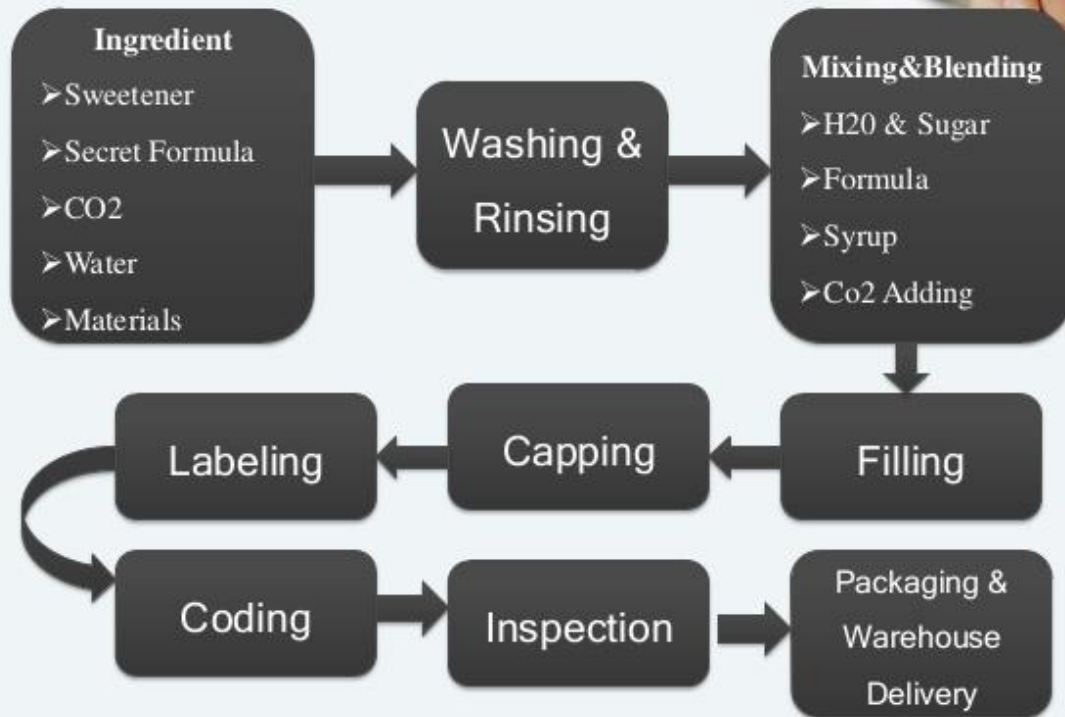
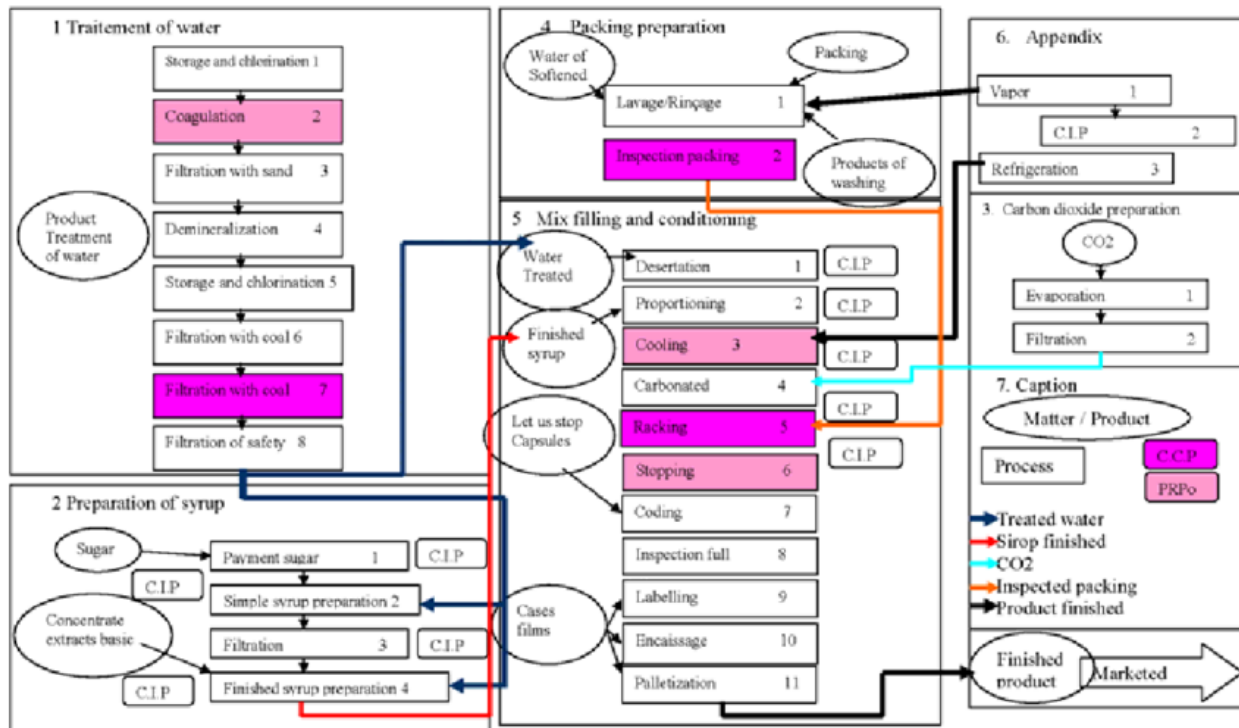
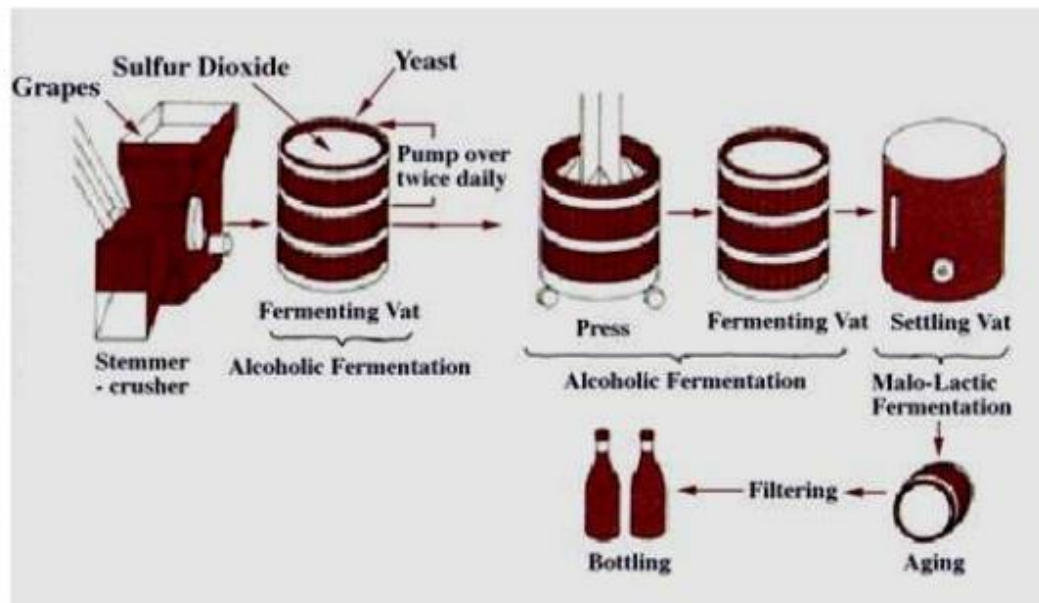


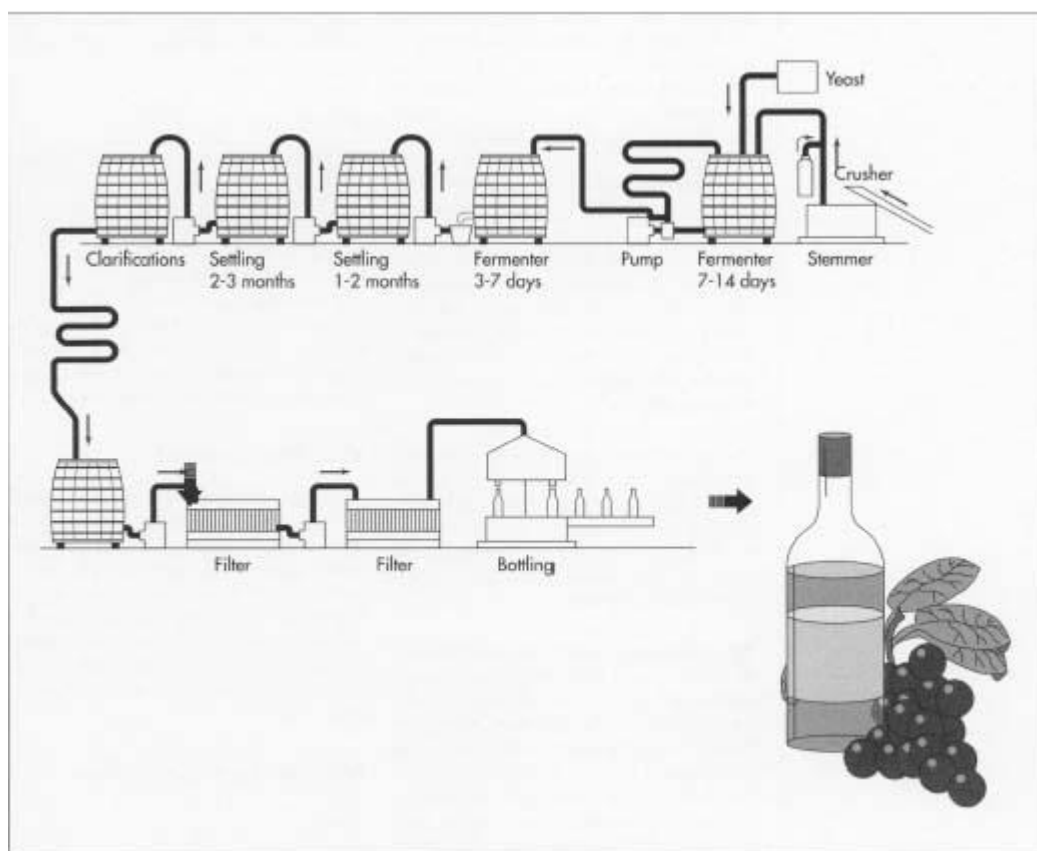
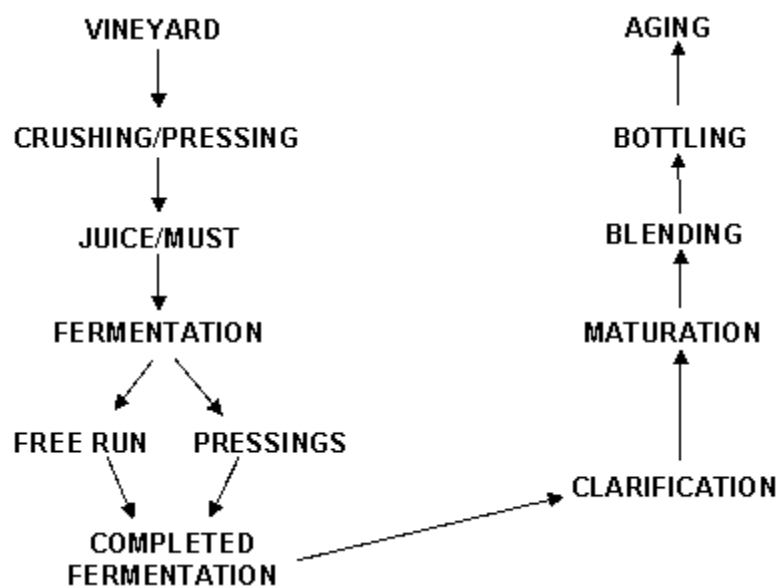
# PRODUCTION PROCESS MODEL

