

**Title** Volatiles during hybrid melon (*Cucumis melo* L. cv. Kuylin) fruit development  
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#### **Abstract**

Aroma volatiles and compositions are major criteria used to determine quality of a hybrid melon (*Cucumis melo* L. cv. Kuylin). Fruit attributes were measured at 30, 35, 40, 45 and 50 days after anthesis (DAA). Volatile compounds were analyzed by head space solid phase microextraction/gas chromatography/mass spectrometry (HS-SPME/GC/MS). During fruit growth or/and unripe melon at 30 days after anthesis (DAA), (*Z*)-6-nonenal was the major of total volatiles. Then, after 5 days (35 DAA) two compounds (*E*)-2-hexenal and nonadienol were key volatiles recovered in this melon's volatile profile. The total esters emanated very little after the onset of the ethylene climacteric (40 DAA), while the production increased in significant during respiration and ethylene maxima production. Straight chain esters hexyl acetate and butyl acetate and branched chain esters 2-methylpropyl acetate and 2-methylbutyl acetate were found to be the major esters. During the late climacteric phase (between 45 and 50 DAA), the production of methyl acetate was found to correlate with loss in firmness and increased in total soluble solids (TSS) due to the rapid accumulation of sucrose. The changes in the many these parameters during the development of the fruit have been determined and possible relationships examined.