

Total phenolics and antioxidant properties of red hot chili peppers of different varieties in Malaysia as potent nutraceutical

ABSTRACT

Chili pepper is a plant that belongs to the genus of *Capsicum* originated from the family of Solanaceae. Despite the unstable taxonomy and the lack of a generally agreed upon nomenclature, only five species are domesticated. They are *Capsicum annuum* L., *Capsicum chinense* Jacq., *Capsicum frutescens* L., *Capsicum baccatum* L. and *Capsicum pubescens* L. In the current study, five different varieties of red hot chilli peppers are purchased. Among them, there are 4 different varieties that are derived from the species of *Capsicum annuum* L. (Kulai 151, Kulai 568, Bara and Pelita), while Centil or bird eyes chilli is a variety that come from *Capsicum frutescens* L.. Kulai 151 and Kulai 568 are the varieties with larger size, with length of fruits ranging from 15-18cm. Bara, Pelita and Centil are small-sized chillies or known as Bird's eye chilli, with stronger pungent smell compared to Kulai varieties. Centil is commonly planted in urban areas in Malaysia. It is later cultured under program of 'Fertigasi' for better plantation quality. Its fruit length ranging from 2-3cm. Both of the variety of Bara and Peilta are small-sized chillies, ranging from 2-4cm in length. They are both originally breed in Indonesia. Lately, they are introduced and planted in Malaysia. According to the local farmers, Pelita is a new hybrid offspring from Bara variety.

Keyword: ABTS; Chilli pepper; FRAP, in vitro assay; Total phenolics