



Australian Government

Department of Education, Employment and Workplace Relations

FDFOP2070A Operate a bright beer tank process

Release: 1

FDFOP2070A Operate a bright beer tank process

Modification History

New Unit.

Unit Descriptor

This unit covers the preparation and operation of bright beer tanks that receive the beer after filtration and before the beer is packaged.

Application of the Unit

This unit applies to operators and other personnel responsible for operating and monitoring bright beer tanks including transfers in and out, settling processes and removal of waste. The unit applies to large and small breweries and to a range of job roles in the brewing environment. It includes complying with quality and standard operating procedures. Where changeovers require maintenance related skills, the unit FDFOP2011A Conduct routine maintenance should be considered.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

FDFOP2071A Identify key stages and beer production equipment in a brewery.

Employability Skills Information

This unit contains employability skills.

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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare bright beer tank process for operation	1.1 Beer availability is confirmed and available to meet production requirements 1.2 Availability of services is confirmed 1.3 Equipment is checked to confirm readiness for use
2 Operate and monitor bright beer tanks and equipment	2.1 The bright beer system is started up according to company procedures 2.2 Receive beer from filtration process 2.3 Control points are monitored to confirm performance is maintained within specification 2.4 System and sub-system outputs meet specification 2.5 Equipment is monitored to confirm operating condition 2.6 Temperature, pressure and carbon dioxide is monitored and controlled to confirm operating condition 2.7 Testing is undertaken to ensure yeast effectiveness and freedom from bacterial contamination 2.8 Transfer bright beer to filling and packaging stations 2.9 Production and other workplace information is recorded in the appropriate format
3 Shut down the system	3.1 The bright beer system is shut down according to company procedures 3.2 Equipment is cleaned and maintained to meet the cleaning schedule and procedural requirements 3.3 Waste generated by both the process and cleaning procedures is collected, treated and disposed of or recycled according to company procedures
4 Contribute to continuous improvement of the system	4.1 Quality or process outputs are assessed against specifications 4.2 Opportunities for improvement are identified and investigated 4.3 Proposals for improvements are developed and implemented within company planning arrangements and according to company procedures
5 Record information	5.1 Workplace information is recorded in the appropriate format

Required Skills and Knowledge

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

Required skills include:

Ability to:

- identify turbulence and undertake appropriate corrective action
- confirming equipment status including checking that hygiene and sanitation standards are met and that all safety guards are in place and equipment is operational
- monitor for bacteria and quality
- monitor oxygen and its affect upon quality
- monitor temperature and its affect upon quality
- use fobbing equipment correctly to control oxygen and beer quality
- operate vessel transfer equipment
- handle dangerous goods according to procedures
- monitor control points within the bright beer process
- operate bright beer related equipment
- identify common causes of variation and undertake corrective action required
- identify OHS hazards and implement appropriate action
- select, fit and use personal protective clothing and equipment
- shutdown filtration process and equipment and implement cleaning requirements associated with changeovers
- record production and other data according to procedures
- collect samples and conduct tests according to enterprise procedures
- clean and sanitise equipment according to enterprise procedures
- maintain work area to meet housekeeping standards
- 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 includes:

Knowledge of:

- purpose and principles of bright beer procedures
- consequences of turbulence and the procedures to avoid it
- effect of bacteria, oxygen and temperature on quality
- fobbing and its affect upon quality
- procedures for handling dangerous goods
- quality characteristics to be achieved
- process specifications, procedures and operating parameters
- significance and methods of monitoring control points within the bright beer process
- equipment and instrumentation components, purpose and operation

- common causes of variation and corrective action required
- OHS hazards and controls
- procedures and responsibilities for reporting problems
- environmental issues and controls
- shutdown and cleaning requirements associated with changeovers and types of shutdowns
- waste handling requirements and procedures
- recording requirements and procedures
- cleaning and sanitation procedures
- sampling and testing procedures
- routine maintenance procedures

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: • access workplace information to identify production requirements and schedules including type of beer being produced • confirm the supply of necessary materials and services to the bright beer tank process • confirm equipment status and condition • set up, start, operate and shut down the bright beer tank process • taking samples of beer and note equipment operation to identify out-of-specification results or non-compliance • monitor supply and flow of materials to and from the bright beer tank process • take corrective action in response to out-of-specification results or non-compliance • conduct product/beer-type changeovers • conducting routine maintenance.
Context of and specific resources for assessment	Assessment of this unit must occur in a real or simulated workplace. Such an environment must provide an opportunity for the assessee to apply OHS principles and procedures when carrying out work given: • OHS policy, system and procedures • standard operating procedures and related advice on specific safe work practices company policies and codes of practice relating to OHS • advice on relevant legislation and codes of practice relating to OHS • work area or process in which OHS procedures are to be implemented • personal protective clothing and equipment as required • relevant hazard control equipment

	• emergency and/or evacuation procedures for the potential range of hazards • consultative forums relating to OHS • storage areas for hazardous goods as required • manual handling equipment as required. Other resources required for assessment include: • Equipment used in the bright beer process • Information systems 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. Examples could be: • FDFOP2003A Clean equipment in place • FDFOP2004A Clean and sanitise equipment • FDFOP2011A Conduct routine maintenance • FDFOP2013A Apply sampling procedures • FDFOP2030A Operate a process control interface • 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

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.	
Services	May include: • power • gas • water • steam • compressed air • refrigeration.
Equipment used in the bright beer process may include:	Equipment used includes: • pumps • fermentation vessels • recovery vessels • cleaning equipment • equipment accessories • valves • transfer systems • finished beer tanks (could include tanks for either filtered or unfiltered beer).
Materials	Materials used include CO ₂ , yeast and nitrogen.
Bright beer tank system controls	The control system for operation and monitoring the bright beer tanks may be manual or involve the use of a process control system and may also involve the use of production data such as performance control charts.
Control points refer to:	those key points in a work process that much be monitored and controlled. This includes food safety (critical) quality and regulatory control points as well as inspection points.
Out of specification results or noncompliance	Out of specification results or noncompliance may include: • oxygen • carbon dioxide • acidity • colour

	• bacteria • chemicals • temperature.
Workplace information can include:	• Standard Operating Procedures (SOPs); specifications and production schedules • Information systems may be print or screen based.

Unit Sector(s)

Operations.