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Study of heat effects on Vitamin C content of different Fruits and Vegetables

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Abstract : *Vitamin C, an essential nutrient of all fruits and vegetables become unavailable due to its high sensitivity towards light, air and heat. Therefore, loss in Vitamin C contents of juices of some fruits namely, Carica papaya (papaya), Citrus reticulata (orange), Ananas comosus (pineapple), Pyrus malus (apple), Psidium guajava (guava) and some vegetable juices including Allium cepa (onion), Solanum tuberosum (potato), Lagenaria siceraria (bottle gourd), Lycopersicon esculentum (tomato) and Cucumis sativus (cucumber) under different heat conditions were investigated. The juices were analyzed for their Vitamin C content at fresh, boiled and frozen conditions by Iodometric titration method. Results revealed that the rate at which*

Vitamin C is lost differed in different fruits and vegetables. In fresh Carica papaya juice Vitamin C content was 7.27 mg which decreased to 6.00 mg after boiling and to 6.33 mg after freezing. Likewise, Vitamin C content of fresh Citrus reticulata juice decreased from 4.71 mg to 4.22 mg and 3.88 mg; of Ananas comosus from 3.79 mg to 3.67 mg and 3.76 mg; of Psidium guajava from 2.72 mg to 1.12 mg and 1.47 mg; and of Pyrus malus from 1.12 mg to 0.40 mg and 0.58 mg on boiling and freezing respectively. Amongst the selected vegetables, Vitamin C content of Allium cepa decreased from 5.43 mg to 2.68 mg and 3.34 mg; of Lycopersicon esculentum from 2.14 mg to 1.69 mg and 1.75 mg; of Cucumis sativus from 1.85 mg to 1.55 mg and 1.26 mg; of Lagenaria siceraria from 1.11 mg to 0.85 mg and 0.70 mg; and of Solanum tuberosum from 1.05 mg to 0.48 mg and 0.30 mg on boiling and freezing. The findings also showed that with increase in the duration of boiling, there was further decrease in the Vitamin C content of vegetable juices.

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