



**Australian Government**

# **Assessment Requirements for MSL973004**

## **Perform aseptic techniques**

**Release: 1**

# Assessment Requirements for MSL973004 Perform aseptic techniques

## Modification History

Release 1. Supersedes and is equivalent to MSL973004A Perform aseptic techniques

## Performance Evidence

Evidence of competence in this unit must satisfy all of the requirements of the elements and performance criteria, and include demonstration of:

- safely performing aseptic techniques that maintain the integrity of both the sample source and the sample on at least three (3) occasions using different samples
- preventing cross-contamination of sample source and sample
- manipulating laboratory equipment and glassware to prevent contamination of culture medium during transfer
- cleaning and disinfecting work surfaces and equipment to prevent cross-contamination of work area, personnel and environment
- performing quality control checks, including streaking out of cultures to a single colony and lawn cultures
- labelling and storing culture media according to workplace procedures
- recognising and reporting non-compliance, anomalies or out-of-specification results
- accurately recording data, labelling samples and completing workplace documentation
- consistently using appropriate personal protective equipment (PPE) and workplace procedures for aseptic transfer
- following workplace procedures for the sorting, collecting, treating, recycling and/or disposing of waste.

## Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- growth requirements of microorganisms (bacteria, fungi, protozoans, viruses and multi-cellular parasites) and tissue in terms of their laboratory culture
- relationship between sterile practices, hygiene procedures and the ability to obtain growth free of contamination
- importance of pure culture techniques and aseptic transfer to the successful microbiological investigation and correct interpretation of laboratory results
- cleaning and sanitising requirements of equipment and work area, and effects of physical and chemical agents on microbial growth and death
- disinfection and sterilisation procedures used in the collection, processing and safe disposal of samples and materials
- principles of infection control related to work health and safety (WHS), and sampling and transfer of materials in microbiological investigations

- relevant hazards, such as accessing the sample from difficult or dangerous areas; injuries from sharps, burners, molten agar, dry ice and liquid nitrogen vapour; ultraviolet (UV) light sources; and exposure to hazardous substances and/or infectious agents
- relevant WHS and environment requirements.

## Assessment Conditions

- Judgement of competence must be based on holistic assessment of the evidence. Assessment methods must confirm consistency of performance over time, rather than a single assessment event.
- This unit of competency is to be assessed in the workplace or a simulated workplace environment. A simulated workplace environment must reflect realistic operational workplace conditions that cover all aspects of workplace performance, including the environment, task skills, task management skills, contingency management skills and job role environment skills.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept in each case).
- This unit of competency may be assessed with:
  - MSL943002 Participate in laboratory or field workplace safety
  - MSL973003 Prepare culture media
- Holistic assessment methods include:
  - observation of the candidate aseptically transferring a range of samples
  - review of quality assurance results and examination of samples transferred by the candidate
  - written and/or oral questioning about aseptic transfer techniques, typical quality problems, common hazards and safe work practices.
- Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to:
  - a standard laboratory
  - appropriate equipment, such as:
    - transfer equipment, such as inoculating loops, pipettes (quantitative and qualitative), flasks, tubes and spatulas
    - Bunsen burners and bench incinerators
    - anaerobic jars
    - incubators, water baths, refrigerators, freezers and dry ice and liquid nitrogen cylinders, if required
    - laminar flow units and biohazard cabinets
    - autoclave or pressure cooker
    - swabs

- a continuous culture system
- appropriate materials, such as:
  - solid and/or liquid media
  - supplied media, such as media manufactured in the workplace or raw material supplies for media
  - disinfecting and sterilising agents and materials, such as methylated spirits, ethanol and ether
  - disposable equipment and clothing
  - tissue culture media
  - growth media in broths, plates, deeps or slopes
  - receptacles for safe disposal of wastes and for processing of reusable materials
  - bar coding material and labels
- workplace schedules, procedures and standard methods, MSDS and documented safe work practices.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competence and currency.
- Technical competence can be demonstrated through:
  - relevant VET or other qualification/Statement of Attainment AND/OR
  - relevant workplace experience.
- Currency can be demonstrated through:
  - performing the competency being assessed as part of current employment OR
  - having consulted with a laboratory about performing the competency being assessed within the last twelve months.

## Links

Companion Volume implementation guides are found in VETNet -

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