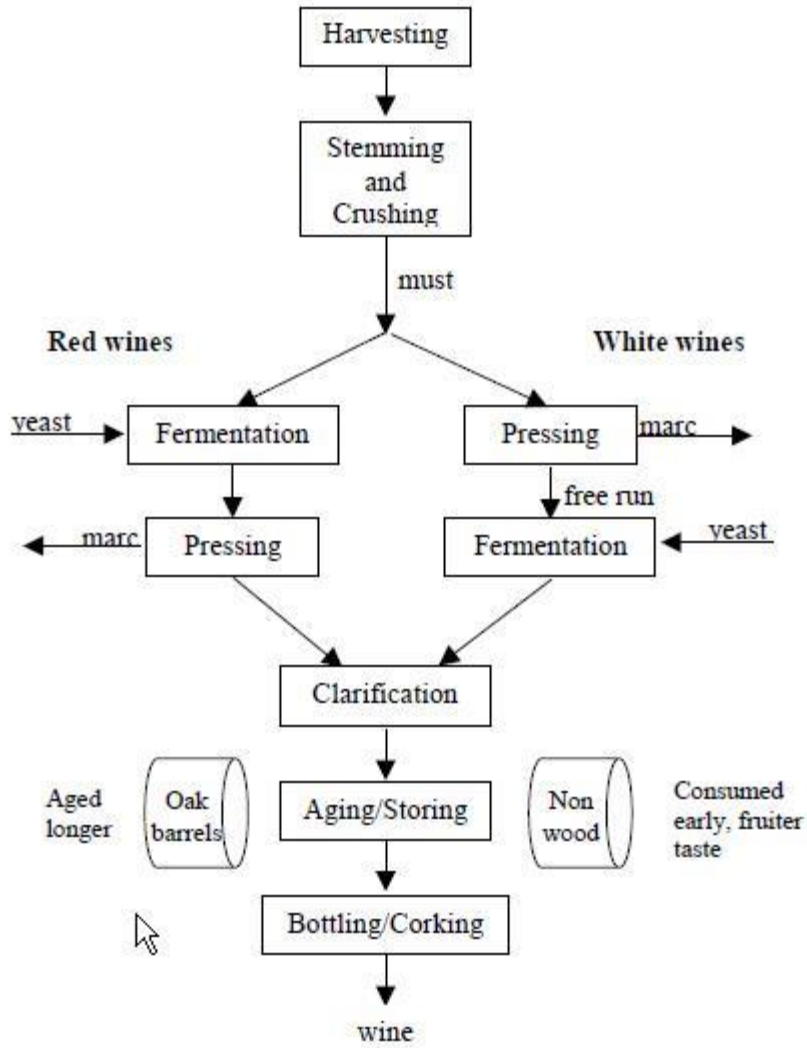




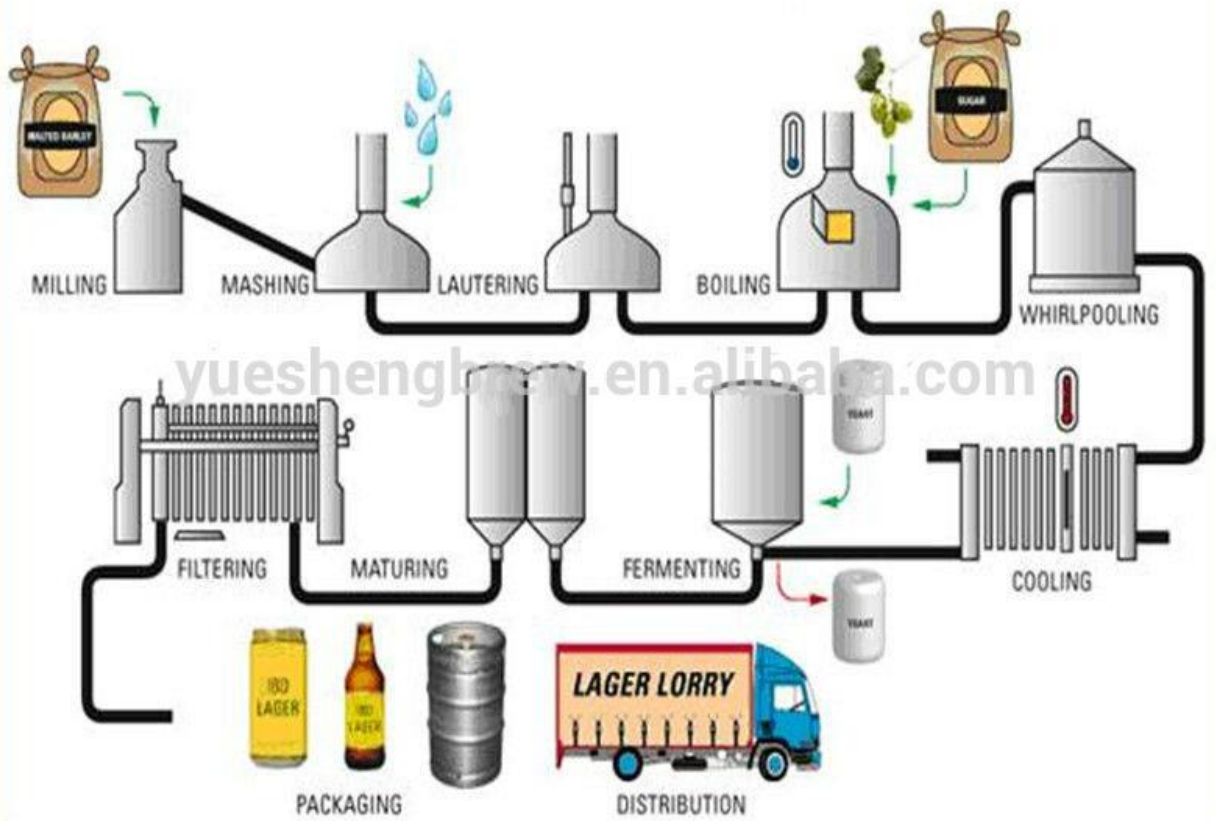
# Wine Production: Process







# THE BREWERY PROCESS

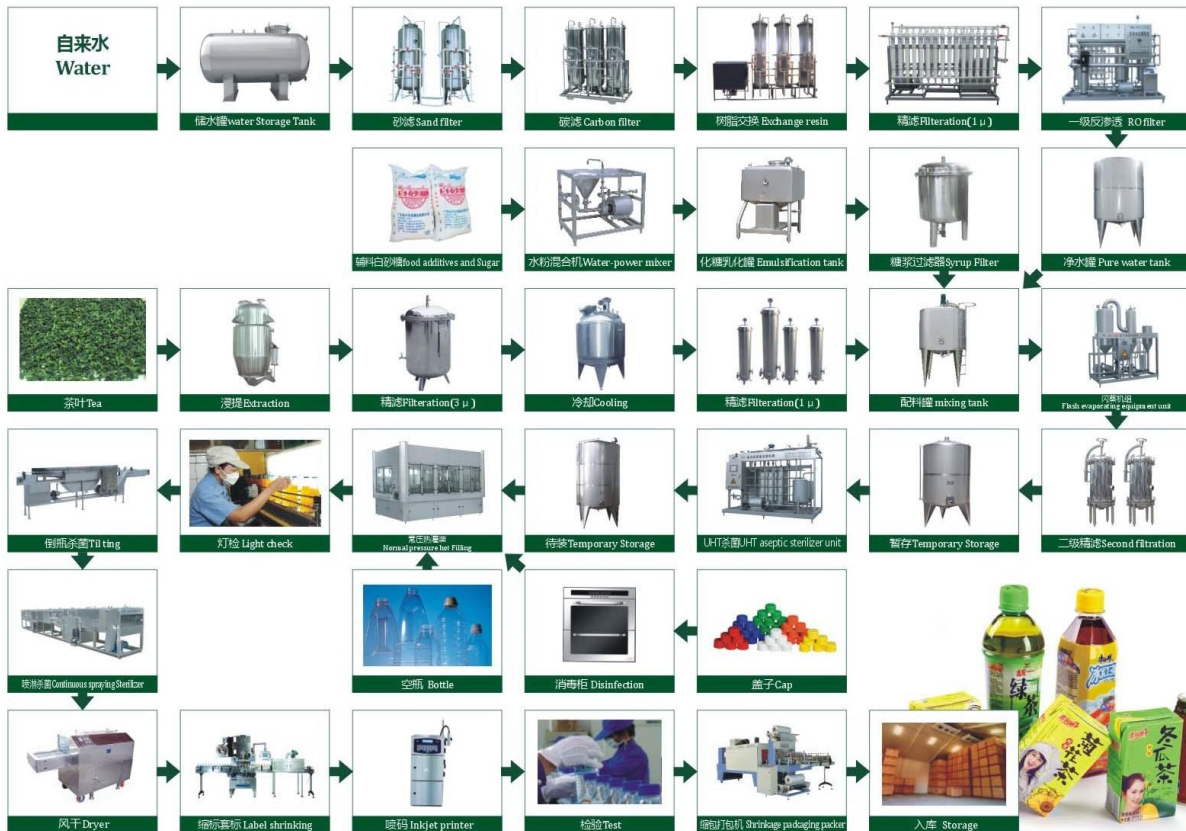


Zoren Hops

# PROCESS FLOWCHART



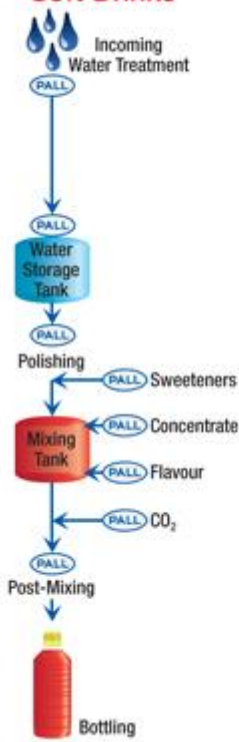
Carbonated Drinks Technological Flow Sheet



