

## Comparative Study on Antioxidant Activity of Fruit Peels and Seeds of Pomegranate Cultivars Grown in Sri Lanka

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Pomegranate (*Punica granatum* L., family Punicaceae) is well known antioxidant source. Non-edible peels and seeds are reported to contain a diverse range of phytochemicals which are believed to possess antimicrobial, antioxidant and anticancer properties. Hence, to develop healthy and eco-friendly pharmaceutical, herbal products, evaluation of the antioxidant potential of peel and seed of *Kalpitiya hybrid*, *Daya* and *Nimali* pomegranate varieties were targeted in the study. Total phenolic content (TPC), proanthocyanidins content (PAC), total anthocyanin content (TAC), total flavonoid content (TFC), DPPH radical scavenging activity, and ferric reducing antioxidant power (FRAP) were assessed under the antioxidant activity evaluation. The highest TPC was observed in *Daya* peel (DP) and *Nimali* Seed (NS), the least was for *Hybrid* Peel (HP) and *Hybrid* Seed (HS). The highest TFC was observed in DP and HS, the least was for HP and NS. The highest IC<sub>50</sub> was observed in HP and HS, the least was for DP and NS. The highest FRAP was observed in HP and NS, the least was for DP and HS. The highest PAC was observed in HP and HS, the least was for *Nimali* peel (NP) and NS. The highest TAC was observed in Hybrid juice, and the least was for HS. Hybrid Juice showed the least amount of TPC, TFC, FRAP, and moderate IC<sub>50</sub>, PAC compared with peel and seed. Findings revealed that peel possesses significantly high antioxidant activity than their seed and juice and are potent sources of antioxidants that can be used to develop nutritionally valuable, healthy products.

**Keywords:** *pomegranate, antioxidant activity, total phenolic content, total flavonoid content, DPPH*