

Antioxidative properties of leaf extracts of a popular Malaysian herb, *Labisia pumila*.

ABSTRACT

A study was undertaken to examine the presence of antioxidative activities of two varieties of *Labisia pumila*; *L. pumila* var. *Alata* and *L. pumila* var. *Pumila* using DPPH, FRAP and β -carotene bleaching methods. In addition, ascorbic acid, β -carotene, anthocyanin, total flavonoid and total phenolic content were also analyzed. In eight methods studied, six of them showed high activities of antioxidant in *L. pumila* var. *Alata* compared to that of *L. pumila* var. *Pumila*. The results obtained showed that *L. pumila* var. *Alata* contained higher antioxidative activities in all three methods applied compared to var. *Pumila*. In DPPH, FRAP and β -carotene bleaching methods, *L. pumila* var. *Alata* had high antioxidant activities with 299.84 μ M trolox/g db, 164.16 μ M trolox/g db and 89.22%, respectively. The same pattern of antioxidant activities also can be observed in ascorbic acid, β -carotene and anthocyanin in *L. pumila* var. *Alata* compared to var. *Pumila* with 0.022, 3.175 and 0.328 mg/g FW, respectively. *L. pumila* var. *Pumila* had higher total flavonoid content than *L. pumila* var. *Alata* with 1.281 mg/g FW. For total phenolic content, no significant different was observed because the amount of total phenolic content ranging from 2.53 to 2.55 mg/g FW. There is a positive correlation between antioxidant capacities and individual antioxidative compounds in the following order β -carotene>flavonoid>vitamin C>total anthocyanins >phenolics.

Keyword: *Labisia pumila*; Antioxidants; β -carotene; Flavonoid; Vitamin C; Anthocyanin; Phenolics.