

**Title** Peeling has no effect on respiration and ethylene production and only minimal effect on quality of fresh white asparagus spears

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#### **Abstract**

Fresh white asparagus spears were subjected to peeling or left unpeeled before storage at 10 °C for 7 days. CO<sub>2</sub> and ethylene production rates were determined during storage, while color, toughness and DPPH radical scavenging activity as well as soluble solids, total soluble phenols and nitrate content were determined before and after storage in both peeled and unpeeled spears. Peel CO<sub>2</sub> and ethylene production rates were also determined during storage. Spears subjected to peeling were more tender, and had lower lightness and chroma and higher hue angle values compared to the unpeeled ones. However, both peeled and unpeeled spears had similar DPPH radical scavenging activity, soluble solids, total soluble phenols and nitrate contents. Peeling resulted in increased CO<sub>2</sub> and C<sub>2</sub>H<sub>4</sub> production rates, but peel contributed to total increase of CO<sub>2</sub> and C<sub>2</sub>H<sub>4</sub> production. As the measured metabolic activity of the peeled asparagus spears was similar to that of the unpeeled, peeling did not adversely affect quality during storage.