



Australian Government

Department of Education, Employment and Workplace Relations

FDFAU4008A Audit manufacturing of ready-to-eat meat products

Revision Number: 1

FDFAU4008A Audit manufacturing of ready-to-eat meat products

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge specifies required to support a food safety audit of food safety programs relating to the manufacture of ready-to-eat meat products.
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Application of the Unit

Application of the unit	This unit applies to the role of a food safety auditor responsible for auditing ready-to-eat meat manufacturing processes. Audit processes would typically occur within the context of auditing a HACCP-based food safety program that defines related prerequisite program requirements. This unit covers raw materials receival, processing of ready-to-eat meat products and post-processing storage and handling of product undertaken by the manufacturer of ready-to-eat meat products. It supports relevant legislation such as food standards contained in the Food Standards Code, Australian standards and industry codes of practice relating to validation and verification of a HACCP-based food safety program, and should be read in conjunction with these documents. Both regulatory and commercial audit system owners may specify additional certification requirements of auditors eligible to audit food safety programs within their system.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	FDFAU4002A	Communicate and negotiate to conduct food safety audits
	FDFAU4003A	Conduct food safety audits
	FDFAU4004A	Identify, evaluate and control food safety hazards

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and assess food safety hazards and control options for ready-to-eat meat manufacturing and related handling processes	1.1. Microbiological food safety hazards that could present a risk in ready-to-eat meat products at the point of consumption are identified by type, origin and food association and assessed to determine risk level and control requirements 1.2. Chemical food safety hazards that could present a risk in ready-to-eat meat products at the point of consumption, including toxin presence, are identified by type, origin and food association and assessed to determine risk level and control requirements 1.3. Physical food safety hazards that present a risk in food are identified and assessed to determine control requirements 1.4. Control requirements and methods are identified to ensure that finished, ready-to-eat meat products meet food safety objectives
2. Confirm that appropriate evidence supports validation of the ready-to-eat meat manufacturing process	2.1. Validation evidence and records are reviewed to confirm that an appropriate level of validation has been applied 2.2. Evidence used by the business to validate the process is identified and assessed to confirm that it is credible and adequate to meet the food safety objective
3. Verify the food safety program for a ready-to-eat meat manufacturing process	3.1. System records required to support verification are identified, collected and reviewed 3.2. Business documentation is reviewed and inspections are conducted to confirm that facilities and equipment design and components comply with regulatory and business standards 3.3. Business documentation is reviewed and inspections are conducted to confirm that operational monitoring and testing procedures and frequency meet regulatory requirements, and industry and business standards

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- interpret and apply relevant legislation, standards, codes of practice and technical specifications relating to the manufacture of ready-to-eat meat products
- identify microbiological, chemical and physical food safety hazards associated with the manufacture of ready-to-eat meat products
- inspect plant and equipment to confirm that regulatory, industry and business standards are met
- apply principles of ready-to-eat meat manufacturing to assess the suitability of processes to ensure a safe finished product
- review workplace records and other documentation to verify that the HACCP-based food safety program relating to the meat product being manufactured is being implemented effectively
- review evidence used to validate the food safety control process

Required knowledge

Knowledge of:

- regulations, codes of practice, guidelines, technical specifications and Australian standards relating to the formulation and manufacture of ready-to-eat meat products
- sources of information on acceptable processing and related storage and handling methods and parameters for given products and target micro-organisms
- pathogens that can occur in meat products and related control methods required in manufacturing, post-processing and storage
- survival and growth characteristics of pathogens and ability of processed product to support pathogen growth
- chemicals that pose a food safety risk in meat products and related control methods
- physical sources of contamination and related control methods
- effect of raw material characteristics, such as bacterial load and temperature, and pre-processing conditions on the growth of pathogens
- prerequisite programs required to support safe manufacture of ready-to-eat meat products
- purpose, role and storage requirements of ingredients
- principles of manufacturing methods and factors that affect processing requirements
- use and effectiveness of hurdle technologies
- principles of packaging to form a suitable seal and requirements of post-processing

REQUIRED SKILLS AND KNOWLEDGE

- handling and conditions to ensure safe product
- principles of operation of ready-to-eat meat product manufacturing equipment, including equipment features required to meet regulatory requirements and critical factors to be controlled to ensure safe food outcomes
- indications of unacceptable product and related test requirements
- principles of test methods and frequency in monitoring condition of raw materials and processing, and in confirming that final product is fit for human consumption

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competence in this unit must be able to audit manufacturing of ready-to-eat meat products.

