Title Antioxidant activity of the extracts from *Dillenia indica* fruits

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Abstract

There has been growing interest in the beneficial health effects of consuming fruits and vegetables. Mainly, the presence of phenolic antioxidants is believed to have the protective mechanisms. In the present study the fruit of *Dillenia indica* was extracted with ethyl acetate, methanol and water. The total phenolic content of the extracts was determined by Folin–Ciocalteu method and antioxidant activity of the extracts was assayed through some in vitro models such as antioxidant capacity by phosphomolybdenum method, β-carotene-linoleate model system, and radical scavenging activity using α,α-diphenyl-β-picrylhydrazyl (DPPH) method. The total phenolic contents of the fruit extracts as tannic acid equivalents were found to be highest in methanol extract (34.1%) followed by ethyl acetate extract (9.3%) and water extract (1.4%). Antioxidant capacity of the extracts as equivalent to ascorbic acid (μmole/g of the extract) was in the order of methanol extract > ethyl acetate extract > water extract. In comparison with butylated hydroxyanisole (BHA), at 100 ppm of concentration, the antioxidant and free radical scavenging activities of the extracts assayed through β-carotene-linoleate model system, and DPPH method were also found to be highest with methanol extract followed by ethyl acetate and water extracts. The results indicated that the extent of antioxidant activity of the extract is in accordance with the amount of phenolics present in that extract and the fruit of *D. indica* is rich in phenolics may provide a good source of antioxidant.