



**Australian Government**

# **Assessment Requirements for MSL973003 Prepare culture media**

**Release: 1**

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## Modification History

Release 1. Supersedes and is equivalent to MSL973003A Prepare culture media

## Performance Evidence

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

- using standard methods to safely prepare at least three (3) different batches of culture media that meet specifications and are free of contamination
- using appropriate sterilisation techniques, including maintaining adequate space between containers to prevent cross-contamination
- performing quality assurance checks on media, including streaking out of cultures to a single colony and lawn cultures
- performing post-sterilisation procedures, including dispensing or adding using aseptic technique
- recognising and reporting non-compliances, anomalies or out-of-specification results
- labelling and storing culture media according to workplace procedures
- accurately recording data and completing workplace documentation
- following workplace procedures for the safe use of hazardous equipment and materials during the preparation of culture media
- following workplace procedures for safe removal of disposable and reusable contaminated materials to relevant areas for disinfection, sterilisation and cleaning or disposal.

## Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- basic microbiological concepts and terminology, including growth rates in culture, and production of gas and haemolysis of red cells in media
- growth requirements of microorganisms and tissue, such as bacteria, fungi, protozoans, viruses and multi-cellular parasites, in terms of their laboratory culture
- purpose, content and features of culture media prepared in job role, and the relationship between the correct preparation of culture media and the optimal growth of organisms or cells
- nature, properties and use of a range of biological media
- relationship between sterile practices, hygiene procedures and the ability to obtain growth free of contamination
- the effect of physical requirements, such as pH and temperature on optimal growth of organisms and cells
- the effect of inappropriate storage on culture media quality and performance
- cleaning and sanitising requirements for equipment and work area

- relevant hazards, such as microorganisms and agents; sharps and broken glassware; sources of heat, such as ovens, burners and autoclaves; fluids under pressure, such as steam; and radiation used for sterilisation
- relevant work health safety (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
  - MSL973004 Perform aseptic techniques
- Holistic assessment methods include:
  - review of quality assurance results and examination of batches of media prepared by the candidate
  - observation of the candidate preparing and dispensing culture media
  - written and/or oral questioning about culture media preparation methods, typical quality problems, common hazards and safety procedures.
- Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to:
  - a standard laboratory equipped with appropriate reagents and equipment, such as pH meters; balances; stirrers, water baths and hot plates; burners, autoclave and Arnold steamer; measuring cylinders, flasks and glassware; Falcon dishes; Petri dishes; media storage bottles and tissue culture bottles; self-refilling syringes; membrane filtration equipment; automatic agar pourers; labelling equipment; distilled water apparatus; refrigerators; sterilisation equipment and indicators
  - workplace schedules and procedures, 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>