

Antioxidant properties of selected non-leafy vegetables.

ABSTRACT

Purpose: The purpose of this paper is to determine the antioxidant properties (capacity and component) of four non-leafy vegetables. The correlation between the antioxidant capacity and its components of the studied vegetables was also assessed.

Design/methodology/approach: Winged beans, also known as four-angled bean (*Psophocarpus tetragonolobus*), French bean (*Phaseolus vulgaris*), string bean (*Vigna sinensis*) and snow pea (*Pisum sativum*) were selected as samples from among the common non-leafy vegetables consumed by Malaysians. These fresh vegetables were lyophilised and ground and their ethanolic extracts were prepared for antioxidant capacity assays and total phenolic, β -carotene and ascorbic acid contents.

Findings: Among the vegetables, string beans showed the highest antioxidant capacity compared to the other vegetables studied ($p < 0.05$). The total phenolic, ascorbic acid and β -carotene contents of snow peas were significantly higher ($p < 0.05$) than the other vegetables. There was a significant positive correlation between scavenging activity and antioxidant components studied. On the other hand, a negative correlation was found between antioxidant activity and its components of the studied vegetables.

Originality/value: Previous reports have indicated that vegetables contain high levels of antioxidants. However, data on antioxidant capacity of these non-leafy vegetables are still lacking. This research paper shows the non-leafy vegetables studied is a promising source of antioxidants with good antioxidant capacity. Beside that, along with the studied antioxidant components, other compounds in these vegetables could also contribute to their antioxidant capacity.

Keyword: Malaysia; Vegetables