HACCP PLAN

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***Cooked, Heat Treated, Salted and Cured Meat processing.***

Business Name



PIRSA Accreditation Number: XX/XXXX

***This is a HACCP template, developed by the Department of Primary Industries and Regions South Australia (PIRSA) for Cooked, Heat Treated, Salted and Cured Meat processing.***

***An Accredited Producer may identify additional steps or hazards upon undertaking their own hazard analysis and risk assessment of each hazard. If this occurs, the Accredited Meat Producer must discuss this with the PIRSA Food Standards team to ensure that this is reflected in this document and appropriately addressed.***

***It is the responsibility of the accredited operator to implement and maintain the HACCP plan as part of the approved Food Safety Arrangement.***

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# HACCP PROCESS

OUTCOME

To process food safely, producing safe food which complies with relevant legislation, regulations and standards.

HACCP

Process

This HACCP plan forms part of the Approved Food Safety Arrangement for the Accredited Meat Producer.

The HACCP team (as identified it the Food Safety Arrangement) is responsible for maintaining this HACCP plan through analysing and improving procedures along with implementing effective controls to manage food safety risks. Each process undertaken by the business needs to be covered by a HACCP plan. This HACCP plan covers:

**Cooked, Heat Treated, Salted and Cured Meats**

|  |  |
| --- | --- |
| **Cooked** | temperature at the point of microbiological concern is maintained at a minimum temperature of 65°C for at least 10 minutes. |
| **Heat Treatment** | Temperature at point of microbiological concern achieves minimum of 55°C for 20 minutes or an equivalent process. |
| **Cured Meats** | A product is cured if curing salts have been added at a level which preserves the product, being a minimum 2.5% salt on water phase and 100ppm nitrite in-going. |

The following have been taken into consideration in the development of this HACCP plan;

* [*Primary Produce (Food Safety Schemes) Act 2004*](https://www.legislation.sa.gov.au/LZ/C/A/PRIMARY%20PRODUCE%20(FOOD%20SAFETY%20SCHEMES)%20ACT%202004/CURRENT/2004.20.AUTH.PDF)
* [*Primary Produce (Food Safety Schemes) (Meat) Regulations 2017*](https://www.legislation.sa.gov.au/LZ/C/R/PRIMARY%20PRODUCE%20(FOOD%20SAFETY%20SCHEMES)%20(MEAT)%20REGULATIONS%202017/CURRENT/2017.278.AUTH.PDF)
* [*AS 4696:20237: Australian Standard for Hygienic Production and Transportation of Meat for Human Consumption*](https://www.publish.csiro.au/book/5553)
* [*Meat and Livestock Australia - Guidelines for the Safe Manufacture of Smallgoods – 2nd edition 2015*](https://pir.sa.gov.au/__data/assets/pdf_file/0004/250591/Guidelines_for_the_safe_manufacture_of_smallgoods_-2nd_Edition.pdf)
* *Foods Standards Australia New Zealand,* [*Food Standards Code*](https://www.foodstandards.gov.au/code/Pages/default.aspx)*:* 
  + [*Standard 1.2 Labelling and other information requirements*](https://www.foodstandards.gov.au/code/Pages/default.aspx)
  + [*Standard 1.6.1 Microbial Limits in Food*](https://www.legislation.gov.au/Details/F2018C00939)*, with* [*Schedule 27*](https://www.legislation.gov.au/Details/F2016C00507)
  + [*Compendium March 2022 (foodstandards.gov.au)*](https://www.foodstandards.gov.au/publications/Documents/Compendium_revised%20March%202022.pdf#page=26&zoom=100,91,95)
  + *Standard 1.6.2 Processing requirements*
  + [*Standard 2.2.1 Meat and Meat Products*](https://www.legislation.gov.au/Details/F2016C00173)
  + [*Standard 4.2.3 for Meat and Meat Products*](https://www.legislation.gov.au/Details/F2018C00943) *Primary production and processing standard for meat*
  + [*Standard 3.2.2 Food safety practices and general requirements*](https://www.legislation.gov.au/Details/F2011C00591)
  + [*Standard 3.2.3 Food Premises and Equipment*](https://www.legislation.gov.au/Details/F2021C00674)

Application for any alternative methods to those identified in the Australian Standard AS4696:2023, must be approved by the Accrediting body.

To produce and sell ***cooked,*** ***heat treated,*** ***salted and cured meats*** the operator must hold accreditation and approval for this process. Additional conditions may be required by PIRSA FSP as part of the approval of this process.