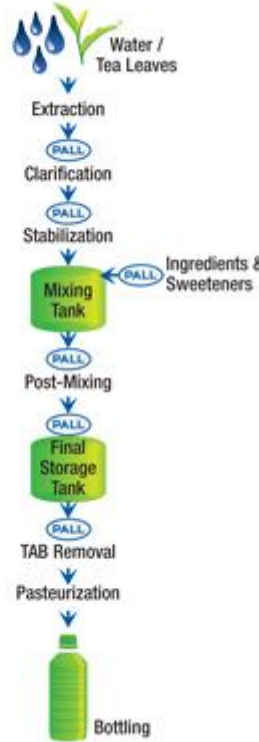
### Bottled Water



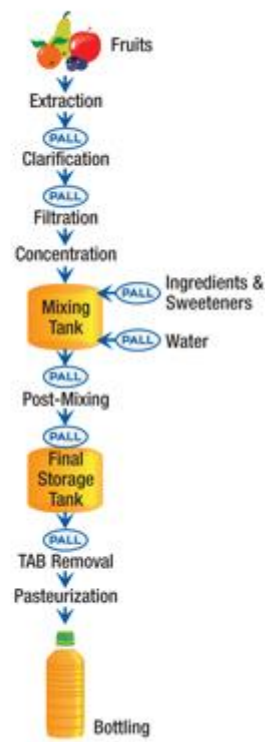
### Carbonated Soft Drinks




### Ready to Drink Tea

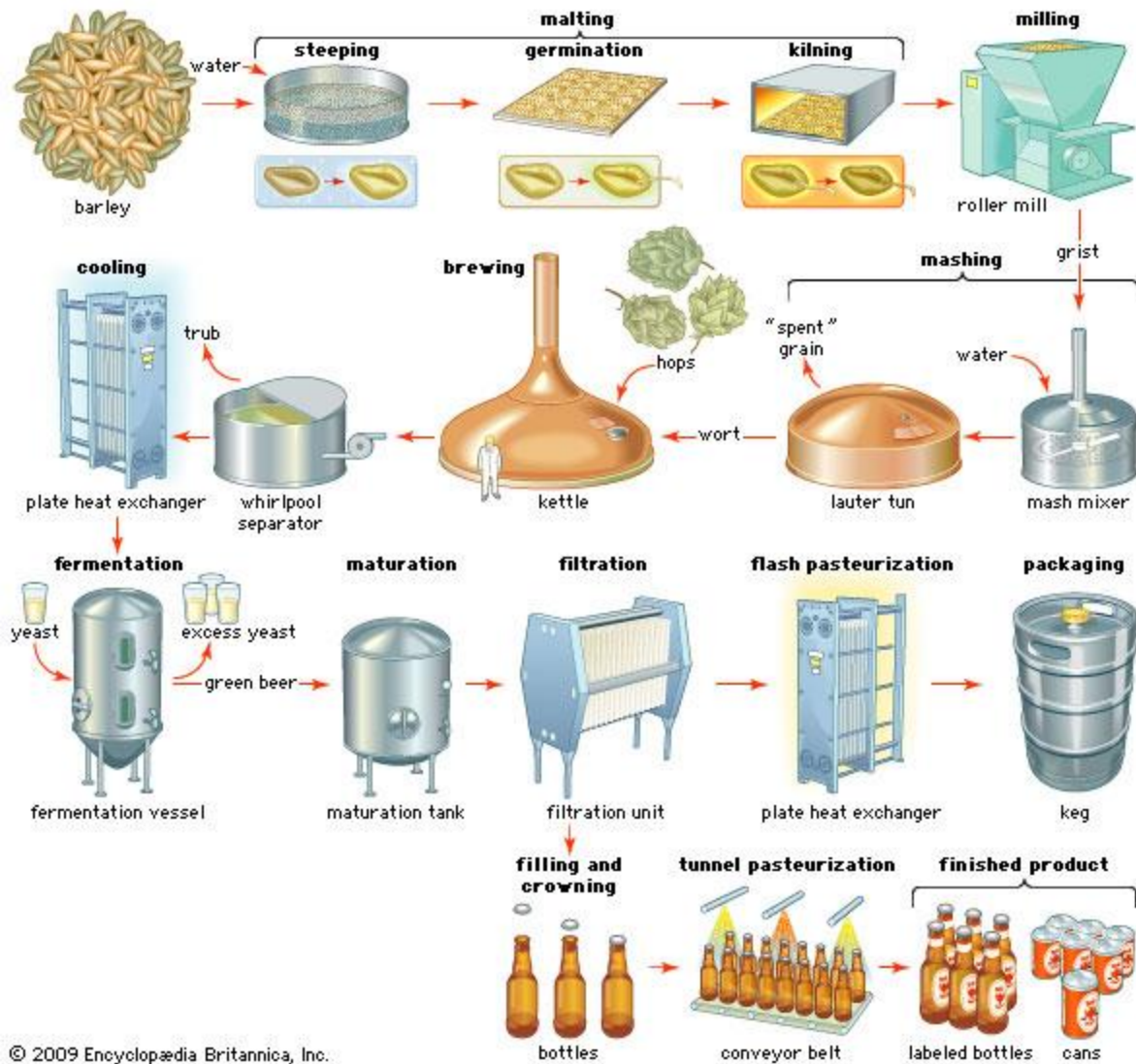


### Fruit Juice



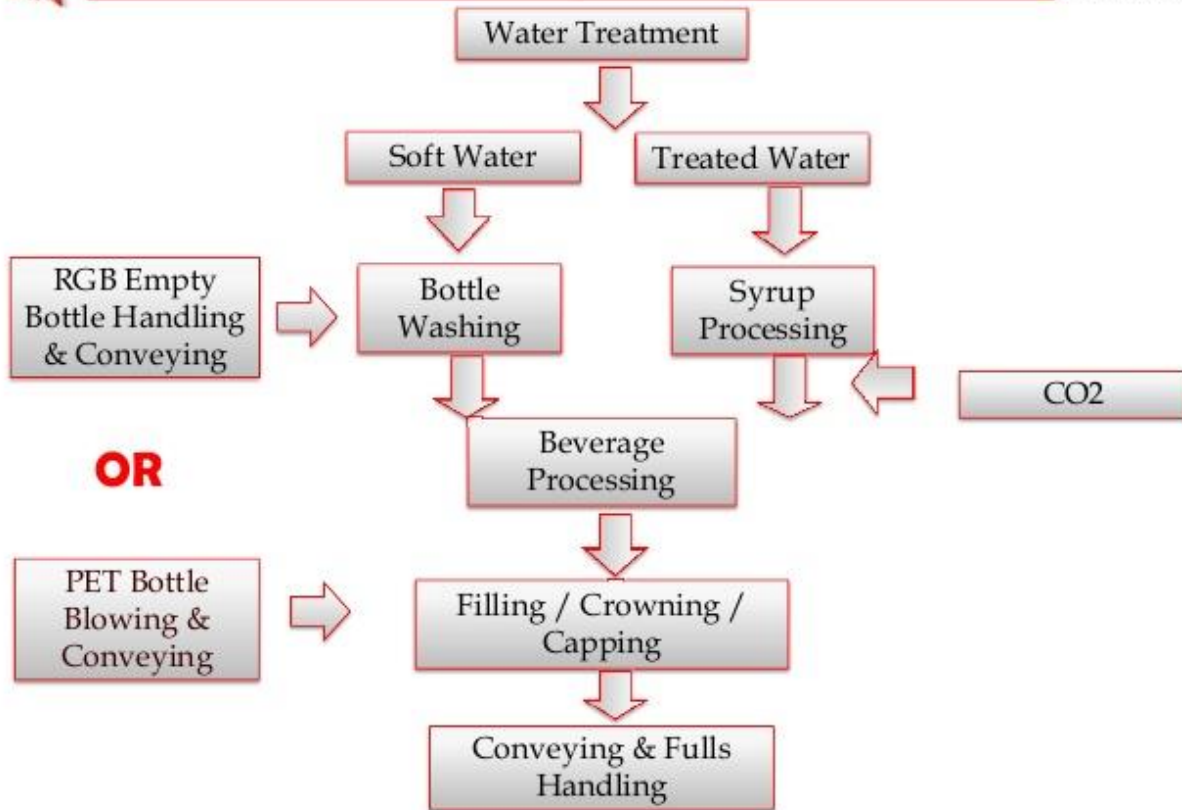
 Pall filtration solution available



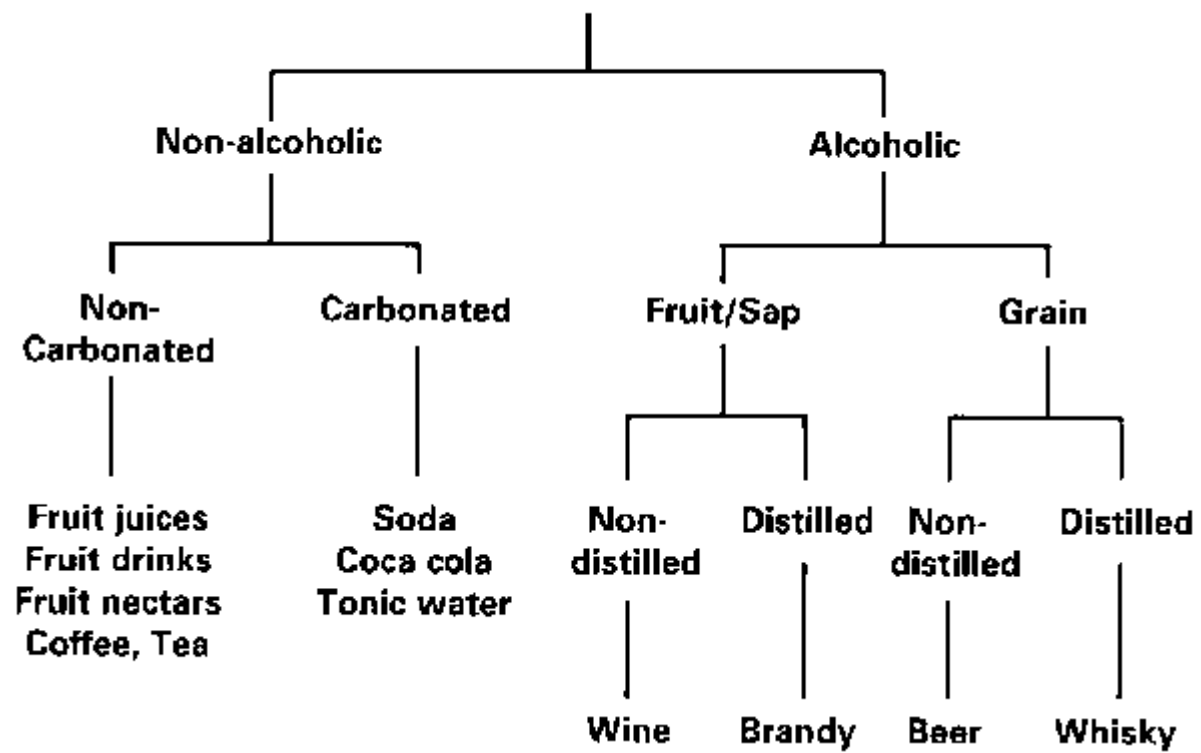


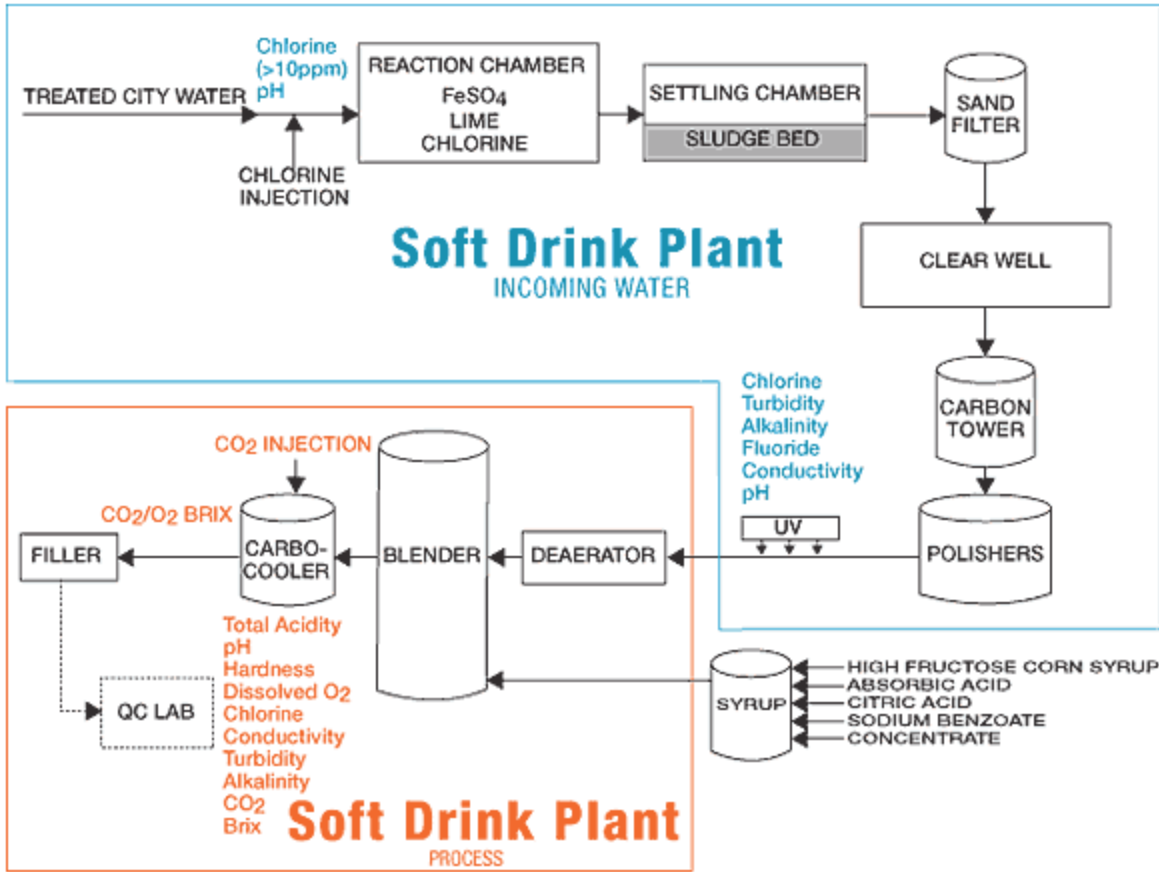


# Process – Over View



# Beverage





## Coca-Cola PlantBottle™

Providing a lead on sustainability through packaging innovation



### WHAT?

#### NEW SUSTAINABLE PACKAGING FORMAT FOR SOFT DRINKS ICON

- › Coca Cola are gradually introducing a new packaging material comprising 30% plant-based sources and 70% recycled plastic (PET polyethylene terephthalate).
- › The new packaging format is 100% compatible with existing recycling scheme.

