Title Red cabbage, a vegetable rich in health-related glucosinolates

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Abstract

The glucosinolates and their breakdown products are responsible for much of the flavour of *Brassica* vegetables and condiments. Specific glucosinolates have long been known to exert antinutritional effects in animal feedstuffs, but there is an increasing body of evidence to suggest that glucosinolates like glucoraphanin, glucobrassicin, glucoiberin and gluconasturtiin also function as anticarcinogens in human foods. To study the variation in glucosinolate profile in cabbage, twenty-one varieties of red cabbage and six varieties of white cabbage were analysed. The varieties originated from the Netherlands, France, Japan, USA and Scandinavia. Intact individual glucosinolates were determined by ion-pair-HPLC-MS/DAD. Red cabbage contained significantly more glucoraphanin and gluconasturtiin than white cabbage, whereas white cabbage contained significantly higher concentrations of glucioberin. There were no significant differences between red and white cabbage in the content of glucobrassicin. For all of the health related glucosinolates there was a large variation between both red and white cabbage and between the different cultivars of red and white cabbage.