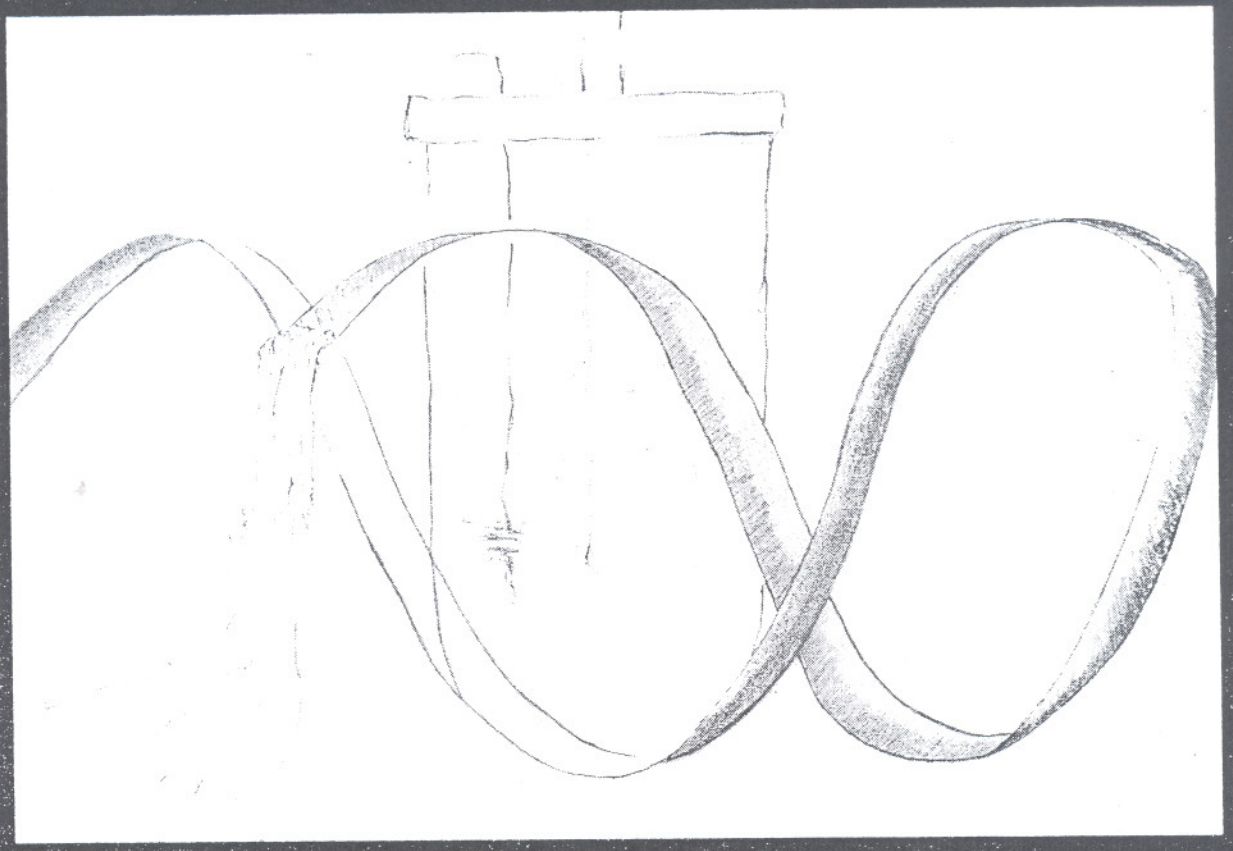

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INFLUENCE OF CHEMICAL TREATMENT AND CONTROLLED ATMOSPHERE ON SOME QUALITY PARAMETERS OF CUT APPLE ('JONAGORED') STORED AT 4°C

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SUMMARY

Fruits usually have a reasonable shelf-life with their natural protective epidermis intact. Removing these epidermis results in rapid desiccation, discoloration, loss of flavour, loss of firmness, and other undesirable biochemical reactions (Pavlath *et al.*, 1993).
Potential treatments that may be used to enhance stability of minimally processed fruits are temperature management, chemical additives, and controlled or modified atmosphere.
Chemical dips may be used to extend the shelf-life of cut fruits, but they must not affect flavour, be perceived or impair product safety (Huxsoll *et al.*, 1989). Controlled atmosphere and modified atmosphere consist on technologies that have been extensively developed in order to extend the shelf-life of several perishable products (Carlin *et al.*, 1990).
The main objective of this research was to evaluate the influence of chemical dips in ascorbic acid and calcium chloride solutions, and controlled atmosphere storage on quality of cut apple ('Jonagored') in terms of some physicochemical properties such as colour, texture and weight loss. The shelf-life of untreated cut apple was limited to 3 days of storage at 4° C due to surface colour degradation. In spite of reducing the surface browning, ascorbic acid increased the softening of refrigerated cut apple. The combined effect of ascorbic acid and calcium chloride was effective in preventing apple softening. Controlled atmosphere storage preserved lighter colour of cut apple surface than the chemical treatments in spite of causing an increase in weight loss.

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