

## PRACTICE ABSTRACT n° 46

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### Production of Tree Tomato Pulp

Tree tomato fruits are perishable and preserving them is a big challenge for fruit farmers and agricultural industries. This leads to post-harvest losses and therefore specific processes must be developed and implemented in order to extend fruit shelf-life and to make use of surplus production. Fruit pulping is the mechanical or chemical extraction of the edible flesh from mature and well-ripened fruit. Pulping of tree tomato fruits can be done as a step towards production of fruit powder. The pulp can also be used as an ingredient in the production of other foods such as fruit juices to take advantage of the high nutrient and phytochemical contents of tree tomato fruits. Pulping is an appropriate method of preventing postharvest losses, preserving fruits that go out of season, increasing shelf stability, and also adding value.

The quality of tree tomato fruits is important as it determines the quality of the processed pulp as well as that of its products. For the common red tomato fruit variety, immature fruits are green in colour. Partially red fruits with green and yellow portions on the surface are not yet ready for harvesting. Only those fruits that are completely red or have at least 97% of their surface red in colour should be harvested. The fruits are harvested by gently twisting and pulling to ensure that each fruit has its stalk still attached to it.

Pulping is done using either the cold or hot extraction methods which also affect the quality and yield of the final product. The hot extraction is done by blanching the fruits, in steam (120 °C) or hot water (95 °C), for 3-5 minutes before pulping. It consists of the following steps that ensure the end product meets the defined quality and safety standards: reception, weighing, sorting, cleaning, blanching, destoning, pulping and homogenization. The pulp is then treated to ensure shelf-life stability by adjusting the pH and careful addition of permitted preservatives. The cold method is done by cleaning the fruits, destoning, then pulping, and results in high-quality fruit pulp but the yield is lower than in the hot method. Sieving is done during pulping to ensure pulp smoothness by removing the skin, seeds and fibre. Pasteurisation is done at 85°C for five minutes. Sodium benzoate is used as a preservative at a maximum concentration of 1 gram per kilogram of product and citric acid is used as a preservative and a flavouring agent. Packaging is done in suitable airtight containers.

