

**Title** Microstructural changes of 'Rocha' pear following storage under controlled atmosphere  
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**Citation** ISHS Acta Horticulturae 800:985-992. 2008.  
**Keywords** *Pyrus communis*; firmness; scanning electron microscopy; image analysis

### **Abstract**

This research effort was aimed at evaluating the influence of storage (for 4 mo at 2°C), under various controlled atmospheres (viz. 1.9 kPa O<sub>2</sub> + 4.9 kPa CO<sub>2</sub>, 1.9 kPa O<sub>2</sub> + 0.5 kPa CO<sub>2</sub> and 1.9 kPa O<sub>2</sub> + 0 kPa CO<sub>2</sub>), on the microstructure of 'Rocha' pear. Toward this goal, the morphology of cellular disassembly, as well as the quantity of granules and intercellular space using scanning electron microscopy (SEM), were tentatively correlated with sensory and instrumental firmness, by 1, 6 and 8 d of exposure to air, at room temperature, after storage. A specific methodology, based on panel evaluation of SEM images, was developed and statistically validated. The degree of cellular disassembly increased throughout exposure time to air at room temperature. Pears stored under 1.9 kPa O<sub>2</sub> + 0.5 kPa CO<sub>2</sub> yielded a degree of cellular disassembly similar to that of the control.