***The activity of modified atmosphere (MAP and Vacuum) packing Ready-to-Eat (RTE) meats is NOT covered by this HACCP Plan.***

***Separate approval and HACCP Plans are required for these activities.***

## PRODUCT SPECIFICATION

The following constitutes a Product Specification for the purpose of the Food Safety Arrangement and obligations under the Act. The Specification detail the product characteristics as listed below and are considered when reviewing the HACCP plan.

**General Category Product Specification (*Example – Not Ready-to-Eat*)**

|  |  |  |
| --- | --- | --- |
| **Product Category** | Not- Ready-To-Eat (e.g. Bacon) | |
| **Form** | Cooked Meat, not ready to eat | |
| **Method of Preservation** | Refrigeration, less than 5°C.  Preservative addition (Nitrite) | |
| **Packaging** | **Primary** | Sealed plastic shrink bag |
| **Secondary** | Cardboard carton |
| **Storage Conditions** | **Refrigerated**: Store under active refrigeration less than 5°C. | |
| **Distribution Method** | Direct to customer, over the counter sales. Wholesale, transported in accredited vehicle | |
| **Shelf Life** | To be determined by Operator: Sealed shelf life: x days from production. Shelf life once opened: x days once opened. | |
| **Labelling** | As per AS4696:2023 and Section 4.1 of FSA; Labels to include:   * Product name * Accredited business * Business address and contact details * Directions for use and storage conditions * Packaging Date * Use By Date (may include batch identification) * Advisory statement/warning (e.g., allergens) * Ingredient information (as per recipe) * Nutrition information * Country of Origin | |
| **Intended Use** | **Sensitive Customer** | Not suitable for those with allergies to listed ingredients. |
| **Customer Preparation** | Product to be fully cooked prior to consumption. |

**General Category Product Specification (*Example – Ready-to-Eat*)**

|  |  |  |
| --- | --- | --- |
| **Product Category** | Ready To Eat meats (e.g. Ham) | |
| **Form** | Cooked Meat, ready to eat | |
| **Method of Preservation** | Refrigeration, less than 5°C.  Preservative addition (Nitrite) | |
| **Packaging** | **Primary** | Overwrap |
| **Secondary** | Cardboard carton |
| **Storage Conditions** | **Refrigerated**: Store under active refrigeration less than 5°C. | |
| **Distribution Method** | Direct to customer, over the counter sales. Wholesale, transported in accredited vehicle | |
| **Shelf Life** | To be determined by Operator: Shelf life: x days from production. | |
| **Labelling** | As per Section 4.1 of FSA; Labels to include:   * Product name * Accredited business * Business address and contact details * Storage conditions and intended use * Use By Date (may include batch identification) * Advisory statement/warning (e.g., allergens) * Ingredient information (as per recipe) * Nutrition information * Country of Origin | |
| **Intended Use** | **Sensitive Customer** | Not suitable for those with allergies to listed ingredients. |
| **Customer Preparation** | Ready to Eat. |
| **Microbiological Limits** | **As per FSANZ** | As per FSANZ Food Standards code Standard 1.6.1 Microbiological limits in Food |

