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 µM trolox/g db, 164.16 µM 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.