



Australian Government

FBPOIL3007 Operate and monitor an interesterification process

Release: 1

FBPOIL3007 Operate and monitor an interesterification process

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 set up, operate, adjust and shut down an interesterification process to rearrange the chemical composition of oil molecules to create an oil more suitable for deep frying or making margarine with good taste and low saturated fat.

This unit applies to individuals who apply basic operating principles to the operation and monitoring of an interesterification process in an edible oils production environment. Processes may be batch or continuous, and apply to single or multiple product types.

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

Edible Oils (OIL)

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 the interesterification equipment and process	1.1 Ensure oil stock and catalyst are available to meet product recipe requirements 1.2 Identify safety requirements and wear appropriate personal

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
for operation	protective clothing and equipment, ensuring correct fit 1.3 Confirm equipment is clean and not locked out 1.4 Acknowledge and load recipe to meet production requirements 1.5 Conduct pre-start checks according to operator instructions
2. Operate and monitor equipment	2.1 Start up and operate the interesterification process according to safe operating procedures 2.2 Monitor equipment to ensure optimal operations 2.3 Identify and report variation in equipment operation, and report any maintenance requirements 2.4 Confirm specifications are met at each stage according to production processing specifications 2.5 Identify, rectify or report out-of-specification product and process outcomes according to workplace procedures 2.6 Maintain work area according to workplace guidelines 2.7 Test finished samples to ensure product meets specifications 2.8 Enter workplace records in required format
3. Shut down the interesterification process	3.1 Identify appropriate shutdown procedure 3.2 Shut down the process according to operating procedures 3.3 Identify and report maintenance requirements 3.4 Ensure waste is disposed of in line with environmental requirements

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
Learning	Solve routine problems according to workplace guidelines and using experience of past solutions
Reading	Interpret standard operating procedures for the interesterification

Skill	Description
	process requirements
Writing	Complete processing records using digital and/or paper-based formats
Numeracy	Read and interpret gauges and scales

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOIL3007 Operate and monitor an interesterification process	FBPGPS2007 Operate an interesterification process	Unit title and code updated to better match work task Minor changes to Performance Criteria to clarify intent Foundation Skills refined Performance Evidence clarified Minor changes to Knowledge Evidence and Assessment Conditions	Equivalent

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 FBPOIL3007 Operate and monitor an interesterification process

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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 an interesterification process to rearrange the chemical composition of at least one batch of oil, to meet product specifications, including:

- applying safe work procedures
- following food safety procedures
- 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 interesterification process, including a basic understanding of the chemical structure of oil and the effect of interesterification on this structure
- basic operating principles of equipment, including:
 - main equipment components
 - status and purpose of guards and lagging
 - equipment operating capacities and applications
 - the purpose and location of sensors and related feedback instrumentation
- good manufacturing practices (GMP) relevant to work task
- the flow of the interesterification process and the effect of outputs on downstream edible fats and oils processes
- quality characteristics to be achieved by the interesterification process
- quality requirements of materials, and effect of variation on interesterification process performance
- 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
 - early warning signs of potential problems
- methods used to monitor the interesterification process, including inspecting, measuring and testing
- inspection or test points (control points) in the interesterification process and the related procedures and recording requirements
- contamination/cross-contamination and food safety risks associated with the interesterification process, and related control measures
- common causes of variation, and corrective action required
- health and safety hazards and controls relevant to interesterification process
- requirements of different shutdowns as appropriate to the interesterification process and workplace production requirements, including:
 - emergency and routine shutdowns
 - procedures to follow in the event of a power outage
- isolation, lock-out and tag-out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the interesterification process, including waste/rework collection and handling procedures related to the process
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- sampling and testing associated with the interesterification process monitoring and control
- routine maintenance procedures for interesterification equipment
- cleaning procedures for interesterification equipment
- product traceability procedures.

Assessment Conditions

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

- physical conditions:
 - an oil processing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective clothing and equipment
 - interesterification equipment and services
 - deodorised oil required for interesterification and related catalyst
 - sampling schedules, and test procedures and equipment
 - 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/batch details, control points and processing parameters
- documentation and recording requirements.

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

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