### WHY?

#### DEMONSTRATING LEADERSHIP IN SUSTAINABLE PACKAGING DEVELOPMENT

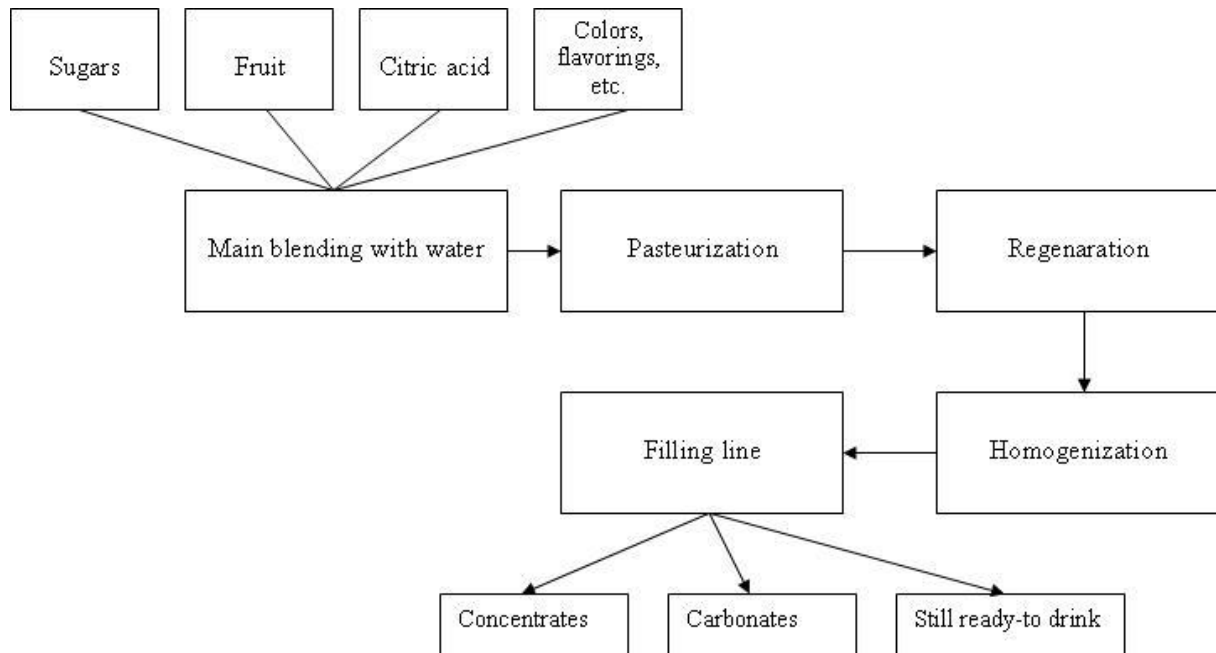
- › The product taps into consumer demand for sustainable packaging solutions.
- › Emphasis on renewable resources and commitment to recyclability demonstrates a holistic approach to overall issue of sustainability.

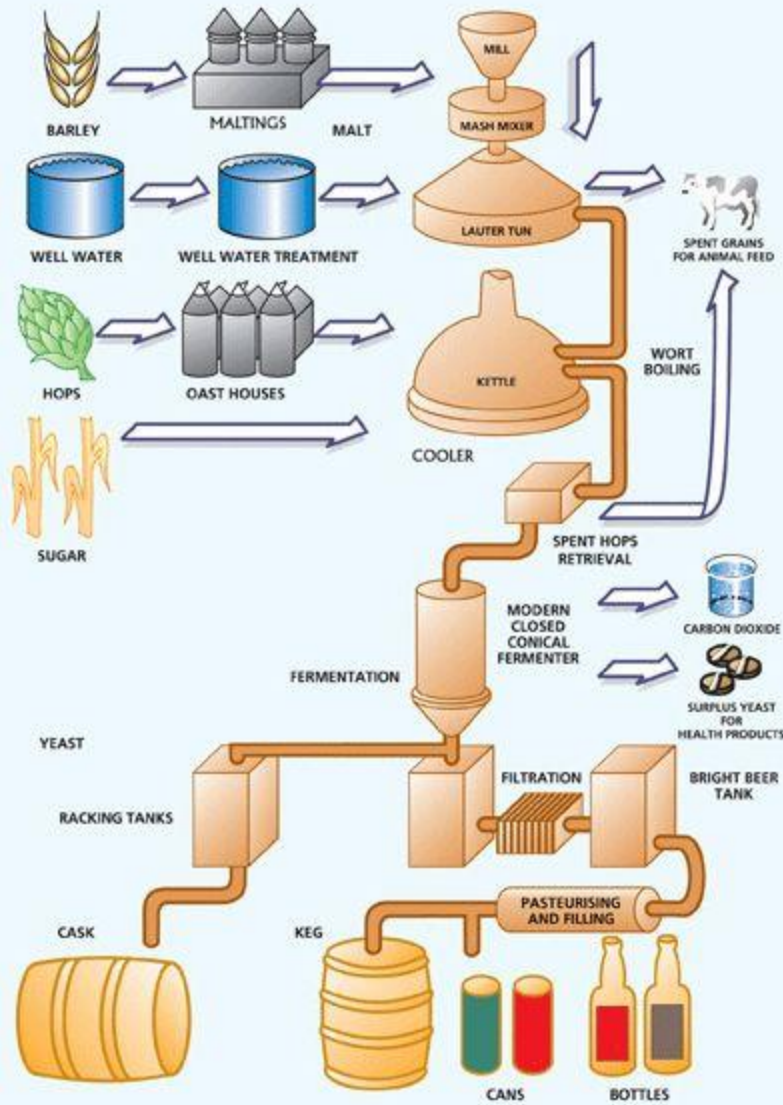
### TAKE-OUT

#### PACKAGING CAN SYMBOLIZE CORPORATE INTENT

- › A combination of innovative packaging technology and effective marketing can act as a potent symbol for a company's whole approach to sustainability.

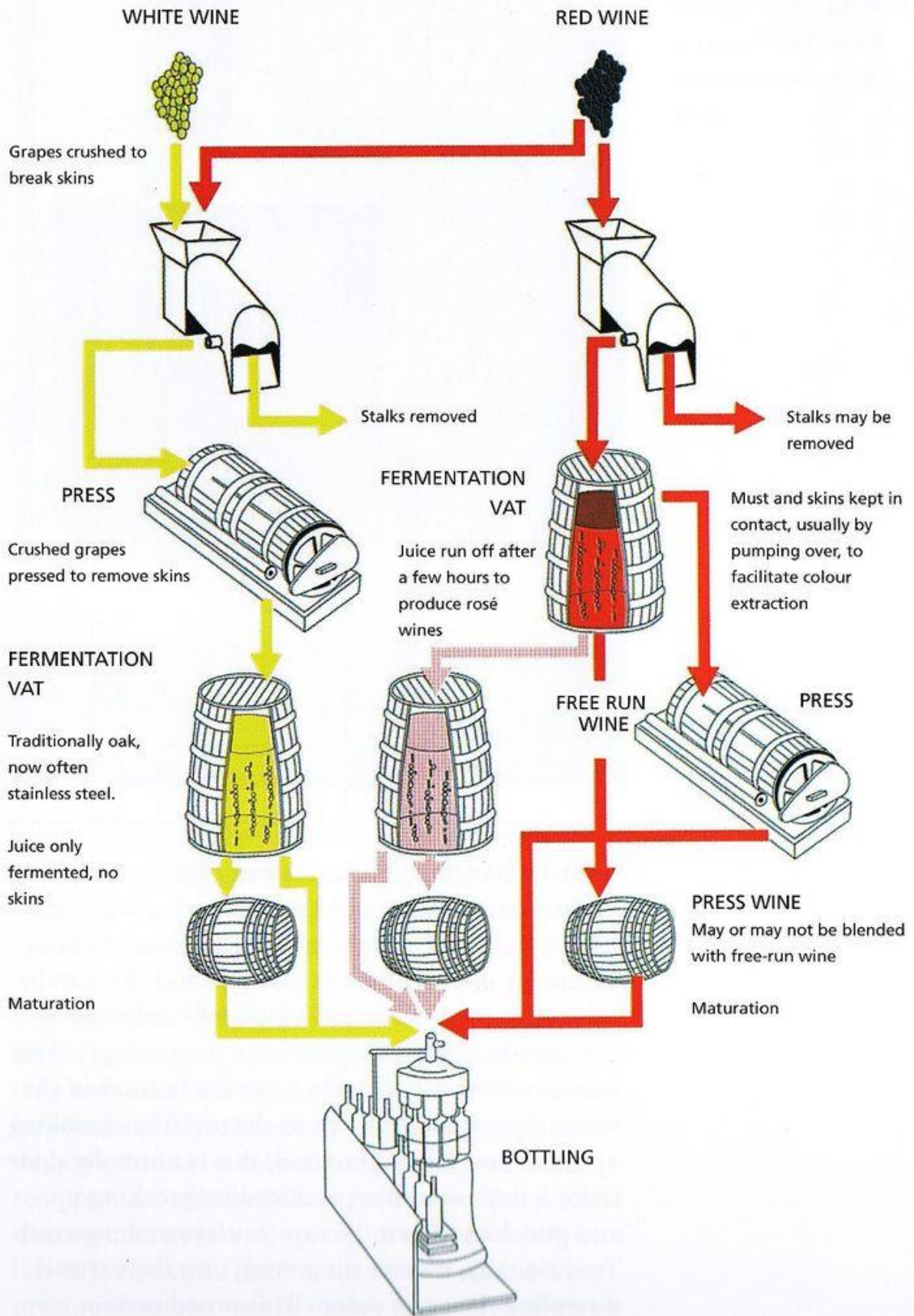






**The Brewing Process**

# The winemaking process



# The Basic Process of Whiskey Making



## 1 Preparation

Various grains are ground and cooked. Barley is malted, a process of soaking the barley and spreading it for about three weeks, allowing it to sprout, and drying and heating it.



