Modification history

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

| FBPFST5001 | Monitor refrigeration and air conditioning systems in food processing |
| --- | --- |
| Application | This unit of competency describes the skills and knowledge required to coordinate the monitoring of refrigeration and air conditioning systems in food processing and storage. The individual is required to demonstrate deep knowledge in a specific technical area and to design and communicate solutions to sometimes complex problems. Depending on the workplace application, the individual is also required to liaise with engineering and maintenance specialists.  This unit applies to individuals who are responsible for maintaining product safety and quality in food processing, including general food production, meat and seafood industries, and exercise autonomy in undertaking complex work.  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. |
| Prerequisite Unit | Nil |
| Unit Sector | Food science and technology (FST) |

| Elements | Performance Criteria |
| --- | --- |
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Coordinate a refrigeration system in the production of food products | 1.1 Identify refrigerants and their required properties  1.2 Monitor performance of the refrigeration system in the production process  1.3 Analyse performance of a refrigeration system  1.4 Identify and evaluate ways to improve the performance of the refrigeration system |
| 2. Coordinate an air conditioning system in the production of food products | 2.1 Identify common forms of air conditioning systems used in the production of food products  2.2 Assess air conditioning requirements for a given situation in the production process  2.3 Identify variables on a psychrometric chart  2.4 Apply psychrometric charts for the analysis of air conditioning systems in the production process  2.5 Monitor the performance of the air conditioning system in the production process  2.6 Monitor energy efficiency to reduce costs and environmental impacts  2.7 Report problems to the designated person |

| 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 | * Interprets industry standards * Interprets technical manuals for refrigeration and air conditioning systems |
| Numeracy | * Maintains and analyses data resulted from testing of refrigeration and air conditioning system * Determines calibration procedures and schedule for test equipment |
| Get the work done | * Problem solves issues as they arise |

|  |  |  |  |
| --- | --- | --- | --- |
| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FBPFST5001 Monitor refrigeration and air conditioning systems in food processing | FDFFST5001A Monitor refrigeration and air conditioning systems in food processing | Updated to meet Standards for Training Packages | Equivalent unit |

|  |  |
| --- | --- |
| Links | Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4 |

| TITLE | Assessment requirements for FBPFST5001 Monitor refrigeration and air conditioning systems in food processing |
| --- | --- |
| Performance Evidence | |
| An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.  There must be evidence that the individual has monitored refrigeration and/or air conditioning systems in food processing on at least one occasions, including:   * identifying characteristics of a refrigeration system in the production of food products * interpreting the function of key components in a refrigeration system * appraising the performance of a refrigeration system in the production process * identifying the common forms of air conditioning system used in the production of food products * recognising common faults and how the faults should be rectified. | |

| 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:   * refrigeration systems in the production of food products * refrigerants and their properties * function of key components in a refrigeration system * common forms of air conditioning systems used in the production of food products * elements and uses of psychrometric charts * energy efficiency and environmental impacts of refrigeration and air-conditioning systems * work health and safety hazards and controls relating to work processes. |

| 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 workplace * resources, equipment and materials: * refrigeration and air conditioning systems and related equipment, manufacturers’ advice and operating procedures * specifications: * operating system data.   Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. |

|  |  |
| --- | --- |
| Links | Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4 |