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence that they can verify manufacturing processes for a range of ready-to-eat meat products to meet regulatory, industry and business standards. They must also demonstrate capacity to confirm that appropriate validation has occurred.

Evidence of the ability to:

- identify product-specific risks and typical processing methods, including sources of information on processing parameters, for a range of products
- participate in audits of HACCP-based food safety programs to demonstrate ability and knowledge of technical aspects of the manufacture, storage and transport of safe ready-to-eat meat products - audit scenarios must include at least one product in each of the following product categories:
 - uncooked fermented meat products, such as salami
 - smoked or cooked meat products, such as ham
 - slowly cured meat, such as prosciutto
 - pâté.

Cold ready-to-eat meat products may also have undergone further processing stages including slicing, shaving and packaging.

Audits of product type may be conducted concurrently or separately, according to production environment.

Context of and specific resources for

Competency may be assessed in an actual workplace or

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assessment	simulated environment that provides access to the required resources. Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints. The following resources must be available: • relevant plant and equipment that would typically be used in the commercial manufacture of ready-to-eat meat products • food safety programs and related documentation • records for the purpose of verification • evidence to support validation.
Method of assessment	This unit only covers the technical skills and knowledge related to the specific area of risk. Generic food safety auditing skills and knowledge are covered in prerequisite units. While participation in audit processes should follow good auditing practice as specified by prerequisite units, formal assessment of generic food safety auditing competence does not need to be repeated when assessing this unit. The following assessment methods should be considered to gather sufficient and valid evidence of competency: • observation and a report covering the audits specified in this • observation by an auditor competent to audit the manufacture of ready-to-eat meat • oral and written questioning to test the level and application of underpinning knowledge • workplace example or scenario to allow verification of records for food safety to be demonstrated. The audits conducted for the purpose of assessment must be witnessed by an auditor competent to audit the manufacture of ready-to-eat meat. Assessment methods must satisfy the endorsed Assessment Guidelines of FDF10 Food Processing Industry Training Package.
Guidance information for assessment	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where

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possible, over a number of assessment activities.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Prerequisite programs

Prerequisite programs are also referred to as support programs, such as Good Manufacturing Practice (GMP), Good Agricultural Practice (GAP) and Good Hygienic Practice (GHP).

Prerequisite programs can be divided into two categories:

Infrastructure and maintenance programs.

These may include:

- layout, design and construction of buildings and facilities
- supplies of air, water, energy and other utilities
- equipment, including sanitary design, preventative maintenance, calibration and cleaning and sanitation
- support services, including waste and sewage disposal
- pest control

Operational prerequisite programs. These may include:

- personal hygiene
- measures for the prevention of cross-contamination
- packaging and labelling procedures
- supplier assurance
- chemical storage
- employee training
- document control
- internal audit programs
- traceability and recall programs
- product integrity and security
- cold chain management
- preparation, maintenance and use of starter cultures (for fermented meat products)

RANGE STATEMENT	
	• inspecting and testing regimes, including analytical and microbiological testing • control of non-conforming product, processes and facilities • animal welfare
Manufacturing and related handling and storage processes	Manufacturing and related handling and storage processes to control food safety include: • heat treatment • fermentation and maturation • use of starter cultures • drying • cold storage • salting and other water activity related controls (e.g. hot smoking) • chemical additives to control water activity, pH and/or preservation (e.g. glucono-delta-lactone (GdL) and liquid smoke)
Microbiological food safety hazards	Microbiological food safety hazards that commonly occur in ready-to-eat meats include: • bacteria: • Campylobacter jejuni (poultry) • pathogenic Escherichia coli, including enterohaemorrhagic Escherichia coli • Clostridium perfringens and C. botulinum • Listeria monocytogenes • Salmonella spp • Staphylococcus aureus • Yersinia enterocolitica • viruses • moulds and fungi • parasites • algae
Ready-to-eat meat products	Ready-to-eat meat products refer to meat products intended to be consumed without further heating or cooking and include: • cooked, heat-treated or uncooked fermented meat, including cooked fermented meats (CFM), uncooked comminuted fermented meat (UCFM) and other salami-type products

