



Puree' and Juice Production

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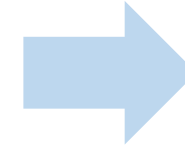


Juice vs Puree'

Squeezing and
extraction



Pomace



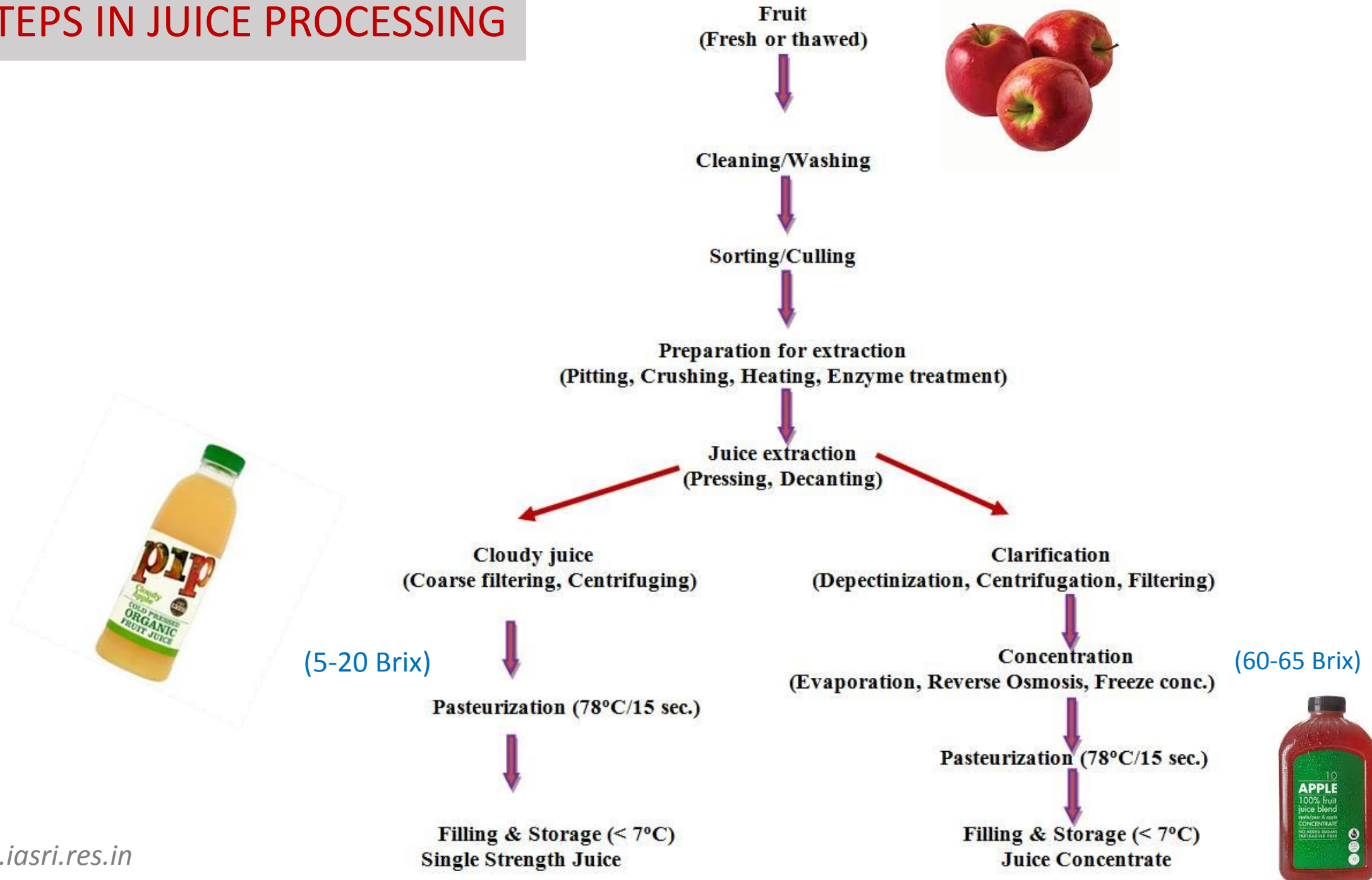
Crushing



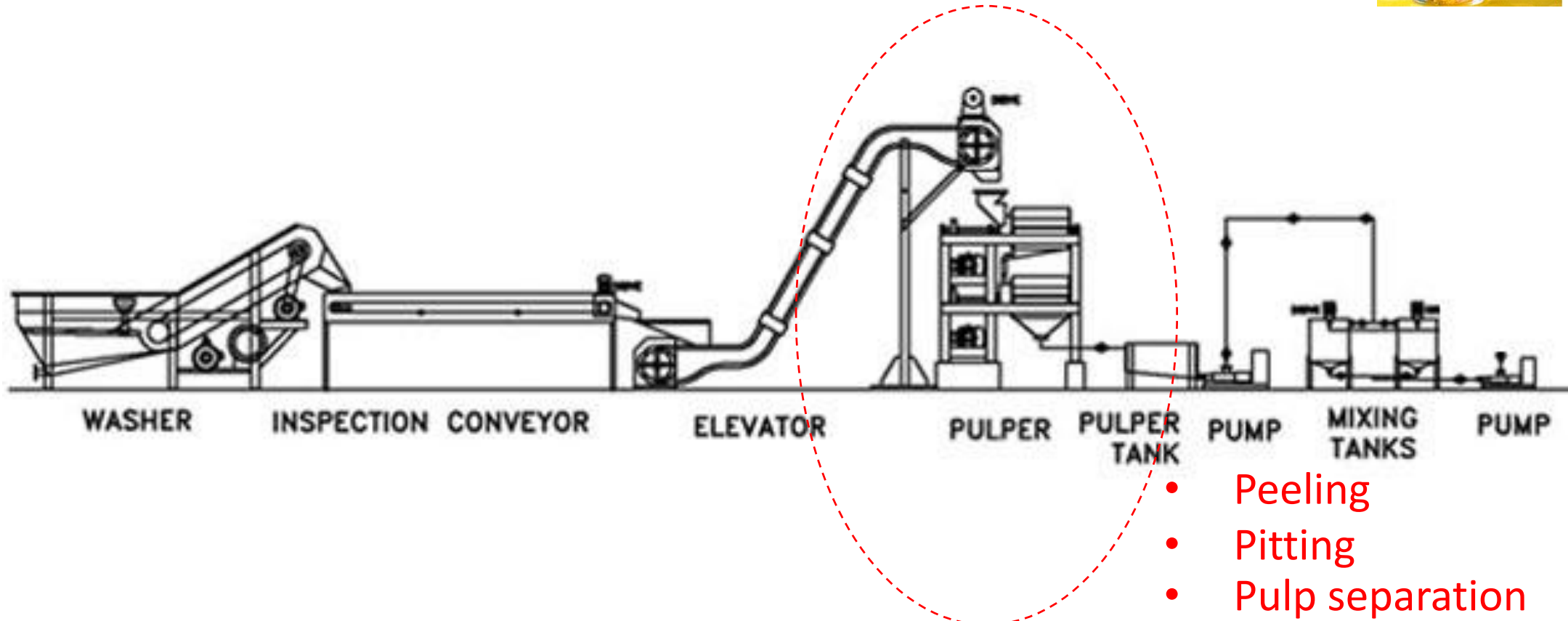
Fruit juice is the liquid that can be obtained from a fruit.