## 2 Mashing

The cooked grain and malted barley are added to warm water, which converts into a liquid known as mash.



## 3 Fermenting

The mash is added to a fermentation tank, along with yeast. The yeast converts the sugar to alcohol. After three or four days, the resulting liquid is about 10% alcoholic and is known as distiller's beer, or wash.



## 4 Distilling

The wash is heated to the point where the alcohol turns to vapor, but the water remains liquid. The alcohol is then collected in a second container. This process is repeated to produce "high wine" or "new whiskey."



## 5 Aging

Water is added to the high wine, which is then aged in wooden barrels, usually made from charred white oak. Here the whiskey ages at least three or four years, and some are aged up to ten or fifteen years.

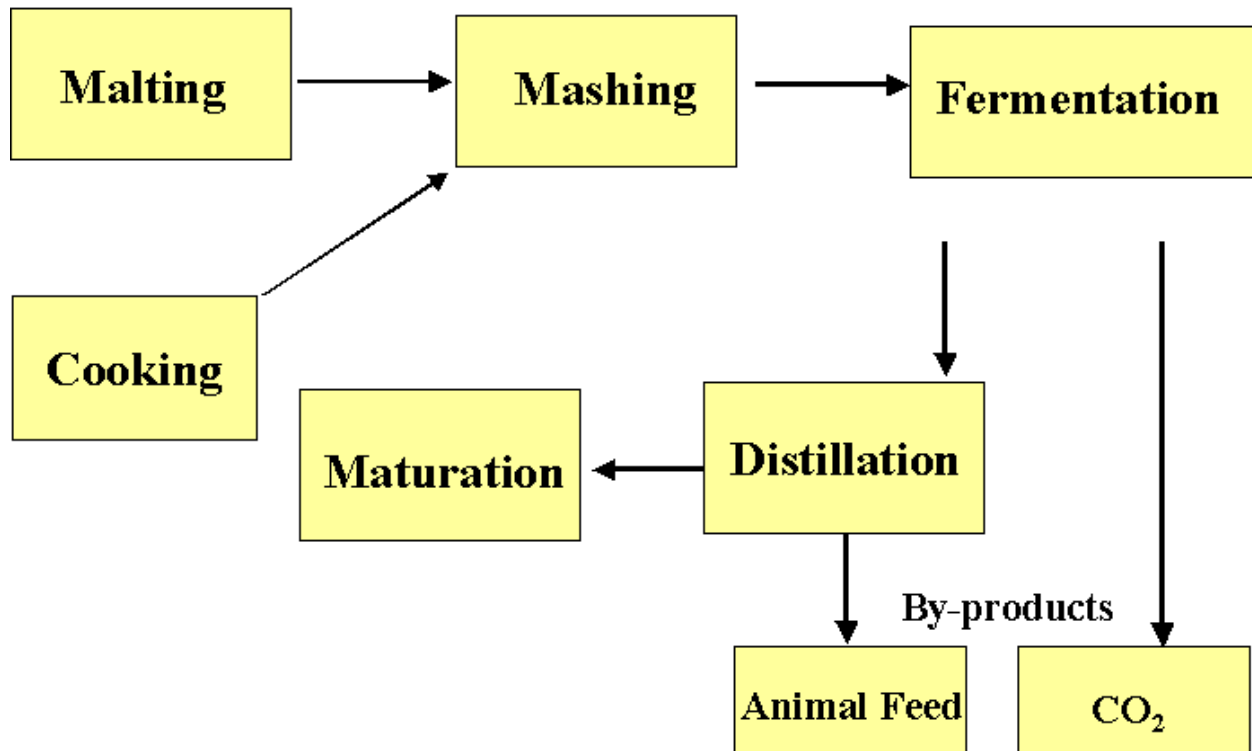


## 6 Bottling

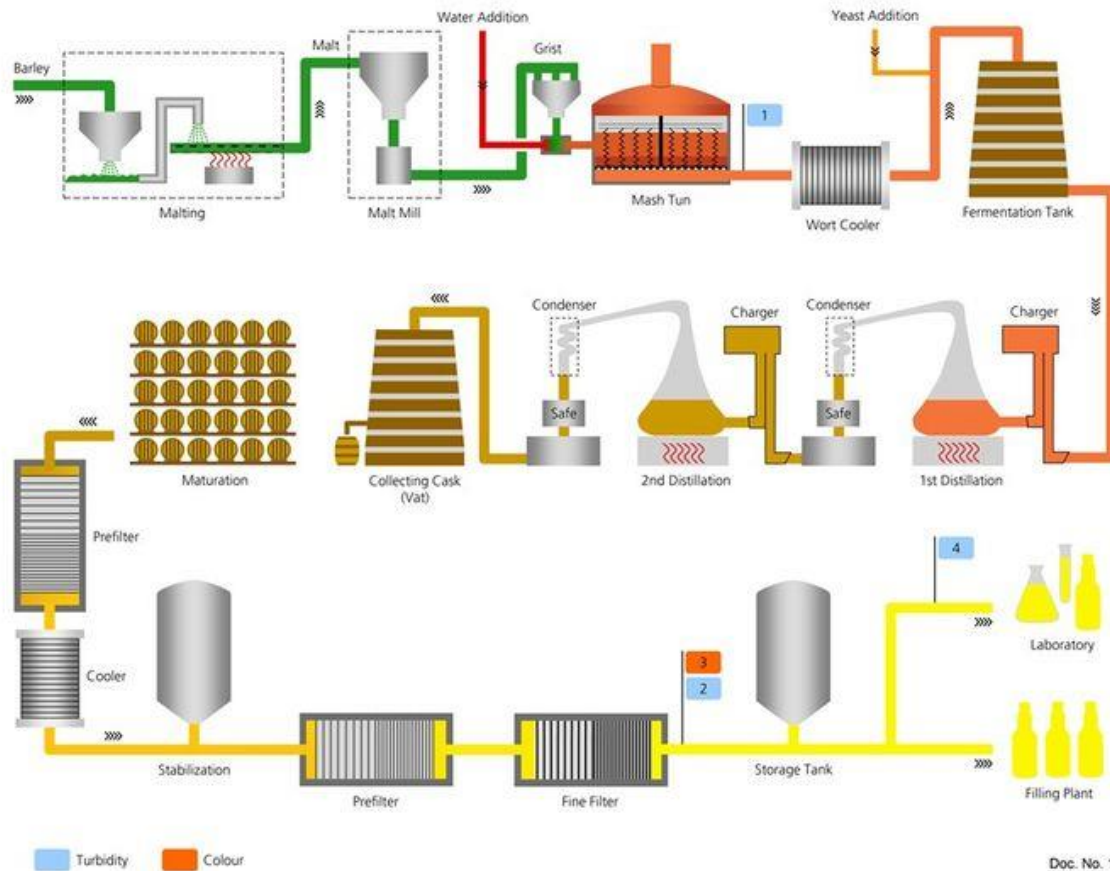
The resulting whiskey is stored in glass bottles, which do not react with the whiskey's flavor.

