

FAQs

1. explain the biological significance of tomato in health

it gives protection from or reduces the risk of contracting chronic degenerative diseases. which has antioxidant properties and may be anticarcinogenic. Higher plasma lycopene levels are associated with reduced incidence of some cancers, especially prostate cancer.

2.write a note on origin of tomato

The tomato probably arrived first in Seville, a major centre of international trade, especially with Italy. In 1544, the Italian herbalist Mattioli referred to the yellow fruits of the tomato plant as the golden apple, and later, in 1554, he mentioned a red variety. Dodoens, a Dutch herbalist, gave a detailed description in 1554 and the fruit earned a reputation as an aphrodisiac. Also the tomato explains as 'pomme d'amour' in French, 'pomodoro' in Italian and the 'love apple' in English. During 1692 Spanish-style published Neapolitan recipe, for 'tomato sauce. The transformation from herbal to a common culinary ingredient began slowly in the 1700's.

3. what is need for tomato processing

There is a constant demand for tomato processing usually arises to preserve the tomato products for home use inclusion in stews, soups, curries etc out of season or to add value for extra income. Traditionally, the most important methods for tomato processing used are concentration (to a paste or purée) and drying either fruit pieces or to a powder.

4. what is the material quality of tomato

Tomatoes qualities are an important to process tomato products, the tomatoes should be ripe, red, firm to soft, free of all mould growth and free of stems, leaves, dirt and soils. It is less important if the tomatoes have surface blemishes or splits or cracks.

5. what is cold pulping process

A process called cold pulping is one important method to remove pulp without affecting on tomato seeds. This method is an ample scope of exploring the ways to establish a machine which may operate under normal temperatures to isolate pulp; seed and skin (peel) from fresh tomato crop avoiding heating activity.

6. what is high pressure processing

High Pressure Processing (HPP), it is a non-thermal food processing technology that allows tomato-based products with a longer shelf-life and safer, preserving nutrients, fresh taste and appearance.

7. what are the advantages of high pressure processing

the High Pressure Processing technology is softer than a thermal treatment: it does not break or create covalent bonds, and does not create new compounds by molecule degradation, such as in a conventional thermal process. However, High Pressure Processing is able to break, or create, weak bonds like hydrophobic and electrostatic interactions; therefore only macromolecules such as proteins and polysaccharides are present in this technique.

8. why High Pressure Processing technology beneficial:

- Safer food products with a longer shelf-life with the inactivation of vegetative microorganisms like bacteria, yeasts and molds.
- Sensory food quality is maintained, keeping the fresh-like taste of homemade products.
- Nutritional quality is preserved.
- This process permits removal of chemical preservatives.

9. what we have to do when pH of tomato is above 4.6

When this happens, the product must be canned in a pressure canner as a low-acid product or acidified to a pH of 4.6 or lower with lemon juice or citric acid.

10. how to reduce the pH of tomato naturally

Tomatoes grown in the shade, ripened in shorter hours of daylight, or ripened off the vine tend to be lower in acidity than those ripened in direct sunlight on the vine. Also, tomatoes attached to dead vines at harvest are considerably less acidic than tomatoes harvested from healthy vines.

11. name the bacteria which is heat resistance and causes food spoilage

Bacillus coagulans, is very heat resistant and causes flat-sour spoilage. The jar lid may still be sealed and the product may appear normal, but the tomatoes will smell sour because of lactic acid produced by the growth of *B. coagulans* in the product.

12. what is FPO? .

The manufacture of processed fruits and vegetables is controlled by the Fruit Products Order FPO-1955 of the Govt. of India. The Fruit Products Order, 1955 is mandatory for tomato products.

13. what are the specifications of FPO

The FPO specifications are as follows:

- i) Tomato Juice: 5% total solids.
- ii) Tomato Puree: 9% total solids. Sodium Benzoate 250 ppm
- iii) Tomato Ketchup: 25% total solids. Acidity: 1.0% Sodium Benzoate: 750 ppm

14. what are the specifications of The Bureau of Indian Standards

The Bureau of Indian Standards has laid down the following specifications for tomato products:

- i) Tomato Juice: IS:3881 : 1966.
- ii) Tomato Ketchup: IS:3882:1966.
- iii) Tomato Puree: IS: 3883:1966.

15. write a note on

Origin of Tomato:

The tomato is a native of the lower Andes, cultivated by the Aztecs in Mexico. In the Aztec word, 'tomato' means simply "plump fruit" and in the Spanish called it "tomate".

Nutrients of tomato:

Tomato is a rich source of minerals, vitamins, organic acid, essential amino acids and dietary fibers. It is a rich source of vitamin A, vitamin C and folate, it also contains minerals like iron, phosphorus. Tomato contains Lycopene and Beta-carotene pigments. reduces the risk of contracting chronic degenerative diseases.

Tomato Processing:

the most important methods for tomato processing used are concentration (to a paste or purée) and drying either fruit pieces or to a powder.

Processed Tomato Products:

Tomato is a valuable raw material used for processed products such as juice, puree, paste, ketchup or sauce, and canned whole. Among these products puree, juice, ketchup are commonly used commodities in households, hotels and restaurants.

Market Potential of tomato:

Estimated production of puree, Sauce, Ketchup in North India was around 12000 MT in 2005. The estimated demand for the products for the same period was 10000 MT which is expected to grow up to 20000 MT by 2020 AD. Thus there is ample scope for a unit to come up in this product sector to cater

especially to the semi urban and rural sectors of India. Besides, tomato products have good export potential especially in the Middle East.