



Australian Government

FDFOP2003A Clean equipment in place

Revision Number: 1

FDFOP2003A Clean equipment in place

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to prepare process equipment for cleaning in place (CIP) or in-line.
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Application of the Unit

Application of the unit	This unit applies to food processing equipment that is fixed in place and cannot be moved to a cleaning station. It requires the operator to initiate, monitor and control variables during cleaning. Where this is not a requirement of a CIP system, this unit may not be relevant. Where the operator is primarily responsible for cleaning and/or where they require a more detailed knowledge of cleaning and sanitation processes to carry out cleaning responsibilities, FDFOP2004A Clean and sanitise equipment, should be considered.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cleaning	1.1. Chemical stocks are available to meet cleaning and sanitation requirements 1.2. Services are confirmed as available and ready for operation 1.3. Equipment shutdown is planned and equipment is taken off-line for cleaning 1.4. Equipment and related valves and pipework are configured to confirm readiness for cleaning 1.5. The plant is set for the cleaning cycle
2. Operate and monitor the cleaning process	2.1. The cleaning cycle is undertaken according to company policies and procedures 2.2. The cleaning process is monitored to confirm cleaning meets company requirements 2.3. Cleaning data is recorded according to workplace reporting requirements 2.4. Out-of-specification process and equipment performance is identified, rectified and/or reported
3. Dispose of waste and return plant to operating condition	3.1. Cleaning chemicals are flushed from plant and disposed of according to company policies and procedures 3.2. Work is conducted according to environmental requirements 3.3. Plant is set up to meet operational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Ability to:

- access workplace information, such as the cleaning schedule to identify cleaning requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary materials and services
- handle and prepare cleaning and sanitation agents safely, including following correct handling and preparation procedures and use of appropriate protective clothing and equipment as required
- schedule cleaning and/or liaise with related work areas to take equipment and area off-line with minimal disruption to production
- prepare equipment and area for cleaning, such as rendering equipment safe to clean, removing obstacles and unnecessary equipment, correctly positioning equipment (e.g. valves, pipes, vents and taps), selecting appropriate cleaning cycle, removing waste and/or dismantling equipment
- clean equipment according to cleaning process cycle and procedures, such as starting up and operating the CIP process in both automatic and manual modes
- monitor the process and equipment operation to maintain the cleaning process within the required parameters
- locate emergency stop functions on equipment
- return plant to operating order
- return area to working order
- take corrective action in response to out-of-specification results
- advise affected work areas of cleaning schedule and progress
- maintain and store chemicals and related equipment as required
- carry out relevant checks and inspections to confirm effectiveness of cleaning
- sort, collect, treat, recycle or dispose of waste
- record cleaning information
- maintain work area to meet housekeeping standards
- conduct routine maintenance according to enterprise procedures
- take samples and conduct tests according to enterprise procedures
- use oral communication skills/language competence 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

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE***Knowledge of:***

- purpose and basic principles of CIP, including the use and functions of caustic and acid solutions, and cleaning sequence and stages as required in the workplace
- purpose and use of cleaning equipment and chemicals used
- terminology relating to the chemical solutions used
- safe work procedures, including appropriate signage of cleaning activities and safe handling and storage of cleaners and sanitisers used
- purpose and limitations of protective clothing and equipment
- cleaning and sanitation requirements, including different levels of cleaning requirements depending on the reason for cleaning
- characteristics of cleaning and sanitising chemicals used, including basic composition as well as compatibility of chemicals with types of equipment
- methods used to render equipment safe to clean, including the status and purpose of equipment guards, relevant lock out/tagout and isolation procedures
- equipment settings required for cleaning and for operating respectively
- basic operating principles of process control where relevant, including the relationship between control panels and systems and the physical equipment
- inspection points for cleaning and sanitation
- consequences of contamination of process flows by cleaning solutions and related safeguards
- types of waste generated by both the production and the cleaning process and related collection, treatment and disposal requirements
- environmental consequences of incorrect cleaning waste disposal procedures
- requirements to liaise/advise related work areas
- reporting and recording systems
- routine maintenance procedures where relevant
- sampling methods and test procedures where relevant

Evidence Guide

EVIDENCE GUIDE

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:

- shut down equipment and prepare for cleaning
- prepare and use chemicals according to safe work requirements
- clean equipment to meet work standards
- monitor cleaning and report or address any non-compliances
- flush equipment and dispose of waste according to environmental guidelines
- complete required documentation
- apply safe work practices and identify OHS hazards and controls
- apply food safety procedures.

Context of and specific resources for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- cleaning procedures and related advice on equipment operation, including advice on safe work practices and environmental requirements
- personal protective clothing and equipment
- equipment to be cleaned, and related CIP system
- chemicals and/or automated chemical addition system
- services as required
- MSDS where appropriate
- cleaning schedule or advice and related standard operating procedures
- housekeeping standards and procedures
- advice on environmental management issues relevant to work responsibilities
- workplace information recording systems,

EVIDENCE GUIDE	
	requirements and procedures • sampling and testing schedules and procedures as relevant to cleaning requirements in the workplace.
Method of assessment	This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be: • FDFOP2011A Conduct routine maintenance • FDFOP2013A Apply sampling procedures • MSL973001A Perform basic tests.
Guidance information for assessment	To ensure consistency in one's performance, competency 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 company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements. When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply and reference to food safety is replaced by GMP
Workplace information	Workplace information may include: • standard operating procedures (SOPs) • specifications • production cleaning schedules and instructions • signs and symbols • materials safety data sheets (MSDS) • manufacturers' advice • standard forms and reports
Dosing of cleaning chemicals	Dosing of cleaning chemicals may be: • automatically controlled or manually dosed
Services	Services may include: • power • water • Steam • compressed and instrumentation air
Testing	Where tests are conducted as part of operation, a typical requirement is measurement of pH
Monitoring the process	Monitoring the process is dependent on the nature of equipment. Examples of monitoring include: • chemical strength • cycle time • temperatures • time

RANGE STATEMENT	
	• storage tank levels • condensate quality
Operation and monitoring of equipment and processes	Operation and monitoring of equipment and processes typically requires the use of control panels and systems

Unit Sector(s)

Unit sector	Operational
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		