## Process Flow Diagram

### Scotch Grain Whisky Production

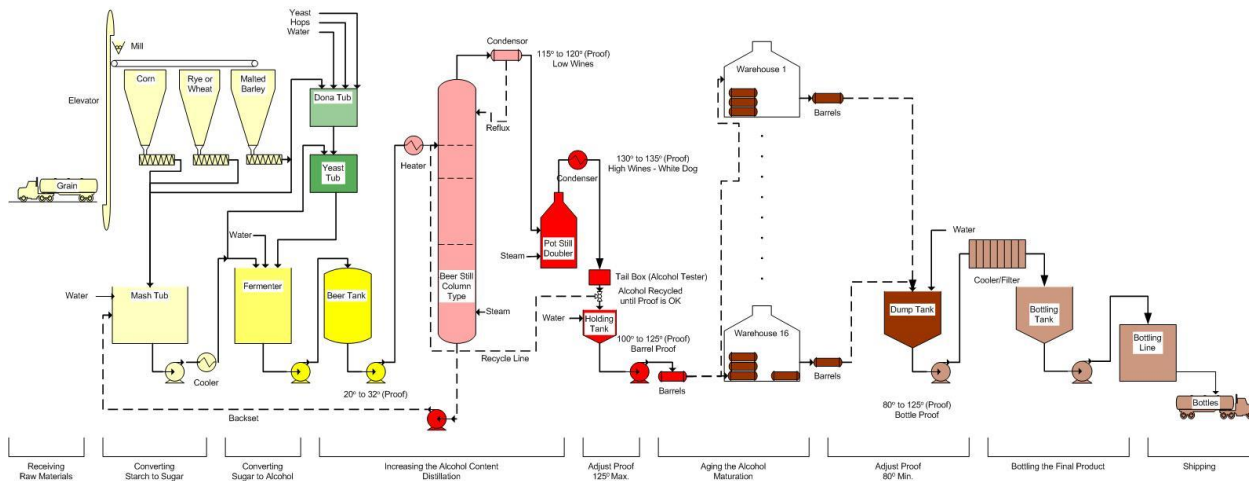




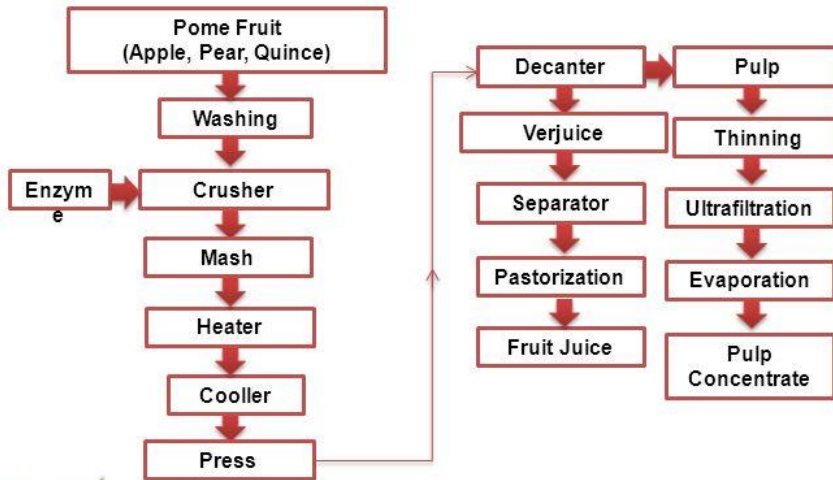


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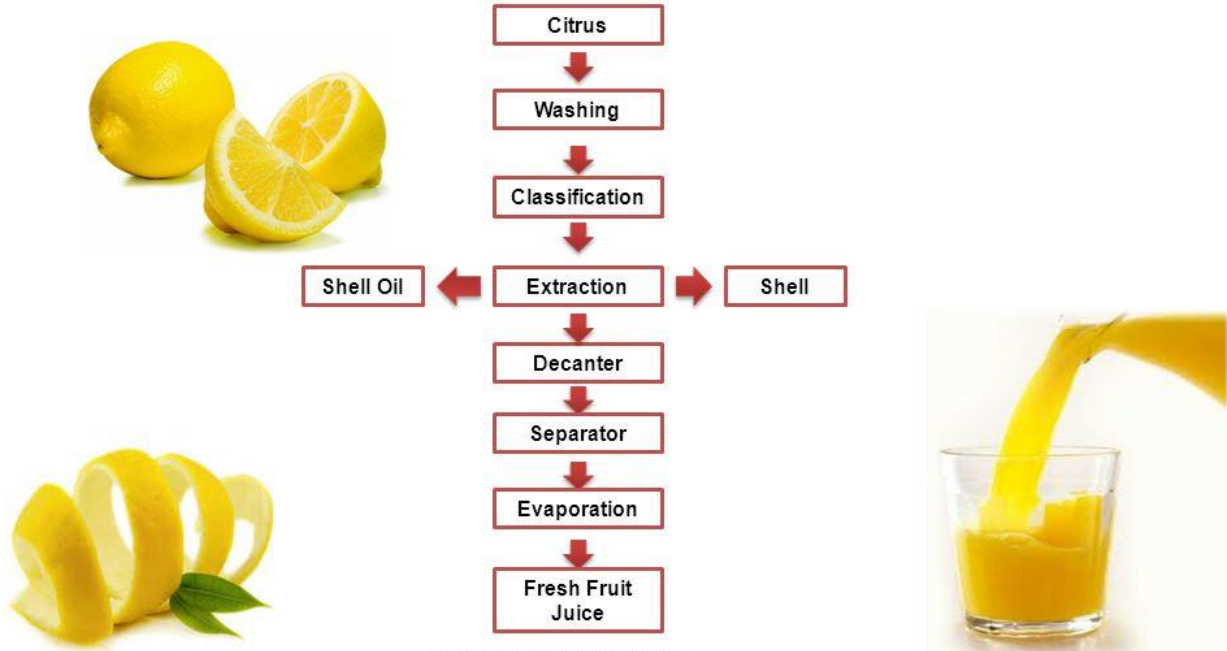
## POME FRUIT PROCESSING



Flow Chart 4. Pome Fruit Processing



## CITRUS PROCESSING



Flow Chart 2. Citrus Processing



## Orange juice



Some OJ isn't 100% juice. It may contain high-fructose corn syrup, artificial flavors and colors, and added sugar.



Fiber helps us feel fuller longer.



Juice—especially **without pulp**—does not have the same levels of fiber, phytochemicals, and antioxidants as whole fruit.

### MAKE IT BETTER:



Add **orange slices** to water for a refreshing beverage without all the sugar.

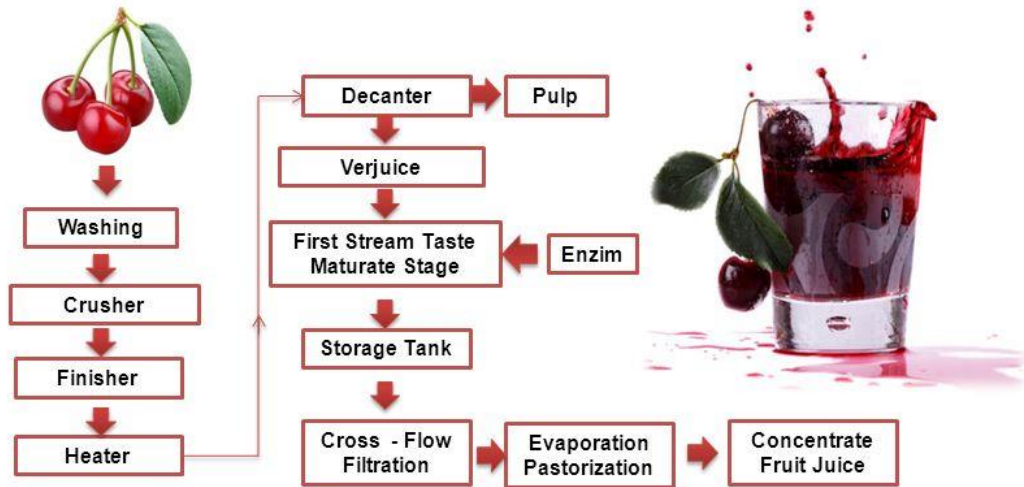


Have a **whole orange** instead.



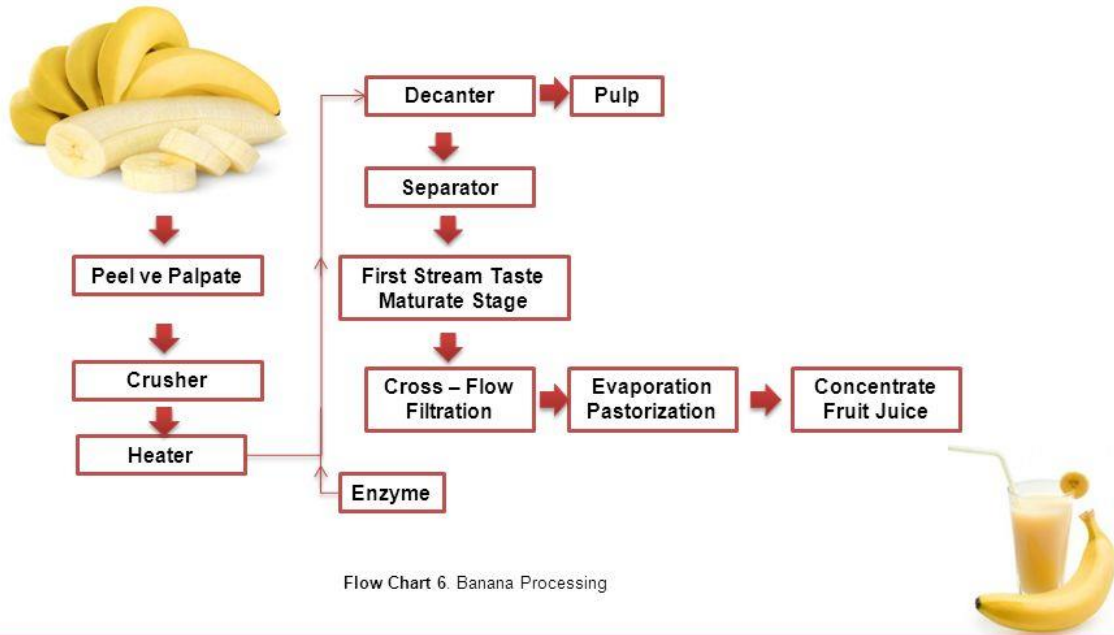
If you do purchase OJ, check the label and make sure it is **100% juice** without any additives.

## CHERRY PROCESSING



Flow Chart 5. Cherry Processing

## BANANA PROCESSING



Flow Chart 6. Banana Processing

## FRUIT JUICE PROCESSING

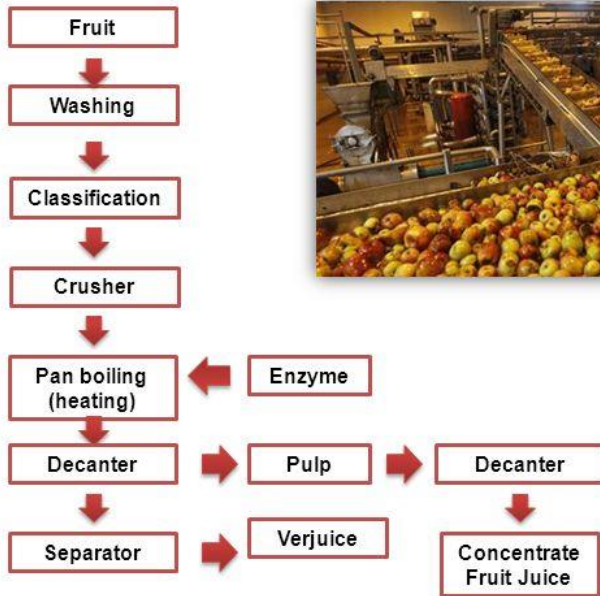
**Pressing:** receiving the fruit juice from the mash resulting from the enzymatic reaction is carried out by pressing method.

**Centrifuge and Decantation:** Fruit juices from the press is blurred. According to the density difference, artificial centrifugal force separation process is provided. Solid particles (sediment) from fruit juice is separated.

**Clarification and Ultra filter:** To reach crystal clear the solid particles in suspension causing turbidity and colloidal particles are removed with the aid of filter. By adding aromas and regulatory becomes ready for sale.



## FRUIT JUICE PROCESSING



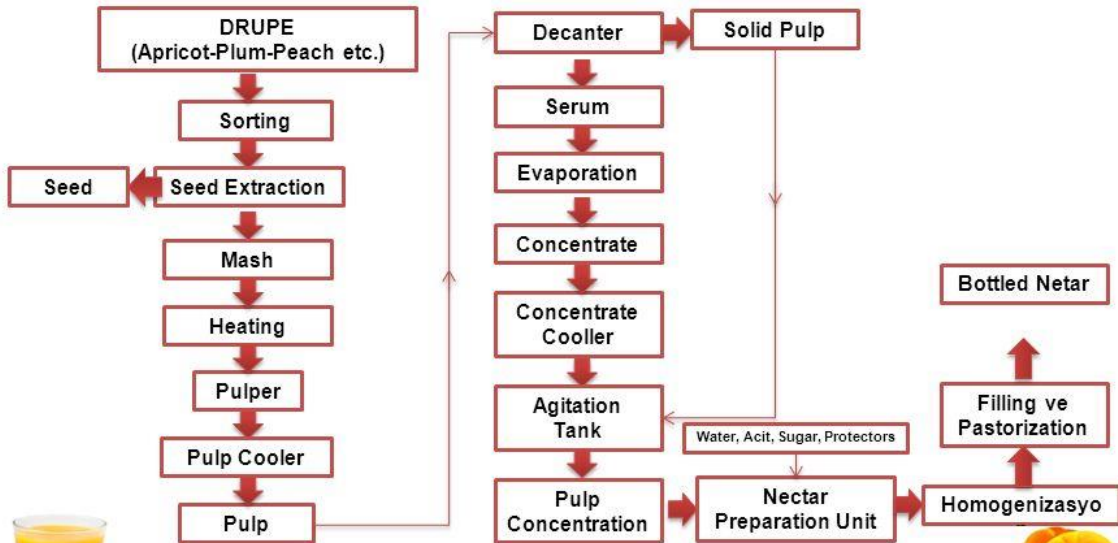
Flow Chart 1. General Fruit Juice Processing



