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Tomato processing





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Introduction.

Botanical name : *Solanum lycopersicum*.

Family : Solanaceae

Chromosome no: $2n=24$.

Fruit type : Berry

Origin : Peru





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Nutritive value of tomato

- Tomatoes contribute to a healthy ,well balanced diet.
- In tomato total sugar content is 2.5% in ripe fruit and ascorbic acid varies from 16-65mg/100g of fruit weight, total amino acid is 100-350mg/100g of fruit weight.
- They are rich in minerals, vitamins, essential amino acids, sugars and dietary fibres.
- Tomato contains much vitamin B and C, iron and phosphorus.
- Composition of tomato fruit per 100g of edible part
- Minerals - 0.6g Nicotinic acid - 0.4g
- Vitamin A - 320I.U oxalic acid - 2mg
- Vitamin C - 31mg phosphorus - 36mg
- Thiamine - 0.07mg Iron - 1.8mg
- Riboflavin - 0.01g Calcium - 20mg

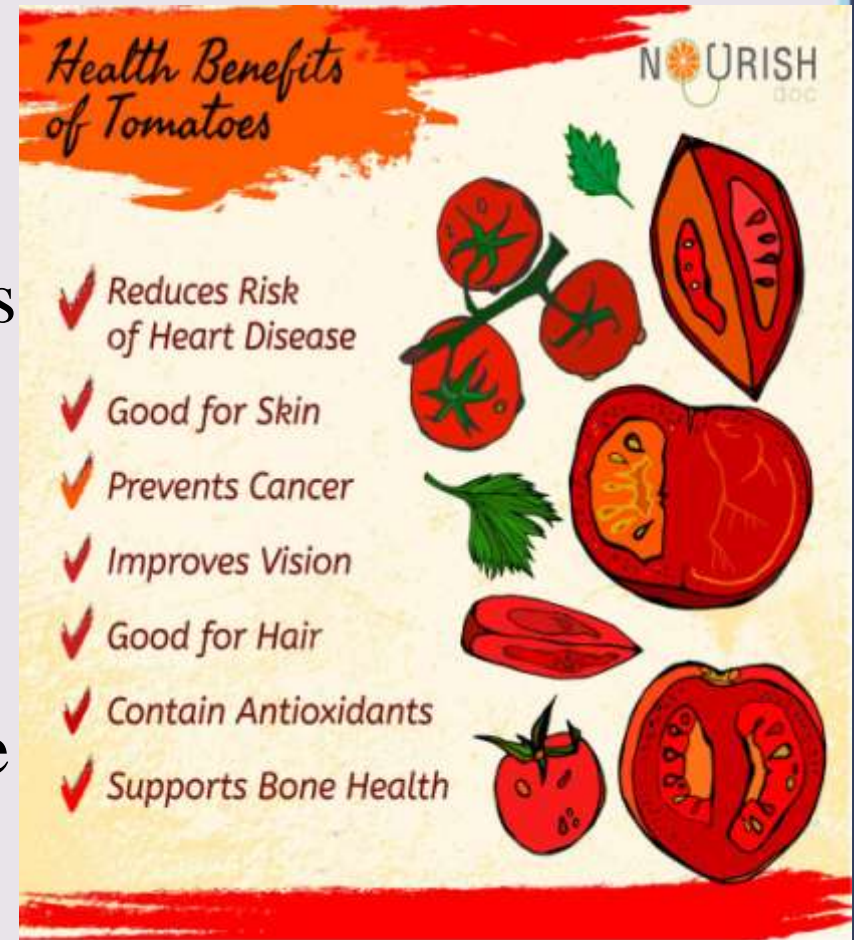


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Health benefits

- Tomato is a versatile crop for its wider adaptability and its health benefits.
- It is universally treated as **protective food** due to its immense health benefits.





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Tomato processed products

- variety of products like puree, paste, syrup, juice, ketchup etc are made.





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Processing qualities

- Deep red colour which retains even after processing.
- pH below 4-5.
- TSS should be 4.50 B..
- High viscosity and consistency
- Firm and easy peeling
- Pericarp thickness-should be more than 0.5 cm.
- Crack resistance
- Fruits size should be above 50 g and oblong in shape
- Varieties like Pusa Gaurav, Roma, Punjab Chuhara, Pusa Uphar, Arka Saurabh are specially suited for processing.



