Title Effect of modified atmosphere packaging on dragon fruit (*Hylocereus undatus*) quality during low temperature storage

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Abstract

Effect of modified atmosphere packaging on postharvest quality changes of dragon fruit (*Hylocereus undatus*) under storage condition at 8°C with 95-100% RH was studied. Drafruits fruit were individually packed in different oxygen transmission rate (OTR) of polypropylene (PP) or polyethylene (PE) bag Comprising; Treatment 1: packed in PP bag (850-950 cc/m^2/day), Treatment 2: packed in PE bag (5,000-5,800 cc/m^2/day), Treatment 3: packed in PE-M2 bag (10,000-11,000 cc/m^2/day), Treatment 4: packed in PE-M4 bag (12,000-15,000 cc/m^2/day) and Treatment 5 was control (non packed). The results showed that respiration rate, weight loss, changes of flesh firmness and bract color were delayed in fruit packed in PE bag when compared with the control. The gas composition in PE bag was 19 and 9 % for O_2 and CO_2 respectively and the water vapor transmission rate was 0.33 g/m^2/day. The fruit packed in PE bag showed better visual appearance than the other treatments up to 20 days of storage Beside, fruit packed in PP bag had flesh translucency and soften while packing fruit in PE-M2 or PE-M4 bag showed the highest diseases incidence on 20 days of storage.