EVALUATION OF THE ANTIOXIDANT CAPACITY AND QUANTIFICATION OF TOTAL PHENOLS OF CRUCIFEROUS

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Several studies have demonstrated a strong association between phytonutrients from fruits and vegetables and reduced cancer risk, as several chronic diseases. One way to prevent the development of these diseases is to include in the diet functional foods, rich in natural compound. The incentive to consumption of cruciferous vegetables has been based on recent studies in which it was demonstrated significant antioxidant activity in some of its specimens, in addition to its nutritional value as an important source of vitamins, minerals, fiber and substances such as carotenoids, flavonoids, coumarins, glucosinolates, among others. This study aimed to quantify Total Phenols using Folin Ciocalteau method and to evaluate the in vitro antioxidant capacity of ethanolic extracts prepared from fresh samples of white cabbage (Brassica oleracea L. var. capitata L.), kale (Brassica oleracea var. acephala) and cauliflower (Brassica oleracea var. botrytis) through the methods: DPPH (2,2-diphenyl-1-picrylhydrazyl) and ORAC (Oxygen Radical Absorption Capacity). Difference between groups was determined by the "one-way ANOVA" using the Tukey test in which p<0.05 was considered significant. Comparing the three studied methods were obtained higher values for ethanolic samples of fresh kale (results of Total Phenols 902.44 ± 86.33 mg of Gallic Acid Equivalent/100g of fresh sample; DPPH of 187.07 ± 11.17 μmol of Trolox Equivalent/100g of fresh sample and ORAC of 4629.24 ± 304.40 μmol of Trolox Equivalent /100g of fresh sample). The results demonstrated the great antioxidant potential and quantity of phenols of kale and its best values compared to the others samples studied.