

**Title** Effects of 1-MCP on physico-chemical changes of ready-to-eat durian 'Mon-Thong'  
**Authors** T. Sudto, A. Uthairatanakij  
**Citation** ISHS Acta Horticulturae 746:329-334. 2007.  
**Keywords** C<sub>2</sub>H<sub>4</sub>; CO<sub>2</sub>; packaging; PVC wrap; lipoxygenase

### **Abstract**

Maintaining the postharvest quality of fresh-cut durian 'Mon-Thong' after processing through their markets is a major challenge facing ready-to-eat fruit. The effect of 1-methylcyclopropene (1-MCP) concentrations was studied. Durian pulp was fumigated with 0, 50, 100, 200 and 500 ppb of 1-MCP for 12 h at 20°C, thereafter the pulp was wrapped with PVC film (15 µm) and stored at 4°C. Durian pulp treated with 1-MCP at 50 ppb showed the most effective to delay the accumulation of CO<sub>2</sub> in package. There was no difference in C<sub>2</sub>H<sub>4</sub> in package. At the first 8 days of storage, 1-MCP maintained higher firmness than untreated pulp, however 1-MCP treatment had no significant effect on firmness of ready-to-eat durian. The reduction of starch content and the increase of soluble solids content were delayed in treated durian pulp. Treatment of durian pulp with 1-MCP at all concentrations reduced the activity of lipoxygenase significantly resulting in delay of ripening. However, 1-MCP had minimal effect on polygalacturonase and β-galactosidase activities.