

Title           Effect of chitosan on ripening of apple fruits grown in the tropics  
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#### **Abstract**

An experiment was conducted to determine the effect of chitosan on quality and physiological changes of apple fruits. Chitosan was extracted from shrimp byproduct according to an established method. Apples grown in highland of East Java were harvested at maturity and transported to Bogor overnight. The fruits were treated with chitosan (0, 0.5, 1.0 and 1.5%) and stored at room temperature. Three cultivars were used in the experiment: Rome Beauty, Anna, and Manalagi. They were periodically analysed at 3-day intervals. Results showed that treatment of chitosan up to 1.5% inhibited weight loss and the reduction of titratable acidity but did not have an effect on fruit softening and increase of total soluble solids (TSS). Anna softened and increased TSS faster than the other two cultivars. Anna and Rome Beauty had higher titratable acidity than Manalagi. No difference was observed in weight loss among the three cultivars. Chitosan effects on respiration rate and ethylene evolution are discussed.