Title Temperature and propylene effects on ripening of green and black 'Conservolea' olives.

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Abstract

Ripening of detached mature-green and black-ripe olives (*Olea europaea* L., cv. Conservolea) was studied during storage at 0, 5, 10, or 20 deg C in air or air plus 100-200 micro L.L-1 propylene. Green olive skin h deg remained unchanged after 24 days at 0 or 5 deg C in air or air+propylene, while olives partially lost their green color at 10 deg C and developed purple color at 20 deg C together with a substantial flesh softening. Propylene partially delayed flesh softening only at 10 deg C. Respiration of green and black olives increased with storage temperature. Black olives had higher respiration rate than green olives. Propylene had no substantial effect on green or black olive respiration rate, except for an increase in respiration and ripening rates of green olives kept at 20 deg C. Ethylene production rate of air-or air+propylene-treated green olives was almost undetectable. Black olives had higher ethylene production rate than green olives and this rate significantly increased with storage temperature. Addition of propylene had only minor effect on ethylene production of black olives. No climacteric respiratory rise or autocatalytic ethylene production was observed in green and black olives.