# Mango Juice Process



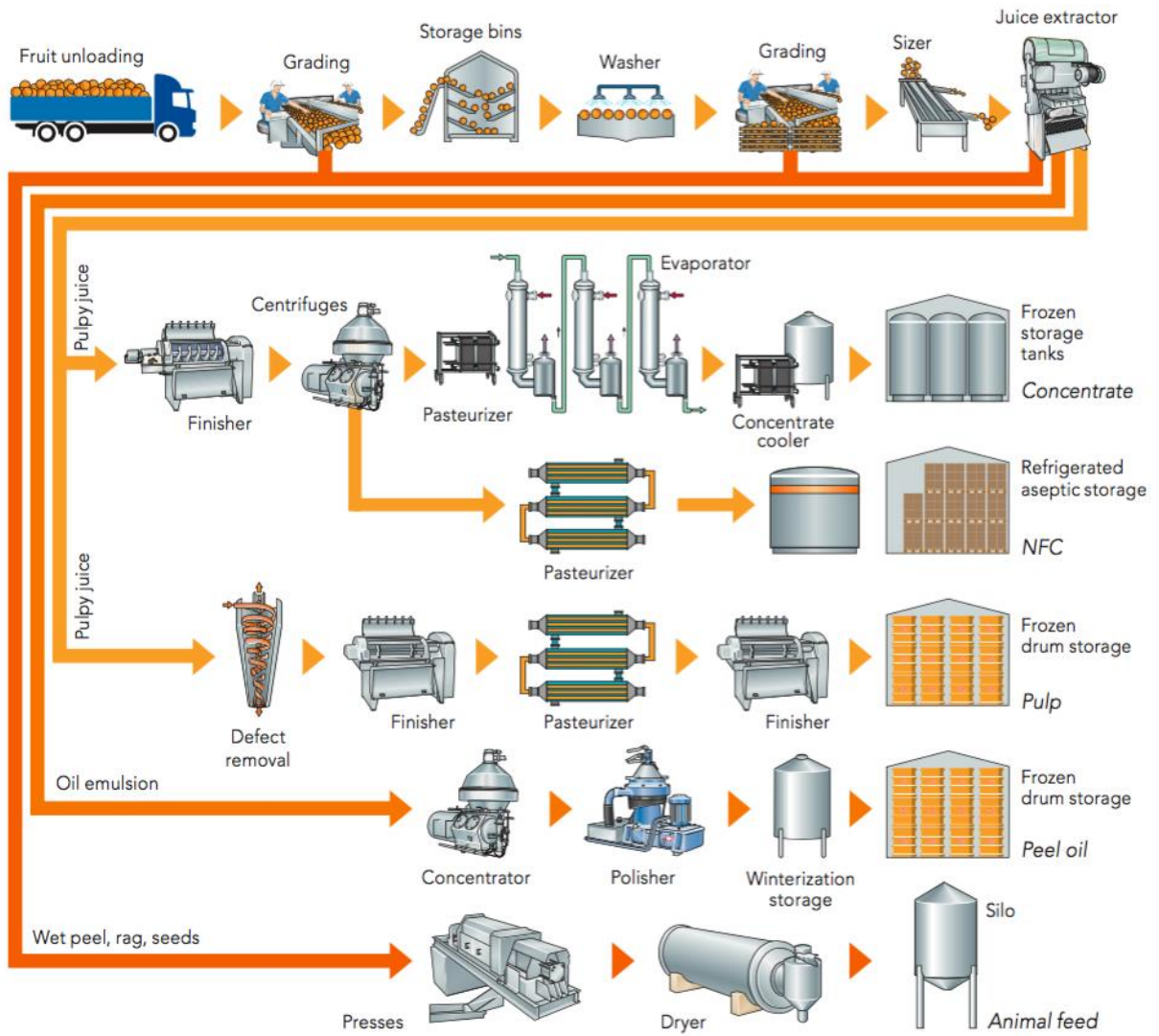
## DRUPE PROCESSING

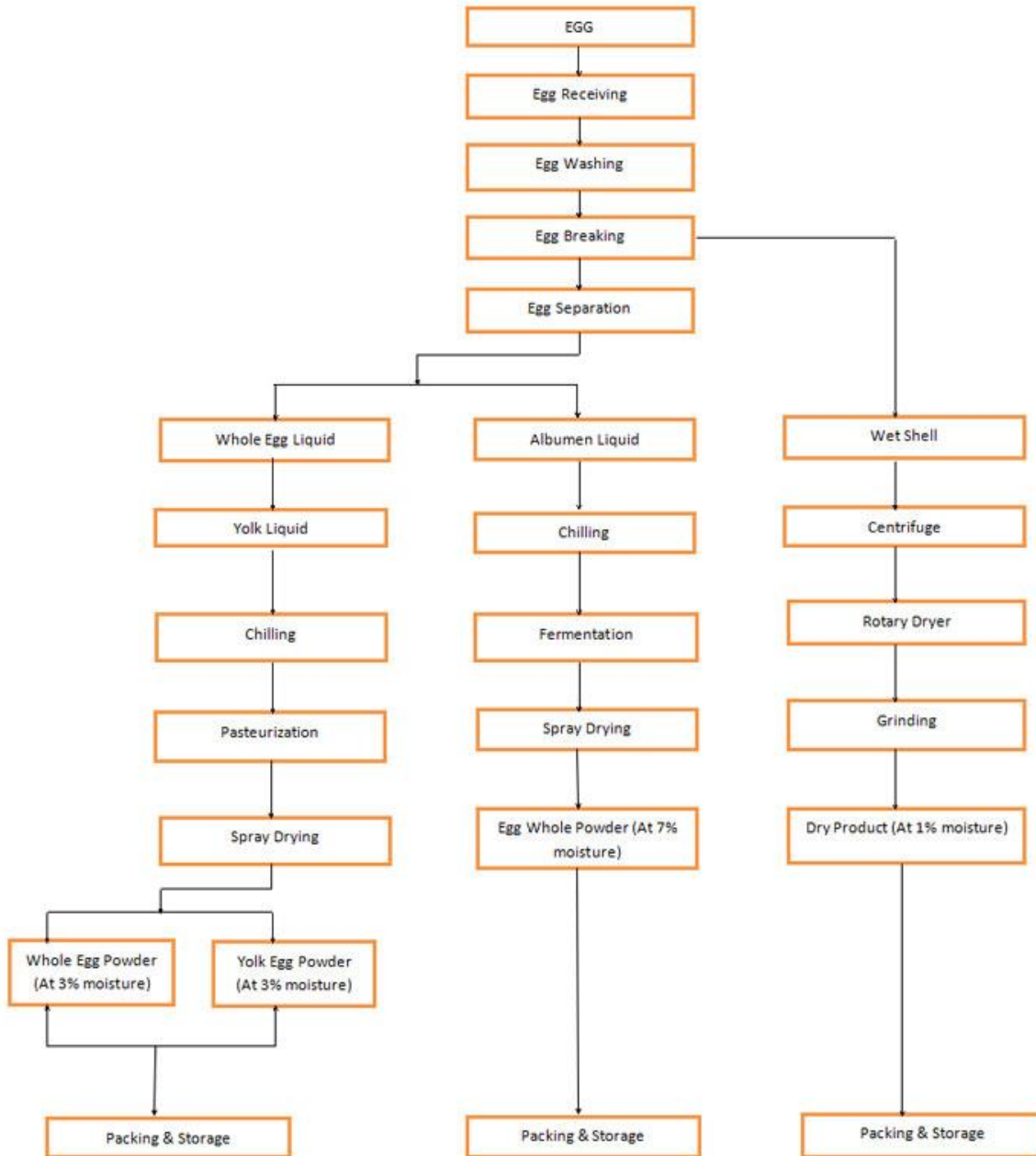


Flow Chart. Drupe Processing

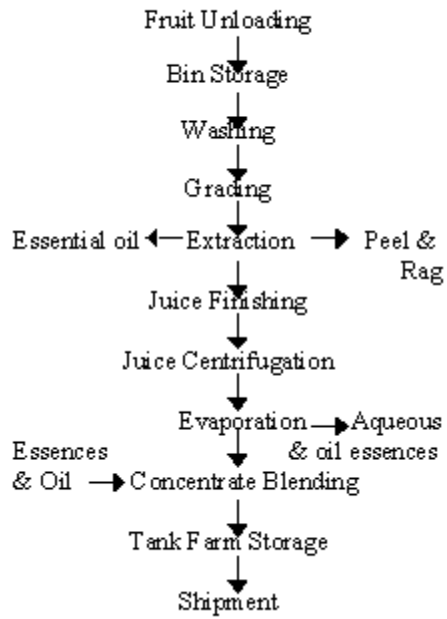


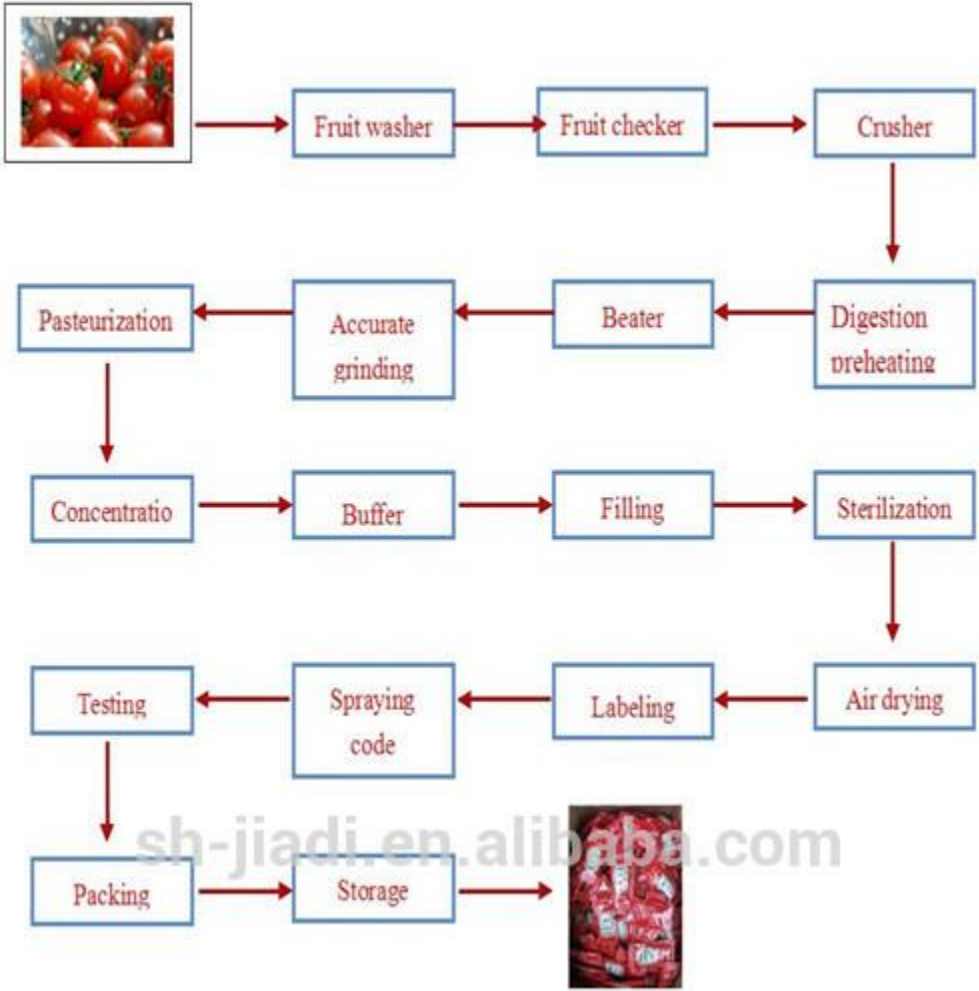
Type of juice	Preliminary processing	Mixing with other juices	Usual preservation
Apples	Grinding, pressing, centrifugation, enzyme clarifying, filtration	It is not usual	<ul style="list-style-type: none"> <li>- Pasteurization</li> <li>- Under CO<sub>2</sub></li> <li>- Sterilization filtration</li> <li>- Concentration by evaporation</li> </ul>
Pears	As for apples	Apple juice (1:1)	- Pasteurization
Raisins	Debunching, optional heating at about 60°C, pressing, detartration, optional enzyme clarifying, filtration	Mix of juices of different varieties	As for apples
Quinces	As for apples, with "sticking" after enzyme clarifying	Apple juice	- Pasteurization
Cherries	Partial crushing, optional heating (65°C), centrifugation, filtration	Mix with sugar (5-10%) or with apple juice	- Pasteurization
Prunes	Crushing, enzyme treatment, diffusion at 85°C (ratio prunes/water 2/1), pressing, mix of liquids, filtration	Mix with 5% sugar	- Pasteurization



