



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **FDFLAB2012A Maintain aseptic environment**

**Release: 2**

## FDFLAB2012A Maintain aseptic environment

### Modification History

This unit supersedes and is equivalent to FDFLABMAEA Maintain aseptic environment.  
April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the skills and knowledge required to operate in an aseptic laboratory environment. Work is usually done under routine supervision.
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### Application of the Unit

<b>Application of the unit</b>	This unit has application in a wine operations environment. It typically targets the worker responsible for preparing and maintaining an area to aseptic standards.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		
	FDFLAB2011A	Use basic laboratory equipment

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare aseptic environment	1.1 Hygiene and sanitation procedures for operator are completed according to safe laboratory guidelines 1.2 Work surfaces are cleaned and disinfected 1.3 Materials and services are prepared for use 1.4 Equipment is prepared for sterilising 1.5 Equipment is sterilised to meet requirements 1.6 Sterilising waste is deposited in collection area or disposed of according to workplace procedures
2. Operate in an aseptic environment	2.1 Equipment and materials are selected which are appropriate for the task 2.2 Appropriate sterilising techniques are selected and used 2.3 Aseptic transfers are conducted using techniques which minimise the risk of contamination 2.4 Aseptic environment is maintained during work procedures
3. Maintain aseptic environment	3.1 Work area is cleaned and disinfected after use 3.2 Equipment is cleaned in preparation for sterilising or placed into relevant disposal or disinfection receptacles 3.3 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas
- confirm supply of necessary materials equipment and services. This may include selecting the appropriate sterilising techniques
- handle sterilising agents safely and correctly
- prepare sterilisers as required
- prepare materials and equipment for sterilising. This includes rendering equipment safe to sterilise. It may also involve removing faulty equipment from service (e.g. chipped glass), correctly wrapping, labelling, loading and sealing
- use appropriate sterilising techniques. This may include activities to prevent cross-contamination
- set up, start up and operate sterilising equipment according to workplace procedures
- return equipment to operating order after sterilisation
- maintain and store sterilisers and related equipment according to workplace procedures
- carry out relevant checks and inspections. This may include:
  - checking pressure equipment calibration status
  - performing safety checks
  - use of autoclave tape, chemical indicators and spore strips
  - sterility control plates
- record sterilisation data in required format
- use appropriate sample handling and transfer techniques to maintain aseptic environment. This may include:
  - streaking
  - swabbing
  - pouring
  - pipetting
- maintain appropriate personal hygiene standards according to workplace procedures
- maintain work area to meet housekeeping standards and hygiene requirements
- record workplace information
- take samples according to enterprise procedures
- identify, rectify and/or report environmental non-compliance according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation,

including questioning, active listening, asking for clarification and seeking advice from supervisor

- work cooperatively within a culturally diverse workforce.

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**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose and principles of sterilisation
- safe handling and storage of sterilising agents used
- functions and features of sterilising equipment and agents
- sterilising requirements of work area and equipment
- procedures for preparing sterilising agents
- procedures for applying and using sterilising agents
- correct operating procedures of any equipment used
- affect of process stages on outcomes
- purpose of personal protective clothing and equipment
- personal hygiene requirements of operator
- Occupational health and safety (OHS) hazards and controls
- methods used to render equipment safe to sterilise
- equipment settings required for sterilisation
- regulatory requirements as they affect immediate responsibilities for sterilising
- types of waste generated by the sterilising process and related collection, treatment and disposal requirements
- environmental consequences of incorrect waste disposal procedures
- procedures and responsibility for reporting problems
- reporting and recording requirements and procedures
- sampling plan and procedures where relevant.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of ability to: <ul style="list-style-type: none"> <li>• prepare environment according to aseptic workplace standards</li> <li>• conduct work in a manner that meets aseptic standards</li> <li>• use sterilising techniques</li> <li>• clean and sterilise equipment after use</li> <li>• maintain workplace documentation.</li> </ul>
Context of and specific resources for assessment	Assessment must occur in a real or simulated workplace where the assessee has access to: <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over

<b>EVIDENCE GUIDE</b>	
	a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information may include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from laboratory manager, supervisor, or senior operator</li> </ul>
<b>Equipment</b>	<p>Equipment to be sterilised may include:</p> <ul style="list-style-type: none"> <li>• volumetric and general glassware, microbiological equipment and laminar flow cabinet</li> </ul> <p>Equipment used for sterilising may include:</p> <ul style="list-style-type: none"> <li>• autoclave, microwave, ultraviolet (UV) cabinet and pressure cooker</li> </ul>
<b>Aseptic transfers</b>	<p>Aseptic transfers may involve:</p> <ul style="list-style-type: none"> <li>• the use of microbiological inoculation and transfer tools, such as loops, spreaders, swabs, pipettes, and flasks, tubes, sample vessels, bottles and wine casks</li> </ul>

<b>RANGE STATEMENT</b>	
	(bladders)
<b>Materials</b>	<p>Materials may include:</p> <ul style="list-style-type: none"> <li>• solid and/or liquid media</li> <li>• live cultures in broths</li> <li>• propagation media</li> <li>• plates</li> <li>• deeps</li> <li>• slopes</li> <li>• ferments</li> <li>• chemical disinfecting or sterilising agents</li> </ul>
<b>Equipment status</b>	<p>Confirming equipment status involves:</p> <ul style="list-style-type: none"> <li>• checking that hygiene and sanitation standards, safety standards, and pre-start requirements are met and that equipment is operational</li> </ul>
<b>Services</b>	<p>Services may include:</p> <ul style="list-style-type: none"> <li>• gases</li> <li>• power</li> <li>• water</li> <li>• steam</li> </ul>
<b>Information systems</b>	<p>Information systems may be:</p> <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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