# FOOD PREPARATION

# FOOD PREPARATION GUIDELINES

- ❑Write what you do – do what you write
- ❑Prepare simple operational procedures
- ❑Construct a flow diagram
- ❑Include hygiene in your premises/surroundings and in your behavior/practices.
- ❑How to prevent hazards

# Recipes
# (food preparation procedure)

**For each product, document :**

- **All ingredients used**
- **All volumes and weights**
- **All procedures and equipment involved**
- **Cooking time/temperature**
- **Packaging material**
- **Packaging**
- **Labeling**
- **Storage**
- **Shelf life**

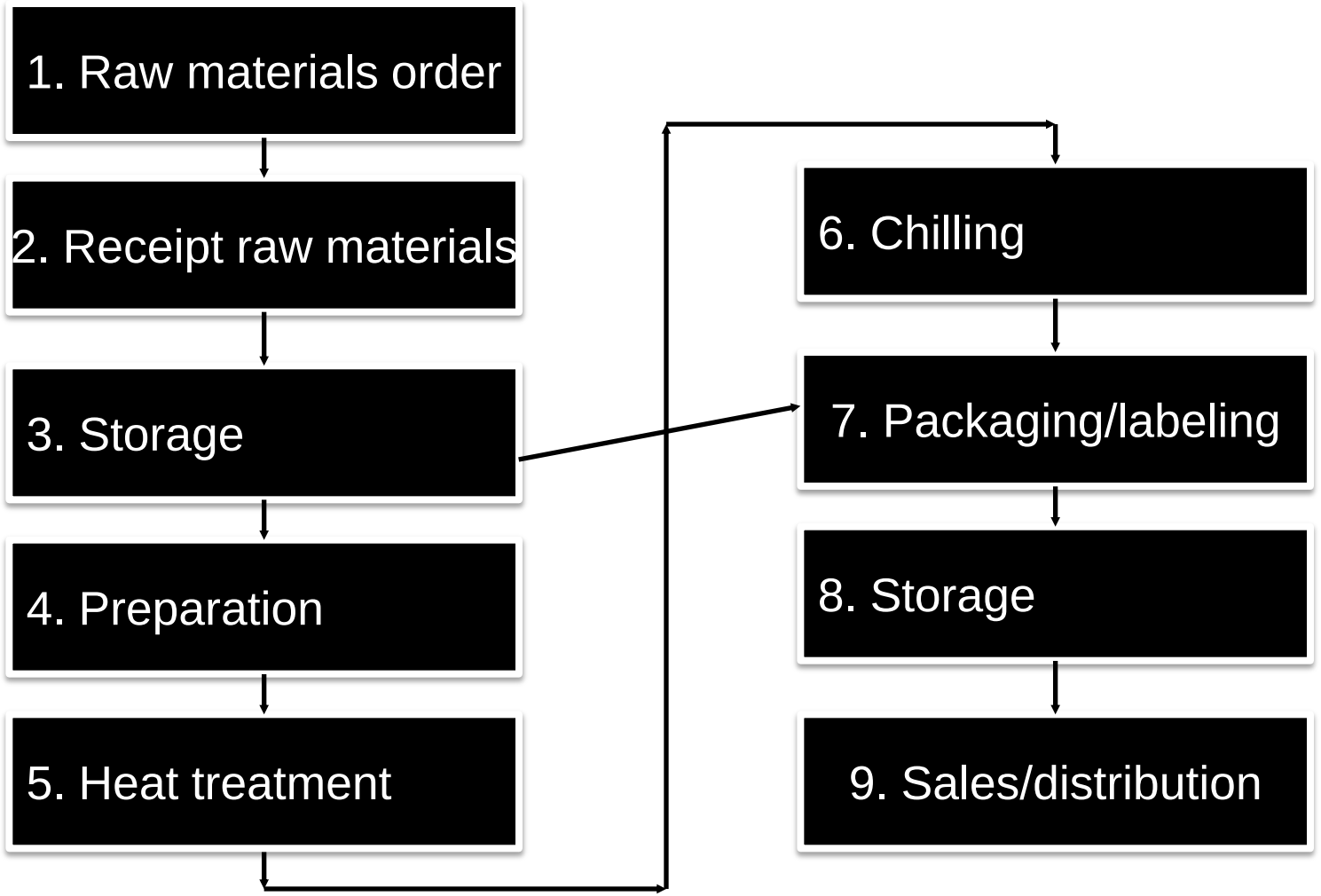
# USE FLOW DIAGRAM

- **construct a flow diagram covering your production.**
- **It will help you to DEFINE THE CRITICAL STEPS for good food hygiene in your production.**
- **It will give GOOD IMPRESSION from people that look at/audit your production**