Puree is a fruit or vegetable that has been cooked, ground, pressed, blended or sieved until it reaches the consistency of a creamy paste or liquid.

GENERAL STEPS IN JUICE PROCESSING



Juice and Puree' Processing Line



<http://www.fruitjuicemachinery.com/product/mango-juice-processing-line.html>

Main Equipments of Mango Juice Production Line

Fruit Sorting Machine



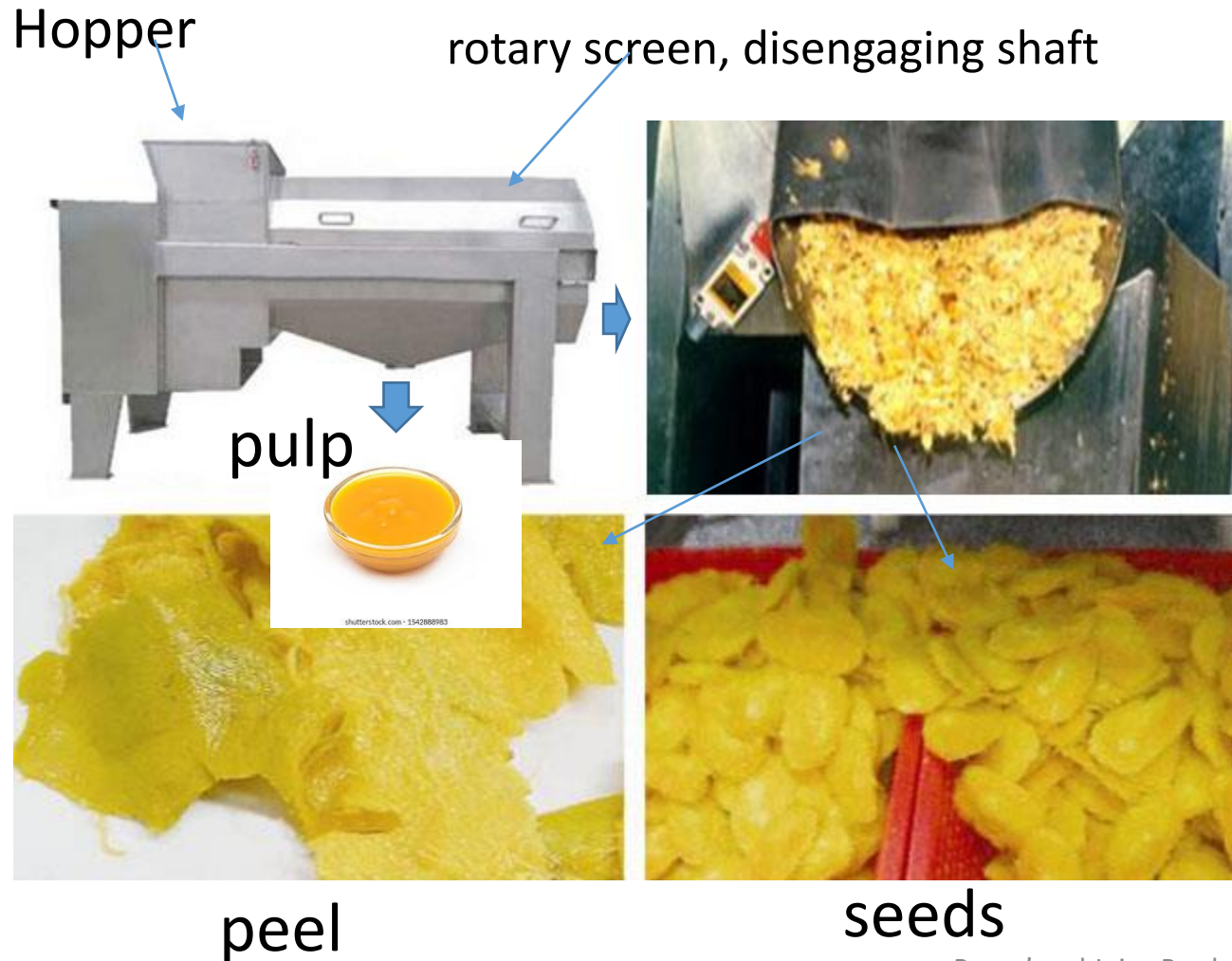
Fruit elevator



Brush and Spray Cleaning Machine for Mango

Puree and Juice Production

Main Equipments of Mango Juice Production Line



This machine is mainly composed by hopper, rotary screen, disengaging shaft, arranger, rack and shield. Materials get into separation device from hopper. The **skins, seeds and pulp** of the mango are **separated** under the function of disengaging shaft with high working speed. Then the skins and seeds are thrown away at the tail of the machine, and the pulp falls into the screw pump and is sent to the next process.

