

## *Tomato Ketchup*

The juice obtained as above is concentrated with spices, salt, sugar, etc. The spices like cloves, cardamom, pepper, cinnamon and other ingredients etc. are tied loosely in a muslin cloth and placed in boiling juice in steam Jacketed Kettle. The sugar, salt and vinegar or acetic etc. are added later on.

Generally concentration is done threefold. It is concentrated to 28 to 30% solids in which 12% are tomato solids. The final product could be preserved by addition of sodium benzoate @ 750 ppm. The tomato ketchup is filled hot into clean, dry bottles, crown corked and processed in boiling water for 30 minutes and cooled at room temperature.

### **Quality Control and Standards**

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. The tomato products should conform to specifications laid down in 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.

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

Now in this era, the entrepreneurs may adopt HACCP and ISO 9000 certification.

### **Pollution Control**

There is no major pollution problem associated with the project. However, material waste (skin, seeds, etc.) are the main effluents for which the provision of treatment has been made in the profile. The entrepreneurs may however, contact the concerned State Pollution Control Board for detailed guidance in the matter. Minimum height of shed will be maintained and exhaust fans should be installed for removing congestion with