replacement of consumables and minor components. Personnel are also required to perform basic troubleshooting and repairs consistent with warranty and service agreements.

Status: Elective "C"
Prerequisites: Nil
Elements
- Perform serviceability checks
- Conduct routine maintenance safely
- Perform calibration/qualification checks
- Arrange instrument servicing where appropriate

MSL955001 - Supervise a robotic sample preparation system
This unit This unit of competency covers the ability to ensure that a workplace's robotic sample preparation system operates safely and continuously to provide clients with samples that meet their specifications. This includes prioritising and planning job sequences, solving common system problems as they arise and working closely with system operators to ensure safety and achievement of production targets and quality standards. Personnel are not expected to undertake system repairs, servicing or non-routine cleaning and maintenance.

Status: Elective "C"
Prerequisites: MSL963001 Operate basic handblowing equipment
Elements
- Plan work for shift
- Oversee system set-up
- Monitor system performance and recover from errors and breakdowns
- Maintain system safety
- Maintain system records
- Contribute to system improvements

MSL965001 - Design and manufacture glass apparatus and glass systems
This unit This unit of competency covers the ability to design and manufacture glass apparatus and glass systems. It includes consulting with clients regarding design specifications and cost, as well as designing equipment and systems to improve efficiency, increase production capabilities and improve safety of equipment and processes.

Status: Elective "C"
Prerequisites: MSL963001 Operate basic handblowing equipment & MSL963002 Repair glass apparatus using simple glassblowing equipment
Elements
- Scope the design of glass apparatus and system
- Design glass apparatus and systems
- Manufacture glass apparatus and systems
- Maintain a safe work environment
- Maintain records
MSL965002 - Perform glass coating, grinding and finishing operations

This unit This unit of competency covers the ability to perform glass coating, grinding and finishing operations for scientific glassware.

Status: Elective "C"
Prerequisites: Nil
Elements

- Prepare for work
- Perform glass coating operations
- Perform glass grinding operations
- Perform glass finishing operations
- Maintain a safe work environment
- Maintain records

MSL965003 - Construct, modify and maintain high vacuum systems

This unit This unit of competency covers the ability to construct, monitor, modify and maintain high vacuum systems. Personnel are required to use advanced bench/hand glasswork techniques and equipment to fabricate glass apparatus.

Status: Elective "C"
Prerequisites: Nil
Elements

- Construct high vacuum systems
- Modify high vacuum systems
- Maintain high vacuum systems
- Monitor and finetune vacuum operation
- Maintain a safe work environment
- Maintain records