



Australian Government

Assessment Requirements for MSMBIO302 Ferment biomaterial to produce bioproducts

Release: 1

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Modification History

Release 1. New unit.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- followed fermentation processes to produce at least 1 batch of beer to specification.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- bioprocessing concepts, drivers, trends and targets
- principles and processes of fermentation, including standard operating procedures
- advantages and disadvantages of fermentation
- bioproducts and bioproducts derived from fermentation, including production requirements and sampling and testing methods
- biological material / biomass, including:
 - pre-fermentation processes, including liquefaction and saccharification
 - fermentation processes
 - feedstock types, sources and uses
 - cultures, microorganisms and additives and their role in fermentation
- process control software and documentation
- fermentation equipment and tools and standard operating procedures, including:
 - critical parameters
 - sensors
 - factors affecting efficient operation of the separation equipment
 - external factors impacting process, including time, temperature, humidity
 - correct methods of starting, stopping, operating and controlling the equipment
 - work health and safety (WHS) procedures including personal protective equipment (PPE) requirements
- fermentation hazards, risks and control measures including:
 - fire and explosion
 - hearing
 - respiratory
 - chemicals

- boilers
- manual handling
- confined space
- falls
- cleaning and sanitising procedures and why they are important.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions, contingencies, facilities, equipment and resources.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet. -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>