

**Modification history**

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

<b>AMPREN30X82</b>	<b>Operate and monitor a batch rendering process</b>
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to operate a batch cooker, including preparation, loading raw material, operation, monitoring and shut down.</p> <p>The unit applies to individuals who work under broad direction in an industrial rendering plant and are responsible for operating and monitoring a batch cooking process. It includes safety compliance using HACCP techniques, process and product quality requirements, and solving problems that arise with the process.</p> <p>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.</p> <p>No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	Rendering (REN)

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 to cook raw materials	1.1 Confirm product brief and set cooker parameters 1.2 Identify safety hazards, assess risks and control or report risks according to working according to Hazard Analysis and Critical Control Point (HACCP) techniques and workplace procedures 1.3 Select and fit personal protective equipment (PPE) and contamination control equipment 1.4 Undertake preoperational checks of plant and equipment according to workplace procedures and/or manufacturer requirements 1.5 Clean and sanitise tools and equipment according to contamination control 1.6 Load raw materials into cooker according to safety and contamination control requirements
2. Cook raw materials	2.1 Monitor cooking equipment and adjust temperature according to product and health and safety requirements 2.2 Monitor duration and temperature to achieve the required end point prior to discharge product to ensure quality specifications are met and adjust outflow for workplace requirements 2.3 Apply pressure (if appropriate) in accordance with workplace and regulatory requirements 2.4 Monitor vapours to ensure they are condensed in accordance with regulatory requirements 2.5 Monitor non-condensed emissions to scrubber, bio-filter and/or after burner

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Monitor cooking process and unload batch cooker	3.1 Take samples and test batch to ensure it is cooked to specifications 3.2 Identify effects of overcooking and causes of typical faults and how they can be rectified according to workplace requirements 3.3 Re use or discard faulty products according to workplace and environmental guidelines 3.4 Empty cooker safely according to workplace health and safety requirements
4. Shut down the batch cooking process	4.1 Clean cooking equipment and report maintenance requirements 4.2 Shut the 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	
<i>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.</i>	
Skill	Description
Reading	Interpret operating manuals for batch cooking equipment
Writing	Complete records using industry terminology
Oral Communication	Use open and closed questions to clarify information
Numeracy	Estimate and measure volume, time, temperature and pressure

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
AMPREN30X82 Operate and monitor a batch rendering process	AMPA3082 Operate batch cooker	Title and application changed Unit sector added Element 1 revised and new performance criteria added . Previous Element 4 merged with Element 2 Previous Element 3 split into two elements with additional performance Criteria added Other performance criteria added, revised, reordered or merged for clarity Foundation skills updated Performance Evidence, Knowledge Evidence and Assessment Conditions updated	Not equivalent
AMPREN30X82 Operate and monitor a batch rendering process	AMPA3084 Operate press	Redesigned unit that includes content from AMPA3082 Operate batch cooker and AMPA3084 Operate press	Not equivalent
<b>Links</b>		Companion Volumes, including Implementation Guides, are available at VETNet	

TITLE	Assessment requirements for AMPREN30X82 Operate and monitor a batch rendering process
<b>Performance Evidence</b>	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has set up, operated, monitored and shut two separate industrial batch cooking processes to convert raw materials into finished products according to specific work orders. The processes must include one of the following:</p> <ul style="list-style-type: none"> <li>• beef</li> <li>• pork</li> <li>• poultry</li> <li>• lamb</li> <li>• feathers</li> <li>• fish</li> </ul> <p>For each process, the individual must have:</p> <ul style="list-style-type: none"> <li>• confirmed the product quantity and quality requirements</li> <li>• identified hazards, assessed and controlled risk using Hazard Analysis and Critical Control Point (HACCP) techniques and workplace health and safety requirements</li> <li>• selected and correctly fitted appropriate personal protective equipment (PPE) required for batch cooking processes</li> <li>• selected and correctly fitted appropriate clothing and equipment required for contamination control batch cooking processes</li> <li>• checked raw materials, including correct labels, temperature, moisture, particle size and colour</li> <li>• set up and calibrated cooking equipment, including temperature, cooking duration, etc</li> <li>• loaded and unloaded cooker to specifications, workplace and regulatory requirements</li> <li>• managed (monitored and adjusted) quality and flow of raw materials</li> <li>• monitored the batch cooking process, including: <ul style="list-style-type: none"> <li>• cooking time</li> <li>• temperature</li> <li>• moisture content</li> <li>• product texture</li> </ul> </li> <li>• observed temperature and pressure gauges and adjusted equipment to meet product and safety requirement</li> <li>• collected and tested at least three product samples to ensure cooked specifications</li> <li>• confirmed the finished product meets specifications</li> <li>• identified and taken corrective action for two of the following: <ul style="list-style-type: none"> <li>• overcooking</li> <li>• undercooking</li> <li>• spills</li> <li>• cross contamination</li> </ul> </li> <li>• applied liquid discharge management</li> <li>• monitored environmental emissions according to workplace and Environmental Protection Agency (EPA) requirements, including odour control and one of the following: <ul style="list-style-type: none"> <li>• noise</li> <li>• gases</li> <li>• liquids</li> <li>• heat</li> </ul> </li> <li>• effectively handed over a rendering process to another team member</li> <li>• communicated verbally with a supervisor and at least one of the following: <ul style="list-style-type: none"> <li>• maintenance team member</li> <li>• quality assurance team member</li> <li>• packaging team member</li> </ul> </li> <li>• completed production records according to workplace requirements</li> <li>• reported product and equipment issues to supervisor using industry terminology.</li> </ul>	

## 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:

- workplace health and safety requirements of operating a batch cooking process
- key features of HACCP techniques related to batch cooking processes
- workplace procedures for safe movement of workers and visitors in and around batch cooking plant and equipment
- features, benefits, limitations, and correct fit of PPE for batch cooking processes
- raw materials quality requirements, including:
  - temperature
  - particle size
- cooked meat product requirements, including:
  - bacteria types and quantity
  - moisture content
  - structure, including friability, density
- key features of quality assurance aspects of cooked product, including:
  - colour and density of cooked products
  - end-point temperature
  - correct level of moisture content
  - correct texture of product
- implications on product quality and productivity of incorrect load in cooker
- effects of overcooking, including :
  - bleached colour of the tallow
  - effect of fines on tallow quality
  - damage to amino acids
- AS5008 Hygienic rendering of animal products
- Australian Renderers Association's Code of practice for hygienic rendering of animal products, including cleaning and sanitation of batch cooking equipment
- environmental regulatory requirements that apply to batch cooking processes
- features and functions of batch cooking 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
- workplace cleaning and maintenance requirements for batch cooking plant and equipment

## Assessment Conditions

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

- physical conditions:
- a registered, operating meat rendering plant
- resources, equipment and materials:
  - industrial batch cooking plant 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
  - reporting and recording forms
- specifications:
  - two batch cooking work orders stipulated in the performance evidence
  - workplace procedures for a batch cooking process and operation of plant and equipment stipulated in the performance evidence
  - workplace procedures for worker safety and contamination control
- relationships:
  - supervisor and others stipulated in the performance evidence

<b>Assessment Conditions</b>
<ul style="list-style-type: none"><li>timeframes<ul style="list-style-type: none"><li>competency must be demonstrated at the normal rate of production for that rendering plant.</li></ul></li></ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet:
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