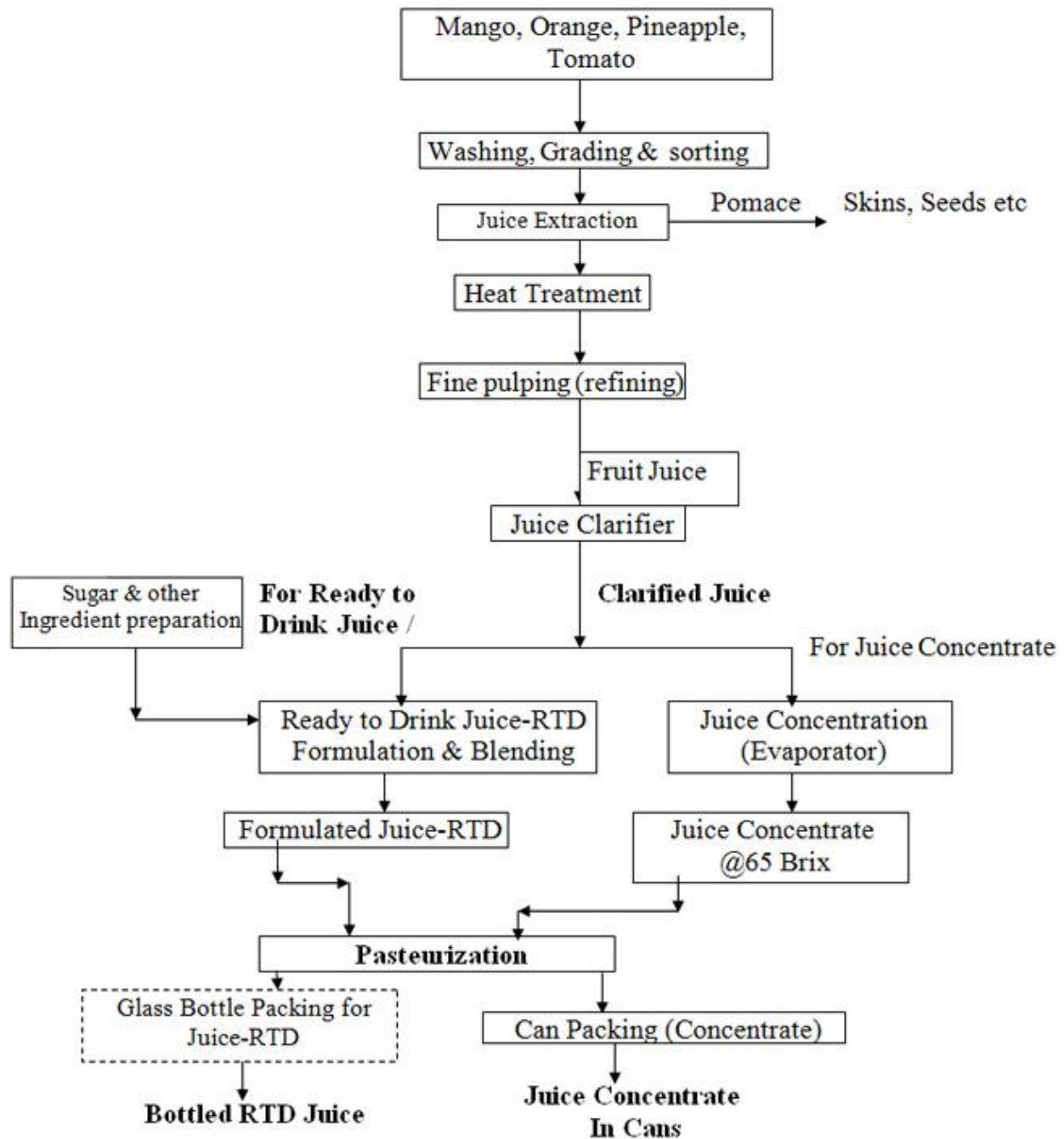


### Process Flow





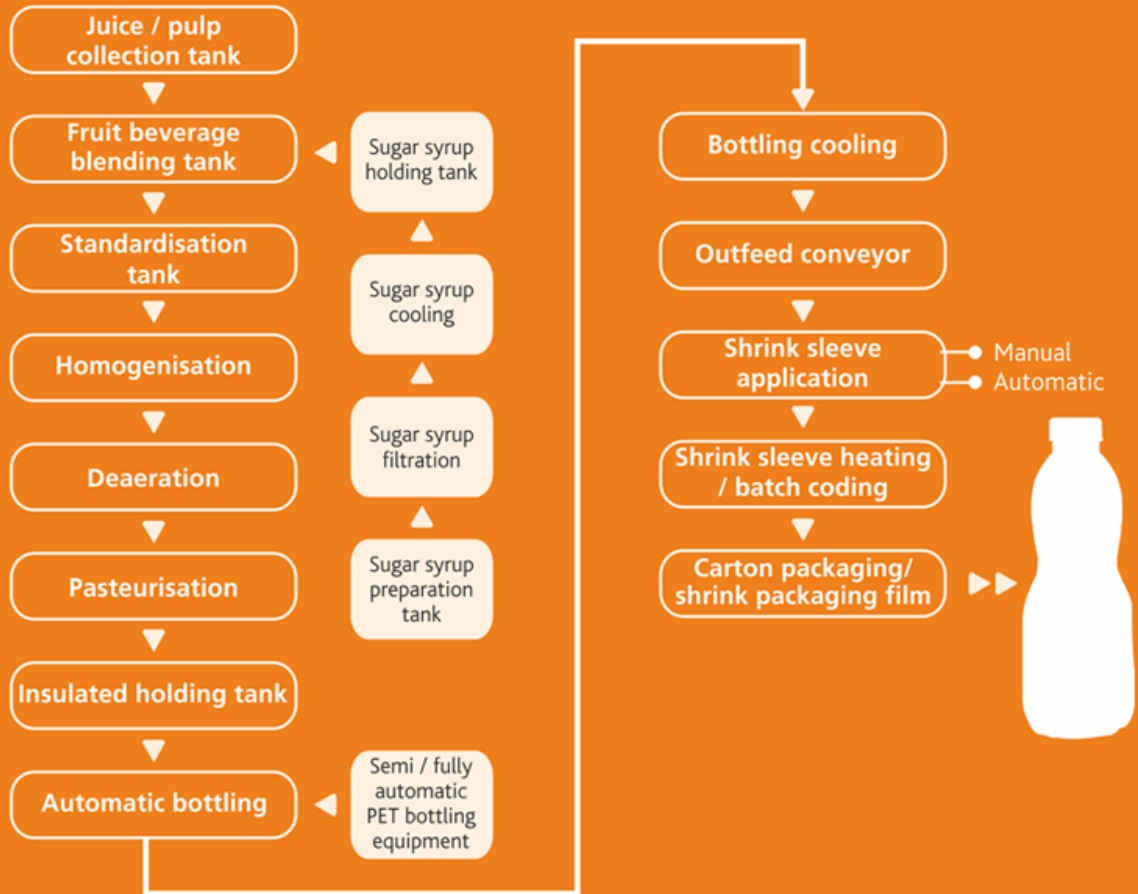
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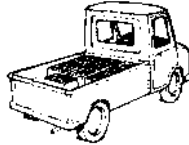

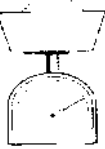


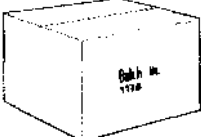




# Process Flow

Fruit / juice beverage plant



STAGE	PROCESS ACTIVITY	CONTROL POINT
<p>Raw material growth and harvest</p> 	<p>Liaison with farmers, pick fruit and load it into boxes or purchase from markets.</p>	<p>Specifications of fruit quality required. Training of pickers and handlers to minimise damage to fruit. Use of correctly designed boxes. Rejection of damaged or rotten fruit.</p>
<p>Raw material transport</p> 	<p>Transport in boxes to processing unit.</p>	<p>Control of fruit temperature by use of water, shade or covers. Correct stacking and handling to minimise damage. Reduce delays and minimise journey time.</p>
<p>Raw material inspection and preparation</p> 	<p>Record amount and quality of fruit received. Sort fruit, wash and peel/slice as required for the specific product.</p>	<p>Setting of acceptable standards for incoming fruit. Training in correct sorting, preparation and recording procedures and management to ensure procedures are implemented. Accurate slicing to required sized pieces. Operator hygiene and plant hygiene. Water chlorination. Regular disposal of waste.</p>
<p>Ingredient formulation/batch preparation</p> 	<p>Weigh and mix ingredients.</p>	<p>Training in accurate weighing and keeping records of ingredients used.</p>
<p>Processing</p> 	<p>Part-processing if fruits are to be stored for later use. Heating, drying, pickling etc to make the required product.</p>	<p>Preparation of processing schedules and training of operators to ensure: - control of temperature and time of heating or drying, - correct amounts of ingredients added at the correct time in the process. Establish standards for operator hygiene and schedules for cleaning of equipment and processing room.</p>
<p>Packaging</p> 	<p>Fill product into packages, seal and label. Pack into distribution boxes.</p>	<p>Establish specifications for package quality (especially glass containers), labels and fill-weights. Implement inspection, check-weighing and recording procedures.</p>
<p>Storage and distribution</p> 	<p>Store finished product. Dispatch products in required amounts to retailers or customers.</p>	<p>Control store-room temperature and implement cleaning schedule and stock rotation procedures. Ensure records are kept. Establish inspection and recording procedures to ensure that customers receive the correct product in the amount specified.</p>

