EVALUATION OF ANTIOXIDANT ACTIVITY OF METHANOLIC EXTRACT OF SEED, PEEL, AND PULP OF JAMBOLAN (Syzygium cumini).


Jambolan (Syzygium cumini) is a fruit which is original from Indonesia, China and the West India and is very well adapted to Brazilian condition, as well. In this fruit there are some phytochemicals and a lot of them are phenolic compounds and organic acids proved as effective in preventing chronic diseases due to their antioxidant capacity. This study evaluated the antioxidant activity of methanolic extracts from the seed, peel and pulp of Jambolan. The extracts were prepared in a ratio 10:1 (solvent:sample) and then they were rotaevaporated. Antioxidant capacity determination was evaluated by DPPH method and it was expressed in the extract concentration required to inhibit 50% of the radical (IC50% in µg/mL). The quantification of phenolic compounds was carried out according to Folin-Ciocalteou and it was expressed in equivalent mg per liter of gallic acid (mgGAE/L). Besides, the flavonoid analysis was accomplished according to Buriol et al. (2009) and expressed in equivalent mg per liter of quercetin (mgQE/L). The seeds showed the highest antioxidant capacity: 15.47µg/mL; the peel presented 101.72µg/mL and the pulp had a result of 142.85µg/mL. The quantity of phenolic compounds of seeds, peel and pulp were 411.02mgGAE/L, 227.83mgGAE/L and 225.56mgGAE/L, respectively. The amount of flavonoids was 61.68 mgQE/L in the seeds, 87.94mgQE/L in the peel and 59.02mgQE/L in the pulp. The different parts of fruit showed excellent antioxidant activity and considerable amounts of phenolics and flavonoids, highlighting that the seed is the best resource of followed by the peel and the pulp.

Keywords: Jambolan; Antioxidant Capacity; Phenolics; Flavonoids.