<https://youtu.be/N2iu7clSNHk?t=15o>

<https://youtu.be/N2iu7clSNHk?t=14>

<http://www.fruitjuicemachinery.com/product/mango-juice-processing-line.html>

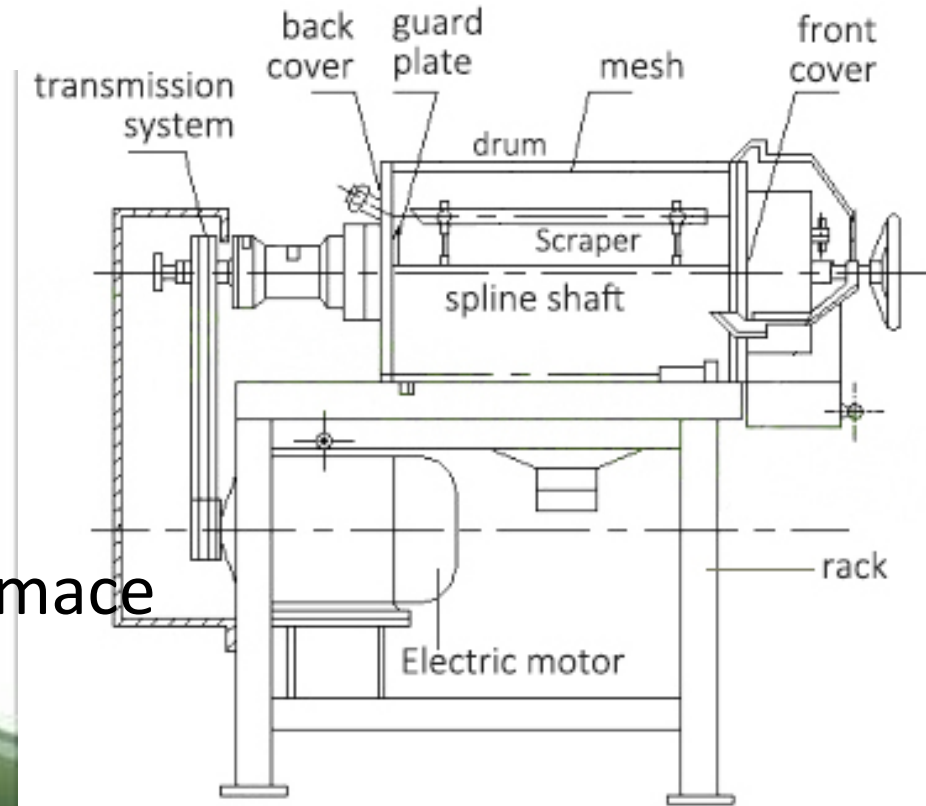
Main Equipments of Mango Juice Production Line

Mango Pulping Machine



juice

pomace



Mango pulping machine can **separate juice and fruit slag (pomace)** quickly, and remove the kernel effectively with the international advanced technology. Because this machine is working in fully enclosed state, so it can reduce the oxidation of the juice, and maximize reserve the taste and nutrition of the raw materials. The content of the solid in juice and humidity of the peel slag can be adjusted.

