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NUMERICAL INVESTIGATION ON REFRIGERATION CAPACITY OF COLD STORAGE FOR STORING OF FRUITS AT VARIOUS TEMPERATURES

G.VELAYUDHAM[1] & M. BRIGHTON JABEZ[2]

[1]Assistant Professor, Department of Food Engineering, College of Food and Dairy Technology, Koduvalli, Chennai, Tamil Nadu, India

[2]Research Scholar, B.Tech (Food Technology), College of Food and Dairy Technology, Koduvalli Chennai, Tamil Nadu, India

ABSTRACT

Storing of fruits in Cold storage is one of the techniques after the post harvest phenomenon. To construct this type of storage system, we must take down the numerous parameters like temperature of supplied food material, quantity to be stored, no of days of storage etc. Freezing is an excellent way to preserve most fresh foods. Freshness and quality at the time of freezing affect the condition of frozen foods (Pilar Cano, M. (1999). If frozen at peak quality, foods emerge tasting better than foods frozen near the end of their useful life. If proper techniques and correct temperatures are used, your foods will keep most of their vitamin content, natural colour, flavour, and texture. Fruits are important sources of vitamin and minerals. They are got rotten before the final consumption due to lack of preservation and storage facilities. This is a useful technique to extend the shelf life and decrease the energy cost. It also helps to improve the sensorial, nutritional and physico chemical properties of foods (Bhardwaj RL, Urvashi Nandal, 2014). In this paper, the refrigeration capacity of plant is examined to maintain various freezing temperatures by considering the quantity of fruits, inside temperature to be maintained, latent of freezing of fruits, heat to be removed in subsequent hours under the mathematical process. This can be achieved and refrigerating capacity of plant is enumerated.

KEYWORDS: Numerical Investigation, Refrigeration Capacity, Cold Storage, Storing of Fruits