



**Australian Government**

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

# **FDFCEL2013A Operate the pressure leaf filtration process**

**Release: 2**

## FDFCEL2013A Operate the pressure leaf filtration process

### Modification History

This unit supersedes and is equivalent to FDFCELPLFB Operate the pressure leaf filtration process.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the cellar stream of the wine sector. It covers the skills and knowledge required to prepare for and operate the pressure leaf filtration process.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to cellar staff in winemaking enterprises who use a leaf filtration process to filter wine, juice product or water using a range of filter media, including diatomite, perlite, cellulose and polyethylene. Filters may be pressure leaf filters or pressure lees filters. The unit can apply to both manual and computer-controlled leaf filter and lees filter equipment.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		
	FDFCEL2018A	Carry out inert gas handling operations
	FDFCEL2019A	Carry out transfer operations

## 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

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the pressure leaf filtration process for operation	<ul style="list-style-type: none"><li>1.1 Product and materials are confirmed and available to meet filtration requirements</li><li>1.2 Product and materials are prepared to meet filtration requirements</li><li>1.3 Services are confirmed as available and ready for operation</li><li>1.4 Equipment is checked to confirm readiness for use</li><li>1.5 The process is set to meet filtration requirements</li></ul>
2. Operate and monitor the pressure leaf filtration process	<ul style="list-style-type: none"><li>2.1 The pressure leaf filtration process is started up according to workplace procedures</li><li>2.2 Control points are monitored to confirm performance is maintained within specification</li><li>2.3 Filtered product meets specification</li><li>2.4 Equipment is monitored to confirm operating condition</li><li>2.5 Out-of-specification product, process and equipment performance is identified, rectified and/or reported</li></ul>
3. Shut down the pressure leaf filtration process	<ul style="list-style-type: none"><li>3.1 The process is shut down according to workplace procedures</li><li>3.2 Equipment is dismantled and prepared for cleaning</li><li>3.3 Waste generated by both the process and cleaning procedures is collected, treated and disposed of, or recycled according to workplace procedures</li><li>3.4 Work is conducted in accordance with workplace environmental guidelines</li></ul>
4. Record information	<ul style="list-style-type: none"><li>4.1 Workplace information is recorded in the appropriate format</li></ul>

## Required Skills and Knowledge

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

### Required skills include:

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 filtration requirements
- select, fit and use personal protective clothing and/or equipment

- confirm supply of necessary product, materials and services
- liaise with other work areas
- prepare product and materials as required. This may include:
  - pre-mixing filter media according to instructions
  - loading filter media into dosing or earth tub
- confirm equipment status and condition. This may involve checking:
  - screen fit and condition
  - receipt vessel capacity and readiness
  - product to be filtered against specifications
  - operation of dosage pump
  - pre-coating filter with product or water
- set up and start up the process
- monitor the process and equipment operation to identify out-of-specification results or non-compliance. This may involve monitoring:
  - filter pressures
  - flow rate
  - media type or grade
  - dosage of bodyfeed
  - product loss
  - dilution
  - oxidation
  - screen integrity
  - relevant product characteristics (e.g. turbidity, solids content and type)
- monitor supply and flow of product and materials to and from the process
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record corrective action as required
- conduct product and batch changeovers
- sort, collect, treat, recycle or dispose of waste
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements
- record workplace information
- maintain work area to meet housekeeping standards
- prepare equipment for cleaning. This may involve draining and/or dismantling equipment, and removing waste either manually or by rinsing, in preparation for cleaning and sanitation
- identify, rectify and/or report environmental non-compliance
- conduct tests according to enterprise procedures
- carry out routine maintenance according to enterprise procedures
- prepare and make additions and finings 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 pressure leaf filtration
- link to related processes
- stages and changes which occur during pressure leaf filtration
- effect of process stages on end product
- quality characteristics and uses of filtered product
- product and materials preparation requirements and effect of variation on the process
- main methods used in pressure leaf filtration
- effects of setting or manipulating filtration process on end product characteristics
- process specifications, procedures and operating parameters
- equipment and instrumentation components, purpose and operation
- basic operating principles of process control systems where relevant
- services used
- significance and method of monitoring control points within the process
- common causes of variation and corrective action required
- Occupational Health and Safety (OHS) hazards and controls
- lock-out and tag-out procedures
- procedures and responsibility for reporting problems
- environmental issues and controls
- shutdown and cleaning requirements associated with changeovers and types of shutdowns
- waste handling requirements and procedures
- recording requirements and procedures
- testing procedures where relevant
- routine maintenance procedures where relevant
- procedures for preparing and making additions and finings 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

<b>EVIDENCE GUIDE</b>	
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	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective equipment and follow other specified OHS procedures</li> <li>• check supply and status of product and filter media before operating filter</li> <li>• check filter equipment status and condition before commencing operation</li> <li>• monitor filter process control points and equipment during filtration process</li> <li>• take corrective action in response to out-of-specification results or non-compliance</li> <li>• demonstrate knowledge of OHS hazards, controls and emergency procedures</li> <li>• record information appropriately.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <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.

**EVIDENCE GUIDE****Guidance information for assessment**

To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over 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****RANGE STATEMENT**

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.

**Policies and procedures**

Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements

**Workplace information**

Workplace information can include:

- Standard Operating Procedures (SOPs)
- specifications
- production schedules or instructions
- routine maintenance schedules
- work notes
- Material Safety Data Sheets (MSDS)
- manufacturer instructions
- verbal direction from manager, supervisor or senior operator

**Equipment**

Equipment may include:

- a range of pressure leaf filters and pressure lees filters

**Product and materials**

Product and materials may include:

- a range of wine and/or juice product and water
- a range of filter media, including diatomite, perlite, cellulose and polyethylene

**Services**

Services may include:

- power



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• water</li> <li>• compressed air</li> <li>• inert gas</li> </ul>
<b>Confirming 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> <li>• checking the operation and calibration of measuring instrumentation</li> </ul>
<b>Monitoring the process</b>	<p>Monitoring the process may involve:</p> <ul style="list-style-type: none"> <li>• the use of production data</li> <li>• checking turbidity and dissolved oxygen</li> </ul>
<b>Process set up, operation and monitoring functions</b>	<p>Process set up, operation and monitoring functions may be:</p> <ul style="list-style-type: none"> <li>• manual or involve the use of a process control system</li> </ul>
<b>Control points</b>	<p>Control points refer to those key points in a work process that must be monitored and controlled. This includes:</p> <ul style="list-style-type: none"> <li>• food safety (critical)</li> <li>• quality and regulatory control points</li> <li>• inspection points</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>
<b>Work hazards</b>	<p>Work may involve exposure to:</p> <ul style="list-style-type: none"> <li>• chemical, dangerous or hazardous substances</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## Custom Content Section

Not applicable.