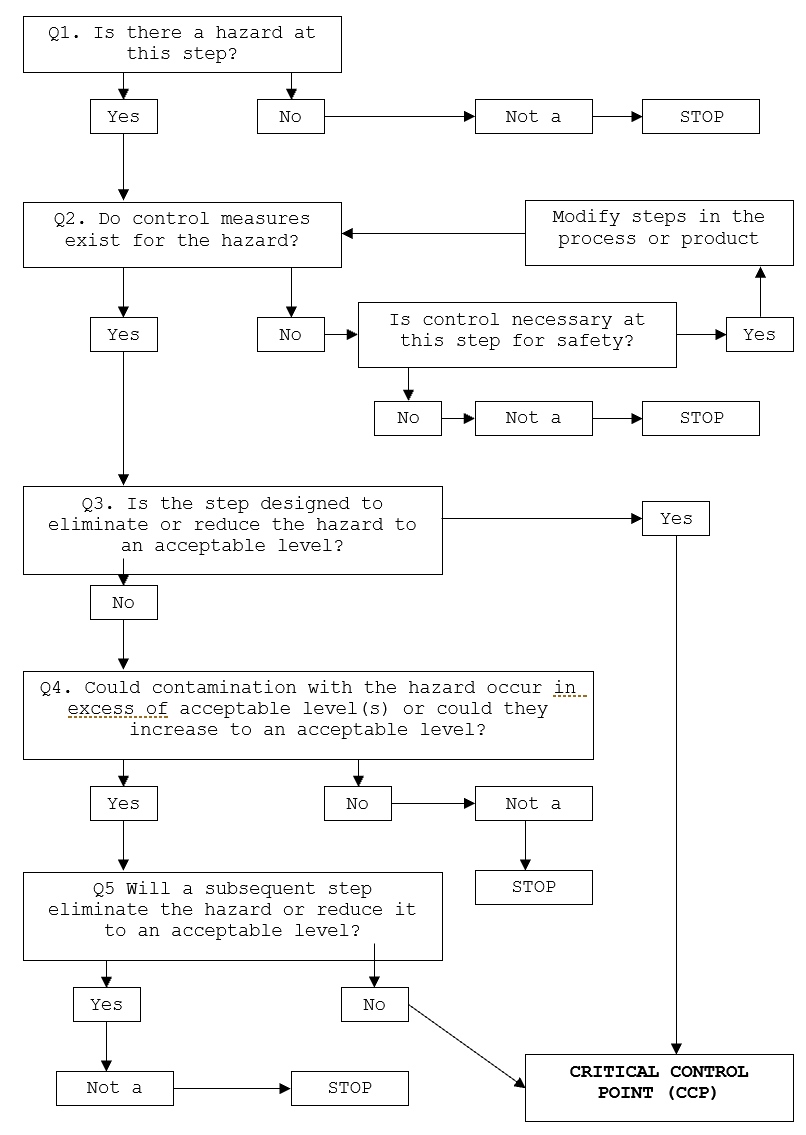
## PRODUCT RECIPE

|  |  |  |  |
| --- | --- | --- | --- |
| **Product Description** | | Bacon | |
| **Product Category** | | Salted and cured meats | |
| **Ingredients** | | **Quantity** | **Country of Origin** |
| Meat, Pork | |  |  |
| Preservatives (Nitrite) | |  |  |
| Salt | |  |  |
| Water | |  |  |
| Seasoning (herbs and spices) | |  |  |
|  | |  |  |
|  | |  |  |
| **Processing Steps** | | | |
| * Make curing solution as per supplier specification (CCP 1) * Apply curing solution (e.g. pumping or massage cover brine) * Prepare for Cooking (hang on racks) * Cook/Heat Treat (including Smoking) product (CCP 2 a & 2 b) * Cool product (CCP 3 a and 3 b) * Portion and pack product * Label product (CCP 4) * Cold storage (CCP 5) * Display and Despatch (CCP 6) | | | |
| **Issue Date** |  | | |

## FLOW CHART

|  |  |
| --- | --- |
| **Objective** | A step-by-step diagram of the flow of the operation/process with all inputs and outputs identified. Key steps in the process that are critical to food safety are referred to as Critical Control Points, CCP. These are highlighted on the Flow Chart. |

## CCP DECISION TREE



## HAZARD ANALYSIS TABLE

Hazard Types: B – Biological; C – Chemical; P – Physical;