<https://youtu.be/ZhMpK9ZmkDM>

<http://www.fruitjuicemachinery.com/product/mango-juice-processing-line.html>

Problems encountered during fruit juice processing

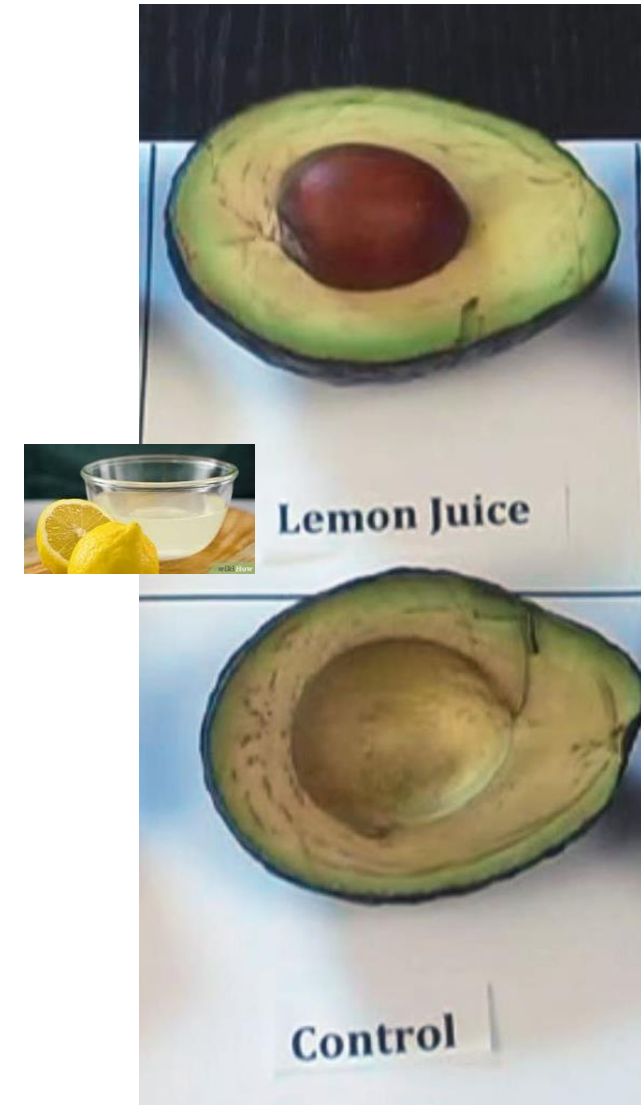
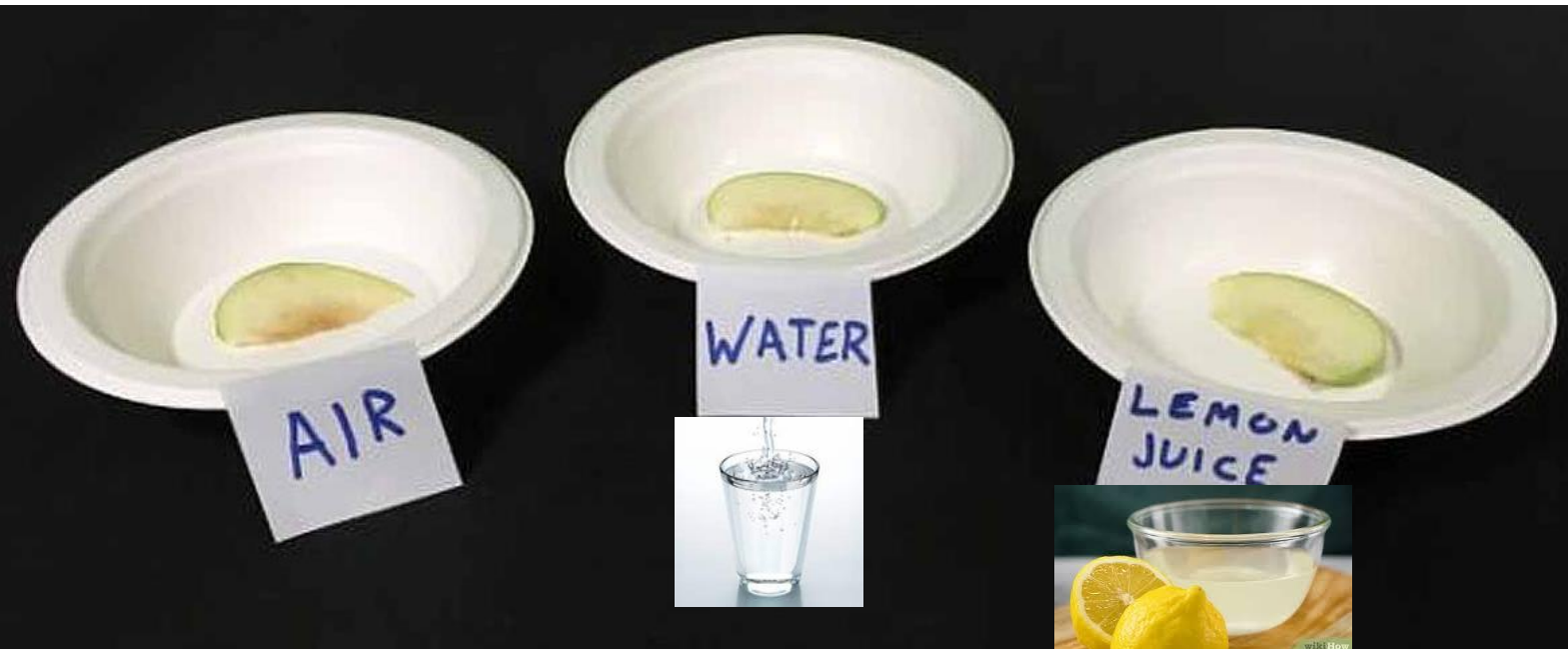
Some of the problems that may be faced in preparation of fruit juices are:

- **Browning** of juice due to action of enzyme Poly phenol oxidase inherent in fruit (i.e. Apples).
- **Foaming of fruit juice** that may lead to oxidation of vitamin C and pose problem during filling of juice in packages.
- **Bitterness of juice** due to action of enzyme limonin and naringin (e.g. in orange and grapefruit).
- **Cloudy juices** due to pectinaceous substance (apple juice) or even bitartrates (in grape juice).

Problems curing during fruit juice processing

Problems	Curing
Browning	Blanching/Chemical treated e.g. acid, potassium metabisulphite (KMS), etc.
Foaming of fruit juice	Deaeration e.g. by vacuum
Bitterness of juice	Enzyme treated e.g. naringinase and limoninase, Chemical treated e.g. Sodium chloride, Sodium bicarbonate, β -cyclodextrin, etc.
Cloudy juices	Enzyme treated e.g. pectinase, cellulose, etc.

