EVALUATION OF ANTIOXIDANT CAPACITY OF PASSION FRUIT SEED OIL (PASSIFLORA SETACEA).


The use of by-product seeds resulted from the fruit process has contributed to increase the supply of vegetable oils rich in compounds bioactive regarding consolidated cosmetic and functional food formulation. The present study had evaluated the extraction process effects on the quality of the passion fruit seed oil from the Passiflora setacea species. The sample was submitted to three different air drying process temperatures: 45°C, 50°C and 55°C. The oil extraction was performed by cold pressing and under heating (55° ± 5 °C) in a screw expeller. For comparative purposes, the oil was also extracted using ethanol as solvent. The oil antioxidant capacity was determined by the DPPH (radical 2,2-diphenyl-1-picrylhydrazyl). In the best experimental condition, the extraction yield was 97% compared with the ether extract value, analytically determined (33 g/100 g). The IC50 values expressed as g oil/g DPPH, for the samples obtained by cold pressing, hot pressing and extraction with ethanol were 124.0, 102.3 and 92.5 respectively. The extracted oil with ethanol showed a higher antioxidant activity indicating that this solvent carried out to the lipid fraction the phenolic compounds presented in the fruit seed. Passion seeds oils evaluated in this work presented an antioxidant capacity similar to grape seeds oils (IC50 equal to 84.8g oil/g DPPH) indicating their potential for applications in natural products formulation process.