|  |  |
| --- | --- |
| **Objective** | A documented review of each step identified in the flow chart and with the importance of each step in the safety of the finished product rated to identify Critical Control Points (CCP). |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Process Step** | **Hazard** | **Cause** | **Q1** | **Q2** | **Q3** | **Q4** | **Q5** | **Preventative measures for hazard control** | **CCP | CP** | **GMP | Support Program** |
| 1. **Finished Product from Raw Process** | Selection of Finished Product compliant with Raw Process | | | | | | | | | |
| 1. **Product Formulation and Processing**   *Whole Muscle and Emulsified Products* | B –Microbiological growth | Bacterial growth if temperature and time allow | Y | Y | N | Y | Y | Process in facility set at ≤10 ̊ C to prevent growth of bacteria.  Or temperature at point of microbiological concern is maintained ≤5°C. |  | Checkmark with solid fill |
| B – for products formulated with preservative, failure to add sufficient permitted preservative, e.g. nitrite | Failure to add preservative e.g. nitrite may allow growth of *C. botulinum* | Y | Y | Y | - | - | Monitor preservative addition during production | CCP |  |
| C – concentration of preservative exceeding permitted levels, e.g. nitrite | Preservative added in excess of permitted levels in finished product. | Y | Y | Y | - | - | Apply correct amounts as per recipe.  Check correct amounts of preservative have been added and conforms with Food Standards Code Section 1.3.1 (schedule 15); Example: Ensure nitrite concertation is no more than 125mg/kg in finished product. | CCP |  |
| **Process Step** | **Hazard** | **Cause** | **Q1** | **Q2** | **Q3** | **Q4** | **Q5** | **Preventative measures for hazard control** | **CCP | CP** | **GMP | Support Program** |
| 1. **Cooking & Heat Treatment** | B – Presence of microbiological pathogens *(Listeria monocytogenes | E. coli | S. aureus)* | An inadequate thermal process can allow pathogens to survive | Y | Y | Y | - | - | **Cooked product**  Point of microbiological concern achieves minimum of 65°C for 10 minutes or a higher temperature to achieve an equivalent process to achieve a 6D reduction of *Listeria monocytogenes.*  **Heat Treated product**  Point of microbiological concern achieves minimum of 55°C for 20 minutes or a higher temperature to achieve an equivalent process to achieve a 2D reduction of *E.coli*. | **CCP** |  |
| 1. **Cooling** | B – Growth of microorganisms including, *C. perfringens* | Prolonged cooling to allow growth of *C. perfringens* | Y | Y | Y | - | - | Cool product according to AS 4696:2023 at point of microbiological concern achieves:  **Cured Meats**  52°C to 12°C within 7.5 hours.  Reduced to 5°C within 24 hours of completion of cooking.  **Uncured Meats**  52°C to 12°C within 6 hours.  Reduced to 5°C within 24 hours of completion of cooking. | **CCP** |  |
| 1. **Portioning** | B, C, P –Microbiological, chemical and physical contamination. | Inadequate cleaning procedures of equipment, lack of equipment maintenance | Y | Y | N | Y | Y | Cleaning and maintenance of premises and equipment, preoperational hygiene and maintenance checks. |  | Checkmark with solid fill |
| **Process Step** | **Hazard** | **Cause** | **Q1** | **Q2** | **Q3** | **Q4** | **Q5** | **Preventative measures for hazard control** | **CCP | CP** | **GMP | Support Program** |
| 1. **Packing** | B – Growth of microbiological pathogens above unsafe levels. | Inadequate seal or vacuum of bag | Y | Y | N | Y | Y | Packaging purchased from an approved supplier; food grade packaging used only.  Inspect each bag for seal integrity after application of vacuum (**Non-RTE**). | CP | Checkmark with solid fill |
| 1. **Labelling** | C – All ingredients date marking or warning statements not listed on packaging. | Inadequate traceability and labelling of finished product. | Y | Y | Y | - | - | Validate Use By Date applied to product.  Mandatory information included on labels as per FSANZ Food Standards Code Section 1.2 Labelling and other information requirements. | **CCP** |  |
| 1. **Cold Storage** | B – Growth of microbiological pathogens above unsafe levels. | Product not stored under appropriate temperature control. | Y | Y | Y | - | - | Product stored <5°C under active refrigeration without delay.  Frozen – solid, remains frozen during storage, Frozen poultry ≤-15°C. | **CCP** |  |
| C – cross contamination | Operator error with cleaning chemicals | Y | Y | N | Y | Y | Suitable chemical storage and control and appropriate training for staff handling chemicals |  | Checkmark with solid fill |
| P – contamination | Foreign objects | Y | Y | N | Y | Y | Compliant chiller construction |  | Checkmark with solid fill |
| 1. **Despatch & Distribution** | B – Growth of microbiological pathogens above unsafe levels. | Product not stored under appropriate temperature control. | Y | Y | Y | - | - | Product maintained <5°C under active refrigeration. | **CCP** |  |