Browning inhibition: Acid treated



Browning inhibition: Acid treated



Air



Water

Puree' and Juice Production



Lime juice

Browning inhibition: Acid treated



Air



Water



Puree' and Juice Production



Lime juice

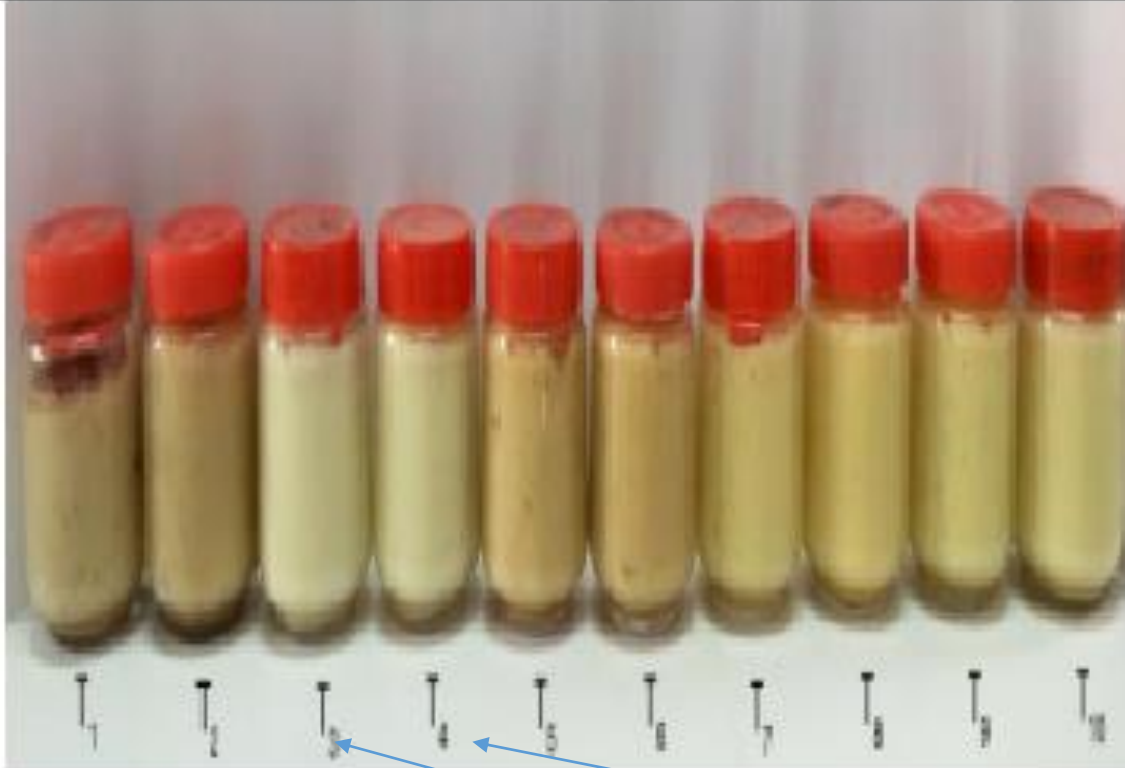


shutterstock.com - 1104331034

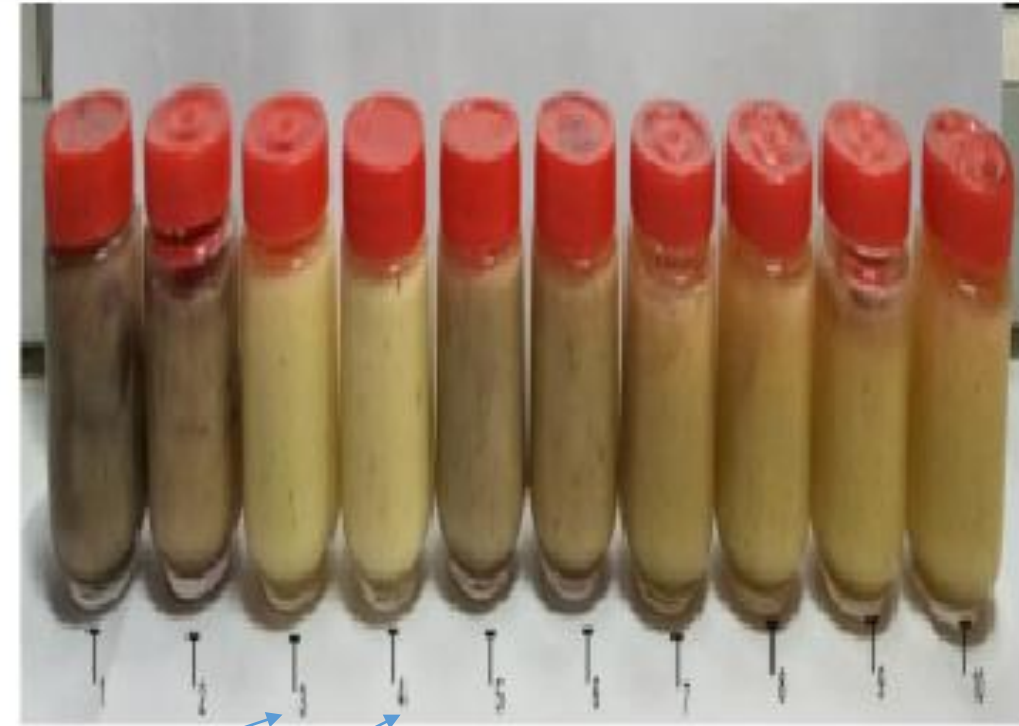
(A) Ripe Banana Pulp

Stored in deep freezer (- 20°C)

0-day pulp



6-days pulp



T₁=Control,

T₂=Blanched,

T₃=KMS (0.1%),

T₄=KMS (0.2%), T₅=Citric acid (1%),

T₆=Citric acid (2%),

T₇=Ascorbic acid (1%),

T₈=Citric acid (1%) + Cysteine (0.5%),

T₉=Citric acid (1%) + Calcium chloride (0.5%),

T₁₀=Citric acid (1%) + Ascorbic acid (1%) + Cysteine (0.5%)

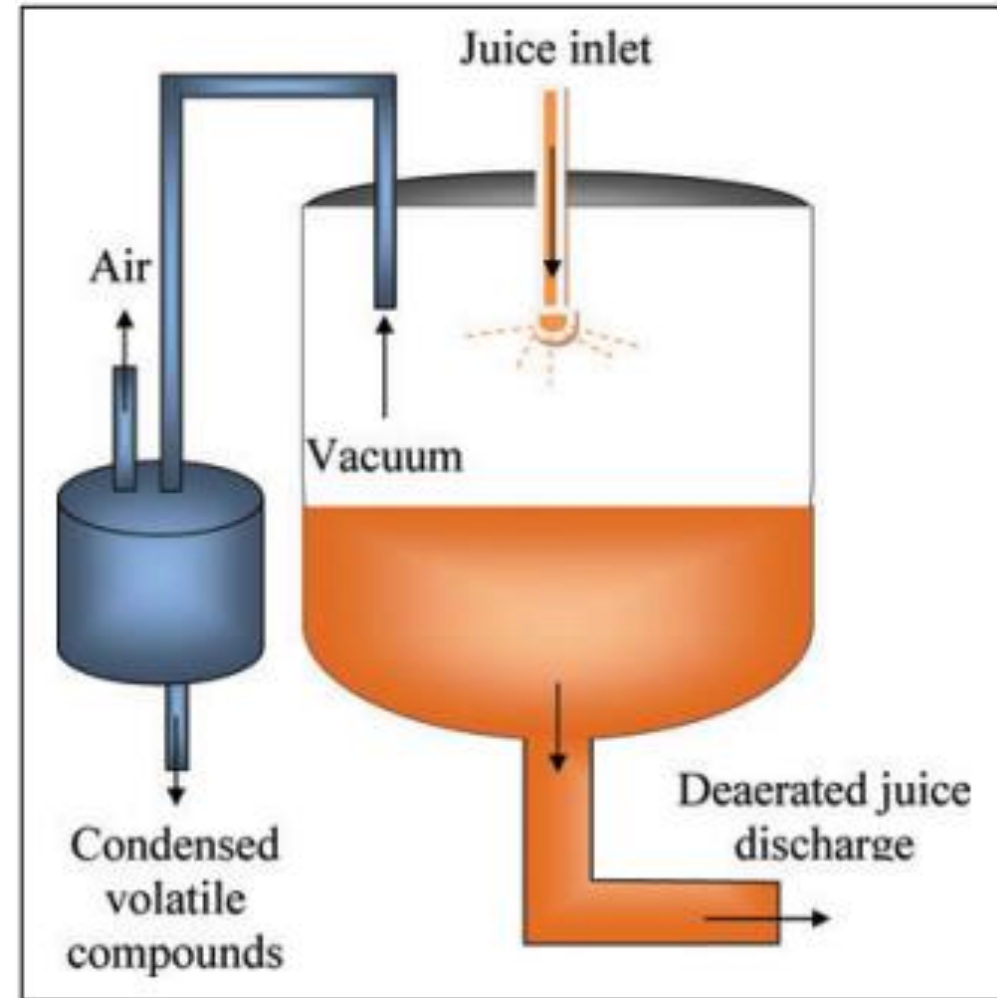
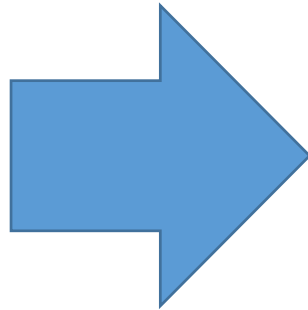


