EFFECTS OF SOLVENT EXTRACTED DIETS TO YIELD THE SHELF LIFE OF PAPAYA (*Carica papaya* L.)

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EFFECTS OF CALCIUM CHLORIDE DIPPING TO EXTEND THE SHELF LIFE OF PAPAYA (*Carica papaya* L.)

By

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PENGAKUAN DAN PENGESAHAN LAPORAN
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Adalah ini diakui dan disahkan bahawa laporan ilmiah bertajuk:
EFFECTS OF CALCIUM CHLORIDE DIPPING TO EXTEND THE SHELF LIFE OF PAPAYA (Carica Papaya L.)

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DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged.

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ABSTRACT

This study was conducted in the Post Harvest Laboratory under the Department of Agrotechnology in University Malaysia Terengganu. Papaya (*Carica Papaya* L.) fruits from the maturity index 2 were chosen and treated with 1.5, 2.5 and 3.5% solutions of calcium chloride by dipping treatment and untreated (0%) as a control group. The effects of these treatments were evaluated on storage life and postharvest quality characteristics of papaya. During the 12 days of storage at 25±1°C, three fruits from each treatment were removed from storage crates for physicochemical analysis in an interval of every two days. Postharvest dipping treatments at different concentrations of calcium chloride prolonged the shelf life, slowed down senescence, ripening processes and maintained the quality of papaya throughout the storage period. The desired effect was obtained at 3.5% solution of calcium chloride compared with other dipping treatments. The least physicochemical changes were found on those fruits which are dipped with 3.5% calcium chloride solution. Hence, obviously it can be concluded that the postharvest dipping of calcium chloride solution at 3.5% has the best effect and has a high potential in controlling the disease incidence, prolong the shelf life and preserve the valuable attributes of postharvest papaya, most probably because of its effects in delaying the ripening and senescence process besides inhibition of the post harvest losses of papaya the aspect of fruit firmness.