

Title            Ethylene seems required for the berry development and ripening in grape, a non-climacteric fruit

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### **Abstract**

While the grape has been classified as a non-climacteric fruit whose ripening is thought to be ethylene independent, we show here that a transient increase of endogenous ethylene production occurs just before veraison (i.e. inception of ripening). We observed that ethylene perception, at this time, is required for at least the increase of berry diameter, the decrease of berry acidity and anthocyanin accumulation in the ripening berries; these latter experiments were performed with 1-methylcyclopropene, a specific inhibitor of ethylene receptors. The potential roles of ethylene in berry development and ripening are discussed.

**Abbreviations:** 1-MCP, 1-methylcyclopropene; ACC, 1-aminocyclopropane-1-carboxylic acid; ACO, 1-aminocyclopropane-1-carboxylic acid oxidase