UNIT II – Topic V
Preparation of Fruit Toffee

CANDIED FRUITS: The method for making candy is practically the same as that followed for preserves, with a minor variation that the fruit is impregnated with a higher concentration of sugar or glucose. The total sugar content of the impregnated fruit is kept at about 75 percent to prevent fermentation. The most suitable fruits for candying are those which possess pronounced flavour like peels of orange, lemon, grape fruit and ginger.

Procedure for preparing candied fruits

Preparation of fruit: Stored fruit or peel is taken out from barrels and washed thoroughly in running cold water to leach out as much of the brine as possible. The fruit or peel is then placed in a cooking pan and boiled for about 15 minutes to remove traces of salt and to soften its texture.

Cooking in syrup: The prepared fruit or peel is boiled in cane sugar syrup (30^{o}B) containing 0.1% citric or tartaric acid for 10-15 minutes and then left in syrup for about 24 hours. Next day, the syrup concentration is raised to 40^{o}B by adding more sugar. The whole mass is boiled for about 5 minutes and left for another 24 hours. The process is repeated until the syrup reaches 60^{o}B. Beyond this concentration, the syrup strength is progressively raised to 75^{o}B at the rate of 5^{o}B and boiling the mass on every alternate day.

Draining and drying: After syrup treatment, the fruits or the slices are removed from syrup and drained for about half an hour and sorted out to separate any defective and unwanted pieces. After this, the fruit/slices are dipped for a moment in boiling water to remove the adhering syrup followed by slow drying in the shade or in a drier at 66^{o}C for 8 to 10 hrs.

Glacing: For glacing process, the sugar syrup is prepared by boiling sugar and water in 2:1 ratio in a steam pan at 113-114^{o}C followed by cooling to 93^{o}C. Sugar granulation is achieved by rubbing the syrup with a wooden ladle on the side of pan. Dried candied fruits are passed through this granulated portion of the syrup and then placed on the trays for drying in drier at 49^{o}C for 2-3 hours. When the pieces become crisp, they are packed in air tight-containers.

Packaging: For retail trade, tin containers (15-20 kg capacity) and glass jars are used for storing preserves. Candied and crystallized fruits and peels are packed singly or in combination in layer in water proof paper or in polythene. Attractive china and porcelain jars are sometimes used for packing these products intended for exclusive export market. In addition to metal and glass containers, the newer flexible films can also be used, which are cheaper and highly effective.

Defects and spoilage: Spoilage due to fermentation occurs in the initial stages of preparation of preserves and candies when the concentration of sugar in the syrup is low. This can be checked by proper boiling of product at proper intervals. Storing of candied/glaced fruit in wet containers or under humid conditions brings about spoilage due to mould growth. Thus, storage of such product in air tight dry containers is recommended. Common defects and spoilage in preserves, candies, glazed and crystallized fruits is given in Table 9.1.

S. No.	Defect	Causes	Prevention
1.	Shrunken preserve	Use of heavy syrup	Use correct amount of sugar and water
2.	Dull brownish colour or cloudy appearance	Inferior fruit quality Over cooking after addition of sugar Failure to remove scum.	Use good quality fruit Use correct cooking time
3.	Tough fruit skin or peel	Fruit or peel not cooked until tender before sugar addition	Cook the fruit or peel until tender and then add sugar.
4.	Moulds on surface	Use of inferior quality fruits Under cooking Warm or damp storage	Use good quality fruit
5.	Fermented preserve after storage	Not enough sugar used Insufficient cooking Storage in warm place	Store in a cool and dry place.
6.	Sticky candy (after drying)	Final syrup not sufficiently concentrated	Always prepare syrup of correct concentration.
7.	Sticky during storage	Poor packing Damping storage	Always prepare syrup of correct concentration.

Table 9.1: Common defects and spoilage in preserves, candies, glaced and crystallized fruits