## 

## HAZARD AUDIT TABLE

|  |  |
| --- | --- |
| **Objective** | Documented controls to be implemented and measured and recorded to demonstrate compliance to process to make safe food. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Step** | **Hazard** | **Critical Limit** | **Monitoring** | **Corrective Action** | **Records** |
| **2. Product Formulation and Processing** | B – for products formulated with preservative, failure to add sufficient permitted preservative, e.g. nitrite may allow growth of *C. botulinum* | For products with preservative as part of formulation, preservative is added. | **What:** Accurate addition of permitted preservative, e.g. Nitrite. | If the incorrect level of preservative is added to the curing mix, the batch is to be discarded and then replace curing mix with correct concentration.  If unsure of how much preservative has been added to meat, place batch on hold. Sample of meat can be sent to external NATA laboratory for testing of Nitrite level in final product. If >125mg/kg then discard batch.  Review process. | Cook Process Record  Or  Electronic monitoring |
| **How:** Visually. |
| C – concentration of preservative exceeding permitted levels, e.g. nitrite | Preservatives in finished product within permitted levels under the Food Standards Code.  Nitrite addition at no more than 125mg/kg | **When:** Every batch. |
| **Who:** Operator |
| **Step** | **Hazard** | **Critical Limit** | **Monitoring** | **Corrective Action** | **Records** |
| **3. Cooking & Heat Treatment** | B – Presence of microbiological pathogens *(Listeria monocytogenes | E. coli | S. aureus)* | **Validated cooking cycle applied to achieve:**  **Cooking**  Point of microbiological concern achieves minimum of 65°C for 10 minutes or a higher temperature to achieve an equivalent process.  Or  **Heat Treatment**  Point of microbiological concern achieves minimum of 55°C for 20 minutes or an equivalent process. | **What:** Confirm approved validated process has been applied.  Or  Time and Temperature of point of microbiological concern of product. | If validated cycle time and temperature or product time and temperature is not achieved, extend processing time and point of microbiological concern of product achieves critical limits. | Cook Process Record  Or  Electronic monitoring  Process Validation |
| **How:** Thermometer / gauge |
| **When:** Every batch |
| **Who:** Operator |
| **4. Cooling** | B – Growth of microorganisms including, *C. perfringens* | Cool product according to AS 4696:2023  **Cured Meats**  Reduced from 52°C to 12°C within 7.5 hours.  Reduced to 5°C within 24 hours of completion of cooking.  **Uncured Meats**  Reduced from 52°C to 12°C within 6 hours.  Reduced to 5°C within 24 hours of completion of cooking. | **What:** Confirm approved validated process has been applied.  Or  Time and Temperature of point of microbiological concern of product. | If product does not meet cooling, product is placed on hold and tested for *C. perfringens (<100cfu/g).*  Discard if above limit. | Cook Process Record  Or  Electronic monitoring |
| **How:** Thermometer / Data-logger |
| **When:** Every batch |
| **Who:** Operator |
| **Step** | **Hazard** | **Critical Limit** | **Monitoring** | **Corrective Action** | **Records** |
| **6.**  **Labelling** | C – All ingredients, date marking or warning statements not listed on packaging | Validated Use-By Date applied.  Correct mandatory labelling including date marking applied to finished products. | **What:** Label applied to product | Isolate and hold product with incorrect labels.  Where labelling details are incorrect or inaccurate, the labels shall be removed.  Discard incorrect labels, apply correct details to product.  All previous products from the batch shall be re-inspected for compliance and corrective action taken if found to be incorrect/inaccurate.  All non-complying and used packaging shall be disposed of and not reused.  Release product for despatch once correct labels have been applied and verified. | Cook Process Record |
| **How:** Visually |
| **When:** Every batch |
| **Who:** Operator |
| **7.**  **Cold Storage** | B – Growth of microbiological pathogens above unsafe levels. | Active refrigeration in place to maintain temperature of meat at less than or equal to 5°C. | **What:** Chiller temperature | Assess temperature of meat. If >5°C, move product to alternate cold storage if available.  Adjust room temperature setting to achieve <5°C product temperature.  Repair or replace refrigeration unit. Discard product if alternative storage unable to be utilised. | Daily Storage Temperature record  Or  Electronic monitoring  Calibration record |
| **How:** Chiller gauge |
| **When:** Monitored during use, recorded daily |
| **Who:** Operator |
| **Step** | **Hazard** | **Critical Limit** | **Monitoring** | **Corrective Action** | **Records** |
| **8.**  **Despatch & Distribution** | B – Growth of microbiological pathogens above unsafe levels. | Active refrigeration in place to maintain temperature of meat at less than or equal to 5°C. | **What:** Product temperature | Product is not loaded out until product temperature is ≤5°C. | Load out record/invoice  Calibration record |
| **How:** Thermometer |
| **When:** At point of despatch/delivery |
| **Who:** Operator |

## CCP WORK INSTRUCTIONS

|  |  |
| --- | --- |
| **Objective** | *At steps that are critical for the safety of the finished product, checks on the process are completed to confirm the process has met the critical limits and the results recorded. If the check finds the product has not met the critical limit of the process, actions need to be taken to make the product safe. These steps need to be documented in a work instruction.* |

