



Australian Government

FBPOIL3001 Operate a degumming and neutralisation process

Release: 1

FBPOIL3001 Operate a degumming and neutralisation 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 a neutralisation process to remove impurities from crude oils.

This unit applies to individuals who apply basic operating principles to the operation and monitoring of a neutralisation 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

Competency Field

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 degumming and neutralisation equipment for operation	1.1 Ensure oil stock is available for production requirements 1.2 Identify safety requirements and wear appropriate personal protective equipment, ensuring correct fit 1.3 Take samples and test oil stock to determine free fatty acid (FFA)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	levels 1.4 Check equipment and services are ready for operation 1.5 Acknowledge and load recipe to meet production requirements 1.6 Conduct pre-start checks according to operator instructions
2. Operate and monitor the degumming and neutralisation process	2.1 Start up and operate the neutralisation process according to work health and safety and operating procedures 2.2 Monitor equipment to ensure optimal operations 2.3 Identify irregularities in equipment operation, and report any maintenance requirements 2.4 Take samples and test to confirm that specifications are met at each stage according to production specifications 2.5 Identify, adjust or report out-of-specification product and process outcomes according to workplace procedures 2.6 Maintain the work area according to workplace guidelines 2.7 Enter workplace records in required format
3. Shut down the degumming and neutralisation process	3.1 Identify the appropriate shutdown procedure 3.2 Shut down the process safely 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 degumming and neutralisation process

Skill	Description
Writing	Record processing data using digital and/or paper-based formats
Numeracy	- Read oil sample graphs and processing gauges - Monitor and adjust control points for temperature, flow rates and dosages - Interpret FFA tests (using % oleic acid)

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOIL3001 Operate a degumming and neutralisation process	FBPGPS2008 Operate a neutralisation 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 FBPOIL3001 Operate a degumming and neutralisation 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 a degumming and neutralisation process to remove impurities from crude oil to produce at least one batch of oil to meet product specifications, including:

- applying safe work practices
- following food safety procedures
- making adjustments to the operating parameters to ensure quality outcomes.

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 degumming and neutralisation process, including the role of acid (for degumming) and alkali (for neutralisation) used
- basic operating principles of equipment, including:
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications
 - the purpose and location of sensors and related feedback instrumentation
- health and safety hazards and controls, including for risks associated with using acids
- good manufacturing practices (GMP) relevant to work task
- services required for a degumming and neutralisation process, and action to take if services are not available
- the flow of the degumming and neutralisation process, and the effect of outputs on downstream edible oils and fats processes
- quality characteristics to be achieved by the degumming and neutralisation process

- 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 degumming and neutralisation process, including inspecting, measuring and testing as required by the process
- inspection or test points (control points) in the degumming and neutralisation process and the related procedures and recording requirements
- contamination and food safety risks associated with the degumming and neutralisation process, and related control measures
- common causes of variation, and corrective action required
- requirements of different shutdowns as appropriate to the neutralisation 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 neutralisation process, including waste/rework collection and handling procedures related to the process
- operating principles of process control, including the relationship between control panels and systems and the physical equipment
- cleaning procedures for neutralisation 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 equipment
 - degumming and neutralisation equipment and services
 - oil for the neutralisation process, and acid and alkali materials as required by the process
 - sampling schedules, 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 specifications, 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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