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Tomato juice

- Fully red ripe fruits are selected.
- Juice should be deep red, possesses the taste of tomato, 0.4% citric acid, 0.5% salt and 1% sugar.





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Flow chart for tomato juice processing





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Tomato paste and puree

- Pulp without skin or seeds, with or without salt.
- Medium puree: not less than 9.0% of salt-free tomato solids
- Heavy puree: not less than 12% of solids.
- Tomato paste: not less than 25% of solids.
- Concentrated tomato paste: not less than 33% of solids

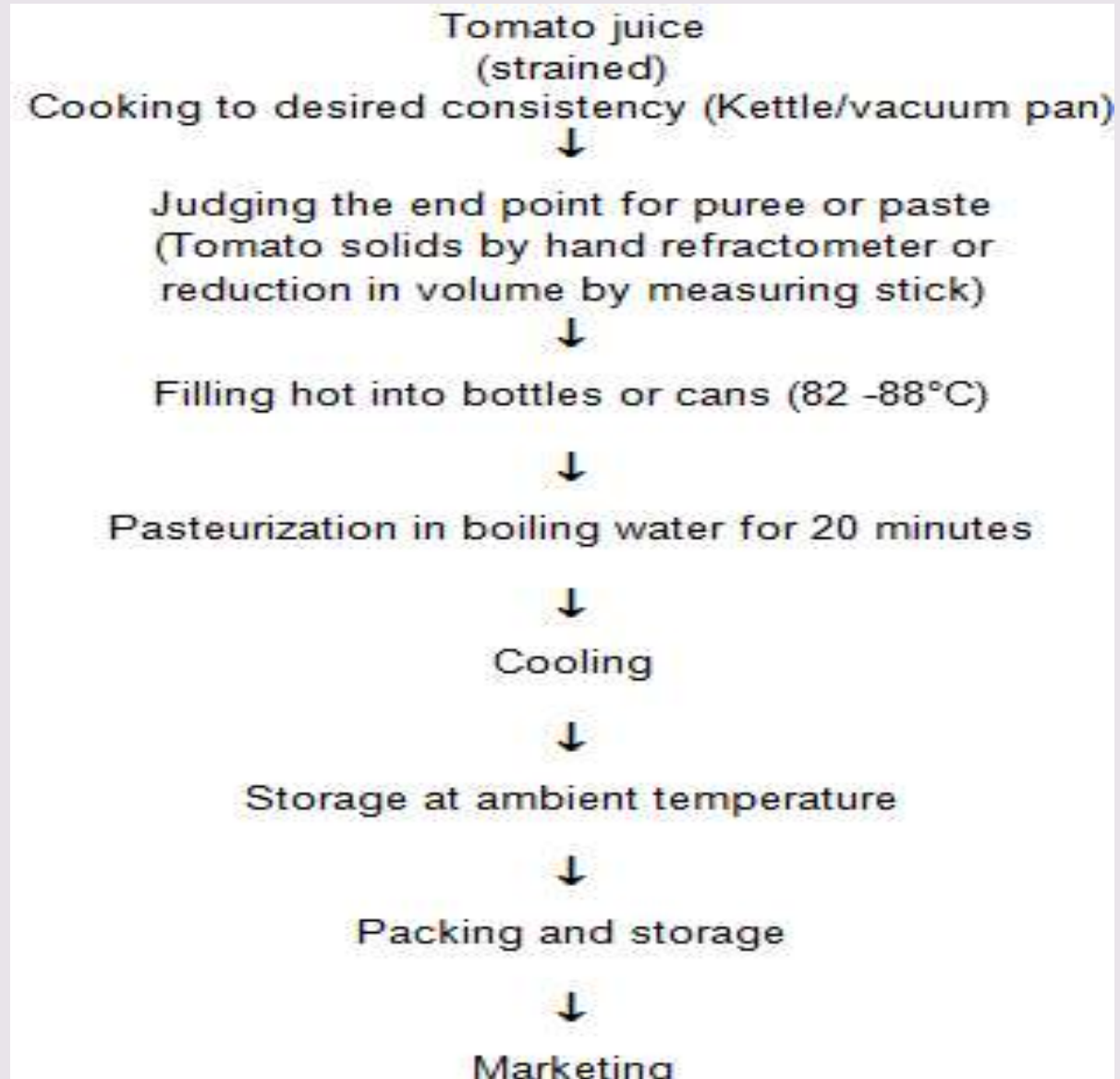




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FLOW-SHEET FOR TOMATO PUREE/PASTE





