

## **Assessment of antioxidant capacity and phenolic content of selected commercial beverages**

### **ABSTRACT**

This study was aimed at assessing the antioxidant capacity and phenolic (free, bound, and total) contents in selected commercial beverages. Three different types of beverages commonly available in Malaysian supermarkets namely, cocoa, coffee and tea were selected. Phenolic contents were determined using a Folin-Ciocalteu assay. Antioxidant capacity (ferric reducing power and scavenging activity) was determined using FRAP and TEAC assays. Based on analysis of variance, coffee showed the highest amount of free phenolic compounds and antioxidant capacity compared to cocoa and tea ( $p < 0.05$ ). The major phenolic compound detected in coffee was chlorogenic acid. Cocoa showed higher phenolic content than tea. However, cocoa and tea have similar catechin content and possessed comparable antioxidant capacity. The free phenolic content in the three beverages was found to be highly correlated with antioxidant capacity. In addition, moderate correlation was observed between total phenolic content and antioxidant capacity. On the other hand, there was no significant contribution of bound phenolic compounds towards antioxidant capacity. The contribution of antioxidant capacity in these beverages could be due to phenolic compounds in the free form. The study indicated that the beverages studied possessed varying degrees of antioxidant capacity and phenolic contents.

**Keyword:** Antioxidant capacity; Phenolic contents; Commercial beverages