



Australian Government

Department of Education, Employment and Workplace Relations

FDFTEC4002A Manage controlled atmosphere storage

Revision Number: 1

FDFTEC4002A Manage controlled atmosphere storage

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge to determine and maintain conditions required for controlled atmosphere storage of perishable produce.
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Application of the Unit

Application of the unit	This unit has application in fresh produce storage or processing environments. It would typically be performed by supervisors and senior operators or technicians responsible for ensuring that conditions in controlled atmosphere storage are set and maintained at the correct levels for the required produce.
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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. Analyse features and parameters of controlled atmosphere storage	1.1.Type of storage facility, components and construction are identified 1.2.All features of the facility are examined and operational processes identified 1.3.Cooling mechanisms and processes are examined 1.4.Implications and parameters of controls are examined and range determined for fresh fruit product 1.5.Consequences of inaccurate controls are identified 1.6.Procedures for opening and closing doors and risks associated with air tight chambers are identified 1.7.Chemicals associated with the storage process are identified 1.8.Occupational health and safety (OHS) risks and control measures relating to safe operation of controlled atmosphere storage are identified 1.9.Storage documentation is confirmed according to workplace requirements
2. Determine operational requirements for storage	2.1.Storage requirements for fresh produce product are identified 2.2.Storage settings and monitoring schedule are established 2.3.Specifications are documented according to workplace practice
3. Set and monitor controlled atmosphere storage	3.1.Operational equipment is checked to ensure readiness 3.2.Settings for controlled atmosphere storage facility are entered according to specifications 3.3.Cooling is conducted at a rate and temperature suitable to produce requirements 3.4.Test equipment is calibrated 3.5.Temperature, air tightness and atmosphere levels are tested daily to ensure accurate levels and details recorded 3.6.Chemicals used in the storage process and associated risks and handling requirements are identified 3.7.Work is conducted in accordance with workplace environmental guidelines 3.8.Non-compliances and variances in temperature and

ELEMENT	PERFORMANCE CRITERIA
	atmosphere are recorded 3.9. Equipment maintenance requirements are identified and documented
4. Complete documentation	4.1. All workplace documentation is completed and files maintained as required 4.2. Quality control documentation is completed

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 to determine storage requirements
- identify storage requirements including temperature limits, atmosphere, minimum duration at given temperatures, segregation and co-storage requirements
- select, fit and use personal protective clothing and/or equipment
- conduct testing of atmosphere and temperature
- read instrumentation, such as temperature gauges, digital and non-digital, O₂ and CO₂ test equipment, to monitor stores and zone temperatures
- identify and report out-of-specification temperatures in storage facilities
- take corrective action in response to out-of-specification temperatures, including implementation of procedures to segregate damaged or potentially unsafe product
- complete records of stock receipt and transfer as required
- maintain work area to meet housekeeping standards
- use communication skills to interpret and complete work information to support operations of work team or area
- demonstrate and support cooperative work practices within a culturally diverse workforce

Required knowledge

Knowledge of:

- OHS hazards and controls, including the purpose and limitations of protective clothing and equipment, conditions for working in confined spaces and modified atmospheres, safe use of handling equipment, use of hazardous chemicals and air tightness
- implications of expansion and contraction of rooms
- temperature controlled storage facilities and features in the work area, including temperatures required for a variety of produce
- acceptable temperature and atmosphere ranges and consequences of failing to meet these ranges, such as requirements for gradual temperature change
- food safety and quality consequences of stock temperature control requirements not being met
- monitoring procedures and instrumentation, including use of thermometers or other measuring and testing instrumentation
- notification, recording and reporting requirements
- operating procedures for goods handling equipment as required
- housekeeping requirements for work area

REQUIRED SKILLS AND KNOWLEDGE

- recording requirements and procedures

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: • identify features and control processes for controlled atmosphere storage • determine and enter settings for controlled atmosphere storage according to requirements for fresh produce • conduct tests to monitor temperature, air tightness and atmosphere of storage facility to ensure standards are maintained and act on any inconsistencies • apply OHS control measures • identify and act on non-conformances • complete workplace documentation • 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: • personal protective clothing and equipment • work procedures, including advice on safe work practices, food safety, quality and environmental requirements • storage specifications • stock handling and rotation systems • controlled atmosphere storage facilities • stock information recording system and procedures.
Method of assessment	This unit should be assessed together with core units and other units of competency relevant to the function or work role. An example could be: • MEM13003B Work safely with industrial chemicals and materials.
Guidance information for	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over

EVIDENCE GUIDE**assessment**

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 according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Legislative requirements	Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes: • relevant commonwealth, state and territory plant health and plant products legislation • legislation associated with the licensing and operation of load shifting equipment • refrigeration regulation • the Food Standards Code, including labelling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity • work in confined spaces regulations
Workplace information	Workplace information may include: • standard operating procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
OHS risks	OHS risks include: • temperature • O₂ and CO₂ levels • chemicals • refrigerant • gases • nitrogen

RANGE STATEMENT	
	• spillages
Equipment	Equipment may include: • condensers • evaporative and air coolers • electronic and manual testing equipment • generator • scrubber • nitrogen flushing equipment

Unit Sector(s)

Unit sector	Technical
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		