UV-B treatment controls chlorophyll degradation and related gene expression in broccoli (*Brassica oleracea* L. Italica Group) florets during storage

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Abstract

Control of chlorophyll (Chl) degradation and related gene expression in response to UV-B treatment were investigated in broccoli florets during storage. Reductions in hue angle value and Chl content in broccoli florets during storage at 4, 15 and 25 °C were delayed with 19 kJ m⁻² of UV-B irradiation. Furthermore, up-regulation of *BoSGR* and *BoNYC1*, Chl-degrading genes, was found with floret yellowing in the control during storage at 15 °C. In contrast, expression of those genes in UV-B-treated broccoli florets were effectively suppressed during storage, suggesting that UV-B treatment could be useful for quality maintenance of broccoli florets during storage.