

Abstract:

Plant-derived flavonoid compounds act as protective nutrients possessing antioxidant and free radical scavenging activity in foods. An HPLC-based quantitative procedure with improved extraction and hydrolysis was used to analyse the content of the flavonols myricetin, quercetin and kaempferol in strawberry cultivars. The quercetin contents in strawberry cultivars ranged from 0.7 to 2.6 mg 100 g⁻¹ fresh weight. The kaempferol levels ranged from 0.9 to 2.2 mg 100 g⁻¹. In cv. Senga Sengana the amount of myricetin was hardly detectable, while in cv. Honeoye it was 1.7 mg 100 g⁻¹. The sum of the three flavonols varied greatly among the strawberry cultivars. In general, cv. Honeoye (fairly resistant to fungal diseases) contained the highest amount of flavonols and the old cv. Senga Sengana (susceptible to fungal diseases) contained the lowest amount of flavonols. The high variability in the flavonol contents offers possible avenues for identifying and selecting strawberry genotypes rich in health-promoting compounds.