Total polyphenol, flavonoid contents and antioxidant capacity of peacock (Caesalpinia pulcherrima (L.) Sw) seed kernel
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Abstract: Peacock (Caesalpinia pulcherrima (L.) are shown numerous beneficial properties such as anti-inflammation, anthelmintic and toothache medicine. The peacock seed kernel were extracted with 50% ethanol (ethanol; water, 50:50), 80% ethanol (ethanol; water, 80:20), and ethanol and were determined the antioxidant activities, total polyphenol and flavonoid contents. The antioxidant activities were evaluated by using DPPH (1,1-diphenyl-2-picrylhydrazyl), ABTS** (2,2'-azino-bis (3-ethylbenzthiazoline-6-sulphonic acid) and FRAP (ferric reducing antioxidant power). The results were revealed that the 80% ethanolic extract of peacock kernel showed the highest total polyphenol (69.60±0.45 mg GAE g⁻¹ DW) than ethanolic extract (20.89±0.07 mg GAE g⁻¹ DW) whereas, the 50% ethanolic extract of peacock was exhibited the strongest antioxidant activity towards DPPH (IC50; 26.41±0.24 µg mL⁻¹), ABTS** (IC50; 2.22±0.03 µg mL⁻¹) FRAP (2.73±0.01 mgTrolox g⁻¹DW) and total flavonoid contents (9.27±0.58 mgQE g⁻¹ DW). The results investigated that peacock seed kernel ethanolic extract is a good choice of natural source for use in food and supplement dietary.

Keywords: Peacock seed kernel, Antioxidant activity, Polyphenol