Arora, et al. (2018)

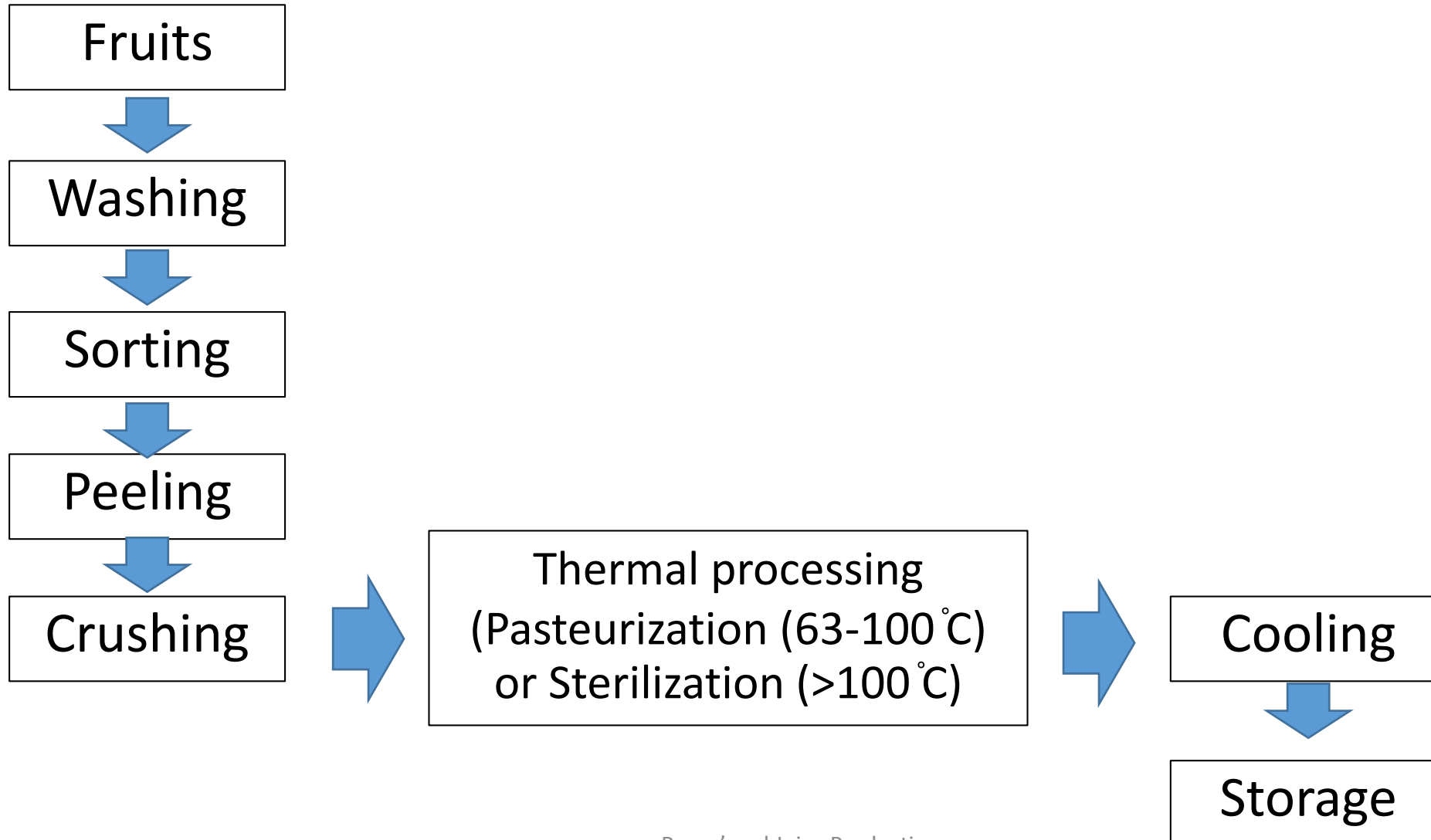
Deaeration of fruit juice



Foaming of fruit juice

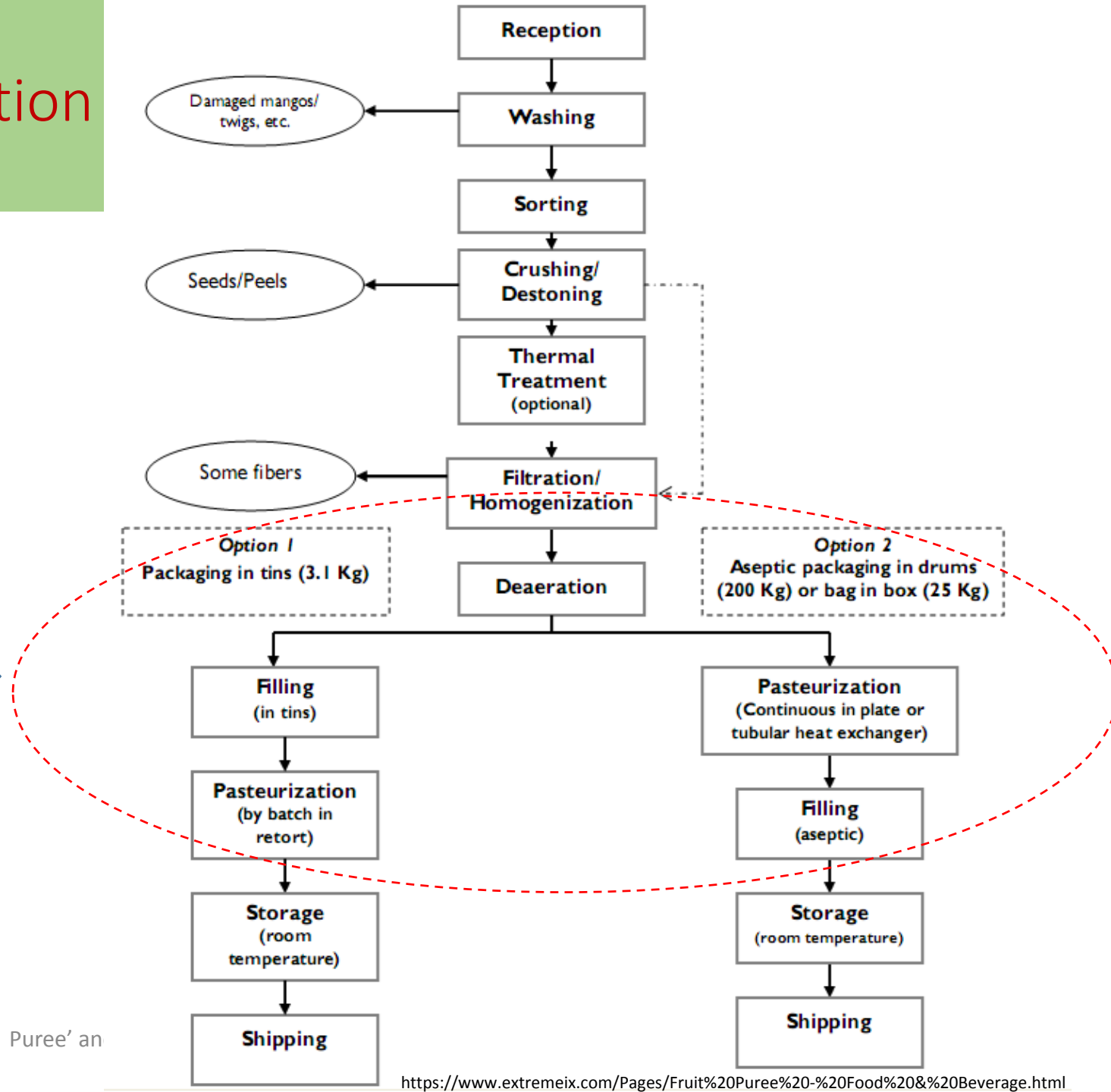


General Steps in Puree' Production



General Steps in Puree' Production

Thermal
processing:
Pasteurization



Puree' an

Banana puree production



Washing and peeling

<https://fruitprocessingmachine.com/portfolio-items/banana-processing-line/>

Puree' and Juice Production

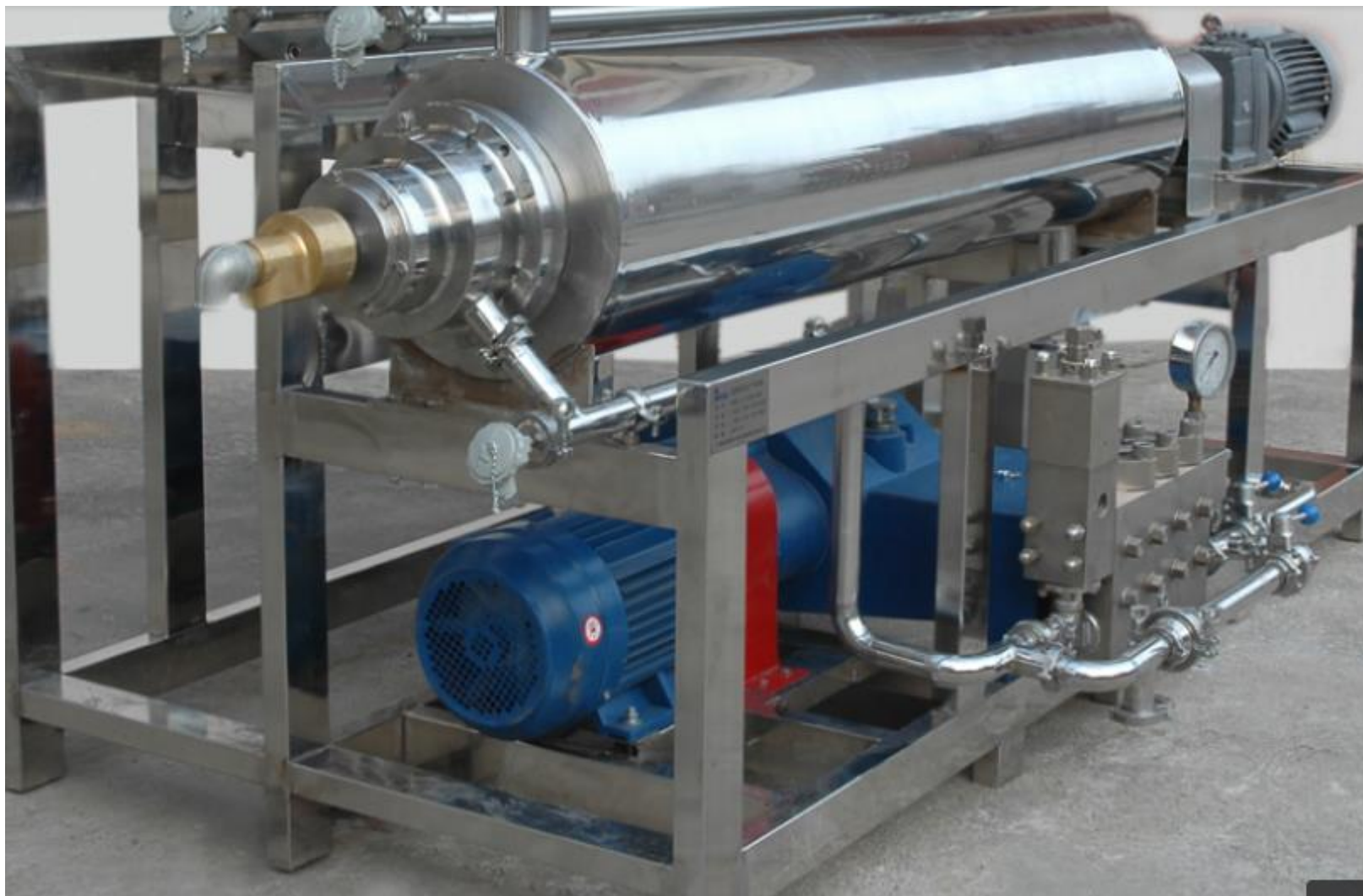
Banana puree production



