

**Title** Effect of modified atmosphere packaging on quality properties and storability extending in two sour cherry cultivars

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#### **Abstract**

Sour cherry (*Prunus cerasus* L.) is an important Iranian-native fruit, considered highly perishable commodity which cannot be stored for long time. On this study, effect of three gas compositions (ambient, 5% O<sub>2</sub>+5% CO<sub>2</sub>+90% N<sub>2</sub> and 10% O<sub>2</sub>+15% CO<sub>2</sub>+75% N<sub>2</sub>) and two storage temperature (0 and 5°C) on two sour cherry cultivars namely Erdy jubileum and Erdy Botermo were studied in a CRD (completely randomized design) based on factorial design with three replications. Fruits were examined, 42 days after packaging, in case of such different qualitative factors as weight loss, tissue firmness, total soluble solids (TSS), titrable acidity (TA), pH, and colour. The results indicate better preservation of qualitative properties such as weight loss, tissue firmness and colour in the modified atmosphere; in 5% O<sub>2</sub>+5% CO<sub>2</sub>+90% N<sub>2</sub> the lowest weight loss and the highest firmness was detected. In Erdy jubileum at 5°C titrable acidity was the lowest and the favourable impact of the 5 °C temperature treatment on qualitative properties, compared to that of 0°C.