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The Effect of Storage on The Physiological Status of Radish (*Raphanus Sativus* L.) Microgreens

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Microgreens are tender, immature green vegetables with fully developed cotyledons or partially developed first true leaves. They often contain higher concentrations of active compounds compared to mature vegetables or seeds. Microgreens are highly valued for their rapid cultivation and high concentrations of active compounds and are also considered a 'functional food' that contains health-promoting properties and prevents the development of certain diseases. The biggest disadvantage of microgreens is their short shelf life. Microgreens are difficult to store due to their high surface-to-volume ratio, high respiration to transpiration rates, and accelerated senescence. The study was performed on three cultivars of radish (*Raphanus sativus* L.): China rose (CHR), Sango (S) and Daikon (D). Radishes were grown in a growth chamber with artificial purple (3 red: 1 blue) LED lighting (45 mmol m^2s^{-1}, 24°C, photoperiod 16h/8h). The aim of this study was to determine the effect of storage (7 days, +4C°) on the physiological status of microgreens compared to fresh ones by measuring total antioxidant activity (DPPH and FRAP). The amount of total soluble phenols (PHE), sugar (TSS) and protein (PROT), as well as the concentrations of ascorbic acid (AA), carotenoids (CAR) and anthocyanins (ANTH) were also determined. Three investigated cultivars revealed similar response to 7-day storage. Generally, all three cultivars showed increase of CAR and decrease of AA while PROT and ANTH levels remained unchanged. Unlike S and D cultivars, CHR displayed significant decrease of antioxidant capacity what lead to simultaneous decrease of PHE and AA. On the other hand, D showed significant decrease of PHE, while TSS content increased compared to fresh ones. Our results suggested that seven-day storage in refrigerator does not induce inhibition of most secondary metabolites. However, CHR cultivar was shown to be the most sensitive to low temperature storage.