

Preliminary study of antioxidant action of Sri Lankan curry powder

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Adequate levels of antioxidants are needed for optimal body functions and its dietary supplementation is recommended. The ingredients of Sri Lankan curry powder have shown to possess antioxidant activity. However, studies on the mixture have not been conducted. This research focusses on analysing the antioxidant action of unroasted curry powder and its ingredients, Coriander (*Coriandrum sativum*), Cumin (*Cuminum cyminum*), Fennel (*Foeniculum vulgare*), Cinnamon (*Cinnamomum zeylanicum*) and Curry leaves (*Murraya koenigii*). Total Phenolic content (TPC), determined using Folin-Ciocalteu assay, was expressed as Gallic Acid Equivalents (GAE). Highest and lowest TPC was observed in cinnamon (2688.85±22.91 µg GAE/mL) and coriander (704.77±6.06 µg GAE/mL) respectively. Other TPC values were Cumin (1190.51±19.08 µg GAE/mL), Curry leaves (1145.55±88.70 µg GAE/mL) Curry Powder (1096.69±29.14 µg GAE/mL) and Fennel (936.36±23.33 µg GAE/mL). The Highest and lowest Total Flavonoid Content (TFC), in catechin equivalents, was observed in Cinnamon (1003.99±25.27 µg/mL) and Curry Leaves (109.52±16.17 µg/mL) respectively. Other values varied as, Fennel (351.82±30.24 µg/mL), Cumin (204.73±28.45 µg/mL), Curry Powder (149.81±6.44 µg/mL) and Coriander (120.29±5.20 µg/mL). DPPH scavenging activity in descending order was Cinnamon (IC₅₀= 32.52±1.31 µg/mL), Curry Powder (IC₅₀= 448.47±235.21 µg/mL), Cumin (IC₅₀= 474.29±314.50 µg/mL), Fennel (IC₅₀= 520.56±282.17 µg/mL), Coriander (IC₅₀= 1533.89±66.17 µg/mL) and Curry Leaves (IC₅₀= 3805.21±2524.27 µg/mL). Ferric reducing power in descending order was Cinnamon (EC₅₀= 1859.75±382.18 µg/mL), Fennel (EC₅₀= 10081.24±521.31 µg/mL), Coriander (EC₅₀= 37670.70±4152.80 µg/mL), Cumin (EC₅₀= 58130.51±4324.66 µg/mL), Curry Powder (EC₅₀= 69565.72±4202.72 µg/mL) and Curry Leaves (EC₅₀= 144604.00±7176.39 µg/mL). In summary current results state that curry powder possesses antioxidant activity to a considerable extent.

Key words: *Curry powder, antioxidants, phenolics, flavonoids, DPPH*

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