EFFECT OF SOLVENT TYPE ON PHENOLICS AND TANNIN CONTENT AND ANTIOXIDANT ACTIVITY IN CANJIQUEIRA (Byrsonima cydoniifolia A. JUSS.) EXTRACTS


Many studies have detected significant levels of antioxidant activities and bioactive components in native fruits, indicating that they may serve as a dietary source of natural antioxidants. The extractive capacity of bioactive compounds depends on the type of solvent. In this work it was studied the effect of extraction solvent of different polarities on total phenolic (Folin-Ciocalteu assay) and tanins (Folin-Denis assay) content and antioxidant activity (DPPH• assay) of Byrsonima cydoniifolia fruits. Canjiqueira were harvest at Southern Pantanal, crushed in skin and strained to separate the seeds, then the pulp were analyzed. The three solvent systems included 100% ethanol, 100% water and 60% ethanol/water (v/v). The results showed that the extracting solvent had significant impacts on phenols and tannins extraction and on antioxidant capacity of canjiqueira. The highest tannin content (13.82 mg TAE.g⁻¹ dry basis) was found in 60% ethanol extracts, whereas the water extract decreased in 30% the results. The highest phenolic content (9.97 mg GAE.g⁻¹ dry basis) was found in 100% ethanol extract. Among the three solvents, 60% ethanol extracts showed the greatest capability in extracting antioxidants and inhibiting the free radicals produced by DPPH. In this extract was observed the highest antioxidant activity (IC₅₀ = 3.96 mg.mL⁻¹ dry basis), with the lower results in water extract (IC₅₀ = 8.56 mg.mL⁻¹ dry basis). Thus, 60% ethanol/water is a recommended solvent for extracting antioxidants from pulp of canjiqueira.