* CCP 1 – Product Formulation and Processing - Preservative addition (Curing/Brine solution)
* CCP 2 – Cooking and Heat Treatment
* CCP 3 – Cooling
* CCP 4 – Labelling
* CCP 5 – Cold Storage
* CCP 6 – Despatch & Distribution

|  |  |
| --- | --- |
| **WORK INSTRUCTION | Product Formulation and Processing** | |
| **Objective** | Preservative addition (Curing/Brine solution) |
| **Procedure** | Preservative is measured (**Nitrite addition at no more than 125mg/kg)** and combined with other ingredients as per recipe. Addition is recorded.  **Whole Muscle**  Preservative ingredients added to prescribed amount (as per manufacturer’s specification) of potable of water to produce curing solution.  Curing solution added to product (Cover Brine or Pumping).  Curing solution to be maintained at or below 5°C.  **Emulsified Products**  Curing ingredients are weighed as per manufacturers specification.  Curing ingredients added to meat and mixed. |
| **Frequency** | Every batch |
| **Records** | Controlled recipe  Cook Process Record |
| **Corrective Action** | If curing solution has an unknown content, the batch is to be discarded and replace curing solution with correct concentration.  If the incorrect level of preservative is added to the curing mix, the batch is to be discarded and replace curing mix with correct concentration.  If unsure of preservative addition to meat, place batch on hold. Sample of meat to be sent to external NATA laboratory for testing of Nitrite level in final product. If >125mg/kg discard batch. |
| **Responsibility** | The operator is responsible for correct addition of preservative to product and monitoring and documenting each batch. |

|  |  |
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| **WORK INSTRUCTION | Cooking and Heat Treatment** | |
| **Objective** | Heat is applied to product to reduce presence of microbiological pathogens of concern to acceptable levels for human consumption. |
| **Procedure** | Load the cooking chamber with raw product ensure evenly distributed within the chamber.  Ensure the temperature logger is inserted? at the point of microbiological concern of selected meats to be cooked.  Ensure cooking chamber is filled with required amount to be cooked.  Ensure all time and temperature settings on the cooking chamber have been set or programmed in.  Commence the cooking cycle.  Verify product has met critical limits:  **Cooking**  Point of microbiological concern achieves minimum of 65°C for 10 minutes or an equivalent process.  **Heat Treatment**  Point of microbiological concern achieves minimum of 55°C for 20 minutes or an equivalent process. |
| **Frequency** | Every batch. |
| **Records** | Cook Process Record or process validation (via datalogger). |
| **Corrective Action** | If time and temperature is not achieved, extend processing time and validate the temperature at the point of microbial concern achieves critical limits. |
| **Responsibility** | The operator is responsible for monitoring and documenting each batch of product that is cooked/heat treated. |

|  |  |
| --- | --- |
| **WORK INSTRUCTION | Cooling** | |
| **Objective** | Product is cooled under controlled conditions to not support the growth of bacteria, including *C. perfringens*. |
| **Procedure** | Upon successful completion of Cooking/Heat Treatment with Critical limits achieved, remove product from cooking chamber.  Initial cooldown may be completed with use of ice bath to assist with rapid drop of product temperature.  Place product in chiller, ensuring sufficient air flow along with separation from other products, batches and raw meats.   1. Verify product has met critical limits:  |  |  |  | | --- | --- | --- | | **Temperatures** | **Cured** | **Uncured** | | 52°C to 12°C | Within 7.5 hours | Within 6 hours | | 5°C | Within 24 hours from completion of Cooking/Heat Treatment | |      1. Verification of cooling required as per annually approved validated process.    1. Process to be validated every 3 months across each product and process.    2. For products produced seasonally (e.g. ham on the bone) cooling process to be validated on first 4 batches produced. |
| **Frequency** | Every Batch.   * Time and Temperature of point of microbiological concern of product.   Or   * Confirm approved validated process has been applied. |
| **Records** | Cook Process Record or process validation (via datalogger). |
| **Corrective Action** | If product does not meet cooling requirements:  HOLD product and test product for C. perfringens (limit <100 cfu/g). Discard if above limit.  Alternative cooling arrangement to be approved by PIRSA. Operator to provide validated evidence that alternative process will not adversely affect the microbiological safety of the meat products. |
| **Responsibility** | The operator is responsible for monitoring and documenting each batch of cooked/heat treated product that is cooled. |

|  |  |
| --- | --- |
| **WORK INSTRUCTION | Labelling and Packaging** | |
| **Objective** | During packaging the wholesomeness of meat and meat produces is not jeopardised and all packaging and labelling comply with the requirements of the Food Standards Code. |
| **Procedure** | Meat products are packaged in accordance with the time and temperature controls as outlined in AS4696:2023, Section 12 Thawing, tempering, boning and other processing of raw meat.  Where meat and meat product packaging is not undertaken in a temperature controlled environment maintained <10°, the times and temperature of packaging of meat and meat products is monitored on raw meat production form with product returned to Chiller upon completion of packaging to maintain surface temperature ≤5°C, unless additional processing is undertaken without delay.  All food must be accurately labelled for items not sold through assisted display.  Meats are to be packaged with approved material, suitable for food contact. All packaging shall be new and not used or contaminated.  An accurate description of the meat product including its ingredients shall be displayed in a prominent position.  A label shall include mandatory information where applicable as per FSANZ Food Standards Code. |
| **Frequency** | Every Batch. |
| **Records** | Raw Meat production Form.  Cook Process Record. |
| **Corrective Action** | Packaged meat is returned to chiller and surface temperature monitored to confirm temperature achieves ≤5°C.  Isolate product with incorrect labels.  Discard incorrect labels, apply correct details to product. |
| **Responsibility** | The operator is responsible for monitoring and documenting the label application for each batch. |