RANGE STATEMENT	
	• pâté • dried meat • slow cured meat • luncheon sausage meat, including processed and manufactured • cooked muscle meat, including ham and roast beef • other ready-to-eat meat that is susceptible to the growth of pathogens or the production of toxins
Chemical food safety hazards	Chemical food safety hazards include: • cleaning chemicals • pesticides • veterinary residues • chemical additives and levels • allergenic substances • toxic metals • nitrites, nitrates and N-nitroso compounds and levels • polychlorinated biphenyls (PCBs) • plasticisers and packaging migration
Physical food safety hazards	Physical food safety hazards refer to objects not normally found in food that may cause illness or injury to the consumer, such as fragments of: • bone • glass • metal • plastic • wood
Validation	Validation refers to obtaining evidence to confirm that a HACCP-based food safety program is complete and effective and will deliver the expected food safety outcomes
Validation evidence	Validation evidence confirms that control measures are capable of being consistently effective and may include: the application of: • existing Australian legislative requirements • challenge tests

RANGE STATEMENT	
	• peer-reviewed scientific papers • targeted scientific reports • validation already carried out in other jurisdictions and recognised by the responsible authority • mathematical modelling (e.g. predictive microbiology models) • industry codes of practice (where implementation by food business is verified during audits)
Verification	Verification refers to methods and procedures used to carry out monitoring, including sampling and testing to provide evidence that the specifications set by relevant legislation and codes of practice continue to be met
Equipment	Equipment may include: • fermentation rooms • filling machines • drying and maturation rooms • mixers and blenders • tumblers • cookers • injectors • mincing machines and slicers or dice machines • conveyors • packaging machines • cooking utensils and knives • equipment used for the purpose of conducting analytical tests
Business standards	Business standards refer to standards or technical specifications set by the system owner based on and in addition to regulatory requirements that relate specifically to food safety
Relevant legislation, standards, codes of practice and technical specifications	Relevant legislation, standards, codes of practice and technical specifications relating to requirements of ready-to-eat meat manufacture may include: • relevant sections of the Australia New Zealand Food Standards Code • relevant Australian standards, including the

RANGE STATEMENT	
	Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2002) • Australia Export Control Act, 1982 • AQIS Export Control (Meat and Meat Products) Orders, 2005 • international protocols, such as those of the Codex Alimentarius Commission • customer food safety requirements, including intended use • state or territory regulations, codes of practice and guidelines
Hurdle technologies	Hurdle technologies refer to the application of a combination of different processing methods or techniques or treatments to achieve safe food outcomes
Test methods	Test methods include methods used to measure: • <i>E. coli</i>, <i>Salmonella</i>, coagulase positive staphylococci, <i>Listeria monocytogenes</i> in raw materials and final product • pH • time and temperature of: • fermentation • maturation or drying • smoking • cooking or heating • weight loss or water activity
Packaging	Packaging refers to: • controlled atmosphere (CA) packaging • modified atmosphere (MA) packaging
Ingredients	Ingredients must comply with the requirements described in the Food Standards Code and may include: • raw materials (meat) • starter cultures • preservatives (e.g. sodium chloride and sulphites) • water

RANGE STATEMENT	
	• sodium and potassium nitrate and/or nitrite • nitrate • spices • binders • water and ice • phosphates and other additives
Additional reference material	Additional reference material includes guidelines for safe manufacture of smallgoods, Meat and Livestock Australia Ltd, September 2003

Unit Sector(s)

Unit sector	Food safety auditing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		