



Australian Government

AMPQUA407 Conduct and validate pH/temperature declines to MSA standards

Release: 1

AMPQUA407 Conduct and validate pH/temperature declines to MSA standards

Modification History

Release	Comments
Release 1	This version released with AMP Australian Meat Processing Training Package Version 8.0.

Application

This unit covers the skills and knowledge required to accurately calibrate and maintain pH equipment, to conduct pH/temperature declines and weekly monitoring, and to validate results to ensure conformance to the pH/temperature window.

It is a licence requirement for Meat Standards Australia (MSA) workplaces to achieve the pH/temperature window.

The skills and knowledge gained from this unit will allow individuals to monitor pH or temperature window to AUS-MEAT and MSA standards. This unit is suitable for people working in quality assurance or a company grading role.

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

Quality Assurance (QUA)

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>

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1. Operate and calibrate pH equipment	1.1 Conduct calibrations on temperature measurement equipment 1.2 Conduct calibrations on pH monitoring equipment 1.3 Demonstrate correct technique for pH/temperature measurement
2. Monitor the pH/temperature window of carcasses	2.1 Conduct pH/temperature checks for validation purposes, in line with AUS-MEAT standards 2.2 Collect weekly and monthly data to ensure compliance with the pH/temperature window 2.3 Ensure readings are valid and sufficient 2.4 Record and report results
3. Analyse monitoring data	3.1 Generate reports for analysis of pH/temperature monitoring 3.2 Analyse results of pH/temperature monitoring 3.3 Recognise effects of heat shortening and cold shortening 3.4 Identify pH/temperature window
4. Suggest corrective action plans for non-conformance	4.1 Identify and evaluate factors impacting on pH/temperature window conformance 4.2 Identify reasons for non-conformance 4.3 Suggest corrective actions for window non-conformance 4.4 Conduct trials to achieve window conformance

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
Reading	Access and interpret MSA Standards Manual
Numeracy	- Generate graphs of pH/temperature data - Identify trends in numerical data

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AMPQUA407 Conduct and validate pH/temperature declines to MSA standards	AMPA404 Conduct and validate pH and temperature declines to MSA standards	Unit title and code updated Performance Criteria clarified Foundation Skills added Performance Evidence, Knowledge Evidence and Assessment Conditions revised	Not equivalent
AMPQUA407 Conduct and validate pH/temperature declines to MSA standards	AMPA3118 Monitor pH and temperature decline	Unit merged into redesigned unit	Not equivalent

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 AMPQUA407 Conduct and validate pH/temperature declines to MSA standards

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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 conducted and validated pH/temperature declines to Meat Standards Australia (MSA) standards, for at least one lot of carcasses, including:

- collected information on live animals for use in pH/temperature monitoring
- conducted weekly and monthly monitoring of the pH/temperature window
- observed, timed and followed carcasses through the slaughter floor, recording the following:
 - carcass information
 - chiller number
 - immobiliser information (where relevant)
 - rigidity probe information (where relevant)
 - stimulation information (where relevant)
 - time entering the chiller
 - time stunned
- analysed results to verify conformance
- generated individual and lot average graphs to show pH/ temperature window conformance
- operated and calibrated pH and temperature equipment
- suggested corrective actions.

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:

- the scope and nature of MSA standards
- MSA Standards Manual

- AUS-MEAT National Accreditation Standards
- effects of extreme weather events on pH decline
- impact of electrical stimulation on pH decline
- impact of chilling factors on pH/temperature decline
- effects of transport on pH/temperature decline
- how the time it takes a carcass to reach the chiller can impact on the rate of pH decline
- pH/temperature window
- how cold shortening occurs and characteristics of cold shortened product
- how heat shortening occurs and characteristics of heat shortened product
- how other electrical inputs can impact the rate of pH decline
- the impact of slaughter floor temperature on rate of pH/temperature decline
- glycogen and the relationship between stress and pH
- pH and its importance for eating quality.

Assessment Conditions

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

- physical conditions:
 - skills must be demonstrated in a meat processing workplace or an environment that accurately represents workplace conditions
- resources:
 - pH meter with thermometer and pH probe
 - pH and temperature calibration equipment
 - stopwatch
 - data recording and monitoring systems
- specifications:
 - workplace procedures, including advice on safe work practices, meat safety and quality
 - MSA Standards Manual
 - AUS-MEAT National Accreditation Standards
 - recording requirements, documentation and procedures
- timeframes:
 - within typical operating and production conditions for the workplace.

Assessment for this unit must include at least three forms of evidence.

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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