|  |  |
| --- | --- |
| **WORK INSTRUCTION | Cold Storage** | |
| **Objective** | Suppress growth of microbiological pathogens. |
| **Procedure** | Active refrigeration in place to maintain temperature of meat at less than or equal to 5°C.  All product to be placed under refrigeration as soon as practically possible.  Product to be stored of the ground and spaced for adequate refrigerated air circulation, with all cooked and raw meats are stored separately and that no cross contamination occurs. |
| **Frequency** | Daily or electronic monitoring system. |
| **Records** | Daily Storage Temperature monitoring form or electronic monitoring system. |
| **Corrective Action** | Assess temperature of meat. If >5°C, move product to alternate cold storage if available. Discard product if unable to find alternative cold storage.  Adjust room temperature setting to achieve <5°C product temperature.  Service and repair chiller. |
| **Responsibility** | The operator is responsible for monitoring, documenting and maintaining temperature of cold storage areas. |

|  |  |
| --- | --- |
| **WORK INSTRUCTION | Despatch & Distribution** | |
| **Objective** | Suppress growth of microbiological pathogens. |
| **Procedure** | **Despatch**  All meat products must be stored in a hygienic and safe manner to ensure the product integrity.  All loads are to be inspected for packaging integrity, contamination and other aspects, which could render the product unwholesome for human consumption.  Temperature of product to be monitored, with meat at less than or equal to 5°C.  **Distribution**  Vehicle condition (including temperature and cleanliness) assessed prior to loading product for distribution.  Immediate action to be taken if active refrigeration cannot be maintained – refer to corrective actions.  Temperature of product to be monitored to ensure that meat at less than or equal to 5°C at point of delivery. |
| **Frequency** | Each despatch/delivery. |
| **Records** | Load-out record/invoice. |
| **Corrective Action** | Product is not loaded out until product temperature is ≤5°C.  Product to be transferred immediately to active refrigeration and monitored. |
| **Responsibility** | The operator is responsible for monitoring, documenting and maintaining temperature of cold storage areas. |

## CCP MONITORING FORMS

Cook Process Record combines CCP monitoring for the following steps:

* Preservative addition (Curing solution)
* Cooking
* Cooling
* Labelling

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **DATE PRODUCED / BATCH #** | | **/ /** | **/ /** | **/ /** | **/ /** | **/ /** | **/ /** |
| **PRODUCT(S) MADE** | |  |  |  |  |  |  |
| **QUANTITY PRODUCED (Units | kg)** | |  |  |  |  |  |  |
| **MEAT TEMPERATURE** (From Chiller) **°C** | | **°C** | **°C** | **°C** | **°C** | **°C** | **°C** |
| **CURING SOUTION MIXTURE / INGREDIENTS**  **(To specification) ✓/ 🗶** | |  |  |  |  |  |  |
| **COOK DATE** | |  |  |  |  |  |  |
| **COOKING: CORE**  Temperature ( ≥ 65°C)  Cooking Time ( ≥10 mins) | | **°C**  **MINS** | **°C**  **MINS** | **°C**  **MINS** | **°C**  **MINS** | **°C**  **MINS** | **°C**  **MINS** |
| **COOLING: As per validated process (circle)** | | **✓ / 🗶** | **✓ / 🗶** | **✓ / 🗶** | **✓ / 🗶** | **✓ / 🗶** | **✓ / 🗶** |
| Or, verify temperature of cooling for each batch | Uncured- ***from* 52°C to 12°C (≤6 hrs)**  Cured- ***from* 52°C to 12°C (≤7.5 hrs)**  **Total ≤5°C within 24 hours** | **HRS**  **HRS** | **HRS**  **HRS** | **HRS**  **HRS** | **HRS**  **HRS** | **HRS**  **HRS** | **HRS**  **HRS** |
| **DATA LOGGER VERIFICATION ✓/ 🗶** | |  |  |  |  |  |  |
| **DATE PACKED** | | **/ /** | **/ /** | **/ /** | **/ /** | **/ /** | **/ /** |
| **Quantity Packed (Units | kg)** | |  |  |  |  |  |  |
| **Labelling applied ✓/ 🗶** | |  |  |  |  |  |  |
| **PRODUCT USE BY DATE** | | **/ /** | **/ /** | **/ /** | **/ /** | **/ /** | **/ /** |
| **SIGNATURE** | |  |  |  |  |  |  |
| **CORRECTIVE ACTION** | |  |  |  |  |  |  |

