



Australian Government

FBPBEV3005 Operate and monitor juice processing

Release: 1

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Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to operate and monitor pressing equipment to produce and subsequently store fruit and/or vegetable juice.

This unit applies to individuals who work in a food processing environment. It typically applies to the production worker responsible for applying basic operating principles to the operation and monitoring of a juice process and associated equipment.

All work must be carried out to comply with workplace procedures, in accordance with state/territory health and safety and food safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Beverages (BEV)

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. Prepare for work in processing area	1.1 Confirm milled fruit and/or vegetable product is available to meet production requirements 1.2 Identify and confirm cleaning and maintenance requirements and status according to health, safety and food safety requirements 1.3 Wear appropriate personal protective clothing, and ensure correct

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	fit
2. Prepare the pressing equipment for operation	2.1 Fit machine components and related attachments, and adjust to meet pressing requirements 2.2 Enter processing and operating parameters to meet pressing requirements 2.3 Load milled product ready for processing 2.4 Carry out pre-start checks according to safe operating procedures
3. Press fruit and/or vegetables	3.1 Start, operate and monitor the process according to workplace procedures 3.2 Inspect pressed product to ensure specifications are met 3.3 Identify, rectify and report out-of-specification equipment, product or process outcomes according to workplace requirements 3.4 Shut down the process according to safe work procedures 3.5 Conduct work and maintain a clean and tidy workplace according to workplace environmental guidelines 3.6 Maintain records of pressing according to workplace procedures
4. Pasteurise and store juice	4.1 Pasteurise juice according to workplace procedures 4.2 Store juice in tank in line with product specifications 4.3 Monitor juice product to avoid microbial deterioration 4.4 Take samples and test stored product to ensure product remains within specification 4.5 Maintain records of stored product according to workplace procedures
5. Conduct housekeeping and identify maintenance requirements	5.1 Follow and apply workplace housekeeping and environmental procedures 5.2 Identify and report any maintenance requirements according to workplace procedures

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	- Interpret workplace and standard operating procedures relevant to work task - Interpret production requirements
Writing	Record processing data using electronic, digital and/or paper-based formats
Oral Communication	- Ask questions to clarify understanding or seek further information - Communicate and report operational and safety information to relevant personnel
Numeracy	- Monitor and interpret production and process control indicators and data - Read and interpret gauges and scales, including temperature (°C), press and flow rates - Monitor supply and flow of materials to and from the process

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPBEV3005 Operate and monitor juice processing	Not applicable	The unit has been created to address a skill or task required by industry that is not covered by an existing unit	Newly created

Links

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

Assessment Requirements for FBPBEV3005 Operate and monitor juice processing

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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 operated pressing and pasteurising equipment to process at least one batch of milled fruit and/or vegetables to meet juice specification, including:

- applying safe work procedures
- following food safety procedures
- monitoring stored product to specification
- taking corrective action in response to typical faults and inconsistencies.

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:

- purpose and basic principles of the juice processing process, including stages and changes that occur during the pressing and pasteurisation process, and that can occur during storage of juice
- basic operating principles of equipment for the pressing and pasteurisation process, including:
 - safety hazards associated with pressing equipment
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications
 - the purpose and location of sensors and related feedback instrumentation
 - services required for operation of juice processing equipment used in the workplace
- the flow of the pressing, pasteurisation and storage process, and the effect of product output on downstream processes
- quality characteristics of pasteurised juice

- methods used to monitor the pressing process, including inspecting, measuring and testing in-feed and out-feed solids, and other tests as required by the process
- good manufacturing practices (GMP) relevant to work task
- health and safety hazards and controls, including the purpose and limitations of protective clothing and equipment relevant to the work process
- inspection or test points (control points) in the pressing process and the related procedures and recording requirements, including use of refractometers
- operating requirements and parameters and corrective action required where operation is outside specified operating parameters
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- contamination/cross-contamination, spoilage and other food safety risks associated with pressed juice, and related control measures
- common microbiological, physical, chemical and allergen hazards related to the foods handled in the work area, including the types of hazards likely to occur, the conditions under which they occur, possible consequences, and control methods to prevent occurrence
- standard microbiological techniques to identify food poisoning and spoilage organisms
- the importance of plant hygiene and how it can affect the finished product
- microbiological toxins and aflatoxins
- common chemical reactions that occur in juice processing, including both spontaneous and controlled reactions, including:
 - the role of enzymes, ascorbic acid and nitrogen gas in generating biological reactions
 - tests commonly used to measure phenomena, and related units of measurement
 - the role of temperature and pressure in the transition process
- pH and its impact on fermentation
- requirements of different shutdowns as appropriate to the process and workplace production requirements, including emergency and routine shutdowns, and procedures to follow in the event of a power outage
- isolation, lock-out and tag-out procedures and responsibilities required for operating the process
- cleaning and sanitisation procedures required for operating pressing, pasteurisation and storage equipment
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the operation of the juice processing process, including handling of waste
- basic operating principles of process control where relevant, including the relationship between control panels and systems and the physical equipment
- recording procedures to ensure traceability of product.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective clothing and equipment
 - juice pressing and pasteurisation equipment and related services
 - fruit and/or vegetables to be pressed
 - sampling schedules and test procedures and equipment as required
 - cleaning materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements
 - information on equipment capacity and operating parameters
 - production schedule and batch specifications, control points and processing parameters
 - recording requirements and procedures.

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

Links

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