

**Title** UV – C irradiation treatment delays chlorophyll degradation and maintain qualities of Chinese kale (*Brassica oleracea* var. *alboglabra*)

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#### **Abstract**

The effect of UV-C irradiation (1.8, 3.6, 5.4 and 7.2 kJ m<sup>-2</sup>) on chlorophyll degradation and quality changes of Chinese kale (*Brassica oleracea* var. *alboglabra*) at 20 °C was determined. The irradiation dose of 5.4 kJ m<sup>-2</sup> maintained the highest total chlorophyll, chlorophyll a and chlorophyll b contents, and delayed decreasing of hue angle compared with other treatments. Furthermore, weight loss, respiration rate and ethylene production were also reduced by 5.4 kJ m<sup>-2</sup> UV-C treatment concomitantly with the maintenance of vitamin C during storage. The results suggest that UV-C irradiation treatment could be a useful non-chemical method to delay chlorophyll degradation and maintain the quality in Chinese kale.