

## **Abstract**

Vegetables within the brassica family such as broccoli, have been shown to contain high concentrations of specific glucosinolates, which in turn produce isothiocyanates with anticancer potential. Sprouted seed has been shown to have exceptionally high levels. We investigated the impact of growing temperature and sprout development stage on the glucosinolate profile and concentration of two cultivars of daikon sprouts (*Raphanus sativus*), also a member of the brassica family. Two glucosinolates (glucoraphenin, glucodehydroerucin) were detected in high concentrations, and two at lower concentrations (glucoraphenin, 4-hydroxyglucobrassicin). Except for glucodehydroerucin, concentrations of all glucosinolates decreased significantly with increase in sprout developmental stage. Growing temperature significantly impacted on the glucosinolate profile of one cultivar of daikon, but not on the other. Higher growth temperatures were associated with an increase in glucodehydroerucin at the expense of glucoraphenin. As glucodehydroerucin is estimated at having approximately one tenth the anti-cancer potential of glucoraphenin, both cultivar, sprout developmental stage and growing temperature appear to be critical factors determining the potency of daikon sprouts.