

Dissertation title: **Studies on minimal processing of Pineapple (*Ananas comosus* L Merr) and its effects on quality during refrigerated storage.**

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## ABSTRACT

Pineapple fruit (*Ananas comosus* L Merr) is widely used as an important constituent in a nutritious diet. Pineapple is abundantly present in North-East India likely Assam, Mizoram, Tripura etc. Pineapple can be minimally process and can give a good market value. This project studied the effects of storage temperatures on the quality of stored fresh-cut pineapple. Biochemical changes were studied for 8 days at two storage temperatures (4 °C and 10 °C). Effects of pretreatment with sodium hypochlorite were also studied during 8 days at 4 °C and 10 °C. Ascorbic acid of the fresh juice ranged from 33.29 mg/100 g to 27 mg/100 gm sample. After storage at different temperature (4°C and 10 °C) of fresh-cut pineapple for 8 days, ascorbic acid was reduced to between 18.8 percent and 17.69 percent of the fresh cut pineapple. Minimal processing of pineapple storage in polythene bag treated with Sodium hypochlorite reduced the ascorbic acid to between 5.8 percent and 13.7 percent while storage in polythene bag without treatment for 8 days further reduced the ascorbic acid content to between 10.95 percent and 8.9 percent. The range of TSS of raw pineapple was between 13.9 °Brix and 16 °Brix which show the acceptability of ripeness of fresh pineapple. The decrease in TA was related to deterioration of fruit characteristics such as firmness and visual quality. There was no more change in other factors likely TA, MC, Crude fibre, Ash content etc. Only a small difference was found in Ash content and crude fibre. The analysis was done for the quality of pineapple at different storing temperature (4°C, 10°C temperature respectively) where results concluded that 4 °C has better nutritional quality than 10 °C. Pineapple can be used freshly and minimally process for marketing. It has high nutrition value. The study suggested that pineapple which was stored at 4°C and 10°C respectively for 8 days showed significant variation in ascorbic acid content. There was loss of ascorbic acid during storage which may be due to degradation reaction.