



Australian Government

FBPOIL3010 Operate and monitor a malaxer

Release: 1

FBPOIL3010 Operate and monitor a malaxer

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, monitor, adjust and shut down a malaxer, used to process crushed olives and release oil from olive paste.

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

All work must be carried out to comply with workplace procedures, in accordance with state/territory food safety and work health and safety regulations and legislation 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 for work in processing area	1.1 Confirm olive mill paste is available to meet production requirements 1.2 Wear appropriate personal protective clothing, and ensure correct fit according to health, safety and food safety requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify and confirm equipment is clean and not locked out
2. Prepare the malaxer for operation	2.1 Fit machine components and related attachments, and adjust to meet operating requirements 2.2 Enter processing or operating parameters to meet production requirements 2.3 Perform pre-start checks according to operator instructions 2.4 Ensure malaxer is at appropriate temperature prior to adding paste
3. Operate and monitor equipment	3.1 Deliver olive paste to malaxer in required quantities to meet recipe specifications 3.2 Start, operate and monitor process to ensure optimal operations 3.3 Monitor temperature of agitation process to ensure it is kept within 25–30°C, and paste consistency meets specifications 3.4 Keep malaxation times within 75 minutes to allow for a steady kneading of paste and a slow release of the oil 3.5 Add water, talc and/or approved enzymes as required to assist malaxing process 3.6 Identify, adjust and report out-of-specification equipment and/or issues with emulsified paste according to workplace requirements 3.7 Maintain records of malaxing process according to workplace procedures
4. Shut down the malaxer	4.1 Identify appropriate shutdown procedure 4.2 Shut down process safely according to operating procedures 4.3 Apply workplace cleaning procedures and dispose of waste according to environmental requirements 4.4 Identify and report maintenance 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
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Skill	Description
Learning	Problem-solve issues with process to ensure quality outcomes
Reading	- Interpret workplace and standard operating procedures relevant to work task - Interpret production requirements
Writing	Record batch processing data using digital and/or paper-based formats
Numeracy	- Weigh ingredients (mg, g, kg) - Monitor and interpret production and process control indicators and data, including temperature of paste (°C) - Monitor supply and flow of materials to and from the process - Calculate malaxation time: $\text{Malaxation time (batch)} = (\text{filling time}/2) + \text{malaxer full time} + (\text{emptying time}/2)$

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOIL3010 Operate and monitor a malaxer	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 FBPOIL3010 Operate and monitor a malaxer

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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 and monitored a malaxer to release oil from at least one batch of crushed olive paste, to meet specifications, including:

- applying food safety practices
- following safe work procedures
- taking corrective action in response to typical faults and inconsistencies in the malaxing process.

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 malaxing olive paste
- Australian Standard for Olive Oils and Olive-Pomace Oils (AS 5264-2011)
- Australian Olive Industry Code of Practice
- basic operating principles of mixing/blending 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
 - awareness of calibration schedules for scales and related weighing/measuring equipment
- services required, and action to take if services are not available
- ingredient-handling requirements and shelf-life or coding
- quality characteristics required of olive paste
- the characteristics of pastes made from different types of olives

- additives and enzymes that can be added to the agitation process to ensure enough oil is released, including: pectinases, cellulases and hemicellulases; talcum or micro talcum powder (hydrated magnesium silicate); water – these technological coadjuvants should not be detectable in the final product
- the effect of temperature on the olive paste, and the need for paste to be kept at 25–30°C
- the effect of malaxation time on the efficiency of oil separation and oil quality
- calculation of malaxation time
- inspection or test points (control points) in the process and the related procedures and recording requirements, including times/temperatures and agitator speeds
- contamination/cross-contamination and food safety risks associated with the process, and related control measures, including cross-contamination risks and associated cleaning requirements
- operating requirements and parameters, and corrective action required when 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
- common causes of variation, and corrective action required
- health and safety hazards and controls relevant to the mixing and blending process
- requirements of different shutdowns as appropriate to the blending or mixing 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 relevant to the mixing and blending process
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the malaxing process, including waste or rework collection and handling procedures related to the process
- basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment
- cleaning and sanitisation procedures for mixing or blending 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:
 - an olive oil processing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - malaxer process equipment and related services
 - personal protective clothing and equipment
 - crushed olives
 - cleaning materials and equipment
- specifications:

- work procedures, including advice on safe work practices, food safety, quality and environmental requirements
- batch/recipe instructions
- information on equipment capacity and operating parameters
- recording requirements.

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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