



# TOMATO KETCHUP



## Introduction

Tomato is an important vegetable crop in Kenya, widely grown for home consumption and commercial purposes. However, the crop faces numerous challenges, including post-harvest losses, which pose a major threat to harvested produce. The presence of losses in a crop indicates the wastage of resources invested during production. Value addition can be a strategic approach to mitigate these losses and maximize the profitability of tomato cultivation.

Tomato ketchup is similar to tomato sauce, except that it is thick in consistency and slightly sweeter. The production of tomato ketchup improves flavor and extends shelf life, with the ability to maintain quality for six months or more. The market for tomato ketchup encompasses not only individual consumers seeking to enhance their home cooking but also restaurants and catering businesses.

By processing surplus or lower-grade tomatoes into tomato ketchup, farmers can add value to their produce and extend its shelf life, thereby reducing post-harvest losses, creating employment, and increasing income. Additionally, they can establish partnerships with local markets, restaurants, or supermarkets to sell their tomato ketchup products, fostering economic growth within their community while meeting the demand for high-quality, locally sourced ingredients.

## Requirements for Processing Quality Tomato Ketchup

### Equipments

- Weighing scale
- Washing troughs
- Metal sieves
- Washing Basins

- Blender/Pulper
- Knives
- Stirring wooden stick
- Source of fire (Gas or Jiko)
- Sufuria (Pan)
- Packaging bottles
- Tea spoon
- Table spoon

### Ingredients:

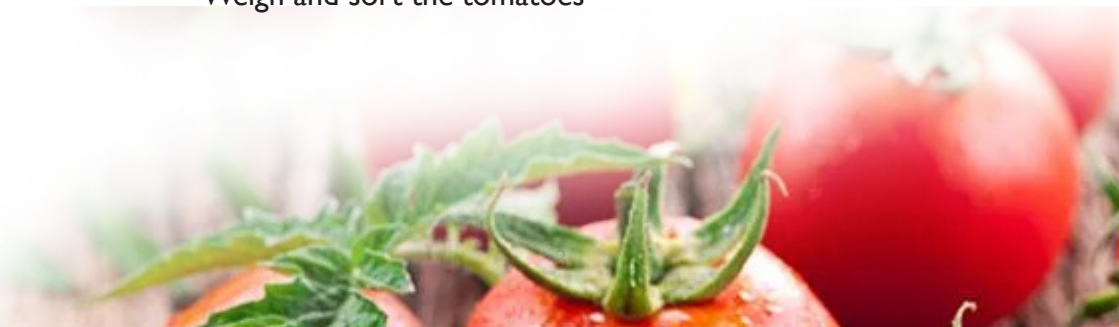
- 5 litres of tomato pulp
- 3g of garlic
- 2g of ginger
- 1.3g of cinnamon
- 0.5g of cardamon
- 0.1g of mace
- 10g of salt
- 0.5ml of apple cider vinegar
- 100g of sugar
- 32g of onion
- 0.5g black pepper
- 0.5g cumin
- 0.1g red chilli powder



*Weighing of tomatoes*

### Procedure

- Weigh and sort the tomatoes



- Wash the tomatoes and put in boiling water for a few minutes to loosen the skin.
- Peel the skin and cut into small chunks



*Sliced tomatoes*

- Mix the tomato pieces, chopped onion, crushed ginger, and garlic, and boil in a covered pan until the mixture becomes soft.
- Strain the mixture through a pulper or soup strainer to obtain pulp.
- Cook the pulp and mix thoroughly to avoid the formation of lumps
- Add sugar and continue cooking until the total



*Blanching of tomatoes for easier removal of peels*



*Cooking of the tomato ketchup*



*Packed and labelled tomato ketchup*

soluble solids (TSS) increase to 28%.

- Add salt and mix well.
- Place all the spices in a cheesecloth to produce spice extract.
- Add the spice extract and remove from the stove. Then, add vinegar.
- Fill the mixture into sterilized, dry bottles.
- Seal the bottles with crown corks and allow them to cool.

### **Uses**

Tomato ketchup is widely used with snacks and ready-to-eat preparations



*Chips with tomato ketchup*

## **Basic Hygiene During Processing**

### ***i. Processing Premises: Spacious to accommodate all required facilities.***

#### **a) Necessary Facilities:**

- Sanitation area: toilets/latrines, changing rooms, handwashing areas, and lunch areas.
- Proper flooring.
- Cleaning stations.
- A floor drainage system.

#### **b) Working Rooms Should Have:**

- Sufficient space to accommodate all processing activities.
- Floors that are easy to clean.
- Walls painted white for easy detection of insects, dirt, and any abnormalities.
- Adequate lighting.
- Temporary storage facilities, including stacked crates for raw materials, shelves for jars, and black airtight containers for dried products.
- Good ventilation to maintain a moderate temperature.
- Windows with insect-proof screens.

### ***ii. Equipment:***

- Equipments should be properly cleaned before and after use.
- Use hot water for sterilizing the equipment.
- Scrub wooden equipment thoroughly.
- Keep all utensils dry by wiping them with a clean cloth and store

them in dust-free places.

**iii. Personal Hygiene:**

- Health certificates should be acquired for commercial purposes.
- Processing should not be done when one is sick or has open wounds.
- Ensure personal cleanliness, including maintaining the cleanliness of the body and clothes.
- Practice good personal hygiene; hands should be carefully washed with soap.





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