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DEVELOPING OF FUNCTIONAL BEVERAGE WITH ANTIOXIDANT PROPERTIES TO REDUCE OXIDATIVE STRESS

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Resumo (Texto Científico) - Máximo 300 palavras | Abstract (Scientific Text) - (Maximum 300 words):
Nutritious and distinguished food are tendency on food industry, aiming at the improvement of the consumer's health and welfare. In the sector of isotonic drinks, the challenge lays on the developing of beverages with distinguished flavours, containing vitamins and compounds with antioxidant activities, which make easier the reestablishment of biochemical balance after the practice of sports. Therefore, the developing of new products using sources of carbon indirectly (cassava), rich in vegetable protein and omega-3 and tropical fruit aromatised (passion fruit) it is an alternative to who practice sports. Against this background, this study aim at the developing of a functional beverage in order to minimise oxidative stress of the individual, caused by prolonged physical effort. It was determined a centesimal composition of three vegetable extracts (cassava, sesame, pumpkin seed) to the development of the compound beverage, according to AOAC's methods, 1997. The phenolic compounds were determined through Folin-Ciocalteu method, which antioxidant capacity was analysed through DPPH method and the total carotenoids were measured by spectrophotometer. The sesame extract presented high levels of lipids, (64,11g / 100g) and protein (30,46g / 100g) when compared to the other extracts. The cassava was the one to present the highest level of carbohydrates (81,20g / 100g), and was chosen as the main source of carbon of the beverage. The pumpkin seed exhibit satisfactory values of proteins, (30,46g / 100g). The final compound of the produced beverage presented the following contents: carbohydrates (1,50g / 100mL), proteins (0,8g / 100mL), lipids (1,97g / 100 mL), dietary fibre (8,13mg / 100mL), phenolic (1511,28mg AGE/g of dry sample) and carotenoids (1,47mg/g total carotenoids/g of dry sample), which pro-vitamin A was below of those recommended (122,5 µg of β-carotene/g of dry sample). The antioxidant beverage produced present important nutritional characteristics, which will optimise the individual's health.