## PROCESS VALIDATION AND VERIFICATION

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| **Objective** | *Confirm the process followed will control the hazards identified, making the product safe for consumption.* |

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| **Verification & Validation | Product Formulation and Processing** | |
| **Validation** | **Theoretical validation – AS4696:2023 Section 13 and FSANZ Food Standards Code Schedule 15**  Provide evidence of the preservative addition (Curing/Brine solution) - **Nitrite addition at no more than 125mg/kg** |
| **Verification** | Refer to work instruction for monitoring records and frequency to confirm validated process has been followed to achieve hazard control.  Annual recipe/product specification review for accuracy – capture via annual internal audit.  Calibration of scales – as per manufacturers specifications. |

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| **Verification & Validation | Cooking and Heat Treatment** | |
| **Validation** | **Theoretical validation – AS4696:2023 section 13**  Provide evidence of the heat is applied to product complies with AS4696:2023;  **Cooking**  Point of microbiological concern achieves minimum of 65°C for 10 minutes or an equivalent process  Data-log of product temperature throughout process.   * Annually for each product type   **Heat Treatment**  Point of microbiological concern achieves minimum of 55°C for 20 minutes or an equivalent process.  Data-log of product temperature throughout process.   * Annually for each product type |
| **Verification** | Refer to work instruction for monitoring records and frequency to confirm validated process has been followed to achieve hazard control.  Calibration of datalogger, thermometer, cooking chamber probes/gauges:   * 3 monthly – internal calibration (as per Food Safety Arrangement); or * annually – external calibration. |

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| **Verification & Validation | Cooling** | |
| **Validation** | **Theoretical validation – AS4696:2023 section 13**  Provide evidence product is cooled as per AS4696:2023;   |  |  |  | | --- | --- | --- | | **Temperatures** | **Cured** | **Uncured** | | 52°C to 12°C | 7.5 hours | 6 hours | | <5°C | Within 24 hours from completion of Cooking/Heat Treatment | |   Data-log of product temperature throughout process.   * Process to be validated every 3 months across each product and process. * For products produced seasonally (e.g. ham on the bone) cooling process to be validated on first 4 batches produced. |
| **Verification** | Refer to work instruction for monitoring records and frequency to confirm validated process has been followed to achieve hazard control.  Calibration of datalogger, thermometer, chiller gauges:   * 3 monthly – internal calibration (as per Food Safety Arrangement); or * annually – external calibration. |

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| **Verification & Validation | Labelling** | |
| **Validation** | **Theoretical validation – FSANZ Food Standards Code section 1.2**  Provide evidence product is labelled with mandatory information to comply with FSANZ Food Standards Code. |
| **Verification** | Refer to work instruction for monitoring records and frequency to confirm validated process has been followed to achieve hazard control.  Annual label review for accuracy – capture via annual internal audit.  Shelf-life validation (non RTE Vacuum packed meats)   * Extended shelf life of greater than 30 days requires validation prior to application of extended life. |

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| **Verification & Validation | Cold Storage** | |
| **Validation** | **Theoretical validation – AS4696:2023 Section 15**  Provide evidence sufficient active refrigeration is in place to maintain temperature of meat at less than or equal to 5°C. |
| **Verification** | Refer to work instruction for monitoring records and frequency to confirm validated process has been followed to achieve hazard control.  Calibration of thermometer probes, chiller gauges:   * 3 monthly – internal calibration (as per Food Safety Arrangement); or * annually – external calibration. |

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| **Verification & Validation | Despatch & Distribution** | |
| **Validation** | **Theoretical validation – AS4696:2023 Section 15**  Provide evidence sufficient active refrigeration is in place to maintain temperature of meat at less than or equal to 5°C. |
| **Verification** | Refer to work instruction for monitoring records and frequency to confirm validated process has been followed to achieve hazard control.  Calibration of thermometer probes:   * 3 monthly – internal calibration (as per Food Safety Arrangement); or * annually – external calibration. |