

Some Nutritional Aspects of Fruit and Fruit Products

PART I.

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(Continued from the previous issue)

Recent Work done in India:

The nutritive value (chemical composition) of several fruits have recently been reported⁵⁴⁻⁵⁸. Varietal difference in the composition of oranges^{35-40, 56a}, mangoes⁵⁹⁻⁶³, pineapple⁶⁴, passion fruit⁶⁵, apples⁶⁶ and guava⁶⁷⁻⁶⁸ have been studied.

Systematic studies on the effect of processing operations^{35, 38, 69, 75} and storage temperature^{35-40, 71-72, 76-86} on the physico-chemical composition of a number of canned fruits and fruit products have been conducted and the results on the effect of canning operations on Badami and Raspuri mangoes⁶⁹, guava⁷⁰, jack fruit⁷⁰, banana and oranges^{70a}, pineapple and pineapple juice^{78, 84}, papaya pulp⁷² and other fruits⁷⁴ indicate that of the vitamins studied, ascorbic acid is the most affected and carotene the least. A greater volume of juice coupled with increased vitamin C could be obtained by quick-freezing of fruits prior to the extraction of juice⁷⁵. Losses in vitamin C during canning of pineapple⁸⁴ were earlier reported to be very high (83%) but later studies⁷³ revealed very low losses (6-9%) only. Effect of storage of canned fruits for periods upto one year at room temperature (28-30°C), 37°C, and 43°C⁸¹⁻⁸⁶ on the retention of carotene, thiamine riboflavin, niacin, ascorbic acid, sugars, tin and iron pick-up colour flavour and general acceptability of a number of canned fruits have been reported. Samples stored at room temperature do not undergo any discolouration or develop off-flavours but at elevated temperatures (37° and 43°C), discolouration, development of off-flavour

and hydrogen-swell formation usually set in. In general, most of the vitamin C is lost during one year's storage at 37°C and 43°C. Thiamin and niacin are only partially destroyed and are retained better in canned fruits than in vegetables^{74, 85}. Effect of heat-processing and storage temperature on the salt-extractability of protein in canned strained fruit pulps and custards (baby foods) have also been investigated⁶².

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