



**Australian Government**

# **MSL973015 Prepare culture media**

**Release: 1**

## MSL973015 Prepare culture media

### 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 MSL973003 Prepare culture media. Changes to performance criteria. Range of conditions removed. Assessment requirements amended.</p>

### Application

This unit of competency describes the skills and knowledge 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.

This unit of competency applies to laboratory assistants in the biomedical, biological, environmental, food processing and pharmaceutical industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

### Pre-requisite Unit

Nil

### Competency Field

Testing

### Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- |   |                              |     |   |
|---|------------------------------|-----|---|
| 1 | <b>Prepare culture media</b> | 1.1 | Prepare mixture of media and solvent to ensure solution and even settling of heat soluble materials |
|---|------------------------------|-----|---|

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.2 Label media to allow tracking in subsequent processes
	1.3 Use a vessel large enough to endure adequate mixing and heating of the media
	1.4 Check pH of media where pH is critical
	1.5 Dispense media into vessels for sterilisation, leaving room for expansion during heating and cooling
<b>2 Sterilise media</b>	2.1 Load the steriliser in keeping with maximum permitted loads and appropriate positioning of materials
	2.2 Ensure a sterilisation indicator is correctly placed with the load to monitor sterilisation process
	2.3 Operate sterilisation cycle in accordance with manufacturer requirements to achieve sterilisation at the required settings
	2.4 Cool media to the temperature specified in the media formulation procedures
	2.5 Sterilise media and/or media additives using membrane filtration techniques
<b>3 Dispense or aliquote media</b>	3.1 Add labile constituents where necessary, under conditions that will not lead to their denaturation or contamination of media
	3.2 Ensure even mixing of additives and media before dispensing
	3.3 Aseptically dispense media to minimise occurrence of procedural contamination
	3.4 Label media to allow for selection, avoiding areas of the culture vessel required for examination of colony growth
<b>4 Label media</b>	4.1 Date batch media to ensure correct batch rotation
	4.2 Label media to allow for selection, avoiding areas of the culture vessel required for examination of colony growth
	4.3 Maintain records of batches of media

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- |          |  |     |   |
|----------|--|-----|---|
| <b>5</b> | <b>Store and incubate media</b>  | 5.1 | Incubate control plates as a sterility check  |
|          |  | 5.2 | Store media to maximise shelf life and minimise contamination   |
| <b>6</b> | <b>Perform quality control checks</b>  | 6.1 | Inspect media for any evidence of possible contamination or problems with structure or sterilisation                                |
|          |  | 6.2 | Check useability of selective media by growth of expected organism  |
|          |  | 6.3 | Check stored stocks at regular intervals for conformance to required standards  |
| <b>7</b> | <b>Maintain work area and equipment to prevent cross-infection and contamination</b> | 7.1 | Use personal protective equipment (PPE) and safe work practices to ensure personal safety and that of other laboratory personnel    |
|          |  | 7.2 | Place disposable and reusable items into relevant receptacles   |
|          |  | 7.3 | Clean and disinfect work area and equipment after use   |
|          |  | 7.4 | Transport disposable and reusable contaminated materials to relevant areas for disinfection, sterilisation and cleaning or disposal |

## Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Unit Mapping Information

Equivalent to MSL973003 Prepare culture media, Release 1.

## 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>