

EVALUATION OF DAWUL KURUNDU LEAF MUCILAGE AS A WAX COATING TO EXTEND THE POSTHARVEST LIFE OF LIME

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The researchers are currently interested in developing waxes from natural compounds of biological origin. The highly viscous leaf mucilage of *Dawul kurundu* (*Neolitsea cassia* L.) was investigated to be used as a wax coating to enhance the postharvest life of lime (*Citrus aurantifolia* L.). *Dawul kurundu* leaves were collected, chopped, crushed and mucilage was extracted with distill water. Lime at correct maturity stage (weight 23.6 ± 2.3 g, Total Soluble Solid (TSS) $8.0 \pm 0.0\%$, Titratable Acidity (TA) $6.90 \pm 0.03\%$) were harvested and divided into 4 lots each containing 30 fruits. Two lots were dipped in prepared wax formulation for 30 seconds. Other two lots were kept without waxing (control). Both treated and control groups were packed in perforated low density polyethylene bags and stored in cold room (8°C and 85%) and under ambient conditions (26°C and 68%). Data on peel color, firmness, TSS, TA, juice pH, Physiological Weight Loss (PWL) were collected at 7 and 4 day intervals for the fruit stored in cold room and ambient conditions, respectively. Firmness, TA and PWL of waxed limes under ambient conditions were 2.37 ± 0.06 kg, $7.06 \pm 0.15\%$ and $17.7 \pm 1.9\%$ respectively and showed a marketable life of 32 days. The control samples showed significantly ($p < 0.05$) lower firmness (2.13 ± 0.06 kg), and TA ($6.53 \pm 0.06\%$) and higher PWL ($29.5 \pm 3.9\%$) thus exhibited a marketable life of 24 days. When fruit were stored at cold room, firmness and TA of treated fruit increased by 0.4% and by 1.6% while PWL was reduced by 12% in contrast to control group. Hence, under cold room, the marketable life was extended up to 63 days in contrast to its un-waxed counterpart where marketable life was 42 days. In conclusion, *Neolitsea cassia* leaf mucilage show promising effect on developing as a wax coating.

Keywords: Firmness, Fruit quality, Storage