



Australian Government

FBPTEC4010 Manage water treatment processes

Release: 1

FBPTEC4010 Manage water treatment processes

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to manage the usage and treatment of water used in food production stages such as washing and cooling, and the usage and treatment of wastewater.

The unit applies to individuals who work in a food production site, who take responsibility for managing water treatment systems and methods, and provide and communicate solutions to a range of predictable and sometimes unpredictable problems. The unit is not designed to meet the competency requirements of the person who specifies water quality standards and/or treatment methods.

No occupational licensing or certification requirements apply to this unit at the time of publication. However, legislative and regulatory requirements for food processing exist, so local requirements must be checked. All work must comply with Australian food safety standards and relevant codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Technical (TEC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Manage water treatment processes	1.1 Identify uses of water within the plant and the related quality requirements for each use 1.2 Establish appropriate treatment methods to meet treatment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.3 Identify environmental considerations for water treatment, and select and apply treatment options to minimise environmental impact 1.4 Develop or review procedures for treating water
2. Manage wastewater treatment and disposal	2.1 Identify sources and characteristics of wastewater generated across food processing operations 2.2 Evaluate methods for treating and recycling water 2.3 Implement appropriate treatment methods 2.4 Determine legal requirements for water discharge 2.5 Identify and monitor factors affecting the cost of water discharge 2.6 Identify conditions that could result in non-compliance, and implement control methods to prevent them from occurring 2.7 Develop or review procedures for treatment of wastewater to ensure compliance with trade waste standards, and to minimise environmental impact 2.8 Research and implement opportunities to reduce the volume of trade waste and to improve treatment methods

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Analyse documentation from a variety of sources relating to water treatment and reviews procedures
Writing	Revise procedural material for a specific audience using clear and detailed language in order to convey explicit information, requirements and recommendations
Numeracy	Perform mathematical calculations to analyse data and water treatment costs while reviewing water treatment options
Navigate the world of work	Implement improvement opportunities within own level of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPTEC4010 Manage water treatment processes	FDFTEC4010A Manage water treatment processes	Updated to meet Standards for Training Packages Prerequisite removed Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPTEC4010 Manage water treatment processes

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has effectively managed water treatment processes in food processing on at least one occasion, including:

- identifying and assessing water usage and disposal processes
- determining environmental impacts of water use, treatment and disposal
- identifying non-compliance associated with water quality
- assessing water treatment requirements and methods for water used in production
- evaluating costs associated with use, treatment and disposal of wastewater
- reviewing or developing wastewater procedures to ensure compliance with relevant standards
- researching and implementing at least one opportunity for improving wastewater management.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- terms and concepts used to describe water quality:
 - potable
 - total residual chlorine
 - free residual chlorine
 - available chlorine
- uses of water in production, including:
 - water used in cooling applications
 - washing
 - flushing
- quantities and applications of water

- treatment stages in the processing system
- points where water could be more effectively conserved
- wastewater generated by the process
- principles of common methods used to treat trade waste and identifying typical applications, including:
 - primary treatment
 - secondary treatment
- requirements and methods for treatment of water used in production, including:
 - treatment methods currently in place
 - opportunities to improve resource utilisation through conserving water, changing materials and processing methods
 - treating and recycling wastewater more efficiently
- sustainable use of water, including legal, social and environmental consequences of releasing water to the environment
- characteristics that are monitored in wastewater and how these affect the cost of trade waste disposal
- rights of relevant authorities to enter the site and conduct independent sample collection and test procedures
- acceptable limits for water going to stormwater (pH range)
- conditions that could result in failure to comply with legal requirements for stormwater, and relevant control methods
- risks associated with water, including Legionella and related control measures
- characteristics of wastewater and related treatment requirements
- methods for recycling water.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real food processing workplace
- resources, equipment and materials:
 - site plans, including relevant advice on drainage system
 - monitoring equipment
- specifications:
 - workplace procedures and legislation relevant to water use and treatment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