Mashing and pulping

<https://fruitprocessingmachine.com/portfolio-items/banana-processing-line/>

Banana puree production



Sterilization

Mango puree production



Receiving



Ripening room

<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



1st Washing



2nd Washing

<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



Sorting and cutting



<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



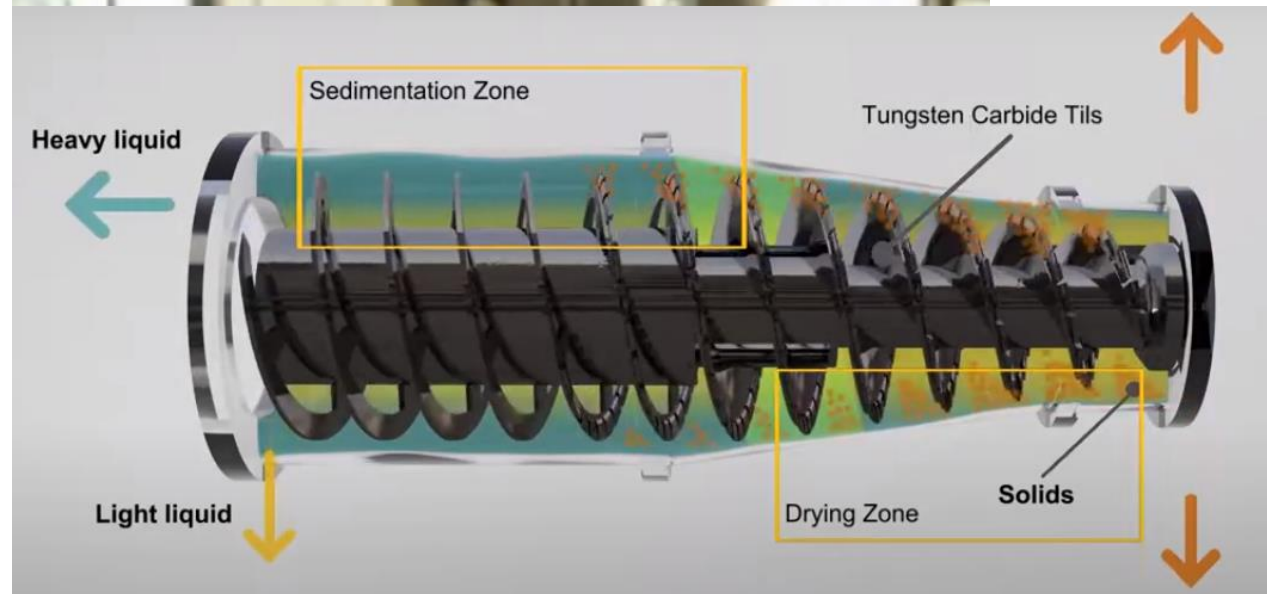
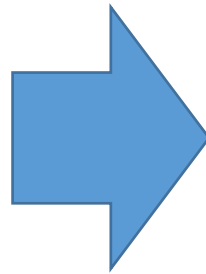
