

**Title** Effects of temperature and storage conditions on aroma volatile compounds in fresh-cut melon (*Cucumis melo* L. cv. Kuylin)

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### Abstract

Effects of various temperatures on altered volatiles of fresh-cut hybrid melon (*Cucumis melo* L. cv. Kuylin) during storage were investigated. Fresh-cut melon cubes were packed in plastic trays and sealed with plus-polyethylene terephthalate (P-PET) film. Fresh-cut melon were stored in different atmosphere conditions of 5 and 10°C for 7 days or stored at 5°C for 2 days and then transferred to 10°C for 5 days. Total esters of headspace in the packages were analyzed using solid phase microextraction/gas chromatography-mass spectrometry (SPME/GC-MS). Total acetate esters of the constituents including ethyl acetate, ethyl propionate, ethyl 2-methylpropionate, ethyl butyrate, butyl acetate, ethyl 2-methylbutyrate, 2-methylbutyl acetate, ethyl hexanoate and hexyl acetate. The results provide evidence that the formation of esters, major components of the fresh-cut melon volatile profile, is dependent upon the storage temperature and O<sub>2</sub>/CO<sub>2</sub> inside packaging.