



Australian Government

Assessment Requirements for FBPFST4001 Apply food processing technologies

Release: 1

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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 produced two different items of food using at least two of the following technologies:

- fermenting
- concentrating or drying
- cooking or steaming.

For each process, the individual must show evidence of:

- monitoring parameters of food processing
- applying appropriate quality control processes and procedures to assess food products
- taking corrective action in response to out-of-specification results.

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:

- fermentation:
 - biochemical principles of fermentation, including lactic acid fermentation and alcohol fermentation
 - the major microorganism groups used in fermentation, including Lactococcus, Streptococcus, Leuconostoc, Pediococcus, Lactobacillus bacterial species, yeasts and moulds
 - the role of microorganisms in the fermentation process
 - the microbial growth phases: lag phase, log phase, stationary phase and death phase

- materials used in the fermentation process, including raw materials/pre-processed materials and starter cultures (single strain starters, multiple strain cultures, mixed strains)
- quality control processes and procedures used to assess fermented food products
- the principles of concentration in production, including:
 - the aim of concentration in food processing
 - the need for concentration in food processing
 - heat transfer mechanism
- the principles of drying in food production, including:
 - the aim of drying in food processing
 - the need for drying in food processing
 - heat transfer mechanism
- the principles of heat transfer in the concentration of food
- the principles of heat transfer in the drying of food
- the various methods of concentration of foods, including evaporation, filtration, reverse osmosis and freeze concentration
- the various methods of dehydrating foods, including cabinet, spray, drying and freeze dehydration
- quality control process and procedures used to assess concentrated and dried food products
- cooking or steaming:
 - the purpose and basic principles of heat sterilisation and effect on physical, chemical, microbiological and organoleptic characteristics of the cooked product
 - basic operating principles of equipment, including safe operating procedures
 - quality characteristics and conditioning required of ingredients used and their role in the product (conditioning may include reconstituting dry ingredients and bringing ingredients to a required temperature)
 - effect of ingredient quality/condition on the process
 - effect of variables including temperature, viscosity/texture, microbial load and acidity
 - heat treatment requirements for low and/or high acid foods as appropriate to production requirements
 - stages and changes that occur during the blending and heat treatment stages
 - quality requirements of the cooked product
 - relationship between time and temperature in the cooking process
- health and safety in the hazards in the workplace and controls relating to work processes
- Food Standards Code
- state/territory, Commonwealth and industry requirements relevant to food processing.

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:
 - personal protective equipment required for applying food processing technologies
 - production process and related equipment, manufacturers' advice and operating procedures
 - testing equipment used to report relevant product and process information
- specifications:
 - equipment manuals, including operating parameters.

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>