# CONSTRUCT FLOW DIAGRAM

- **Include all steps (also transportation)**
- **All side flows (spices, packaging, semi finished products, rework…)**
- **Include details such as time and temperature for essential steps (heat treatment, chilling…)**

# FLOW DIAGRAM



# PRODUCTION AREA

- **The process flow shall be arranged to prevent product contamination**
- **The premises shall allow safe and hygienic conditions**
- **There shall be separation between high and low risk operations**
- **Walls, floors, ceiling and windows shall be kept clean and withstand cleaning methods. Open windows shall be screened.**

# PRODUCTION AREA

- **Floor shall have adequate fall and well designed drainage, to minimize risk for contamination.**
- **Doors shall normally be closed or screened to prevent pest entrance.**
- **Lighting shall be adequate and not possess a risk for glass splinters in the product.**

# Equipment

- **Shall be suitably designed for the intended purpose.**
- **Shall be easy to keep clean**
- **When necessary equipment shall be disassembled for thorough cleaning.**

# Food Prep…

- Observe good personal hygiene
- Separate raw and ready to eat food: chopping boards, utensils, surfaces…
- Avoid unnecessary handling of food, use clean tongs, trays…
- Keep chilled food out of the fridge for the shortest possible time.
- Use potable water to wash

  and prepare food, or making ice.

# Cooking

**If your process includes a cooking step, you will kill Bacteria, parasites and viruses at this step!**

- **Proper cooking kills a majority of food poisoning microorganisms such as salmonella, campylobacter, pathogenic E.coli, Listeria, (viruses) and parasites**

- **Minimum cooking time for meat**

| | |
|---|---|
| 60 °C – 45 min | 75 °C – 30 sec |
| 65 °C – 10 min | 80 °C – 6 sec |
| 70 °C – 2 min | |

# Critical Operations

- are steps at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to acceptable level.

# Critical Operations 1

**Heat treatment:**

- **Define and maintain critical temperature and time for the heat treatment to eliminate pathogens.**

**Example:**

- **Burger needs to reach 68 °C for 30 sec.**
- **Milk is pasteurized at 72 °C for 15 sec.**
- **Drying at 93°C to achieve $a_w \leq 0.85$ to control pathog dried foods.**

# Critical Operations 2

**Acidification:**

- ***Clostridium botulinum*** **cannot grow at <u>pH under 4.6</u> .**

**Example:**

- **Define how much acetic acid has to be added to pickled food to guarantee <u>pH lower than 4.6</u> .**

# Critical Operations 3

**Chilling:**

- **Low temperature slows down the growth of several pathogenic bacteria.**

**<u>Example</u>**

**Creamy fruit cake is kept at <u>4 °C or lower</u> to extend shelf life.**

# Critical Operations 4

- **Hot food can be kept below 60°C for a maximum of two (2) hours.**
- **Chilled food can be kept above 4°C for a maximum of (2) hours.**

# Example of Hazard Prevention

- **control at the receiving step (e.g., supplier declaration) to prevent pathogens and chemical hazards**

- **control at the formulation or ingredient-addition step (e.g., pH adjustment or addition of preservatives)**

- **control by refrigerated storage or chilling**

# Example of Hazard Elimination

- **Cooking (biological hazards)**
- **Metal detector (physical hazards)**
- **Freezing (parasites - e.g., *Anisakis* in fish intended for raw consumption)**
- **Manual sorting and automatic collectors (physical hazards)**
- **Obtain meat, shellfish, prawns, poultry from approved sources (biological & chemical hazards)**

# THANK YOU!