

**MINIMAL PROCESSING OF *AVERRHOA CARAMBOLA* L.
CV. 'FWANG TUNG' (CARAMBOLA)**

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Carambola is an underutilized fruit with potential for popularizing particularly in the hotel industry due to its unique star shape and pleasing flavour. In this study, the effect of harvest maturity, anti-browning treatments and packaging material on keeping quality of minimally processed (MP) carambola was investigated.

Sixty fruits each from green-yellow (GY) and yellow-green (YG) maturity stages were randomly selected for the study. Slices (1 mm) of GY and YG, selected based on a colour chart, were immersed for 3 min in 0.5 % ascorbic acid (AA) & 1% citric acid (CA), 1% AA & 2% CA and distilled water (control) and packaged in 0.025 mm low density polyethylene (LDPE). The packages were stored at 5 ± 1 °C for seven days. The slices were evaluated on the 7th day, based on total plate counts (TPC), yeast and mould counts (YMC) and preference for sensory attributes using 30 in-house panellists and a 7-point hedonic scale. GY stage carambola slices obtained from eighty fruits were immersed in 1% AA & 2% CA for 3 min and packaged in 0.035 mm LDPE packages, 0.025 mm Peakfresh[®] and 2.16 mm Styrofoam trays overwrapped with 0.0175 mm polyvinyl chloride (PVC). All the packages were stored at 5 ± 1 °C for 14 days, and TPC, YMC, coliform counts and physicochemical properties (firmness measured using a fruit firmness tester, pH, TA and TSS) of the slices were determined. The slices stored for 14 days in Peakfresh[®] and the fresh slices were evaluated using 30 in-house panellists and a 7-point hedonic scale.

Maturity stage x anti-browning treatment interaction effect was significant ($P < 0.05$) for TPC, YMC and preference for sensory attributes. GY stage and 1% AA & 2% CA were the best treatment combination as revealed by the least TPC (2.2 Log CFU/g), YMC (1.6 Log CFU/g) and sensory attributes. TPC of slices packaged in Peakfresh[®], Styrofoam trays with PVC over-wraps and LDPE were 2.7, 2.9, 3.2 Log CFU/g and the YMC were 1.6, 1.9 and 2.1 Log CFU/g, respectively. The slices packaged in Peakfresh[®] exhibited minimum changes in firmness, pH, TA and TSS. *Coliforms* were absent in all the samples. The sensory attributes of slices packaged in Peakfresh[®] and stored for 14 days at 5 ± 1 °C were not significantly different from the fresh slices. GY stage carambola slices (1 mm) can be immersed in 1 % AA & 2% CA for 3 min, packaged in 0.025 mm Peakfresh[®] in a 3 to 1 surface area to fruit weight ratio (cm^2g^{-1}) and stored at 5 ± 1 °C for 14 days to obtain a MP product possessing sound sensory attributes.