

**Title** Postharvest quality characteristics of methyl bromide fumigated durian (*Durio Zibethinus*) fruits as affected by storage temperature

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**Citation** Abstracts of 7<sup>th</sup> International Postharvest Symposium 2012 (IPS2012). 25-29 June, 2012. Putra World Trade Centre (PWTC), Kuala Lumpur, Malaysia. 238 pages.

**Keywords** durion; methyl bromide

#### **Abstract**

The plant quarantine regulations for certain countries, like Japan and China, are quite strict. China requires methyl bromide treatment of the fresh produce before export. Thus, this study was conducted to determine the effects of storage temperature on postharvest quality characteristics of methyl bromide fumigated durian. Durian ('Musang King') fruits were obtained from the Department of Agriculture, Serdang, Selangor, Malaysia. The fruits were fumigated with methyl bromide and then stored at 13 and 25°C. The postharvest quality characteristics of the durian were evaluated for firmness, peel and pulp colour (L\*, C\* and h°), soluble solids concentration, ascorbic acid, and pH at 1) two days interval for durian stored at 13°C, and 2) everyday for durian that were stored at 25°C. The results indicated that storage life of durian stored at 13°C was 8 days compared to 5 days for durian stored at 25 °C (control temperature). During the 5 days of storage at 25°C, there were significant differences in L\*, C\* and h° values of peel colour, soluble solids concentration, pH and ascorbic acid content of durian at each storage day. Simi larly, fruits stored at 13°C were significantly different in the quality characteristics measured at every two days interval. Peel of durian started to split on storage day 4 when stored at 25°C, while those stored at 13°C started to split on storage day 6. Generally, after methyl bromide fumigation, the durian remained acceptable for 8 and 5 days at 13 and 25°C of storage, respectively.