

## **Rhaphidophora decursiva leaves: phenolic content and antioxidant activity.**

### **ABSTRACT**

Total phenolic content (TPC) and antioxidant activity (AA) of *Rhaphidophora decursiva* (Roxb.) Schott leaves extracted with methanol and water were studied. The TPC was assessed using Folin-Ciocalteu method. Meanwhile, the antioxidant activity was estimated using  $\beta$ -carotene bleaching, 2, 2-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging, and ferric reducing antioxidant power (FRAP) assay. Butylated hydroxytoluene (BHT) was used to compare its AA with the other extracts. It was found that the total AA of methanol extracts was higher than that of BHT. Significant differences were found in the scavenging activity, EC50 value and TPC between the water and methanol extracts. No significant relationship ( $p>0.05$ ) between TPC and AA as measured by  $\beta$ -carotene bleaching and DPPH radical scavenging methods for both water and methanol extracts. However, TPC and AA as measured by FRAP assay did show a significant relationship at  $p<0.01$  level. This study showed that the methanol extracts of the plant possess both higher TPC and AA compared to that of water extracts, and this was supported by the consistent results showed by all antioxidant activity assays. The antioxidant properties of the plant may have originated not only from phenolic but also from the non-phenolic compounds which possess high antioxidant activity.

**Keyword:** *Rhaphidophora decursiva* (Roxb.) Schott; Antioxidant activity; Phenolic; FRAP; DPPH;  $\beta$ -carotene.