Title Phytochemical changes in fresh-cut jackfruit (*Artocarpus heterophyllus* L.) bulbs during modified atmosphere storage

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Abstract

A minimal process was carried out for pitted jackfruit (*Artocarpus heterophyllus* L.) bulbs using additives $CaCl_2$, ascorbic acid (AA), and sodium benzoate in combination with mild acidified conditions for storage under modified atmosphere (MA), i.e., 3 kPa O_2 + 5 kPa CO_2, gas mixture flushed polyethylene (GFPE) bags, polyethylene terephthalate jars with silicon membrane on lid and polyethylene bag with air. Samples devoid of any additive based pretreatment but packaged in similar MA conditions were used as experimental control. A restricted loss of around 7%, 8%, 43%, and 31% was found for total phenolics (TP), total flavonoids (TF), total carotenoids (TC), and AA contents respectively in the pretreated samples kept under GFPE bags towards the end of 35 days storage at 6 °C. Among the phytochemicals evaluated, the radical-scavenging activity showed the highest correlation (r = 0.979) with AA followed by TP, TF and TC.