<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



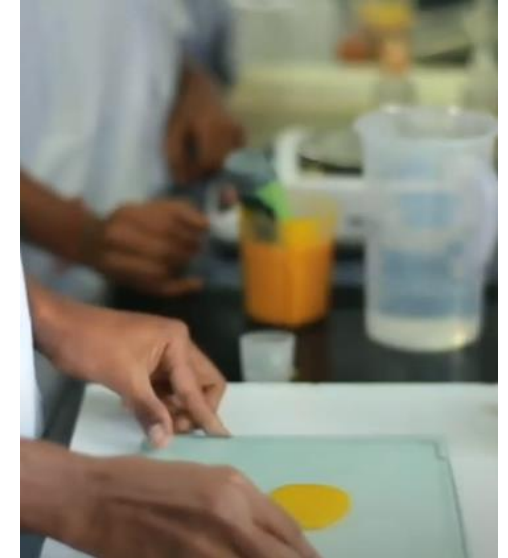
Filling

Mango puree production



<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



Quality assessments

- Total soluble solids
- pH/Total acidity
- Viscosity
- Microbial growth, etc.

<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



Packing

<https://www.youtube.com/watch?v=WwLAFjAntxo>

Mango puree production



Storage ready for transportation

<https://www.youtube.com/watch?v=WwLAFjAntxo>