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TOMATO SAUCE / KETCHUP

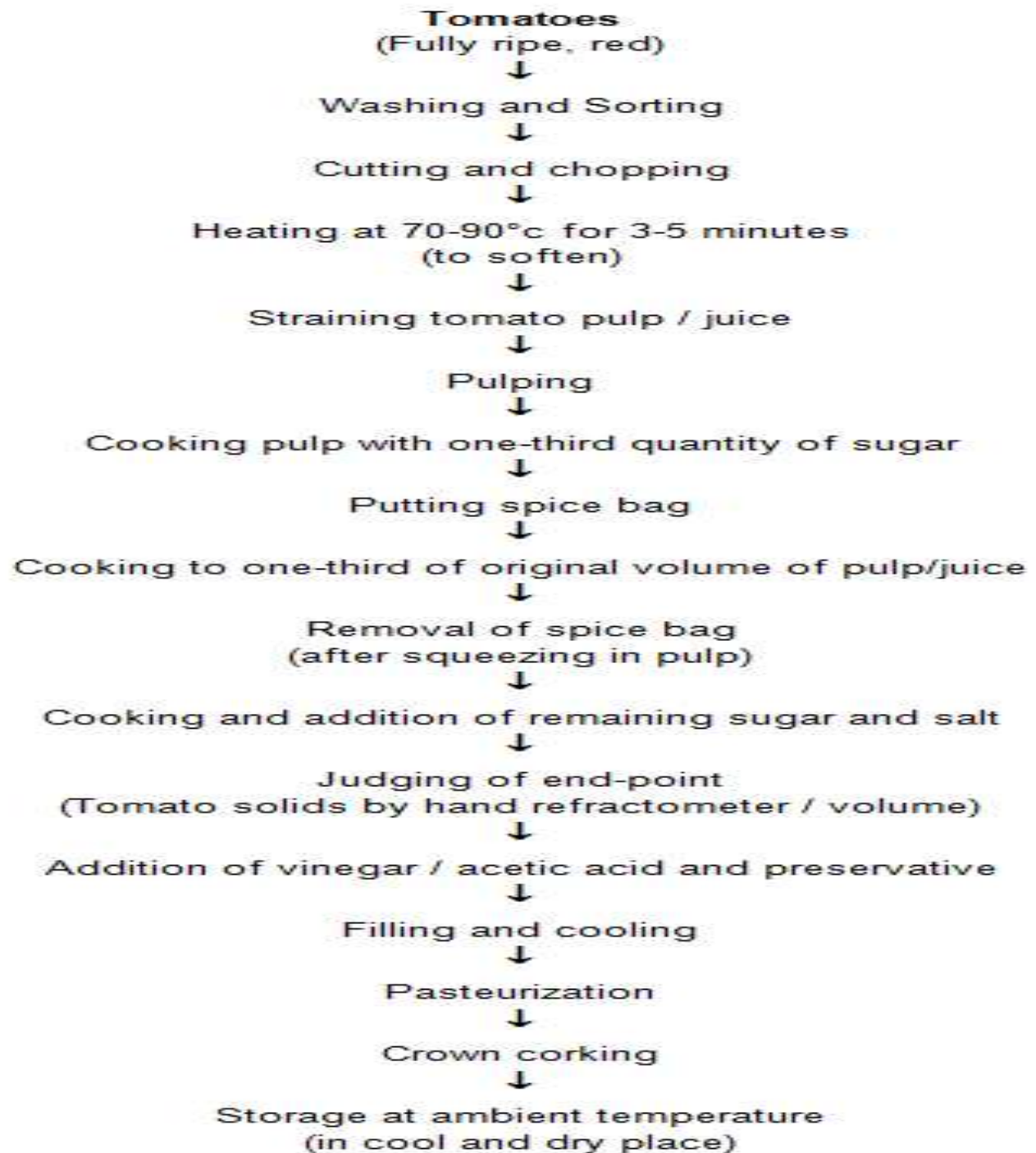
- It is made from strained tomato juice or pulp and spices, salt, sugar and vinegar, with or without onion and garlic, and contains not less than 12 per cent tomato solids and 25 per cent total solids.
- Sugar content-10-26%.
- Salt content -1.3-3.4%





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Tomato chutney

- The tomatoes can be diced, mashed or pulped, and additional typical ingredients used include onion, garlic, ginger, sugar, salt, vinegar and spices.

