

**Title** Effects of MeSA vapor treatment on the postharvest quality of Hayward kiwifruit

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**Citation** Abstracts Book, 6<sup>th</sup> International Postharvest symposium, 8-12 April 2009, Antalya, Turkey. 256 pages.

**Keyword** Kiwifruit; methyl salicylate; vapor

### **Abstract**

The roles of methyl salicylate (MeSA) vapor in postharvest quality of kiwifruit were investigated using exogenous application of MeSA. Mature fruit of kiwifruit (*Actinidia deliciosa* cv. Hayward) was harvested at commercial maturity and exposed to 0,8,16, 24 and 32  $\mu$ lit MeSA vapor at 20°C for 16h. The rate of ethylene production, flesh firmness, total soluble solids (TSS), titrable acidity (TA), Ascorbic acid content and pH of fruits were determined 1, 2, 3, 4, 5 months after the beginning of storage. Ethylene production was decreased significantly by the use of MeSA. Control fruits had the highest rate of ethylene production while lowest rate was occurred in 32  $\mu$ lit MeSA treatment at all determination times. The use of MeSA also prevented the softening of fruit flesh and decrees of ascorbic acid content of fruit during the storage and kept their firmness and ascorbic acid content, so that the 32  $\mu$ lit MeSA treatment caused the highest fruit firmness and ascorbic acid content at all determination times. Fruit treated with 24 and 32  $\mu$ lit MeSA was lowest pH and TSS, respectively. TA of the fruits was not significantly affected by the use of MeSA. The quality of fruits was improved by the of 32  $\mu$ lit MeSA treatment.