



**Australian Government**

# **Assessment Requirements for MSL974021**

## **Perform biological procedures**

**Release: 1**

# Assessment Requirements for MSL974021 Perform biological procedures

## Modification History

| Release   | Comments                                                                                                                                                                                                                                                                                    |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Release 1 | <p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL974006 Perform biological procedures. Changes to elements and performance criteria. Range of conditions removed. Assessment requirements amended.</p> |

## Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- classify 2 organisms from 2 different kingdoms to species level using a dichotomous approach
- safely and accurately performed 3 multistep biological procedures, using a minimum of 2 different techniques from the following list:
  - multistep staining:
    - haematological
    - histological
    - microbiological
  - preparation and examination of samples to demonstrate mitosis microscopically
  - preparation and enumeration of microscopic samples
  - colorimetry
  - spectrophotometry
  - chromatography
  - electrophoresis
  - electrochemistry
  - multistep molecular technique
  - multistep immunological technique.

## Knowledge Evidence

There must be evidence the candidate has knowledge of:

- biological principles and concepts underpinning tests and procedures associated with job role:
  - basic classification and taxonomy of organisms including prokaryotes and eukaryotes, bacteria, viruses, fungi, plants, animals, parasites and prions
  - interrelationships of biological systems including the carbon cycle and energy cycle
  - basic structure and function of a plant and animal cell and the respective organelles (plant and animal)
  - cell membrane activity, including diffusion (passive, facilitated and active), osmosis, tonicity and plasmolysis
  - plant and animal tissue types
  - phases of the cell cycle including phases of mitosis
  - mendelian genetics including inheritance, meiosis, karyotypes, dominant and recessive traits, genotypes, phenotypes, and pedigrees
  - basic structure and function of chromosomes, nucleic acids and proteins
  - chemical and physical characteristics of organic molecules
  - basic structure and function of including carbohydrates, fats and amino acids
  - basic role of biological significance of ions, including calcium, iron, magnesium, sodium, potassium, chloride and phosphate
- purpose of procedures implemented (why they are used and what they demonstrate)
- calculation steps to give results in appropriate units and precision
- importance and appropriate use of controls and certified reference materials
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task including traceability, confidentiality and security requirements of all clinical information, and laboratory data and records.

## Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
  - a standard laboratory equipped with appropriate test equipment and instruments, safety equipment, reagents and materials
  - standard operating procedures (SOPs) and testing methods
  - records, including:
    - test calibration results
    - equipment use, maintenance and servicing history
    - faulty or unsafe equipment
    - batch number, catalogue number and use-by-date for analytical kits.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

## Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>