Summary

Fruits have been part of man's food since times immemorial. Among the preserved fruits, jams constitute important product and afford means of utilizing a large amount of sound cull fruits unsuitable for other purposes. It is an older method than canning and freezing. Historically, jams may have originated as an early effort to preserve fruits for consumption in the off-season. As sugar manufacture became more affordable, the popularity and availability of these fruit products increased. The earliest published record of jam making appeared in the later part of the 18th century. The preparation of jams was developed as an art by the housewife and served as a means of preserving fruit, corresponding to the time, when the fruits were being harvested. Fruit jams are essentially pectin gels, in which the final texture mainly depends on adequate sugaracid-pectin blend. It is prepared by boiling the fruit pulp with almost equal quantity of sugar (TSS content not less than 68.5% and acidity not less than 0.5%) resulting into a reasonably thick consistency with enough firmness to bind the fruit tissues. In preparation of fruit jam, almost equal quantity of fruit pulp and sugar is used. Jam is consumed widely and is the second most popular processed product in Indian household after pickle. The definition of fruit jam issued by FDA in 1963 is-"Fruit jam is the product made by cooking to suitable consistency, properly prepared fresh fruit, cold stored fruits, canned fruits or a mixture of two or all of those with sugar or with sugar and dextrose with or without water. In its preparation, not less than 45 lb of fruits be used for each 55 lb of sugar and dextrose". Factory-made jam must conform to certain specifications and standards, not essential for a home-made jam, for instance; it must be of a consistency firm enough to meet the demands of confectioneries and to withstand handling during transport. The consistency depends upon the presence of pectin. Hence, scientific jam manufacture is largely based on the correct application of knowledge about pectin and the laws governing the formation of the pectin-sugaracid gel. Jam and jelly products were prepared with a high concentration of dissolved solids so that fermentation could not occur. However, only pectin and sugar are not sufficient for the formation of the products. Equally important is the acidity of the fruit, resulting in a definite equilibrium in the "pectin-acid-sugar" system.