According to FSSAI

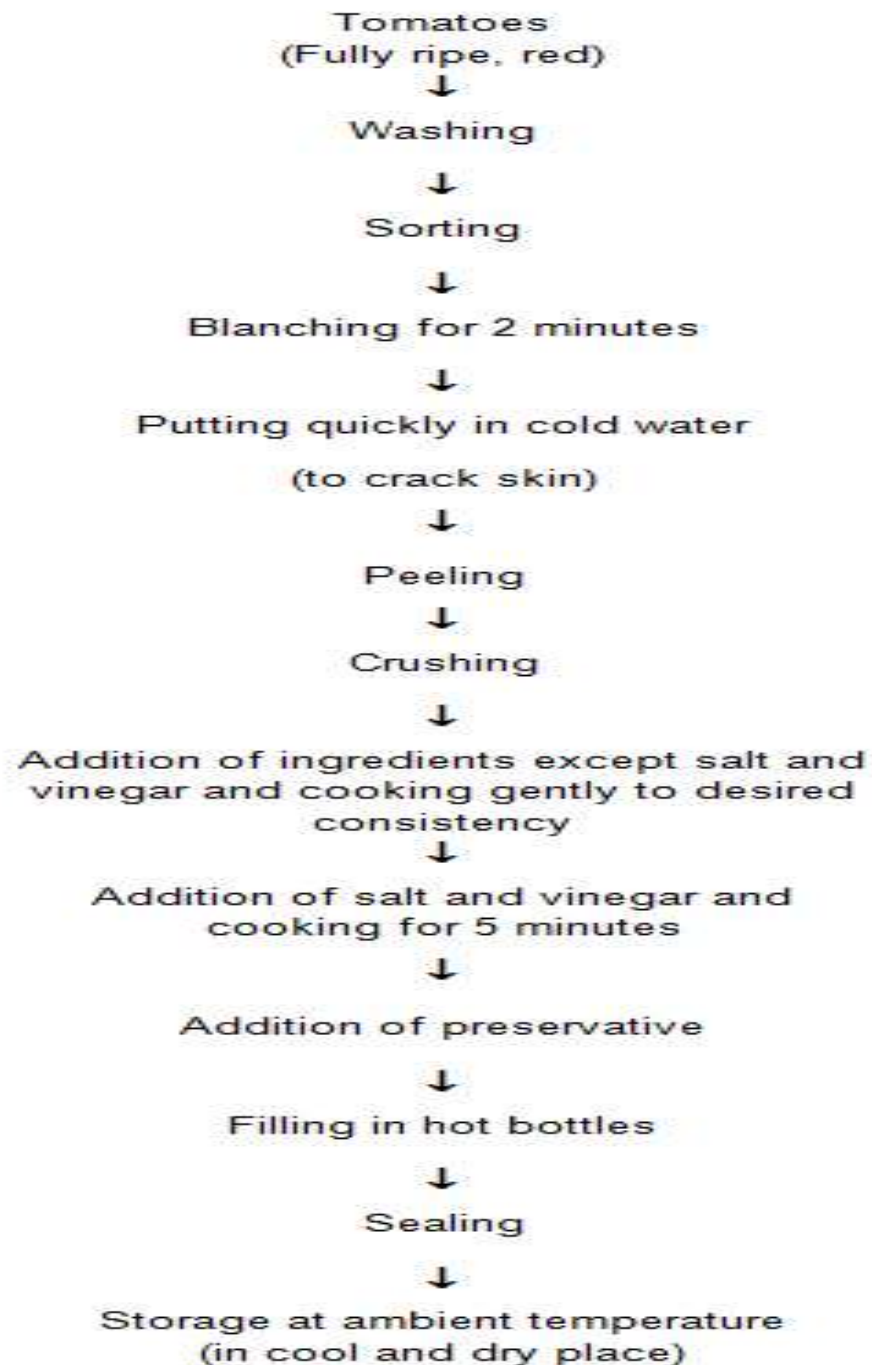
- TSS- 50%.
- Fruit part- 40%





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TOMATO SOUP MIX

- Tomato soup mix refers to tomato concentrate that are available in dry mix form, ready to be served by adding hot water boiling for five minutes.
- Tomato soup TSS shall be not less than 7.0% (w/ w)





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Soup mix preparation

- Wash ripe to tomatoes.
- dry in the cabinet drier at 80oC for 10 hours.
- Mix all the ingredients and pack in a polythene bag

Ingredients

Tomato powder	5.0 g
Onion powder	0.5 g
Corn flour	2.0 g
Cumin powder	0.5 g
Pepper powder	0.3 g
Salt	1.5 g
Aginomotto	0.5 g.



