

**Title** Effect of gas tightness-controlled compartment system on quality keeping of fresh produce stored in household refrigerator

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#### **Abstract**

Refrigerator chill compartments with volumes of 22-L were fabricated, which had different gas tightness properties to gas or water vapor, ranging from 1,770 to 107,000 mL/hr·m<sup>2</sup>·atm in CO<sub>2</sub> permeance at 25°C. Those compartments were filled with prepared fresh vegetables, and then their ability to preserve the quality at 3°C for 14 days was compared. The internal atmosphere and humidity were monitored together with the stored produce quality. The air-tight compartment with the lowest permeance created an atmosphere slightly different from air (CO<sub>2</sub> 0.8–1.6%; O<sub>2</sub> 19.7–20.4%), while the other ones had atmospheres of normal air. The relative humidity of the compartments ranged from 52 to 97%. Two air-tight compartments, maintaining a relative humidity mostly higher than 95%, preserved the produce better than the conventional open type one, with reduced weight loss and better retentions of ascorbic acid and chlorophyll.

<http://www.springerlink.com/content/d844325h746t3172/fulltext.pdf>