



Australian Government

AMPREN304 Operate a tallow refining process

Release: 1

AMPREN304 Operate a tallow refining process

Modification History

Release	Comments
Release 1	This version released with AMP Australian Meat Processing Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to operate a tallow refining process, including preparation, rendering, separation, extraction, and shut down.

This unit applies to individuals who work under broad direction in an industrial rendering plant and who are responsible for operating a tallow refining process. It includes safety compliance using Hazard Analysis and Critical Control Point (HACCP) techniques, process and product quality requirements, and solving problems that arise with the process.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, environmental and meat rendering 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

Rendering (REN)

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to refine tallow	1.1 Confirm finished tallow product specifications 1.2 Identify hazards, assess and control risks according to workplace health and safety procedures 1.3 Identify food safety hazards, assess and control risks according to

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	HACCP principles 1.4 Select and fit personal protective equipment and contamination control equipment 1.5 Undertake preoperational checks of machinery and equipment according to workplace procedures and/or manufacturer requirements 1.6 Clean and sanitise tools and equipment according to contamination control requirements
2. Extract tallow from rendered product	2.1 Set up, start up and operate presses according to product requirements and workplace procedures 2.2 Monitor feed rate of rendered product and pressing operation to maximise safe production 2.3 Monitor product in press to ensure finished quality specifications are met and adjust equipment 2.4 Monitor environmental emissions according to workplace procedures
3. Test tallow and unload refining equipment	3.1 Take samples and test to ensure refined tallow product meets specifications 3.2 Identify causes of product faults and rectify according to workplace requirements 3.3 Contain spillages according to workplace and environmental requirements 3.4 Reuse under refined tallow product or discard faulty products according to workplace and environmental requirements 3.5 Transfer refined tallow product according to workplace procedures, quality and safety requirements
4. Shut down tallow refining process	4.1 Clean tallow refining equipment and report maintenance requirements 4.2 Shut the refining process down safely according to operating procedures 4.3 Identify and report maintenance requirements according to workplace procedures 4.4 Maintain workplace records in appropriate format

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.

Reading	- Interpret operating manuals for tallow processing machinery - Read and interpret gauges and scales
Writing	Complete records using industry terminology
Oral Communication	Use open and closed questions to clarify information
Numeracy	Estimate and measure time (hrs, mins), temperature (degrees Celsius), volume (mls, L) and pressure (psi)

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AMPREN304 Operate a tallow refining process	AMPA3087 Operate a tallow processing plant	Merged with AMPA3089 Produce rendered products hygienically Unit sector, code and title updated to better reflect work task Application updated Unit sector added Previous elements 3 merged with element 2 New element 4 added Performance criteria added, revised, reordered, or merged for clarity Foundation skills updated Performance Evidence, Knowledge Evidence and Assessment Conditions updated	Not equivalent
AMPREN304 Operate a tallow	AMPA3089 Produce rendered products	Unit merged with AMPA3087 Operate a	Not equivalent

refining process	hygienically	tallow processing plant Unit sector, code and title updated to better reflect work task	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e2e56b7-698f-4822-84bb-25adbb8443a7>

Assessment Requirements for AMPREN304 Operate a tallow refining 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 the individual has set up, operated, monitored and shut down two separate industrial tallow refining processes to produce tallow from different rendered meat raw materials. One process must be for refined liquid tallow production and one process must be for refined solid tallow production.

For each process, there must be evidence that the individual has:

- identified at least three safety hazards, assessed and controlled risk using workplace health and safety procedures
- selected and correctly fitted appropriate personal protective equipment (PPE) and clothing required for worker safety and contamination control
- operated tallow separation and filtration equipment, including at least two of the following:
 - press or decanter
 - screening
 - settling tanks
- monitored temperature and made adjustments according to work instructions and product specifications
- monitored environmental emissions according to workplace and Environmental Protection Agency (EPA) requirements, including odour control and one of the following:
 - waste water
 - oil and grease
- recorded emissions data according to workplace and regulatory requirements
- completed tallow refining process including:
 - safe shut down of equipment
 - completed production records, including product and equipment issues, according to workplace requirements.

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:

- basic principles of tallow refinement including liquid tallow and solid tallow
- key features of Hazard Analysis and Critical Control Point (HACCP) principles related to tallow refinement
- workplace procedures for safe movement of workers and visitors in and around plant and tallow refining machinery and equipment
- features, benefits, limitations, and correct fit of PPE for refining tallow
- quality requirements of rendered materials that are used to produce refined tallow, including:
 - temperature
 - particle size
- product requirements, including:
 - free fatty acid levels
 - colour
- AS5008 Hygienic Rendering of Animal Products
- Australian Renderers Association's Code of Practice for Hygienic Rendering of Animal Products, including cleaning and sanitation of tallow refining equipment
- codes and standards that apply including EPA requirements for monitoring environmental emissions, including odour control, waste water, heat recovery and noise as applicable
- features and functions of tallow processing and refining machinery and equipment, including:
 - manufacturer and workplace instructions for safe operation
 - control panels and ancillary controls
 - operating capacities, efficiencies and applications
 - location and purpose of guards, rails and sensors
 - feedback instrumentation
 - services required, including compressed air, electricity and water
 - shut down
- workplace recording and reporting requirements for tallow refinement.

Assessment Conditions

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

- physical conditions:
 - in a meat rendering plant or an environment that accurately represents workplace conditions
- resources, equipment, and materials:
 - industrial tallow refining machinery and equipment required for the tasks specified in the performance evidence.

- raw materials specified in the performance evidence
- PPE and contamination control equipment clothing required for the tasks specified in the performance evidence
- specifications:
 - workplace procedures for refining tallow and operation of machinery and equipment stipulated in the performance evidence
 - workplace procedures for worker safety and contamination control
 - reporting and recording formats
- timeframes:
 - competency must be demonstrated at the normal rate of production for the rendering plant.

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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