

Evaluation of antioxidant activities in relation to total phenolics and flavonoids content of selected Malaysian wild edible plants by multivariate analysis

Abstract

The aim of this study was to determine the antioxidant activity, total phenolics, and total flavonoid content of six freeze dried wild edible plants, namely *Helminthostachys zeylanica*, *Schismatoglottis ahmadii*, *Heckeria umbellatum*, *Lasia spinosa*, *Gonostegia hirta*, and *Aniseia martinicense* from Sabah, Malaysia. All leaves had higher levels of total phenolics, flavonoids, and antioxidant activity than stems and flowers for all extracts, except the stem of *Gonostegia hirta*. Integrated antioxidant activity index showed the leaf of *Heckeria umbellatum* and *Aniseia martinicense* possessed the highest antioxidant activity for all extracts. Principal component analysis identified that the phenolic group present in the hot water and methanolic extracts was the main factor for higher values observed in oxygen radical absorbance capacity and ferric reducing antioxidant power assays. These wild edible plants are good natural sources of antioxidants to be incorporated as functional ingredients in the food industry.