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Tomato pickle

- Preservation of food in common salt or vinegar is known as pickling.
- Pickling is a result of lactic acid bacteria.

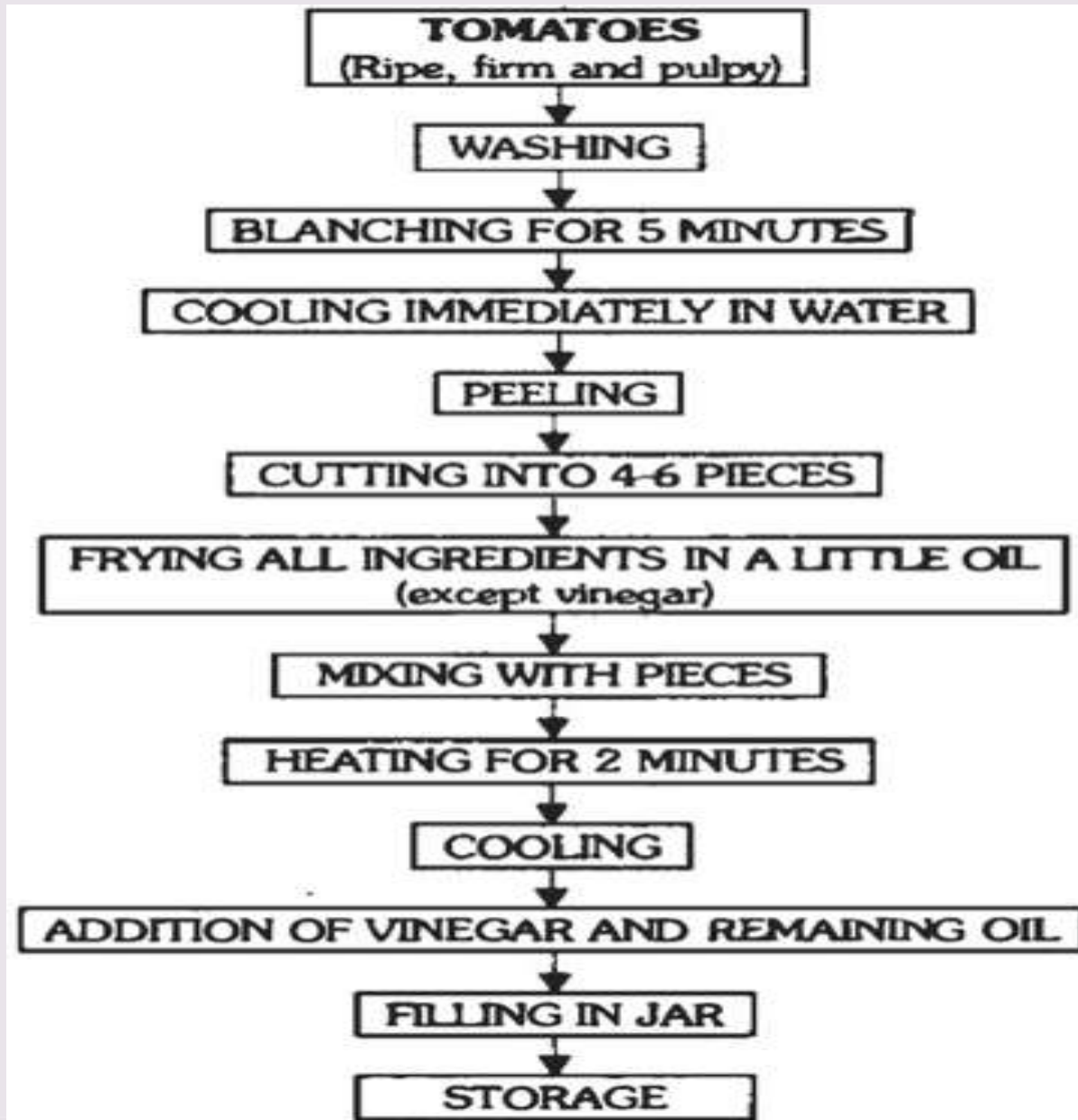




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Flow chart for pickle preparation





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THANK YOU